AGENDA

September 1, 2021

CITY COUNCIL
HOUSING AUTHORITY
6:00 p.m.
Council Chambers
311 Vernon Street
Roseville, California
www.roseville.ca.us/CORTV

The meeting may be viewed on Comcast channel 14, Consolidated Communications channel 73, and AT&T U-Verse. City Council meetings are also video streamed live on the City's website at roseville.ca.us/watch and roseville.ca.us/agenda, and the City's YouTube channel at youtube.com/CityofRosevilleCa.

Members of the public may offer public comment by phone:

Dial in Phone Number: 916-774-5353

If you need disability-related modification or accommodation to participate in this meeting, please contact: Voice: 916-774-5200, TDD: 916-774-5220. Requests must be made as early as possible.

THE CITY OF ROSEVILLE WELCOMES YOUR PARTICIPATION

If an agenda item is open to public comment, such public comment shall be addressed to the chair of the meeting.

Public Comment - Speakers have three minutes under Public Comment to speak on issues that are not listed on the agenda and are within the City's jurisdiction. The Brown Act does not permit any action or discussion on items not listed on the agenda.

Consent Calendar - If applicable, the Consent Calendar consists of routine items that may be approved by one motion. Any person can remove an item from the Consent Calendar to be discussed separately.

Agenda Items - Speakers have five minutes to address items that are listed on the agenda.

Americans with Disabilities Act - Notify the City Clerk or Secretary at least 72 hours in advance if special assistance is required to participate in a meeting including the need of auxiliary aids or services.

Audio/Visual Presentations - If making a presentation regarding an agenda item, audio/visual materials must be submitted to the City Clerk or Secretary at least 72 hours in advance.

Security procedures are in place to attend Roseville City Council meetings. All attendees must successfully pass through a security metal detector. Any person with a prohibited item will not be allowed entry. Prohibited items include, but are not limited to: firearms (even with valid CCW), knives, pepper spray/mace, explosives of any kind/ any weapons and/or dangerous devices of any kind, illegal drugs and alcohol.

Roseville City Clerk 311 Vernon Street, Roseville, CA 916-774-5200 TDD 916-774-5220

1. CALL TO ORDER

2. ROLL CALL

3. PLEDGE OF ALLEGIANCE

4. MEETING PROCEDURES

5. PRESENTATIONS

5.1. Proclamation - Prostate Cancer Awareness Month - September 2021

Proclaim September 2021 as Prostate Cancer Awareness Month and urge citizens to acquaint themselves with the issues involved in Prostate Cancer Awareness.

CONTACT: Katrina Six 916-774-5267 kmsix@roseville.ca.us

5.2. City Response to COVID-19

CONTACT: Dominick Casey 916-774-5362 dcasey@roseville.ca.us

6. PUBLIC COMMENTS

7. CONSENT CALENDAR

BEGINNING OF CONSENT CALENDAR

Bids / Purchases / Services

7.1. Roseville Aquatics Complex Slide and Water Play Structure Replacement Project - Approval of Plans and Specifications and Authorization to Call for Bids

Memo from Park Development Project Manager Heather Buck and Parks, Recreation & Libraries Director Jill Geller recommending the City Council approve the plans and specifications for the Roseville Aquatics Complex Slide and Water Play Structure Replacement project and authorize staff to call for bids. The existing slide and water play structure are located at the Roseville Aquatics Complex. The project includes removal and replacement of the existing pool slide, water play structure, and associated piping, pool deck modifications, replacement of existing pool equipment for the water play structure, and replaster of the existing recreation pool. Funding for the project is provided through the Parks, Recreation & Libraries Capital Projects Fund within the FY2021-22 budget, with a project estimate of $1,600,000. Maintenance of

the existing aquatics complex is provided by the General Fund and will remain unchanged.

CC #: 1685

File #: 0707

CONTACT: Heather Buck 916-774-5254 hcbuck@roseville.ca.us

7.2. Buljan Park Play Structure Improvements - Contract Purchase Agreement

Memo from Park Planning & Development Superintendent Tara Gee and Parks, Recreation & Libraries Director Jill Geller recommending the City Council adopt RESOLUTION NO. 21-385 APPROVING A CONTRACT PURCHASE AGREEMENT, BY AND BETWEEN THE CITY OF ROSEVILLE AND PLAYPOWER LT FARMINGTON INC., AND AUTHORIZING THE CITY MANAGER TO EXECUTE IT ON BEHALF OF THE CITY OF ROSEVILLE (3001566). Staff recommends approval of a contract purchase agreement with Playpower LT Farmington, Inc. for $87,000 for additional play elements to the play structure at Buljan Park. The play structure at Buljan Park was replaced in 2019. After completion of the replacement, neighbors surrounding the park expressed the need to have a bigger play structure that better matched what previously existed. Neighbors rallied together and raised $10,000 to contribute towards the addition of more play elements. The contract purchase agreement piggybacks National Joint Powers Alliance Contract #030117-LTS. Funding for this project was approved in the FY2021-22 budget using funds from the Parks, Recreation & Libraries Capital Projects Fund. Ongoing maintenance costs are anticipated to remain the same and are already included in the Parks, Recreation & Libraries budget in the General Fund.

CC #: 1686

File #: 0704-01

CONTACT: Tara Gee 916-774-5253 tgee@roseville.ca.us

7.3. Washington Boulevard at All America City Boulevard Roundabout Project - Approval of Plans and Specifications and Authorization to Call for Bids

Memo from Assistant Engineer Beth Taylor and Public Works Director Jason Shykowski recommending the City Council approve plans and specifications for the Washington Boulevard at All America City Boulevard Roundabout Project and authorize staff to call for bids. The construction scope of this project consists of clearing and grubbing, excavation, concrete and asphalt paving, sidewalk, lighting, storm drain, waterline, urban design, and landscape improvements. The project is estimated to cost $5.7 million and will be funded with Congestion Mitigation and Air Quality Improvement funds, Local Transportation Funds and Environmental Utility Water Rehabilitation Funds. No General Fund resources will be used for the project construction. This project includes landscaping improvements along the corridor that will require maintenance by the City. The estimated landscaping maintenance cost increase as a result of the improvements is $300 per month ($3,600 annually). At project award a budget adjustment will be requested from the General Fund to cover the additional maintenance cost in the appropriate operations budget.

CC #: 1690

File #: 0900-04-02

CONTACT: Beth Taylor 916-746-1300 bftaylor@roseville.ca.us

Resolutions

7.4. Hewlett Packard 2 Campus Oaks 64 (HP2/CO64) City-Wide Park - Master Plan and Park Development Agreement

Memo from Park Planning & Development Superintendent Tara Gee and Parks, Recreation & Libraries Director Jill Geller recommending the City Council adopt RESOLUTION NO. 21-389 APPROVING A PARK DEVELOPMENT AGREEMENT FOR HP2/CO64 CITY-WIDE PARK SITE IMPROVEMENTS, BY AND BETWEEN THE CITY OF ROSEVILLE AND BBC ROSEVILLE OAKS, LLC, AND AUTHORIZING THE CITY MANAGER TO EXECUTE IT ON BEHALF OF THE CITY OF ROSEVILLE. The master plan proposes a design that includes multi-use grass areas, pickle ball courts, a fenced off-leash dog park, shaded picnic areas, a restroom, a parkour or challenge fitness course for juniors and adults, a skate track and a BMX track. A walkway/bike path loops along the park edges and through the park. In lieu of paying city-wide park fees per home, the developer will incur the cost of the park and build it on behalf of the City, per city standards. The City will also contribute 20.5 percent of the cost of construction of the park from the Campus Oaks Neighborhood Park fund, consistent with the development agreement. Once complete, the park will be deeded to the City for operations and maintenance. The budget for the design and construction of the park is approximately $3.7 million. This includes permitting, inspections and engineering costs, in addition to landscape architectural design. Maintenance costs are estimated at approximately $140,000 per year. Consistent with all city-wide parks, the funding source for maintenance will be provided through the General Fund.

CC #: 1693

File #: 0704-01

CONTACT: Tara Gee 916-774-5253 tgee@roseville.ca.us

7.5. 2020 Power Source Disclosure Annual Reports and 2020 Power Content Labels

Memo from Electric Resources Analyst David Siao and Electric Utility Director Michelle Bertolino recommending the City Council adopt RESOLUTION NO. 21-384 APPROVING SUBMISSION OF THE 2020 POWER SOURCE DISCLOSURE ANNUAL REPORTS AND 2020 POWER CONTENT LABELS, AND ATTESTATION OF THE VERACITY OF THE ANNUAL REPORT. The 2020 Power Source Disclosure Annual Reports and 2020 Power Content Labels are state-mandated reports detailing Roseville Electric Utility's 2020 energy supply. There is no fiscal impact with the approval of these reports.

CC #: 1683

File #: 0800-03

CONTACT: David Siao 916-746-1613 dsiao@roseville.ca.us

7.6. Westbrook - Phase 3 Villages WB-22 And WB-23 - Notice of Completion

Memo from Construction Inspector Andrew Druck and Development Services Director Mike Isom recommending the City Council adopt RESOLUTION NO. 21-388 ACCEPTING THE PUBLIC WORK KNOWN AS WESTBROOK – PHASE 3 – VILLAGES WB-22 AND WB-23 PROJECT, APPROVING THE "NOTICE OF COMPLETION", AND AUTHORIZING AND DIRECTING THE CITY ENGINEER TO EXECUTE SAID NOTICE ON BEHALF OF THE CITY OF ROSEVILLE, THEREFORE, AND ACCEPTING ALL DEDICATIONS OFFERED ON THE RECORDED MAP OF THE SUBDIVISION. The Engineering Division has made final inspection of the project and has found the civil improvement work complete in accordance with the improvement plans and City specifications. This action has no impact to the City's General Fund. Construction costs were paid by the developer.

CC #: 1692

File #: 0400-04-12-1

CONTACT: Andrew Druck 916-223-7577 adruck@roseville.ca.us

7.7. Federico - Phase 1 - Village 20A - Notice of Completion

Memo from Construction Inspector Andrew Druck and Development Services Director Mike Isom recommending the City Council adopt RESOLUTION NO. 21-386 ACCEPTING THE PUBLIC WORK KNOWN AS FEDERICO – PHASE 1 – VILLAGE 20A PROJECT, APPROVING THE "NOTICE OF COMPLETION", AND AUTHORIZING AND DIRECTING THE CITY ENGINEER TO EXECUTE SAID NOTICE ON BEHALF OF THE CITY OF ROSEVILLE, THEREFORE, AND ACCEPTING ALL DEDICATIONS OFFERED ON THE RECORDED MAP OF THE SUBDIVISION. The Engineering Division has made final inspection of the project and has found the civil improvement work complete in accordance with the improvement plans and City specifications. This action has no impact to the City's General Fund. Construction costs were paid by the developer.

CC #: 1687

File #: 0400-04-09-01

CONTACT: Andrew Druck 916-223-7577 adruck@roseville.ca.us

7.8. Fiddyment Ranch Phase 3 Village F-10 Phase 2 - Final Map and Subdivision Agreement

Memo from Assistant Engineer Robert Medina and Development Services Director Mike Isom recommending the City Council adopt RESOLUTION NO. 21-387 APPROVING A SUBDIVISION AGREEMENT, BY AND BETWEEN THE CITY OF ROSEVILLE AND JEN CALIFORNIA 15, LLC, AND AUTHORIZING THE CITY MANAGER TO EXECUTE IT ON BEHALF OF THE CITY OF ROSEVILLE; and approve the Fiddyment Ranch Phase 3 Village F-10 Phase 2 final map. Staff has completed its review of the final map and found that it is in compliance with the approved tentative map. This map will create 110 residential lots. The actions requested have no fiscal impact to the City's General Fund.

CC #: 1688

File #: 0400-04-09-1 & 0400-07
CONTACT: Robert Medina 916-774-5517 rmedina@roseville.ca.us

7.9. Emergency Housing Voucher Services - Professional Services Agreement

Memo from Housing Manager Trisha Isom and Assistant City Manager Ryan DeVore recommending the City Council adopt RESOLUTION NO. 21-391 APPROVING A PROFESSIONAL SERVICES AGREEMENT, BY AND BETWEEN THE CITY OF ROSEVILLE AND HOMELESS RESOURCE COUNCIL OF THE SIERRAS, AND AUTHORIZING THE CITY MANAGER TO EXECUTE IT ON BEHALF OF THE CITY OF ROSEVILLE. Staff requests Council approval of a contract with the Homeless Resources Council of the Sierras to administer $125,000 in Emergency Housing Voucher Services Fees to benefit homeless residents. The Emergency Housing Voucher Services Fee is federally funded through the US Department of Housing and Urban Development (HUD). Through this HUD-funded program, the Roseville Housing Authority provides an important social service to ensure safe and affordable housing for the under-housed population. The Emergency Housing Voucher program does not create additional costs to the City's General Fund.

CC #: 1696

File #: 0709-02-01 & 0201-01

CONTACT: Trisha Isom 916-746-1239 tisom@roseville.ca.us

7.10. Oak Ridge Drive Bridge Replacement Project - Notice of Completion

Memo from Associate Engineer Rjahja Canlas and Public Works Director Jason Shykowski recommending the City Council adopt RESOLUTION NO. 21-392 ACCEPTING THE PUBLIC WORK KNOWN AS THE OAK RIDGE DRIVE BRIDGE REPLACEMENT PROJECT, APPROVING THE "NOTICE OF COMPLETION," AND AUTHORIZING THE PUBLIC WORKS DIRECTOR TO EXECUTE SAID NOTICE ON BEHALF OF THE CITY OF ROSEVILLE. This project removed the existing functionally obsolete and hydraulically inadequate bridge and constructed a longer, wider two-lane bridge with shoulders and sidewalks on both sides of the road. The project was funded by Federal Highway Bridge Program grant funds, with the exception of $50,000 of Roadway funds budgeted for non-participating project costs. No General Fund resources were used for the project.

CC #: 1698

File #: 0900-04-02

CONTACT: Rjahja Canlas 916-746-1300 rcanlas@roseville.ca.us

Ordinances (for introduction and adoption - appropriation/urgency measures)

7.11. Sierra Vista Specific Plan Phase 1 Bike Trail Project - Reimbursement Agreements and Budget Adjustment

Memo from Alternative Transportation Analyst Jeannie Gandler and Public Works Director Jason Shykowski recommending the City Council adopt RESOLUTION NO. 21-390 APPROVING TWO CITY/DEVELOPER

REIMBURSEMENT AGREEMENTS, BY AND BETWEEN THE CITY OF ROSEVILLE AND JOHN MOURIER CONSTRUCTION, INC., AND AUTHORIZING THE CITY MANAGER TO EXECUTE THEM ON BEHALF OF THE CITY OF ROSEVILLE; and adopt ORDINANCE NO. 6392 OF THE CITY OF ROSEVILLE AUTHORIZING CERTAIN AMENDMENTS TO THE FISCAL YEAR 2021-22 BUDGET AND DECLARING THIS ORDINANCE TO BE IMMEDIATELY EFFECTIVE AS AN APPROPRIATION MEASURE. Staff requests Council approve two reimbursement agreements with John Mourier Construction, Inc., a California Corporation, for grading trail segments adjacent to JM-41, JM-81 and JM-83 ($112,418) and for paving trail segments adjacent to JM-41 and JM-83 ($184,104) within the Sierra Vista Specific Plan and adopt an ordinance approving a budget adjustment in the amount of $296,522. Funding for the project is from the Sierra Vista bike trial development fees. General Fund resources will not be used for this project.

CC #: 1694

File #: 0721-05 & 0201-01

CONTACT: Jeannie Gandler 916-746-1289 jgandler@roseville.ca.us

7.12. Warnick Property - Transfer of Property and Budget Adjustment

Memo from Refuse and Stormwater Manager Devin Whittington and Environmental Utilities Director Richard Plecker recommending the City Council adopt ORDINANCE NO. 6393 OF THE CITY OF ROSEVILLE AUTHORIZING CERTAIN AMENDMENTS TO THE FISCAL YEAR 2021-22 BUDGET AND DECLARING THIS ORDINANCE TO BE IMMEDIATELY EFFECTIVE AS AN APPROPRIATION MEASURE. Staff is requesting Council approve the transfer of the Warnick Property from the Pleasant Grove Drainage Basin Fund to Environmental Utilities (Waste Services Operations Fund and Water Operations Fund) to support future utility operations. The Waste Services Operations Fund will contribute $2,920,000 and the Water Operations Fund will contribute $730,000. The Pleasant Grove Drainage Basin Fund will receive transfers totaling $1,159,344 for the original proportional purchase price of the property plus interest and the Strategic Improvement Fund will receive transfers totaling $2,490,656 for the difference between the property purchase price of $3,650,000 and the amount going to the Pleasant Grove Drainage Basin Fund. Property maintenance costs are included in the FY2021-22 Water Operations Fund and Solid Waste Operations Fund budgets.

CC #: 1695

File #: 1002 & 0800-02 & 0201-01

CONTACT: Devin Whittington 916-774-5783 dwhittington@roseville.ca.us

Ordinances (for second reading and adoption)

7.13. Second Reading - Creekview Specific Plan – Rezone and Development Agreement Amendment

ORDINANCE NO. 6394 OF THE COUNCIL OF THE CITY OF ROSEVILLE AMENDING ZONING ORDINANCE NO. 5428 OF THE CITY

OF ROSEVILLE CHANGING THE ZONING OF CERTAIN REAL PROPERTY LOCATED WITHIN THE CITY OF ROSEVILLE; and adopt ORDINANCE NO. 6395 OF THE COUNCIL OF THE CITY OF ROSEVILLE ADOPTING A SECOND AMENDMENT OF THE DEVELOPMENT AGREEMENT BY AND BETWEEN THE CITY OF ROSEVILLE AND ANTHEM UNITED CREEKVIEW DEVELOPMENTS LIMITED PARTNERSHIP RELATIVE TO THE CREEKVIEW SPECIFIC PLAN AND AUTHORIZING THE CITY MANAGER TO EXECUTE IT ON BEHALF OF THE CITY OF ROSEVILLE, for second reading and adoption.

CC #: 1697

File #: 0400-04-13-2 & 0400-02

CONTACT: Kinarik Shallow 916-746-1309 kshallow@roseville.ca.us

Reports / Requests

7.14. Out-of-State Travel Request - Public Works Department

Memo from Facility Manager Dan Allen and Public Works Director Jason Shykowski recommending the City Council approve an out-of-state travel request for two Public Works staff members to attend the International Facility Management Association World Workplace Conference and Expo in Florida in October of 2021. The costs are estimated to be $6,000, and are included in the FY2021-22 operating budget in the Facility Services Fund.

CC #: 1684

File #: 0600-02

CONTACT: Dan Allen 916 774-5741 dallen@roseville.ca.us

7.15. HOUSING AUTHORITY - Quarterly Status Report

Memo from Housing Supervisor Suzi Cook-Turner and Assistant City Manager Ryan DeVore recommending the City Council accept a quarterly report on the Housing Authority's Housing Choice Voucher Program. This report is for informational purposes only and has no impact on the City's General Fund.

CC #: 1689

File #: 0709-02-01

CONTACT: Suzi Cook-Turner 916-774-5414 smcook-turner@roseville.ca.us

END OF CONSENT CALENDAR

8. RESOLUTIONS

8.1. Emergency Generation Capacity for California Department of Water Resources - Site Use and Installation Agreement

Memo from Power Supply and Portfolio Administrator William Forsythe and Electric Utility Director Michelle Bertolino recommending the City Council adopt RESOLUTION NO. 21-393 APPROVING A SITE USE AND INSTALLATION AGREEMENT, BY AND BETWEEN THE CITY OF ROSEVILLE AND THE CALIFORNIA DEPARTMENT OF WATER

RESOURCES, AND AUTHORIZING THE CITY MANAGER TO EXECUTE IT ON BEHALF OF THE CITY OF ROSEVILLE. Staff recommends the Council approve the Site Use and Installation Agreement between the City and the California Department of Water Resources (CDWR) relating to the installation of temporary electric generation facilities at the Roseville Energy Park. The Site Use Agreement grants CDWR a temporary license to use and occupy the site for the installation and operation of the facilities through December 31, 2023. CDWR will pay Roseville $8 million for services provided under the Site Use Agreement over the term of the contract. All costs for construction, operations and maintenance will be borne or reimbursed by CDWR. In addition, Roseville will have the option to procure the generating units at the end of the contract term for an agreed upon purchase price.

CC #: 1699

File #: 0800-02

CONTACT: William Forsythe 916-774-5619 wforsythe@roseville.ca.us

9. SPECIAL REQUESTS/REPORTS/PRESENTATION

9.1. The American Rescue Plan Act of 2021 - Update

Memo from Assistant City Manager/Chief Financial Officer Dennis Kauffman recommending the City Council receive an update on the Coronavirus State and Local Fiscal Recovery Funds included in the American Rescue Plan Act of 2021. There is no fiscal impact.

CC #: 1691

File #: 0300

CONTACT: Dennis Kauffman 916-774-5313 dkauffman@roseville.ca.us

10. REPORTS / PUBLIC COMMENTS

11. ADJOURNMENT

COUNCIL COMMUNICATION

CC #: 1698
File #: 0102-06

Title: Proclamation - Prostate Cancer Awareness Month - September 2021
Contact: Katrina Six 916-774-5267 kmsix@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 5.1.

RECOMMENDATION TO COUNCIL

Proclaim September 2021 as Prostate Cancer Awareness Month and urge citizens to acquaint themselves with the issues involved in Prostate Cancer Awareness.

BACKGROUND

Not applicable.

FISCAL IMPACT

Not applicable.

ENVIRONMENTAL REVIEW

The California Environmental Quality Act (CEQA) does not apply to activities that will not result in a direct or reasonably foreseeable indirect physical change in the environment, or is otherwise not considered a project as defined by CEQA Statute §21065 and CEQA State Guidelines §15060(c)(3) and §15378. Ceremonial documents meet the above criteria and are not subject to CEQA. No additional environmental review is required.

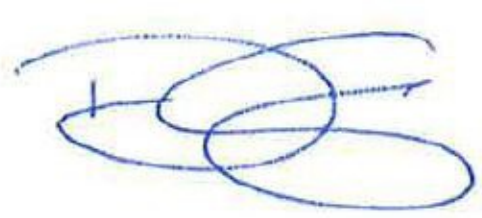
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal B - Support community engagement and advocacy

Respectfully Submitted,

Katrina Six, City Clerk Technician

Sonia Orozco, City Clerk



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Dominick Casey, City Manager

ATTACHMENTS:

Description

Prostate Cancer Awareness

Proclamation

Prostate Cancer Awareness Month
September 2021

WHEREAS, prostate cancer is the most frequently diagnosed cancer in men and the second leading cause of cancer deaths in men; and

WHEREAS, the American Cancer Society estimates there will be 248,530 new cases of prostate cancer in the USA in 2021 resulting in an estimated 34,130 deaths, and 20,160 men in California will be diagnosed with prostate cancer and an estimated 4,140 California men will die from this disease in 2021; and

WHEREAS, early-stage prostate cancer usually has no symptoms and studies suggest strong familial predisposition may be responsible for 5% to 10% of the disease cases; and

WHEREAS, late-stage prostate cancer commonly spreads to the bones, which can cause pain in the hips, spine, ribs, or other areas in the body; and

WHEREAS, the 5-year survival rate approaches 100% when prostate cancer is diagnosed and treated early, but drops to 30% when it spreads to other parts of the body; and

WHEREAS, the American Cancer Society recommends that men should have an opportunity to make an informed decision about whether to be tested for prostate cancer based on their personal values and preferences; and

WHEREAS, the rapid reduction in prostate cancer mortality is attributed to early detection through PSA testing and advancement in treatment; and

WHEREAS, the City of Roseville joins communities across the nation to increase awareness about the importance for men to make an informed decision with their health care provider about early detection and testing for prostate cancer.

NOW, THEREFORE, I, KRISTA BERNASCONI, MAYOR OF THE CITY OF ROSEVILLE, CALIFORNIA, do hereby proclaim the month of **September 2021** as **Prostate Cancer Awareness Month** and urge citizens to acquaint themselves with the issues involved in Prostate Cancer Awareness.

SIGNED AND APPROVED this 1st day of September 2021.

CITY OF ROSEVILLE
INCORPORATED APRIL 10, 1909

KRISTA BERNASCONI, MAYOR

COUNCIL COMMUNICATION

CC #: 1685
File #: 0707

Title:	Roseville Aquatics Complex Slide and Water Play Structure Replacement Project - Approval of Plans and Specifications and Authorization to Call for Bids
Contact:	Heather Buck 916-774-5254 hcbuck@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 7.1.

RECOMMENDATION TO COUNCIL

Staff recommends that the Council approve the plans and specifications for the Roseville Aquatics Complex (RAC) Slide and Water Play Structure Replacement Project and authorize staff to call for bids.

BACKGROUND

The Roseville Aquatics Complex (RAC) includes a competition pool, recreation pool with slide, and a water play structure, and is located off Woodcreek Oaks Boulevard, south of Pleasant Grove Boulevard. The RAC Slide and Water Play Structure Replacement Project includes removal and replacement of the existing pool slide, retrofit of the water play structure into a spray ground, and associated piping, pool deck modifications, replacement of existing pool equipment for the water play structure, and replaster of the existing recreation pool. These improvements are necessary to replace the aging and deteriorating infrastructure.

Public Outreach

Public outreach was conducted through a two-week write-in period between May 3 and May 16, 2021. Notification of the write-in period was sent via email to the RAC member/user mailing list, posted on NextDoor and the City's Park Development website, and flyers were placed at the RAC, MSIP, Crabb Park spray ground, and VSTS spray ground, inviting comments. No public comments were received.

Parks & Recreation Commission

On April 5, 2021, the Parks & Recreation Commission meeting received a staff presentation on the project scope and status.

Schedule

In order to expedite the construction schedule and realize economic efficiencies, two bid packages are included in this project: one for the slide procurement and installation and the second for the general construction, splash pad, and pool plaster.

Bids are scheduled to be opened in September. Staff plans to return to Council to seek approval to award the project.

FISCAL IMPACT

The budget for this project is $1,600,000. Funding for the project is provided through the Parks, Recreation & Libraries Capital Projects Fund (Fund 3130) within the FY2021-22 budget. Maintenance of the existing aquatics complex is provided by the General Fund and will remain unchanged.

ENVIRONMENTAL REVIEW

The proposed project involves the repair, maintenance, and minor alteration of existing facilities and structures. This activity is categorically exempt from CEQA as a Class 1 Exemption (State CEQA Guidelines §15301). The project also involves the replacement of existing facilities and structures. This activity is categorically exempt from CEQA as a Class 2 Exemption (State CEQA Guidelines §15302). The Exemption has been prepared and no further CEQA action is required.

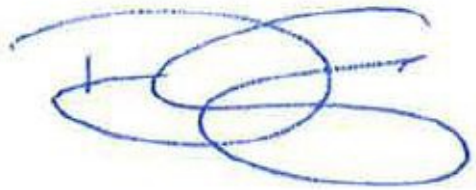
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal A - Remain fiscally responsible in a changing world
Goal B - Support community engagement and advocacy
Goal C - Maintain a safe and healthy community
Goal D - Enhance economic vitality
Goal E - Deliver exceptional city services
Goal F - Invest in well-planned infrastructure and growth

Respectfully Submitted,

Heather Buck, Park Development Project Manager

Jill Geller, Director, Parks, Recreation & Libraries



Dominick Casey, City Manager

ATTACHMENTS:

Description

Vicinity Map

RAC Slide and Water Play Structure Replacement Project Manual

RAC Slide Project Manual

RAC Slide Replacement Plans

Roseville Aquatics Complex Vicinity Map

Project Manual for the

Roseville Aquatics Complex Slide and Water Play Structure Replacement Project

July 2021

The latest edition of the City of Roseville Parks Construction Standards are incorporated by reference as a part of this Project Manual. The Parks Construction Standards can be purchased at the address listed below.

For Council Approval - Not for Bidding

Parks, Recreation & Libraries
316 Vernon Street, Suite 400
Roseville, California 95678
www.roseville.ca.us

CITY OF ROSEVILLE CALIFORNIA

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For Council Approval -
Not for Bidding

Parks, Recreation & Libraries
Park Development
316 Vernon Street, Suite 400
Roseville, California 95678

Notice to Bidders

DATE: September 2, 2021

TO: Prospective Bidders

FROM: Heather Buck, Park Development Project Manager

RE: Roseville Aquatics Complex Slide and Water Play Structure Replacement Project

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Project Description: The City of Roseville is now accepting bid proposals for the Roseville Aquatics Complex (RAC) Slide and Water Play Structure Replacement Project. The scope of work for the base bid includes, but is not limited to: removal and replacement of existing pool slide, water play structure, and associated piping, pool deck modifications, removal and replacement of existing pool equipment, and replaster of existing recreation pool. Slide procurement and installation shall be by separate contract and will include labor, materials, equipment, and engineering to furnish and install one outdoor body flume ride inclusive of fiberglass flume components, flume support system, starting platform with shade structure, stair, railing, and steps, and concrete footings and foundations. In order to meet the budget constraints, additive alternatives have been identified and include 1) additional pool deck replacement, 2) replacement of the pump and motor in kind for Pool C, replacement of the water fill valve in kind for Pool C, and replacement of the CO2 delivery system in kind for Pool C.

Contract Documents: A Project Manual, including all Contract Documents and the Proposal forms for bidding this project, may be obtained online from the City of Roseville's website at www.roseville.ca.us/business/bids_rfps_rfqs_andrfis.asp. All communications relative to this project shall be conducted through Public Purchase.

Potential bidders are advised to obtain all documents and specifications related to this project directly from the City of Roseville. The City of Roseville does not guarantee the accuracy of any forms, plans, or project manuals obtained through outside sources other than the City of Roseville. Furthermore, the City does not guarantee the distribution of any addendums or the accuracy of their content if obtained from a third party.

Bidders expressly assume the risk that their bid will be rejected from the use of project manuals or project plans obtained from third parties other than the City of Roseville.

Engineer's Estimate: The engineer's estimate for construction of the base bid items is $1,500,000.

Pre-Bid Meeting: A job walk will be held at 9:00 a.m. on September 14, 2021, at the Roseville Aquatics Complex located at 3051 Woodcreek Oaks Boulevard, Roseville, CA 95747.

Questions: All questions prior to the deadline for bid submissions shall be directed to the attention of Heather Buck via Public Purchase at https://roseville.ca.us/rfp. The deadline for submission of questions and clarifications regarding the Contract Documents is September 21, 2021 at 3:00 p.m. Only addenda issued by the City are binding.

Bid Deadline: Proposals will be received at the Office of the City Clerk, 311 Vernon Street, Roseville, California, until 3:00 p.m. on September 28, 2021. The proposals will be publicly opened and read by the City Clerk or designee of the City of Roseville in the City Clerk's Office at 3:05 p.m. on that same day.

The July 2021 edition of the City of Roseville Parks Construction Standards will be applicable to this project. The successful bidder will be required to use the standards contained in the book for the construction of this project.

For Council Approval - Not for Bidding

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For Council Approval -
Not for Bidding

Parks, Recreation & Libraries
Park Development
316 Vernon Street, Suite 400
Roseville CA 95678

Notice to the apparent low bidder for the Roseville Aquatics Complex Slide and Water Play Structure Replacement Project

In order to move forward with the award of this project, the City of Roseville requests that you submit the following documents:

1. Agreement (two sets of originals) with either:
   - wet signatures from two corporate officers, or
   - wet signature from one corporate office plus the corporate seal

2. Public Works Faithful Performance Bond – fully executed and notarized.

3. Public Works Labor and Materials Payment Bond – fully executed and notarized.

4. Insurance - fully executed and notarized.

The Agreement, bond forms and insurance requirements are contained in this Project Manual.

We request that all documents be received by October 8, 2021.

Please contact us if you are unable to meet this deadline.

Send completed forms to:

City of Roseville - Parks, Recreation & Libraries Department
Attn: Heather Buck
316 Vernon Street, Suite 400
Roseville CA 95678

The Parks, Recreation & Libraries Department requires submittal of all of the above executed documents prior to City Council bid award.

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916.774.5505 phone
916.774.5251 fax
www.roseville.ca.us

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CITY OF ROSEVILLE

DEPARTMENT OF _____

Name of Project:_____

NOTICE TO CONTRACTORS

NOTICE IS HEREBY GIVEN THAT sealed Proposals will be received at the Office of the City Clerk, 311 Vernon Street, Roseville, California, until _____ at 3:00 p.m. Late Proposals will be rejected. No exceptions.

The Proposals will be publicly opened and read by the City Clerk or designee of the City of Roseville at 3:05 p.m. on _____, 20__ at the Office of the City Clerk located at 311 Vernon Street, Roseville California for the following project:

_____.

A pre-bid meeting will be held at _____

~~Woodcreek Oaks, Blvd, Roseville, CA.~~_____.

A Project Manual, including all Contract Documents and the Proposal forms for bidding this project, may be obtained on-line from the City of Roseville's website at www.roseville.ca.us/business/bids_rfps_rfqs_and_rfis.asp. All communications relative to this project shall be conducted through Public Purchase.

Bids shall be submitted on the City's Proposal Forms included in the Project Manual, plainly endorsed with the Bidder's name together with signed acknowledgement of any and all addenda. Proposal Forms shall be securely sealed in a suitable envelope marked with the name and address of the Bidder, and marked in capital letters on the front and back of the envelope as

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follows:

[NAME OF PROJECT]

(Name of Bidder)

(Address of Bidder)

Whether mailed or personally delivered, all bids shall be addressed to the City of Roseville, Office of the City Clerk, 311 Vernon Street, Roseville, California, 95678.

Each bid must be accompanied by a Bid Guaranty in the form of a Certificate of Deposit, Certified or Cashier's Check, Bidder's Bond or Irrevocable Standby Letter of Credit in an amount equal to at least ten percent (10%) of the Bidder's Grand Total Price. The Bid Guaranty will be retained by the City and applied to any and all damages sustained by the City in the event that the successful Bidder fails or refuses to enter into the Contract awarded to it and to furnish all required bonds and Certificates of Insurance. The City intends to award the Contract to the lowest responsible Bidder based on the Grand Total Bid Price for all components of the Project. To the extent allowed by law, the City reserves the right to reject any and all bids and/or to waive any irregularities or informalities in any bid or in the bidding procedure. The City specifically reserves the right to not award the Contract after the opening of bids.

Any bid may be withdrawn at any time prior to the time fixed in the public notice for the deadline submission of bids only by written request for the withdrawal of the bid filed with the City Clerk. The request shall be executed by the Bidder or his or her duly authorized representative. The withdrawal of a bid does not prejudice the right of the Bidder to file a new bid by the submission deadline. Whether or not bids are opened exactly at the time fixed in the public notice for opening bids, a bid will not be received after the deadline submission of bids

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nor may any bid be withdrawn after the time fixed in the public notice for deadline for submission of bids. Immediately following the deadline for submission of bids all bids shall become the property of the City of Roseville and the City is under no obligation to return bids.

Bids will be examined and reported to the City Council within sixty (60) business days after the bid opening. Except as permitted by applicable law, no Bidder may withdraw its bid for a period of sixty (60) business days after the date of bid opening. Each Bidder will be notified of any award of the Contract by the City.

The City will affirmatively ensure non-discrimination on the basis of one or more of the following: race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, age, sexual orientation, or military and veteran status in the award and administration of contracts that it awards.

Pursuant to Public Contract Code Section 22300, the successful Bidder may submit certain securities in lieu of the City withholding retention of payments during the Project.

The City has determined that the Contractor shall possess a valid Class ___, _____ Contractor's license at the time that the bid is submitted, as well as any other license classification as may be required by the laws of the California for the performance of the work specified in the Contract Documents. Said license shall be maintained during the Contract period. Failure to possess the specified license shall render the bid nonresponsive and will act as a bar to the award of the Contract to any Bidder not possessing such a license at the time of bid submittal. The Contractor shall provide certification of the license, its number and the expiration date on the proposal form.

The work is to be done in Placer County. Pursuant to California Labor Code Section 1773, the City has ascertained the General Prevailing Rate of Wages in the County in which the

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work is to be done to be as determined by the Director of Industrial Relations of the State of California. The Contractor is hereby made aware that information regarding prevailing wage rates may be obtained from the State Department of Industrial Relations and/or the following website address: http://www.dir.ca.gov/dlsr/DPreWageDetermination.htm. The Contractor is required to post a copy of the applicable wage rates at the job site. Attention is directed to Section 5 "Legal Relations and Responsibility" of the General Conditions.

Pursuant to Labor Code Section 1771.1(b), notice is hereby given that a contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in Labor Code Sections 1720, et seq., unless currently registered and qualified to perform public work pursuant to Labor Code Section 1725.5 or exempt from registration requirements pursuant to Labor Code Section 1725.5(f). It is not a violation of Labor Code Section 1771.1 for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform work pursuant to Labor Code Section 1725.5 at the time the contract is awarded or is exempt from registration requirements pursuant to Labor Code Section 1725.5(f). The Contractor is hereby notified that this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

All questions prior to the deadline for bid submissions shall be directed to the attention of _____ via _____ at _____. The deadline for submissions of questions and clarifications regarding the Contract Documents is _____ calendar days before the deadline for

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bid submissions. Only Addenda issued by the City are binding.

_____
City Clerk, City of Roseville

Dated: _____

Published: _____

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INSTRUCTIONS TO BIDDERS

SECTION 1. GENERAL

1-1.01 **GENERAL.** These Instructions to Bidders form a part of the Contract Documents. Capitalized terms are defined in the General Conditions Section 1.

1-1.02 **EXAMINATION OF PLANS, CONTRACT DOCUMENTS AND SITE OF THE WORK.** The Bidder shall examine carefully the site of the Work and all the Contract Documents, including these Instructions to Bidders, and shall inform itself of the conditions relating to the execution of the Work. Failure to do so will not relieve the successful Bidder of its obligation to enter into an Agreement and complete the Work in strict accordance with the Contract Documents. Conditions relating to the execution of the Work include the requirements of federal, state, and local laws, statutes and ordinances relative to the execution of Work, including, but not limited to, applicable regulations concerning prevailing wage rates, non-discrimination in the employment of labor, protection of the public, employee health and safety, and environmental protection.

The submission of a bid shall be conclusive evidence that the Bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of Work to be performed, the quantities of materials to be furnished, and as to the requirements of all the Contract Documents.

1-1.03 **EXISTING INFORMATION.** Where the Department has made investigations of site conditions, including subsurface conditions in areas where Work is to be performed under the Contract, such investigations are made only for the purpose of study and design. City does not represent that such conditions as found in these investigations or inferences or conclusions drawn as a result of these investigations will represent actual site

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conditions and hereby disclaims any liability as a result of Contractor's or Bidder's reliance on such investigations. City will presume that all Bidders have conducted their own site investigations, including investigations of subsurface conditions. Where such investigations have been made, Bidders or Contractors may, upon written request, inspect the records of the Department as to such investigations subject to the conditions set forth in these Instructions to Bidders. Such inspection of records may be made only at the location noted above. The records of such investigations are not a part of the Contract Documents and are shown solely for the convenience of the Bidder or Contractor. The City assumes no responsibility whatsoever with respect to the sufficiency or accuracy of the investigations made, the records thereof, or of the interpretations set forth therein or made by the City in its use thereof. The City makes no warranty or guarantee, either express or implied, that the conditions indicated by such investigations or records are representative of those existing throughout such areas, or any part thereof, or that unforeseen developments may not occur, or that materials other than, or in proportions different from those indicated, may not be encountered.

No information derived from such inspection of records of investigations or compilation thereof made by the City, the Department or from the Engineer, or his or her assistants, will in any way relieve the Bidder or Contractor from properly examining the site and making such additional investigations as it may elect, or from properly fulfilling the terms of the Contract.

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SECTION 2: BID REQUIREMENTS

2-1.01 **PROPOSAL FORMS.** The Department will furnish to each Bidder standard Proposal Forms, which, when filled out and executed may be submitted as the bid. Proposals shall include all pages in the Project Manual with page numbers marked "PROP" plus the Addendum acknowledgment form (front sheet) from all Addenda received by the Bidder. Proposals shall be removed from the Project Manual. The full Project Manual shall not be submitted with the proposal. Bids not presented on forms so furnished will be disregarded.

The Proposal and one (1) copy thereof shall be submitted as directed in the "Notice to Contractors" under sealed cover plainly marked as a Proposal, and identifying the project to which the Proposal relates and the date of the bid opening therefor. Proposals which are not properly marked may be disregarded.

All blank spaces in the Proposal must be completed, as required, in ink. All price information shall be shown, clearly legible, in figures where required.

The Bidder shall sign the Proposal in the blank space provided therefor. If the Bidder is the sole owner, the Proposal shall be signed by the owner. If the Bidder is a corporation, the legal name of the corporation and its State of incorporation shall be set forth and the Proposal shall be signed by at least two officers authorized to sign contracts on behalf of the corporation. If the Bidder is a partnership, the true name of the firm shall be set forth, the names and addresses of all partners shall be given and the Proposal shall be signed by a partner in the firm authorized to sign contracts on behalf of the partnership. If the Bidder is a joint venture, the Proposal shall be signed on behalf of each participating company by officers or other individuals who have the full and proper authorization to do so. If the Proposal is signed by an agent of the Bidder other than an officer of a corporation or a member of a partnership, a notarized Power of

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Attorney must be on file with the City prior to opening of bids or must be submitted with the Proposal. If requested by the City, the Bidder shall promptly submit evidence satisfactory to the City of the authority of the person signing the Proposal.

2-1.02 **SUBMISSION OF BIDS.** Bids must be submitted at the prescribed time and location specified in the Notice to Contractors. Any submission received after the prescribed time shall be rejected, regardless of whether or not bids are opened exactly at the prescribed time.

Any unauthorized conditions or qualifications entered on, or changes made to, the Proposal may render it invalid and may cause its rejection.

No telegraphic, telephonic, or facsimile or other electronically transmitted bids will be considered.

2-1.03 **REQUIRED LISTING OF PROPOSED SUBCONTRACTORS.** Each Proposal shall list the name, address and Contractor license number of each Subcontractor to whom the Bidder proposes to subcontract portions of the Work in an amount in excess of one-half of one percent (0.5%) of its total bid, in accordance with Section 4100 to 4114, inclusive, of the Public Contract Code for the State of California. The Bidder shall list the Subcontractor's license number and the portion of the Work that will be done by each Subcontractor. If the Bidder fails to specify a Subcontractor for any portion of the Work, the Bidder agrees to perform that portion of the Work itself, and represents that it is qualified to perform that portion of the Work itself. The Bidder's attention is invited to other provisions of the Public Contract Code related to the imposition of penalties for a failure to observe its provisions by using unauthorized Subcontractors or by making unauthorized substitutions.

2-1.04 **CONTRACTOR'S LICENSING LAWS.** Attention is directed to the

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provisions of Business and Professions Code Chapter 9 of Division 3 concerning the licensing of Contractors.

All Bidders at the time of bid submittal shall be licensed as Contractors in accordance with the laws of this State. Any Bidder or Contractor not so licensed is subject to the penalties imposed by such laws. The form of Contractor's license required is stated in the Notice to Contractors, provided that the City makes no representation as to whether the State may require other or additional licenses. It is the Bidder's and Contractor's responsibility to obtain the correct Contractor's licenses. Bidders shall be skilled and regularly engaged in the general class or type of Work called for under this Contract.

All Bidders and Contractors, including Subcontractors, shall have a current City business license before undertaking any Work.

2-1.05 **NONCOLLUSION DECLARATION.** By submitting a bid, the Bidder represents and warrants that such bid is genuine and not a sham or collusive or made in the interest or on the behalf of any person therein named, and that the Bidder has not, directly or indirectly, included or solicited any other Bidder to put in a sham bid, or any other person, firm, or corporation to refrain from bidding, and that the Bidder has not in any manner sought collusion to secure the Bidder an advantage over any other Bidder.

Bidders shall submit a properly completed and executed "Noncollusion Declaration" in the form required by Public Contract Code Section 7106 and provided with the Proposal (PROP-11).

2-1.06 **DISQUALIFICATION, REMOVAL OR OTHER PREVENTION OF BIDDING.** A bid may be rejected on the basis of a Bidder, any officer of such Bidder, or any employee of such Bidder who has a proprietary interest in such Bidder, having been disqualified,

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removed, or otherwise prevented from bidding on, or completing a federal, state, or local project because of a violation of law or a safety regulation.

2-1.07 **PROPOSAL GUARANTY.** All bids shall be accompanied by one of the following forms of Bidder's security: Cash, a cashier's check, a certified check, or a Bidder's bond executed by an admitted California surety insurer, made payable to the City of Roseville, or any other form of security deemed acceptable by the City Attorney. The security shall be in an amount equal to at least ten percent (10%) of the amount bid. A bid will not be considered unless one of the form of Bidder's security is enclosed with it.

A Bidder's bond shall conform to the City's bond form in the Proposal and shall be properly filled out and executed.

2-1.08 **SCHEDULE OF BID PRICES.** Bidders are directed to submit unit and lump sum prices for all Work set forth in the Contract Documents on the Proposal Form entitled "Schedule of Bid Prices."

Unit prices and lump sum prices, as indicated, must be entered in the appropriate spaces provided in the Schedule of Bid Prices. If applicable, unit prices shall be multiplied by the quantities shown, and the total shall be inserted in the Amount column. In the event of any error or discrepancy between the unit price and the calculated amount, the unit prices shall govern. The City may correct any mathematical errors apparent on the face of the bid.

The amounts shown in the Amount column must be added together in arriving at the Grand Total Bid Price.

Amounts for Allowance bid items must be entered in the exact amount in the Amount column.

The prices included within the Schedule of Bid Prices shall include all costs for labor,

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materials, tools, equipment, services, Subcontractors, suppliers, taxes, insurance, shipment, delivery, overhead, profit, and all other costs necessary to perform the Work in accordance with the Contract Documents.

The Grand Total Bid Price shall be indicated in the Summary table form included with the Schedule of Bid Prices. The Grand Total Bid Price shall be the sum of the amounts bid for each of the designated portions of the Work, as more specifically described on the Schedule of Bid Prices form itself.

Full compensation for complying with the Contract Documents, including requirements of the Standard Specifications, the General Conditions, Supplemental Conditions, and all warranties, shall be considered included in the bid items and no additional compensation shall be allowed therefor.

Full compensation for completion of all work as shown on the plans, as specified in the Specifications, and as directed by the City, shall be considered included in the bid items and no additional compensation shall be allowed.

Bidders are strongly discouraged from submitting unbalanced bids. As used herein, the term "unbalanced bid" is defined as any bid that does not include a reasonable proportionate allocation of indirect costs and profit of each bid item indicated in the Schedule of Bid Prices. The City reserves the right to reject any unbalanced bid if the City determines that there is a reasonable doubt that an acceptance of the bid will not result in the lowest ultimate cost to the City with regard to the work or a disproportionate distribution of contract funds.

The City reserves the right to delete any bid item in its entirety and/or significantly reduce the quantity of Work under a bid item. The City makes no representation that any Work under a bid item will be performed during the course of the Project or that the Work will be

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performed at the quantities included in the Schedule of Bid Prices. As provided in the General Conditions, for any deleted Work, Contractor shall not be entitled to payment of the indirect costs and profit included for said bid item. All bid items shall be considered distinct and severable from the remaining bid items, and each Bidder acts at its peril if its bid is unbalanced.

The City shall compare bids on the basis of the Grand Total Bid Price, which includes the base bid and any alternates designated on the Schedule of Bid Prices. Alternates may or may not be awarded, or may be awarded in any combination, at the City's discretion.

2-1.09 **WITHDRAWAL OF PROPOSALS.** Any bid may be withdrawn at any time prior to the time fixed in the Notice to Contractors for the opening of bids, provided that a request in writing, executed by the Bidder or its duly authorized representative, for the withdrawal of such bid is filed with the City Clerk. Facsimile and electronic mail requests are not acceptable. The withdrawal of a bid shall not prejudice the right of a Bidder to file a new bid. The withdrawal of any bid after the time fixed in the Notice to Contractors for the opening of bids will not be permitted.

2-1.10 **ADDENDUM.** Proposals shall include all costs and account for all Addenda issued prior to opening of bids. The Bidder is responsible for verifying that all issued Addenda have been received. An Addendum acknowledgment form for each Addendum shall be included as part of the Proposal submittal.

2-1.11 **PUBLIC OPENING OF PROPOSALS.** Proposals will be publicly opened and read at the time and place indicated in the Notice to Contractors. Bidders or their authorized agents are invited to be present.

2-1.12 **TRENCHING AND EXCAVATION WORK.** In accordance with the provisions of California Labor Code Section 6707, if the Work involves construction of a

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pipeline, sewer, sewage disposal system, boring or jacking pits, or similar trenches or open excavations, which are five feet (5') or deeper, each bid submitted shall contain, as a bid item, adequate sheeting, shoring, and bracing, or equivalent method, for the protection of life or limb, which shall conform to all applicable safety orders.

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SECTION 3: EVALUATION OF BIDS

3-1.01 **BID EVALUATION PROCESS.** Bids will be evaluated to determine the apparent low Bidder. The apparent low Bidder will be determined on the basis of the Grand Total Bid Price, as shown in the Schedule of Bid Prices. If additive or deductive alternates are used in the Schedule of Bid Prices, the apparent low Bidder will be the Bidder with the lowest total of the bid prices for base contract items plus the alternates designated by the City as those that will be used for determining the lowest bid price. However, the City reserves the right to (1) not award any alternates or (2) award any combination of alternates.

In case of discrepancy between the total of the base contract items and any specified alternates and the stated Grand Total Bid Price, the total of the base contract items plus specified alternates shall prevail. Any mathematical errors that appear on the face of the bid will be corrected by the City and the City will use the mathematically corrected addition. For example, if the mathematical total of Bidder's base contract items plus specified alternates equals $1,000,000, but the Bidder has written $1,250,000 as the Grand Total Bid Price, the City will consider $1,000,000 to be the Bidder's Grand Total Bid Price for purposes of comparison to other Bidders and actual bid award. The City reserves its rights to reject or accept bids based on discrepancies between the stated Grand Total Bid Price and the actual mathematical total of the base contract bid items, plus specified alternates.

3-1.02 **REJECTION OF IRREGULAR PROPOSALS.** Proposals may be rejected in the City's sole discretion if they show any alterations of form, additions not called for, conditional bids, incomplete bids, erasures, or irregularities of any kind. However, the City reserves the right to waive any minor irregularities and informalities in any bid or in the bid procedure for any reason.

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3-1.03 **COMPETITIVE BIDDING.** If more than one proposal is offered by any individual, firm, partnership, corporation, association, or any combination thereof, under the same or different names, all such proposals may be rejected. A party who has quoted prices on materials or Work to a Bidder is not thereby disqualified from quoting prices to other Bidders, or from submitting a bid directly for the materials or Work.

All Bidders are put on notice that any collusive agreement to control or affect the awarding of this Contract is in violation of the competitive bidding requirements of the City Charter, State Contract Act and the Business and Professions Code and may render void any Contract let under such circumstances.

3-1.04 **RELIEF OF BIDDERS.** If the Bidder claims a mistake was made in its bid, the Bidder shall give the Department written notice within five (5) Days after the opening of the bids of the alleged mistake, specifying in the notice in detail how the mistake occurred. No relief from a claimed mistaken bid shall be granted unless such mistake clearly appears on the face of the bid submitted to the City. Claimed mistakes on backup worksheets, spreadsheets, computerized bidding programs, or any other similar calculative bidding mistake which is not apparent on the face of the bid shall not under any circumstance be considered as a basis for relief. The burden of proving the occurrence of a mistake entitling a Bidder to relief from its bid rests entirely on the Bidder. Relief from bids shall be in the City's sole discretion.

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SECTION 4: AWARD AND EXECUTION OF CONTRACT

4-1.01 **AWARD OF CONTRACT.** The City reserves the right to reject any and all proposals and to award (or not award) any combination of bid items at its option. Any such award will be to the lowest responsible Bidder whose proposal complies with the requirements prescribed for the bid items awarded. Such award, if made, will be made within sixty (60) business days after the opening of the proposals. If the lowest responsible Bidder refuses or fails to execute the Contract, or provide an acceptable Performance Bond, Payment Bond, and insurance certificate(s), the City may award the Contract to the second lowest responsible Bidder. Such award, if made, will be made within eighty-two (82) business days after the opening of proposals. If the second lowest responsible Bidder refuses or fails to execute the Contract, or provide an acceptable Performance Bond, Payment Bond, and insurance certificate(s), the City may award the Contract to the third lowest responsible Bidder. Such award, if made, will be made within one hundred four (104) business days after the opening of the proposals. The above time periods within which the award of Contract may be made are subject to extension for such further period as may be agreed upon in writing between the City and the Bidder concerned.

4-1.02 **RETURN OF BIDDER'S SECURITIES.** Within ten (10) Days after the award of the Contract, the City Clerk will return all Bidders' securities, other than Bidders' bonds, accompanying the proposals that are not to be further considered in making the award. Retained Bidders' securities will be held until the Contract has been fully executed, after which all Bidders' securities, except Bidders' bonds and any Bidders' securities that have been forfeited, will be returned.

4-1.03 **CONTRACT BONDS.** The successful Bidder shall furnish two (2)

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bonds in the form contained in the section entitled Insurance Broker Information Packet and Bonds. One (1) bond shall secure the payment of the claims of laborers, mechanics or materialmen employed on the Work under the Contract, and the other bond shall guarantee the faithful performance of the Contract.

Each of the two (2) bonds shall be in a sum equal to one hundred percent (100%) of the Contract Price. If the Contract Price increases by the issuance of Change Orders, the penal amounts of the bonds required shall increase accordingly. Sureties on each of said bonds shall be satisfactory to the City.

All alterations, extensions of time, extra and additional Work, and other changes authorized by the Standard Specifications, the General Conditions, the Supplemental Conditions or any part of the Contract may be made without securing the consent of the surety or sureties on the Contract bonds.

Furthermore, the successful Bidder shall furnish a certificate from the County Clerk as required by California Civil Code of Procedure Section 995.660(a)(3).

4-1.04 **INSURANCE.** At the time of the execution of the Contract, the Contractor shall, at its own expense, procure, and at all times during the prosecution of the Work maintain in full force and effect Worker's Compensation Insurance, and Liability Insurance as specified in the General Conditions. The Contractor shall provide a Certificate of Insurance in the form contained in the section entitled Insurance Broker Information Packet.

4-1.05 **EXECUTION OF CONTRACT.** The Contract shall be signed by the successful Bidder and returned, together with all the required Contract bonds and insurance certificates, within fifteen (15) Days after the Contract has been awarded, or as otherwise directed, in writing, by the City.

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If the Bidder is an individual, the Contract shall be executed personally by the Bidder. If the Bidder is a partnership, it is desirable that the Contract be executed by all of the partners, but it may be executed by one of them. If the Bidder is a corporation, it must be executed by two officers of the corporation consisting of (1) the chairman of the board, president or vice president; and (2) the secretary, assistant secretary, chief financial officer, treasurer or assistant treasurer, or by a person authorized by the corporation to execute written contracts on its behalf, and the corporate seal affixed thereto. In the alternative, a person other than an officer may sign the Contract, provided evidence satisfactory to the City is provided indicating the individual's authority to bind the corporation. If the corporate seal is not affixed to the Contract, or if it is executed by a person other than officers, or only by one officer, there must be attached to the Contract a certified copy of a resolution of the corporation authorizing such officer or person to execute written contracts for and on behalf of the corporation. If the Bidder is a joint venture, the Contract must be executed on behalf of each participating firm by officers or other individuals who have the full and proper authorization to do so.

4-1.06 **FAILURE TO EXECUTE CONTRACT.** Failure of the lowest responsible Bidder, the second lowest responsible Bidder, or the third lowest responsible Bidder to execute the Contract and file acceptable bonds and insurance as provided within fifteen (15) Days after the Contract has been awarded, or as otherwise directed, in writing, by the City, shall be just cause for annulment of the award and forfeiture of the Bidder's security. The successful Bidder may file with the City Clerk a written notice, signed by the Bidder or Bidder's authorized representative, specifying that the Bidder will refuse to execute the Contract if presented to Bidder. The filing of such notice shall have the same force and effect as the failure of the Bidder to execute the Contract and furnish acceptable bonds within the time prescribed.

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SECTION 5: BID PROTEST PROCEDURES

5-1.01 **POLICY/PROCEDURES.** It is the policy of the City to consider fully and adjudicate promptly protests filed by prospective Bidders relating to the City's bidding procedure or award of the Contract. Protests shall be filed and processed in accordance with Section 4.12.150 of the Roseville Municipal Code. A Bidder's failure to follow the bid protest procedures may result in rejection of the protest by the City.

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PROPOSAL TO THE DEPARTMENT OF _____

Project:_____

Name of Bidder _____ Business Phone _____

Business Address _____

Place of Business _____

Contractor's License No. _____

License Expiration Date_____

License Classification Type _____

DIR Registration No. _____

Type of business organization: _____

*If a Corporation, incorporated under the laws of the State of: _____

City of Roseville Business License No._____

The undersigned Bidder herewith submits this Proposal and binds itself on award by the City of Roseville under this bid to execute a Contract in accordance with its bid and the Contract Documents.

The Notice to Contractors, Instructions to Bidders, Form of Agreement, Specifications, General Conditions, Supplemental Conditions, Contract Drawings, and Addenda, if any, are made part of this bid and all provisions thereof are hereby accepted, and all representations and warranties are required thereby are hereby affirmed.

The work to be done is described in the Bidding Documents entitled _____

_____, City of Roseville, California.

This offer shall be irrevocable for a period of sixty (60) Days after the date on which bids are opened.

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The undersigned Bidder understands that any clarification made to the above or any new and different conditions or information submitted on or with its Proposal, other than that requested, may render the bid non-responsive.

The undersigned, as Bidder, declares that the only persons or parties interested in this Proposal as principals are those named herein; that this Proposal is made without collusion with any other person, firm, or corporation; that the Bidder has carefully examined the location of the proposed Work, the attached Form of Agreement, and the plans, Specifications, and other Contract Documents; and agrees if this Proposal is accepted, that it will contract with the City of Roseville, in the form of a copy of the Agreement contained in the Project Manual, to provide all necessary machinery, tools, apparatus and other means of construction, and to do all the work and furnish all the materials specified in the Contract Documents, in the manner and time therein prescribed, and according to the requirements of the Director, as therein set forth, and that the Bidder will take in full payment therefore prices indicated in the Schedule of Bid Items, including all work modified by addendum numbers _____. (IF NONE, STATE NONE).

Bids are required for all Bid Items. The amount of the Bid for comparison purposes will be the total of all items awarded.

The Bidder shall set forth for each item of work, in clearly legible figures, an item ("unit") price and a total for the item in the respective spaces provided for this purpose in the Schedule of Bid Items.

The prices included within the Schedule of Bid Items include all costs for labor, materials, tools, equipment, services, Subcontractors, suppliers, taxes, insurance, shipment, delivery, overhead, profit, and for all other costs necessary to perform the Work in accordance

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with the Contract Documents.

Accompanying this Proposal is _____.

(Notice: Insert the words "Cash $_____," "Cashier's Check," "Certified Check," or "Bidder's Bond," as the case may be, in an amount equal to at least ten percent (10%) of the total of the Bid.)

The names of all persons interested in the foregoing Proposal as Principals, are as follows: _____

_____

_____

_____

If SOLE OWNER, execute here:

I sign as sole owner of the business named above:

_____

If PARTNERSHIP, one or more partners sign here:

The undersigned certify that we are partners in the business named above and that we sign this bid with the full authority to do so:

_____

_____

If CORPORATION, execute here:

Corporate Name: _____

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Incorporated under the laws of the State of _____

The undersigned certify that they sign this bid with the full and proper authorization so to do:

By_____	By_____
*Signature of Authorized Official**	*Signature of Authorized Official**
_____	_____
Title	*Title*
_____	_____
Typewritten or Printed Name	*Typewritten or Printed Name*

If JOINT VENTURE, execute here:

Joint Venture name composed of: _____

The undersigned certify that they sign this bid with the full and proper authorization so to do:

_____	_____
*Signature of Authorized Official**	*Signature of Authorized Official**
_____	_____
Title	*Title*
_____	_____
Typewritten or Printed Name	*Typewritten or Printed Name*

*If Bidder is a partnership or Joint Venture, give the full names of all partners and/or Joint Ventures in the space provided (use additional sheet if required). If Bidder is a corporation, two signatures are required as follows: (1) the Chairman, President, or Vice-President and (2) the Secretary, Assistant Secretary, Chief Financial Officer, Treasurer, or Assistant Treasurer. In the alternative, this Agreement may be executed by a single officer or a person other than an officer provided that evidence satisfactory to City is provided demonstrating that such individual is authorized to bind the corporation (example, a copy of a certified resolution from the corporation's board or a copy of the corporation's bylaws).

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[LIST OF SUBCONTRACTORS FOLLOWS ON NEXT PAGE.]

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LIST OF SUBCONTRACTORS

Contractor's Name: _____

The Bidder is required to furnish the following information in accordance with the provisions of Section 4100 and 4114, inclusive, of the Public Contract Code of the State of California. This list and information shall include all Subcontractors that perform work, provide labor or render services to the Bidder in connection with the Project in an amount in excess of one-half of one percent (0.5%) of the total amount of the Bidder Grand Total Price.

PORTION/ TYPE OF WORK	% OF CONTRACT	SUB-CONTRACTOR'S NAME	CONTRACTOR LICENSE NO.	DIR REG NO.	BUSINESS ADDRESS (CITY, STATE)

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SECURITY FOR COMPENSATION CERTIFICATE

(Required by California Labor Code Section 1861)

TO: City Council
City of Roseville

I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Contract.

_____

_____
(Signature of Bidder)

_____

_____
Business Address

_____
Telephone

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BIDDER'S BOND

City Council of the City of Roseville

KNOW ALL MEN BY THESE PRESENTS:

That we _____

_____, as PRINCIPAL, and

_____

a, _____ and duly authorized to transact business under the laws of the State of California, as SURETY, are held and firmly bound unto the City of Roseville in the penal sum of _____ dollars ($_____), being at least TEN PERCENT (10%) OF THE TOTAL AMOUNT OF THE BID of the Principal above named, submitted by said Principal to the City of Roseville, acting by and through the Public Works Director, for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, to the Director of the Department to which said Bid was submitted, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH,

That whereas the Principal has submitted the above-mentioned Bid to the City Council of the City of Roseville, as aforesaid, for certain construction specifically described as follows, for which Bids are to be opened at the Office of the City Clerk located at 311 Vernon Street, Roseville, California, on _____, 20__ FOR

_____

(Copy here the exact title of work as it appears on the Proposal.)

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NOW, THEREFORE, IF THE AFORESAID PRINCIPAL is awarded the Contract and, within the time and manner required under the Contract Documents, after the prescribed forms are presented for signature, enters into a written Contract, in the prescribed form, in accordance with the Bid, and files all insurance and two (2) Bonds with the Department, one (1) to guarantee Faithful Performance and the other to guarantee Payment for Labor and Materials, as required by law, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on this _____ day of _____, 20___.

_____(Seal)

_____(Seal)

_____(Seal)
Principal

_____(Seal)

_____(Seal)

_____(Seal)
Surety

_____

_____
Business Address

NOTE: To be considered complete, both the Principal and the Surety must sign this Bidder's Bond. In addition, signatures of those executing for the Surety must be properly acknowledged.

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SCHEDULE OF BID ITEMS

ROSEVILLE AQUATICS COMPLEX SLIDE AND WATER PLAY STRUCTURE REPLACEMENT PROJECT

The bidder, in compliance with the published Notice to Contractors for the removal and replacement of existing pool slide, water play structure, and associated piping, pool deck modifications, replacement of existing pool equipment, and replaster of existing recreation pool and any other items necessary as shown on the Plans and Specifications; having examined the Plans and Specifications, any and all addenda, any related documents, and all of the sites of the proposed work, and being familiar with all the conditions surrounding the construction of the proposed project, including the availability of material, hereby proposes to furnish all labor, materials, and supplies, and to construct the project in accordance with the Contract Documents, within the time period set forth therein, and at the prices stated. This is a "Lump Sum Bid" project. These prices are to include all labor, materials, supplies, and all other expenditures incidental to complete compliance to the Contract Documents.

The work to be included in the Contract shall be determined by the City prior to award of Contract. The amount of the bid for comparison and award purposes shall be the total amount set forth in the "Lump Sum Base Bid". The City reserves the right to award none, all or selected add alternates as the budget permits.

TOTAL LUMP SUM BASE BID for:

Roseville Aquatics Complex Slide and Water Play Structure Replacement Project according to the plans and specifications.

Numerical Total **Base** Bid: $_____

Written Total **Base** Bid: _____dollars and_____

Add Alternates:

Add Alternate 1: Additional Pool Deck Replacement.

Numerical Total Bid: $_____

Written Total Bid: _____dollars and_____

Add Alternate 2: Removal and replacement of the pump and motor in kind for Pool C, removal and replacement of the water fill valve in kind for Pool C, and removal and replacement of the CO2 delivery system in kind for Pool C.

Numerical Total Bid: $_____

Written Total Bid: _____dollars and_____

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TOTAL LUMP SUM BID (Lump Sum plus add alternates 1 and 2)

Numerical Total Bid: $_____

Written Total Bid: _____dollars and_____

The additions or deletions sheets (PROP 10 C-D) are required to be submitted with the proposal and shall be completed in their entirety. Failure to do so would be interpreted an as incomplete/non-responsive bid. This breakdown will not be considered for bid award but will be used during the contract in case of change orders.

Contractor Name (print or type): _____

Signature (by authorized representative): _____

Date: _____ License No.: _____ Class: _____

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ROSEVILLE AQUATICS COMPLEX SLIDE AND WATER PLAY STRUCTURE REPLACEMENT PROJECT

For Additions and Deletions Only

Contractor shall provide itemized costs as shown below for use during construction for additions or deletions only. Unit costs to be listed are based on the project plans, specifications, Parks Construction Standards and the Design & Construction Standards, unless otherwise noted. Items listed are not necessarily shown on the plans or identified in the Technical Specifications.

Item	Description	Unit	Unit Cost
1	EC-2 Preservation of Existing Vegetation	sf	
2	EC-3 Hydraulic Mulch	sf	
3	EC-4 Hydroseeding	sf	
4	EC-6 Straw Mulch	sf	
5	EC-7 Geotextiles and Mats	sf	
6	EC-8 Wood Mulching	sf	
7	EC-10 Velocity dissipation device	ea	
8	EC-11 Slope Drains	ea	
9	EC-14 Compost Blanket	sf	
10	EC-16 Non-Vegetative Stabilization	sf	
11	SE-1 Silt Fence	lf	
12	SE-5 Fiber Rolls	lf	
13	SE-6 Gravel Bag Berm	ea	
14	SE-7 Street Sweeping and Vacuuming	ea	
15	SE-8 Sandbag Barrier	lf	
16	SE-9 Straw Bale Barrier	lf	
17	SE-10 Storm Drain Inlet Protection	ea	
18	TC-1 Stabilized construction entrance/exit	ea	
19	TC-3 Entrance/outlet tire wash	ea	
20	Site Security Fencing	lf	
21	Additional Pool Deck removal and replacement	sf	
22	Removal and replacement of pump and motor in kind (Pool C)	ls	
23	Removal and replacement of water fill valve in kind (Pool C)	ls	

Items 1 through 19 are to be consistent with requirements detailed in California Stormwater Quality Association Stormwater Best Management Practice Handbook, latest edition.

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ROSEVILLE AQUATICS COMPLEX SLIDE AND WATER PLAY STRUCTURE REPLACEMENT PROJECT

For Additions and Deletions Only (continued)

Item	Description	Unit	Unit Cost
24	Removal and replacement of CO2 delivery system in kind (Pool C)	ls	
25	Engineering and permitting for items 22, 23, and 24 above	ls	
26	Engineered shop drawings for replacement of existing Pool C lights w/LED	ls	
27	Removal and replacement of existing Pool C light with LED light	ea	
28	Reseal surge tank	ea	
29	6" Sleeve (Sch 40)	lf	
30	Irrigation Lateral Lines PVC	lf	
31			
32			
33			
34			
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PROJECT QUALIFICATIONS/EXPERIENCE SHEET

Project Name: _____Company Name: _____ License Type: _____

The following shall be fully completed by the Contractor detailing previous experience which satisfies the project prerequisite. This prerequisite includes aquatics projects of similar size and scope to that of the current project and which has been completed by your company within the last three (3) years. This form shall be fully completed and submitted as a part of the Proposal/Bid Schedule. Failure to do so could be interpreted as an incomplete/non-responsive bid.

1. Project Name: _____ Acres _____ Location:_____
Owner: _____ Contact Person: _____
Phone: (_____) _____ Contract Amount: $_____ Year Completed _____
Landscape Architect/Architect: _____ Phone: (_____) _____

Scope of Work (check all those that apply):

___ Grading	___ Drainage	___ Irrigation	___ Asphalt Concrete Work	___ Concrete Forming
___ Concrete Flatwork	___ Special Concrete Finishing	___ Decomposed Granite Paving	___ Parking Lots	___ Tennis Courts
___ Basketball Court	___ Play Equipment Installation	___ Benches	___ Picnic Tables	___ Lighting
___ Drinking Fountains	___ Masonry Block Work	___ Backstops	___ Restroom Facilities	___ Landscaping

___ Other (specify) _____

2. Project Name: _____ Acres _____ Location:_____
Owner: _____ Contact Person: _____
Phone: (_____) _____ Contract Amount: $_____ Year Completed _____
Landscape Architect/Architect: _____ Phone: (_____) _____

Scope of Work (check all those that apply):

___ Grading	___ Drainage	___ Irrigation	___ Asphalt Concrete Work	___ Concrete Forming
___ Concrete Flatwork	___ Special Concrete Finishing	___ Decomposed Granite Paving	___ Parking Lots	___ Tennis Courts
___ Basketball Court	___ Play Equipment Installation	___ Benches	___ Picnic Tables	___ Lighting
___ Drinking Fountains	___ Masonry Block Work	___ Backstops	___ Restroom Facilities	___ Landscaping

___ Other (specify) _____

3. Project Name: _____ Acres _____ Location:_____
Owner: _____ Contact Person: _____
Phone: (_____) _____ Contract Amount: $_____ Year Completed _____
Landscape Architect/Architect: _____ Phone: (_____) _____

Scope of Work (check all those that apply):

___ Grading	___ Drainage	___ Irrigation	___ Asphalt Concrete Work	___ Concrete Forming
___ Concrete Flatwork	___ Special Concrete Finishing	___ Decomposed Granite Paving	___ Parking Lots	___ Tennis Courts
___ Basketball Court	___ Play Equipment Installation	___ Benches	___ Picnic Tables	___ Lighting
___ Drinking Fountains	___ Masonry Block Work	___ Backstops	___ Restroom Facilities	___ Landscaping

___ Other (specify) _____

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NONCOLLUSION DECLARATION TO BE EXECUTED BY
BIDDER AND SUBMITTED WITH BID

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham bid. The Bidder has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham bid, or to refrain from bidding. The Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other Bidder. All statements contained in the bid are true. The Bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a Bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the Bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____ [date], at _____ [city], _____ [state].

_____
(Signature of Declarant)

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DISQUALIFICATION QUESTIONNAIRE

The Bidder shall complete, under the penalty of perjury, the following questionnaire:

Has the Bidder, any officer of the Bidder, or any employee of the Bidder who has proprietary interest in the Bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

Yes_____ No_____

If the answer is yes, explain the circumstances in the following space.

_____

_____

_____

_____

_____

_____

NAME OF BIDDER: _____

SIGNATURE OF BIDDER: _____

TITLE OF BIDDER: _____

DATE: _____

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ACKNOWLEDGEMENT OF INSURANCE AND BOND REQUIREMENTS

Included in the Bid Price is full compensation for the requirements set forth in the INSURANCE BROKER INFORMATION PACKET of the Project Manual.

NAME OF BIDDER: _____

SIGNATURE OF BIDDER: _____

TITLE OF BIDDER: _____

DATE: _____

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DISCLAIMER OF WARRANTIES AND ACCURACY OF DATA

Although soil and site investigation reports have been obtained from sources believed to be reliable, no warranty expressed or implied is made regarding accuracy, adequacy, completeness, legality, reliability or usefulness of any information contained therein. These reports are subject to change at any time, may be incomplete, and/or may contain errors. This information is provided for informational purposes only. The City of Roseville provides this information on an "as is" basis. Warranties of any kind, express or implied, or statutory, including but not limited to the implied warranties of merchantability, and fitness for a particular purpose ARE DISCLAIMED to any party viewing these documents or to any third party.

The City of Roseville does not accept and expressly disclaims liability to any party viewing such information, or to any third party whatsoever, for any loss, damage, or injury (including incidental or consequential damages) whether such loss, damage, or injury is the result of negligence, willful or intentional misconduct, or any other cause.

I have read and acknowledged the above disclaimer and agree to hold harmless the City of Roseville on any theory of liability for any loss, damage or injury whether in contract, strict liability or tort arising in any way out of the use or contents of the released information or documents described above or the performance of the work called for herein.

Print Name	Signature
Name of Business/Company/Corporation	Date
Address	Phone

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END OF PROPOSAL

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A G R E E M E N T

THIS AGREEMENT, is made and entered into this _____ day of _____, 20_____, by and between the City of Roseville, a municipal corporation, ("CITY"), and _____, a _____, ("CONTRACTOR"); and

W I T N E S E T H:

WHEREAS, the City Council of the CITY, at a meeting held on the ____day of _____, 20_____, approved plans and specifications for the _____

and directed the City Clerk to advertise for sealed proposals for doing said work and providing that bids be submitted on the _____ day of _____, 20_____; and

WHEREAS, the City Clerk, thereafter duly and regularly caused a notice to be published in the manner and for the time prescribed by law; and

WHEREAS, CONTRACTOR, pursuant to the provisions of said notice duly filed a bid with the City Clerk, a true copy of which bid is now on file in the office of the City Clerk, and is hereby referred to and by this reference made a part hereof as fully as if set forth at length herein; and

WHEREAS, all bids received pursuant to said notice were opened and examined and publicly declared at the time specified in said advertisement for bids and at a meeting of the City Council held on the _____ day of _____, 20_____, the Council found and

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declared the bid of CONTRACTOR to be the lowest responsible bid and thereupon awarded a contract to CONTRACTOR to do the work referred to in the aforementioned specifications.

NOW, THEREFORE, the parties agree as follows:

1. THE WORK. CONTRACTOR agrees:

a. To do the work and furnish all the labor, materials, tools, supplies, equipment, superintendence, insurance, and bonds required for the _____ _____ in accordance with the Contract Documents (the Work).

b. To do and perform the Work contemplated hereby in a good and workmanlike manner under the direction of and to the satisfaction of the Director of Public Works of the City of Roseville.

2. PAYMENT. CITY shall pay CONTRACTOR _____ _____ dollars ($_____) for the Work to be done under this Agreement in accordance with the Contract Documents.

3. CONTRACT DOCUMENTS. The complete Agreement between the parties hereto consists of the following documents:

a. The advertisement for bids (including the notice to bidders, instructions to bidders and proposals);

b. The accepted bid;

c. Plans and specifications (including general conditions, supplemental conditions, special provisions and construction details);

d. Bonds and insurance required by the specifications; and

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e. This contract.

All documents specified above are intended to operate so that any work called for in any one and not mentioned in the other, or vice versa, is to be executed the same as if mentioned in all said documents.

4. LIQUIDATED DAMAGES. In the event CONTRACTOR does not complete the Work within the time specified, CONTRACTOR agrees that CITY will suffer damages. Inasmuch as the actual damages which would result from such breach by CONTRACTOR under this Agreement are uncertain, and would be impractical or extremely difficult to fix, CONTRACTOR agrees that it shall pay, or CITY shall deduct from CONTRACTOR's fee, the amount of $_____ per day as liquidated damages, in the event of such delay.

5. TIME OF COMPLETION. Time is of the essence of this Agreement. CONTRACTOR shall complete all Work under the Contract Documents within _____ Days of the date of this Contract. CONTRACTOR shall begin work by the date specified in the "Notice to Proceed" letter and shall diligently prosecute all of the Work under this Contract in all parts and requirements as defined in the Contract Documents.

6. SERVICE OF NOTICE. Any notice required or permitted to be given under this Agreement shall be deemed given when (a) personally delivered to the recipient identified below; (b) mailed by registered or certified mail, return receipt requested, postage pre-paid, to the address specified below; or (c) sent by facsimile, with confirmation of receipt, to the facsimile number identified below.

CITY OF ROSEVILLE	CONTRACTOR
_____	_____
_____	_____
_____	_____
_____	_____

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CITY may also act through either its architect or construction manager if CITY expressly gives notice to CONTRACTOR, in writing, that CITY's designee has authority to act for CITY in a specific capacity.

7. DISPUTES. Disputes arising from this Agreement will be determined in accordance with the Contract Documents and Public Contract Code Sections 10240-10240.13.

8. GOVERNING LAW. This Agreement shall be governed by and construed in accordance with the laws of the State of California.

9. INDEPENDENT CONTRACTOR. CONTRACTOR shall act as an independent contractor, and covenants and agrees that it will conduct itself consistent with such status, that it will neither hold itself out as, nor claim to be, an officer or employee of CITY by reason of this Agreement.

10. SUCCESSORS IN INTEREST. This Agreement shall be binding upon the heirs, successors, executors, administrators and assigns of the respective parties hereto.

11. MODIFICATION. This Agreement and each provision contained herein may be waived, amended, supplemented or eliminated only by mutual written agreement of the parties.

12. SEVERABILITY. If any of the provisions contained in this Agreement are for any reason held invalid or unenforceable, such holding shall not affect the remaining provisions or the validity and enforceability of the Agreement as a whole.

13. INTEGRATED AGREEMENT. This is an integrated agreement and contains all of the terms, considerations, understanding and promises of the parties. It shall be read as a whole.

14. CONTRACTORS LICENSE LAW. CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTORS' STATE LICENSE

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BOARD WHICH HAS JURISDICTION TO INVESTIGATE COMPLAINTS AGAINST CONTRACTORS IF A COMPLAINT REGARDING A PATENT ACT OR OMISSION IS FILED WITHIN FOUR (4) YEARS OF THE DATE OF THE ALLEGED VIOLATION. A COMPLAINT REGARDING A LATENT ACT OR OMISISON PERTAINING TO STRUCUTRAL DEFECTS MUST BE FILED WITHIN TEN (10) YEARS OF THE DATE OF THE ALLEGED VIOLATION. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS' STATE LICENSE BOARD, P.O. BOX 26000, SACRAMENTO, CALIFORNIA 95826.

IN WITNESS WHEREOF, the City of Roseville, a municipal corporation, has authorized the execution of this Agreement in duplicate by its City Manager and attestation by its City Clerk under authority of Resolution No. _____, adopted by the Council of the City of Roseville on the ____day of _____, 20_____, and CONTRACTOR has caused this Agreement to be duly executed.

CITY OF ROSEVILLE, a municipal corporation

BY:_____
DOMINICK CASEY
City Manager

ATTEST:

BY:_____
SONIA OROZCO
City Clerk

_____, a
_____

BY: _____
its: _____

and

BY: _____
its: _____

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APPROVED AS TO FORM:

BY: _____
MICHELLE SHEIDENBERGER
City Attorney

APPROVED AS TO SUBSTANCE:

BY: _____

Print Name:_____

Title:_____

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INSURANCE BROKER INFORMATION PACKET

Project:_____

NOTICE TO CONTRACTOR:

For your convenience, this package contains the Requirements for Insurance and Bonds for this project, including the necessary City forms. You are required to return these forms in addition to the executed Contract within fifteen (15) calendar days after the award of the Bid, unless otherwise directed by City in writing. (See the Instructions to Bidders.)

Please insert the dollar amount of your accepted Bid into the blank on page INS-1 and present this entire package to your insurance broker if you are awarded the Bid.

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Notice to Insurance Broker	INS 1
Insurance Requirements	INS 2
Public Works Faithful Performance Bond	INS 10
Public Works Payment Bond	INS 13

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NOTICE TO INSURANCE BROKER

Your client has been awarded a bid by the City Council of the City of Roseville to perform a public works project known as _____. The Contract Conditions for that project require your client ("the Contractor") to return certain evidence of insurance and bonds to the City Attorney of the City within fifteen (15) days after the Bid award, unless otherwise directed by the City in writing, or else the Bid award may be terminated and awarded to another company.

This package contains the information you will need as an insurance broker to provide the appropriate insurance and bonds to the City. The insurance coverages the Contractor needs are specified in the section entitled "Insurance Requirements." Please note that, in addition to the insurance certificate itself, copies of several endorsements must be actually furnished.

Please refer to the Supplemental Conditions for modifications of the General Conditions, if any, and the requirements of this insurance packet.

Please use the standard City of Roseville Bond Forms provided in this package.

The Bonds required must each be in the penal amount of: $_____.

Bonds must be sent to the following staff person:

_____

_____

_____

Insurance documents must be provided using one of the following methods:

a. By email to roseville@ebix.com and riskmanagement@roseville.ca.us

b. By fax to (770) 335-5727 and (916) 774-5461

After using one of these methods, please **DO NOT** send the insurance certificate(s) by mail.

When forwarding the documents, please refer to the project name so that the documents can be matched with the Contract for which they are submitted.

Thank you.

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INSURANCE REQUIREMENTS

The following sections are quoted from the General Conditions:

5-1.23 **INSURANCE COVERAGE.**

A. Evidence of Maintenance Required. The Contractor shall, at its expense, procure and at all times maintain in full force and effect at a minimum the insurance required by this section on all of its operations; and the Contractor shall not allow any Subcontractor to commence work until similar insurance required of the Subcontractor has been obtained and filed. An original Certificate of Insurance, and copies of all required endorsements, all in a form approved by the Risk Manager, evidencing all required coverage or policies shall be filed after the award of the bid and prior to approval of the Contract by the City Council. Contractor shall provide ten (10) days prior written notice to the City of any reduction of coverage limits or cancellation of the coverage or policies shall be given to the City of Roseville as Certificate holder.

B. Qualifying Insurers. With the exception of the State Compensation Insurance Fund, all required insurance policies shall be issued by companies acceptable to the City and licensed to do business in the State of California and who hold a current policy holders alphabetic and financial size category rating of not less than AVII according to the most recent issue of Best's Insurance Reports.

C. Insurance Required.

1. **Commercial General Liability (CGL):** Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations with limits of no less than Two Million Dollars ($2,000,000) per occurrence for bodily injury, personal injury and property damage for projects under One Million Dollars ($1,000,000) and

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limits of no less than Five Million Dollars ($5,000,000) per occurrence for bodily injury, personal injury and property damage for projects over One Million Dollars ($1,000,000). If a general aggregate limit applies, either the aggregate limit shall apply separately to this project or the general aggregate limit shall be twice the required occurrence limit.

The Commercial General Liability insurance shall include the following, copies of which shall be provided:

a. Inclusion of the City of Roseville, and its officers, agents, employees, and volunteers, as additional insureds (except for workers' compensation) as respects services or operations under the Contract. The additional insured endorsement for the general liability policy shall be at least as broad as the ISO CG 2010 10 01 combined with ISO CGL Endorsement CG 2037 10 01. Any other endorsement must be approved in writing by the City. Endorsements must include coverage for on-going and completed operations, which coverage shall be maintained for four (4) years following completion of the Project. Endorsements shall cover the City of Roseville, its officers, agents, employees, and volunteers.

b. The insurance shall provide coverage for claims by one insured against another insured and the policies shall not contain any cross-suits exclusions, cross-liability exclusions, or insured versus insured exclusions. The policies shall not contain any classification exclusions purporting to deny coverage for any work to be performed by Contractor or any of its Subcontractors.

c. Stipulation that the insurance is primary and noncontributory, as evidenced by a separate endorsement (CG 20 01 04 13 or an equivalent) or section of the policy, and that neither the City nor its insurers will be called upon to contribute to a loss.

d. Such insurance shall specifically cover the contractual liability of

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the Contractor.

e. Any available insurance proceeds in excess of the specified minimum insurance coverage requirements and limits shall be available to the additional insureds. Furthermore, the requirements for coverage and limits shall be: (1) the minimum coverage and limits specified in this Agreement; or (2) the full coverage and maximum limits of any insurance proceeds available to the named insureds, whichever is greater.

f. Waiver of subrogation endorsement.

g. The Contractor shall furnish a certificate for the period covered.

2. **Automobile Liability:** Insurance Services Office Form Number CA 0001 covering Code 1 (any auto), or if Contractor has no owned autos, Code 8 (hired) and Code 9 (non-owned), with limits of no less than One Million Dollars ($1,000,000) per accident for bodily injury and property damage.

3. **Workers' Compensation:** In accordance with the provisions of the California Labor Code, Contractor is required to be insured against liability for Workers' Compensation or to undertake self-insurance. Statutory Workers' Compensation and Employers' Liability of at least One Million Dollars ($1,000,000) shall cover all Contractors staff while performing any work incidental to the performance or this Agreement.

4. **Professional Liability:** Professional Liability (Errors and Omission) Insurance appropriate to Contractor's profession, with a limit of liability not less than One Million Dollars ($1,000,000) per occurrence or claim and Two Million Dollars ($2,000,000) aggregate to cover all design and engineering services rendered by Contractor pursuant to the Agreement. Coverage must commence from the first day that Contractor or any of its Subcontractors provided any design or engineering services in connection with the Project.

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5. **Builder's Risk/Course of Construction Insurance Is ____ OR Is Not ____ Required by Risk Management:** The Contractor shall be responsible for all loss, damage or destruction whatsoever to the work called for by this Contract until the approval of a Notice of Completion or acceptance of the Work if no Notice of Completion is to be recorded.

The Contractor shall secure "All Risk" type of builder's Risk Insurance of the type covering one hundred percent (100%) of the value of the work performed under this Contract (the value is presumed to be the Contract amount unless otherwise stated in Supplemental Conditions) and all materials, equipment, or other items to be incorporated therein while the same are located at the construction site, a bonded warehouse, or its place of manufacture. At any time, the policy shall cover the value of the work completed. The policy shall cover hazards including the losses due to fire, explosion, hail, rain, lightning, flood (separate insurance as needed), vandalism, malicious mischief, wind, collapse, aircraft, and smoke.

The policies providing such insurance shall name the City as a loss payee as its respective interests may appear, and certified copies of such policies shall be filed with the City. The maximum deductible allowable under the Builder's All Risk policy shall be five percent (5%) of the Contract amount.

Builder's Risk Insurance is not required for coverage of losses in excess of five percent (5%) of the Contract amount for damages resulting from earthquake in excess of a magnitude of 3.5 on the Richter scale, or tidal waves. Coverage in the amount of five percent (5%) of the Contract amount for such losses is required.

6. **Pollution Coverage:** Contractor shall procure pollution liability coverage

[redacted]

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[redacted]

7. **Higher Coverage Limits:** If Contractor maintains higher coverage limits than the amounts shown above, then the City requires and shall be entitled to coverage for the higher coverage limits maintained by Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the City.

8. **Claims Made Coverage:** Liability insurance coverage may not be written on a "claims made" or modified occurrence basis. The Certificate of Insurance must clearly provide that the coverage is on an "occurrence" basis.

5-1.24 **OTHER INSURANCE PROVISIONS.**

A. The requirements of the Standard Specifications as to types and limits of insurance coverage to be maintained by the Contractor, and any approval of insurance by the City, are not intended to, and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to the Contract, including, but not limited to, the provisions concerning indemnification, nor preclude the City from taking any other action available to it under any other provision of the Contract or law.

B. The City acknowledges that some insurance requirements contained in these Standard Specifications may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by Contractor under the Contract. Any self-insurance must be approved in writing by the City, in its sole discretion and shall not reduce the limits of liability. Any deductibles or self-insured retentions ("SIR") must be declared on the certificate of insurance and approved by City in writing. Policies containing any

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SIR provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named insured or City. City reserves the right to obtain a full certified copy of any insurance policy and endorsements. The failure to exercise this right shall not constitute a waiver of such right.

C. The Contractor agrees to include in its contracts with all subcontractors the same requirements and provisions of this Contract, including the indemnity and insurance requirements, to the extent they apply to the scope of the subcontractor's work. Furthermore, the Contractor shall require its subcontractors to agree to be bound to the Contractor and the City in the same manner and to the same extent as the Contractor is bound to the City under this Contract. Additionally, the Contractor shall obligate its subcontractors to comply with these same provisions with respect to any tertiary subcontractor, regardless of tier. A copy of the City's indemnity and insurance provisions will be furnished to the subcontractor or tertiary subcontractor upon request. Alternatively, the Contractor may insure subcontractor(s) under its own policy.

D. The City, its officers, agents, employees, and volunteers are to be covered as insureds with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the Contractor; and with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts or equipment furnished in connection with such work or operations. Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under California Insurance Code Section 11580.04.

E. The limits of insurance required in this Contract may be satisfied by a combination of primary and excess insurance. Any excess insurance shall contain or be

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endorsed to contain a provision that such coverage shall also apply on a primary and noncontributory basis for the benefit of the City (if agreed to in a written contract) before the City's own insurance shall be called upon to protect it as a named insured.

F. The insurance procured by Contractor shall be subject to the approval of the City, but any acceptance of insurance certificates by the City shall in no way limit or relieve Contractor of its duties and responsibilities under the Agreement.

G. Contractor shall be responsible for all premiums, deductibles, and self-insured retention applicable to the insurance it is required to procure under the Contract. All deductibles or self-insured retentions over five hundred thousand dollars ($500,000) must be approved by the City, in writing. Contractor shall be responsible for all deductibles, self-insured retention payments, and/or increased premiums incurred if the City's policies of insurance are forced to cover damages or respond to claims for which Contractor or its Subcontractors were obligated to provide insurance under the Contract.

H. Failure of the City to enforce in a timely manner any of the requirements of these insurance provisions shall not act as a waiver to enforcement of any of these provisions at a later date.

I. Contractor's indemnity obligations shall not be limited by these insurance provisions and shall survive the expiration of the Contract and the insurance provisions of the Contract shall likewise not be limited by the indemnity provisions of the Contract.

J. THE CITY RESERVES THE RIGHT TO WITHHOLD ANY PROGRESS PAYMENTS TO THE CONTRACTOR IN THE EVENT OF NONCOMPLIANCE WITH ANY INSURANCE REQUIREMENTS.

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Bond No. _____
Premium $_____

PUBLIC WORKS
FAITHFUL PERFORMANCE BOND

(Project: _____)

WHEREAS, the City of Roseville ("CITY") has awarded a bid and contract to _____ as contractor ("PRINCIPAL") for the public work described as _____ _____ (the "WORK"). The contract ("AGREEMENT"), for the public work described above, and all of its terms and conditions are incorporated by reference and made a part hereof; and

WHEREAS, the PRINCIPAL is required to furnish a bond in connection with the AGREEMENT guaranteeing its faithful performance; and

NOW, THEREFORE, we the undersigned PRINCIPAL and _____ _____, a _____, admitted and duly authorized to transact business under the laws of the State of California, as SURETY ("SURETY"), are held and firmly bound unto the CITY or its successors and assigns in the sum of _____ dollars ($_____) (which amount is not less than 100% of the AGREEMENT price) to be paid to the CITY or its successors and assigns; and for which payment, well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors or assigns jointly and severally, firmly by these presents.

The condition of this obligation is such that if the PRINCIPAL, or its heirs, executors, administrators, successors or assigns, shall abide by, and in all respects promptly and faithfully perform the covenants, conditions and provisions in said AGREEMENT and any alteration thereof made as therein provided, notice of which alterations to Surety being hereby waived, on its part to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless CITY, its officers, agents, employees, volunteers as therein stipulated, then this obligation shall be null and void; otherwise, this obligation shall be and remain in full force and effect.

As condition precedent to the satisfactory completion of the contract, the obligation of the PRINCIPAL and SURETY under this Bond shall remain in effect for a period of one (1) year after the completion and acceptance of the WORK. During that time, if the PRINCIPAL, its heirs, executors, administrators, successors or assigns fails to make full, complete and satisfactory repair and replacement or totally protect the CITY from any loss or damage made evident during that year which results from or is caused by either defective materials or faulty workmanship in the prosecution of the WORK, then the obligation shall remain in full force and effect. However, anything in

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this paragraph to the contrary notwithstanding, the obligation of the SURETY shall continue so long as any obligation of the PRINCIPAL remains.

No prepayment or delay in payments, and no change, extension, addition or alteration of any provision of the AGREEMENT or in the specifications agreed to between the PRINCIPAL and the CITY, or any forbearance on the part of the CITY shall operate to relieve the SURETY. The SURETY hereby waives the provisions of Section 2819 of the California Civil Code. The SURETY waives all rights of subrogation against the CITY or any person employed by the CITY. If the contract price increases by the issuance of change orders, the amount specified in this bond shall increase by the same amount.

Whenever PRINCIPAL shall be and declared by CITY to be in default under the AGREEMENT, SURETY shall promptly remedy the default, or shall promptly do one of the follow at CITY's election:

1. Undertake through its agents or independent contractors, reasonably acceptable to CITY, to complete the AGREEMENT in accordance with its terms and conditions and to pay and perform all obligations of PRINCIPAL under the AGREEMENT, including without limitation, all obligations with respect to warranties, guarantees, and the payment of liquidated damages.

2. Reimburse CITY for all costs CITY incurs in completing the AGREEMENT, and in correcting, repairing or replacing defects in materials or workmanship and/or materials and workmanship which do not conform to the specifications in the AGREEMENT.

SURETY's obligations hereunder are independent of the obligations of any other surety for the performance of the AGREEMENT, and suit may be brought against SURETY and such other sureties, jointly and severally, or against any one or more of them, or against less than all of them without impairing CITY's rights against the others.

No right of action shall accrue on this bond to or for the use of any person or corporation other than CITY or its successors or assigns.

As part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by CITY in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

[SIGNATURES NEXT PAGE]

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IN WITNESS WHEREOF, this instrument has been duly executed by the PRINCIPAL and SURETY above-named, on the ____ day of _____, 20___.

PRINCIPAL:

BY:_____

PRINT NAME: _____

PRINT TITLE: _____

AND

BY: _____

PRINT NAME: _____

PRINT TITLE:_____

SURETY:

BY:_____

PRINT NAME: _____

PRINT TITLE:_____

MAILING ADDRESS:

_____

_____

_____

(Notarization by Surety and copy of Power of Attorney required.)

APPROVED AS TO FORM:

BY: _____
City Attorney

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Bond No. _____
Premium $_____

PUBLIC WORKS
LABOR AND MATERIALS PAYMENT BOND
(Project: _____)

WHEREAS, the City of Roseville ("CITY"), has awarded a bid and contract to _____ as contractor ("PRINCIPAL"), for the public work described as _____ _____ (the "WORK"). The contract ("AGREEMENT"), for the public work described above, and all of its terms and conditions are incorporated by reference and made a part hereof; and

WHEREAS, the PRINCIPAL is required to furnish a bond in connection with the AGREEMENT guaranteeing payment of persons who provide labor and material; and

NOW, THEREFORE, we the undersigned PRINCIPAL and _____ _____, a _____, admitted and duly authorized to transact business under the laws of the State of California, as SURETY ("SURETY"), are held and firmly bound unto the CITY or its successors and assigns in the sum of _____ dollars ($_____) (which amount is not less than 100% of the AGREEMENT price) to be paid to the CITY or its successors and assigns; and for which payment, well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors or assigns jointly and severally, firmly by these presents.

The condition of the obligation is such that if the PRINCIPAL, its subcontractors, heirs, executors, administrators, successors or assigns fails to pay any of the persons named in Section 8004 or 9100 of the Civil Code of the State of California, or the amounts due under the Unemployment Insurance Code of the State of California, or any amounts required to be deducted, withheld and paid over to the Employment Development Department from the wages of employees of the PRINCIPAL and its subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to work or labor performed by any such claimant, that the SURETY will pay for the same, in an amount not exceeding the sum specified in this bond, and also, in case suit is brought upon the bond, shall pay reasonable attorneys' fees, to be fixed by the Court.

This bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file a Stop Payment Notice pursuant to the provisions of Section 9350 et seq. of the Civil Code of the State of California, so as to give a right of action to them or their assigns in any suit brought upon this bond.

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No prepayment or delay in payments, and no change, extension, addition or alteration of any provision of the AGREEMENT or in the specifications agreed to between the PRINCIPAL and the CITY, or any forbearance on the part of the CITY shall operate to relieve the SURETY. The SURETY hereby waives the provisions of Section 2819 of the California Civil Code. The SURETY waives all rights of subrogation against the CITY or any person employed by the CITY. If the contract price increases by the issuance of change orders, the amount specified in this bond shall increase by the same amount.

As part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by CITY in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

IN WITNESS WHEREOF, this instrument has been duly executed by the PRINCIPAL and SURETY above-named, on the _____ day of _____, 20__.

PRINCIPAL:

BY:_____

PRINT NAME: _____

PRINT TITLE: _____

AND

BY: _____

PRINT NAME: _____

PRINT TITLE:_____

SURETY:

BY:_____

PRINT NAME: _____

PRINT TITLE:_____

MAILING ADDRESS:

_____

_____

_____

(Notarization by Surety and copy of Power of Attorney required.)

APPROVED AS TO FORM:

BY: _____
City Attorney

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CITY OF ROSEVILLE

GENERAL CONDITIONS

FOR

BUILDINGS AND GROUNDS

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CITY OF ROSEVILLE
GENERAL CONDITIONS
FOR
BUILDINGS AND GROUNDS

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SECTION 1

DEFINITIONS AND TERMS

1-1.01 **GENERAL.** When the following abbreviations and terms or pronouns in place of them appear in the Contract Documents, the intent and meaning shall be interpreted as provided in this Section 1.

1-1.02 **ACCEPTANCE.** Formal Acceptance by resolution by the Roseville City Council of the Contract when completed in all respects in accordance with the Contract Documents and any modifications previously approved.

1-1.03 **ADDENDUM.** Written interpretation or revision to any of the Contract Documents issued by the City before the bid opening.

1-1.04 **AS-BUILT DOCUMENTS, AS-BUILT DRAWINGS AND RECORD DOCUMENTS.** As-Built Documents, As-Built Drawings and Record Documents are all contract documents modified to reflect changes during the construction phase. Specifically, As-Built Documents/Drawings are a revised set of drawings submitted by the Contractor upon Final Completion of a project. They reflect changes made in the Specifications and Working Drawings during the construction process, and show the exact dimensions, geometry, and location of all elements of the work completed under the Contract. Record Documents, on the other hand, are compiled by the Engineer or Architect based on the As-Built Documents/Drawings submitted by the Contractor. They reflect the Engineer or Architect's concurring review of what changes were denoted, why they were made and where they occurred and create a record set of drawings.

1-1.05 **ASSESSMENT.** A cost imposed on the Contractor for non-compliance

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with certain contractual requirements.

1-1.06 **BENEFICIAL OCCUPANCY.** The taking possession of a portion of the Work by the City for its use and/or occupancy on other than a temporary or emergency basis.

1-1.07 **BID GUARANTY.** The cashier's, certified check, irrevocable standby letter of credit, deposit of securities, or Bidder's Bond, accompanying the bid submitted by the Bidder, as a guaranty that the Bidder will enter into an agreement with the City for the performance of the Work, if the Agreement is awarded to Bidder, and the Bidder will submit the required Contract Bonds and Certificate of Insurance. Also referred to as the Bidder's Security.

1-1.08 **BIDDER.** Individual, firm, partnership, limited liability company, corporation, joint venture, or any combination thereof, submitting a Proposal for the Work, acting directly, or through a duly authorized representative.

1-1.09 **BIDDING DOCUMENTS.** Includes the Notice to Bidders, Bidding Requirements, Contract Conditions, Drawings, and Addenda.

1-1.10 **CHANGE ORDER.** Any written order to the Contractor directing an addition, deletion, or modification of the Work, or an adjustment in the Contract Price or Contract Time provided in the Contract Documents and issued after the Agreement has been signed.

1-1.11 **CITY.** The City of Roseville.

1-1.12 **CITY ATTORNEY.** The City Attorney of the City.

1-1.13 **CITY CLERK.** The City Clerk of the City.

1-1.14 **CLAIM.** A separate demand by Contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following: (a) a time extension, including, without limitation, for relief for damages or penalties for delay assessed by

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the City; (b) payment by the City of money or damages arising from work done by, or on behalf of, Contractor pursuant to the Contract Documents and payment for which is not otherwise expressly provided or to which Contractor is not otherwise entitled; and (c) payment of an amount that is disputed by the City.

1-1.15 **CONSTRUCTION SCHEDULE.** A list or graphic display of construction activities required for completing the Work, in a format required by the Contract Documents. The duration, start and finish date, and sequence of significant activities, critical path, float and milestones must be indicated in the Construction Schedule.

1-1.16 **CONTRACT OR AGREEMENT.** The written agreement relating to the Work to be performed, the labor, materials, and equipment to be furnished, and the payment to be made therefor. The Agreement/Contract is part of and incorporates all of the Contract Documents.

1-1.17 **CONTRACT CONDITIONS.** Includes the General Conditions, Supplemental Conditions, and Specifications.

1-1.18 **CONTRACT DOCUMENTS.** Includes those documents that form the basis of the Contract, including but not limited to, Bidding Documents, the Bid or Proposal, Contract Bonds, the Contract, all required insurance certificates or endorsements, all bonds, all required certifications or statements, Change Orders, any Contract Amendment, any City Standard which is incorporated by reference and these City of Roseville General Conditions for Buildings and Grounds.

1-1.19 **CONTRACT DRAWINGS.** The official drawings including plans, elevations, sections, detail drawings, diagrams, plated, General Notes, information and schedules thereon, or exact reproductions thereof, showing the location, character, dimension, and details

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of the Work. The Contract Drawings include any drawings or plates bound within the Supplemental Conditions.

1-1.20 **CONTRACT PRICE.** The total compensation to be paid to the Contractor in accordance with the terms of the Agreement.

1-1.21 **CONTRACT TIME.** The number of Days, or portion thereof, allowed for completion of the Work, including all authorized time extensions. The effective date for commencement of the Work specified in the Notice to Proceed shall define the beginning of the Contract Time.

1-1.22 **CONTRACTOR.** Individual, firm, partnership, limited liability company, corporation, joint venture, or any combination thereof, who has entered into the Agreement with City.

1-1.23 **DAY OR DAYS.** Unless otherwise designated, Day or Days as used in the Contract Documents will be understood to mean calendar Day or Days.

1-1.24 **DEPARTMENT.** The Department for Contract Administration, as identified in the Supplemental Conditions.

1-1.25 **DIRECT COSTS.** Those cost items (including labor, materials, equipment and any subcontractor's work) that are used in the actual performance of, and are specifically and uniquely attributable to the Work or changed Work. Direct Costs do not include Overhead. Direct Costs only include the following:

A. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by City and Contractor. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include salaries and

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wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' compensation, health and retirement benefits, sick leave, vacation and holiday pay applicable thereto. Such employees may include superintendents and foremen at the site. The expenses of performing work after regular working hours, on Saturday, Sunday or legal holidays shall be included in the above only to the extent authorized by City in writing.

B. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and suppliers' field services required in connection therewith. All trade discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to City, and Contractor shall make provisions so that they may be obtained.

C. Payments made by Contractor to the subcontractors for work performed by subcontractors. If required by City, Contractor shall obtain competitive bids from subcontractors acceptable to Contractor and shall deliver such bids to City who will then determine which bids will be accepted. If a subcontract provides that the subcontractor is to be paid on the basis of cost of the work plus a fee, the subcontractor's cost of the work shall be determined in the same manner as Contractor's cost of the work. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

D. Costs of special consultants (including engineers, architects, testing laboratories, surveyors, and accountants) employed for services specifically, and only, related to the Work.

E. Supplemental costs including the following:

1. The proportion of necessary transportation, travel and subsistence

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expenses of Contractor's employees incurred in discharge of duties connected with the Work.

2. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value of such items used but not consumed which remain the property of Contractor.

3. Rentals of all construction equipment and machinery and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by City, and the costs of transportation, loading, unloading, installation, dismantling and removal thereof, all in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.

4. Sales, consumer, use or similar taxes related to the Work, and for which Contractor is liable, imposed by laws and regulations.

5. The cost of utilities (including the meter and all associated installation costs), fuel and sanitary facilities at the site.

6. Cost of premiums for additional bonds and insurance required because of changes in the Work.

1-1-26 **DIRECTOR.** Director of the Department for Contract Administration or his or her designee.

1-1.27 **EMERGENCY.** Any sudden generally unforeseen occurrence (such as a fire, flood, storm, earthquake, civil disorder, or other natural and/or man-made disaster) that has the potential to adversely affect the safety of life, the Work, and/or adjacent property; to interrupt contracts essential to the performance of the Work; and/or to cause catastrophic failure of City

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equipment and/or facilities.

1-1.28 **ENGINEER OR ARCHITECT.** Professional Engineer or Architect designated for a particular project responsible for signing and sealing the permit drawings, interpretation of the drawings where ambiguities exist, review of requests for information, design Change requests and Shop Drawings, resolution of errors and omissions, and finalization of Record Documents.

1-1.29 **FINAL COMPLETION.** When the project has been completed according to the terms and conditions set forth in the Contract Documents. Final Completion is not the same as Acceptance.

1-1.30 **FORCE ACCOUNT.** Payment by force account shall mean payment on the basis of the Contractor's time and materials.

1-1.31 **GENERAL NOTES.** The written instructions, provisions, conditions or other requirements appearing on the Contract Drawings and so identified thereon, which pertain to the performance of the Work.

1-1.32 **INSTALLATION, INSTALL.** Completely assembling, erecting, and/or connecting materials, parts, components, supplies, and related equipment specified or required for the completion of the Work.

1-1.33 **LABORATORY.** Established professional laboratories authorized by the City to test materials and Work involved in the Contract.

1-1.34 **LEGAL HOLIDAYS.** Those days designated as Federal holidays or declared by the City, or otherwise specified in the Contract Documents.

1-1.35 **LIQUIDATED DAMAGES.** The amount prescribed in the Contract Documents to be paid to the City or to be deducted from any payments due or to become due the

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Contractor for each day's delay in completing the whole or any specified portion of the Work beyond the time allowed in the Supplemental Conditions.

1-1.36 **NOTICE OF COMPLETION.** A legal notice filed by the City with the Placer County Recorder's Office stating that construction has been completed and accepted by the City.

1-1.37 **NOTICE TO PROCEED.** A written notice given by the City to the Contractor fixing the date on which the Contract Time will commence to run.

1-1.38 **NOTICE OF TERMINATION.** Written notice from the City to the Contractor and/or its Surety terminating the Agreement, or a portion thereof, either for convenience of the City or for default due to the Contractor's failure to perform its contractual obligations.

1-1.39 **OVERHEAD.** Business or administrative expenses (including but not limited to office expenses, administrative staff, rent, insurance, utilities) not chargeable to a particular part of the Work. The term "Overhead" shall include all of the following:

A. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor whether at the Work Site or in Contractor's principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications, all of which are to be considered administrative costs covered by the Contractor's fee.

B. Expenses of Contractor's principal and branch offices other than Contractor's office at the site.

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C. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

D. Cost of premiums for all bonds and for all insurance whether or not Contractor is required by the Contract Documents to purchase and maintain the same, except as provided in section 1-1.25.

E. Other overhead or general expense costs of any kind.

1-1.40 **PREMISES.** Shall mean the area within construction easements, easements, rights of entry and City owned property which surrounds the Work Site, limited by the property lines thereof. In some cases Premises may coincide with the Work Site.

1-1.41 **PROFESSIONAL ENGINEER.** An engineer licensed by the Board of Registration for Professional Engineers, State of California.

1-1.42 **PROJECT MANUAL.** A book containing all Contract Documents.

1-1.43 **PROPOSAL FORMS.** The approved forms upon which the City requires that each Bidder submit its bid with regard to the Agreement.

1-1.44 **REQUEST FOR INFORMATION (RFI).** A document issued by the Contractor requesting information concerning the Contract Documents.

1-1.45 **SAFETY.** Includes the practice of identifying potential hazards, assessing their risk, taking corrective action where possible, including and providing control measures such as engineering design, written procedures, and the personal protective equipment for workers in order to eliminate or reduce the risk for exposure in the workplace.

1-1.46 **SCHEDULE OF VALUES.** The breakdown of the Contract Price that will serve as the basis for Contractor's Applications of Payment. Any lump sum bid item

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included within the Contract Price will be apportioned among values relating to specific components of the Work covered by said lump sum.

1-1.47 **SHOP DRAWINGS.** Drawings, plans, diagrams, schedules, and other data specifically prepared and submitted to the City by the Contractor, showing in detail: (a) the proposed fabrication and assembly of a special component of the Work; and (b) the Installation (form, fit and attachment details) of a special component of the Work. Shop Drawings shall be deemed to include Working Drawings, Product Data, literature, and applicable performance and test data.

1-1.48 **SPECIFICATIONS.** The technical Specifications for the Work prepared by the Director or an Engineer or Architect describing in detail the nature of the Work, its components, any performance standards, and how the Work is to be constructed.

1-1.49 **SUBCONTRACTOR.** Any individual, firm, partnership, limited liability company, corporation, joint venture, or combination thereof, other than employees of the Contractor, engaged by the Contractor to furnish services, labor, equipment and materials for a portion of the Work.

1-1.50 **SUBMITTALS.** Those documents required to be submitted by the Contractor for review by the City in accordance with the Contract Documents.

1-1.51 **SUPPLEMENTAL CONDITIONS.** The Supplemental Conditions are specific clauses modifying or supplementing these General Conditions.

1-1.52 **SUPPLIER.** Any individual, firm, partnership, limited liability company, corporation, joint venture, or combination thereof, other than employees of the Contractor, that supplies a tangible product as a portion of the Work, with services usually limited to delivery and/or required testing, and with manufacturing, fabrication, or production facilities located off

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the Work Site.

1-1.53 **WORK.** The furnishing of all labor, and the furnishing and Installing of all materials, articles, supplies and equipment as specified, designated, or required by the Contract Documents.

1-1.54 **WORK SITE.** All or portion of the Premises that the Work is limited to as shown on the Contract Drawings or designated by the Director. Public streets are not included unless Work is being done within the street right-of-way.

1-1.55 **WORKING DRAWINGS.** Original drawings prepared by the Contractor and/or its Subcontractors or Suppliers, of any tier, illustrating Work required for construction that will not become an integral part of the completed Work. This includes, but is not limited to, drawings for temporary structures such as decking, bulkheads, excavation supports, utility support, groundwater control, forming, falsework, access roads, staging areas, staging plans, and diversion plans. A Working Drawing is one type of a Shop Drawing.

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SECTION 2

CONTROL AND SCOPE OF THE WORK

2-1.01 **AUTHORITY OF DIRECTOR.** The Contract shall be performed in a manner satisfactory to the Director who shall decide all questions which may arise as to the quality or acceptability of materials furnished and Work performed and as to the manner of performance and rate of progress of the Work; all questions which may arise as to the interpretation of the Contract Documents; all questions as to the acceptable fulfillment of the Contract on the part of the Contractor; and all questions as to compensation. The Director shall have authority to enforce and make effective such decisions and orders in the event the Contractor fails to promptly carry out the same.

2-1.02 **INTENT OF CONTRACT DOCUMENTS.** The Contract Documents are complementary, and what is called for by one shall be as binding as if called for by all. The intent of the Contract Documents is to describe the details for the construction and completion of the Work. Where the Contract Documents describe portions of the Work in general terms, but not in complete detail, it is understood that only the best general practice shall be followed and that only materials and workmanship of the best quality are to be used. Any Work, materials, or equipment that are customarily provided, or that are reasonably inferable from the Contract Documents as being required to produce the intended result, shall be supplied, whether or not specifically called for. When words, which have a well-known technical or trade meaning are used to describe work, materials, or equipment, such words shall be interpreted in accordance with that meaning. Unless otherwise specified, the Contractor shall furnish all labor, materials, tools, equipment, and incidentals, and do all the Work involved in executing the Contract in a

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satisfactory and workmanlike manner.

Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, laws, or regulations in effect on the first published date of the Notice to Contractors, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of City or Contractor, or any of their consultants, agents, or employees from those set forth in the Contract Documents, nor shall it be effective to assign to City, or City's designated representative, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to other provisions of the Contract Documents.

The Contract Documents are divided into parts, divisions, sections and articles for convenience, organization and reference. Generally, there has been no attempt to divide the Specifications sections into work performed by the various building trades, work by separate Subcontractors, or work required for separate facilities in the project.

2-1.03 **EXAMINATION AND VERIFICATION OF CONTRACT DOCUMENTS.** The Contractor shall thoroughly examine and become familiar with all of the various parts of the Contract Documents and shall determine the nature and location of the Work, the general and local conditions (including applicable laws) and all other matters which can in any way affect the cost, progress or performance of the Work under this Agreement. Failure to make an examination necessary for this determination shall not release the Contractor from the obligations of the Agreement. No oral agreement or conversation with any officer, or employee

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of the City, or with the City's designated representative either before or after the execution of the Agreement, shall affect or modify any of the terms or obligations contained in the Contract Documents.

2-1.04 **CONTRACT DRAWINGS.** The Contract Drawings consist of general drawings and show such plans, elevations, sections, details and schedules as are necessary to give a graphic and pictorial description of the contemplated construction. All authorized alterations affecting the requirements and information given on the Contract Drawings shall be in writing.

2-1.05 **COORDINATION AND INTERPRETATION OF CONTRACT DOCUMENTS.** All Contract Documents are essential parts of the Contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary, and to describe and provide for a complete Work.

In the event of inconsistencies between requirements contained in different components of the Contract Documents, the precedence of the Contract Documents shall be as follows to resolve conflicts:

1. Change Orders
2. The Contract (including Addenda)
3. The Supplemental Conditions
4. Specifications
5. Contract Drawings
6. The General Conditions

Should it appear that the Work to be done or any of the matters relative thereto are not sufficiently detailed or explained in the Contract Documents, the Contractor shall submit a

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Request for Information ("RFI") to the Director for such further explanations as may be necessary and shall conform to the written explanation given as if part of the Contract Documents. The decisions of the Director shall be final.

Contractor shall anticipate that it will be necessary to prepare and submit RFIs regarding the Contract Documents. The City will respond to each RFI by no later than fourteen (14) Days after receipt of the RFI, unless the RFI is of significant complexity. Furthermore, in the event that there are numerous RFIs pending, Contractor shall cooperate with the City in establishing a priority for responding to the RFIs, and potentially some RFIs may be responded to beyond the fourteen (14) Day period.

Each RFI prepared by Contractor shall be full and complete. Contractor shall prepare RFIs so as to not cause any delay to the progress of the Work and to not cause any impact to Contractor's labor productivity in the field. Contractor shall not assert any Claims for delay or interference against the City if Contractor fails to timely submit any RFI to the City, after consideration of the response period allowed for by the City.

The response to an RFI shall not, by itself, constitute a writing that authorizes Contractor to perform any Work that causes an adjustment to either the Contract Price or the Contract Time. If Contractor believes that any response to any RFI should constitute a compensable change, Contractor shall provide a Notice of Potential Claim as provided in Section 7-1.03, below. Contractor's failure to provide the required written notice shall constitute a waiver of the Contractor's right to seek a compensable change based on the RFI response.

The Contractor shall examine all Contract Documents; shall verify all figures in the Contract Documents before laying out the Work; shall promptly notify the City of all errors, inconsistencies, and/or omissions that it discovers; and, in instances where such non-

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conformities are discovered, shall obtain specific instructions in writing from the City before proceeding with the Work. Contractor's performance of any Work affected by such non-conformities prior to the City's decision shall be at the Contractor's risk. Any Work that is customarily provided or that is reasonably inferable shall not relieve the Contractor from performing such work at no additional expense and/or delay, and such Work shall be performed as if fully set forth in the Contract Documents.

2-1.06 **INDEPENDENT CONTRACTOR STATUS.** The Contractor shall independently perform all Work required by the Contract Documents and shall not be considered as an agent or employee of the City, nor shall the Contractor's Subcontractors or employees be considered as subagents of the City.

The Contractor and Contractor's Subcontractors shall be licensed in accordance with the laws of the State of California and as more particularly described in the bidding documents or elsewhere in the Contract Documents.

2-1.07 **ORDER OF WORK.** When required by the Contract Documents, the Contractor shall follow the sequence of operations set forth therein. Full compensation for conforming to such requirements will be considered as included in the prices paid for the various Contract items of work, and no additional compensation will be allowed therefor.

2-1.08 **SUBMITTALS.** It shall be the Contractor's responsibility to timely submit, so as to cause no delay in the Work, all Shop Drawings, descriptive data, manuals, instructions, affidavits, samples for the various trades as required by the Supplemental Conditions and Specifications, and offers of alternatives, if any. Such Submittals shall be checked and coordinated by the Contractor with the Work of other trades involved before they are submitted to the Director for examination.

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The Contractor shall deliver at least one (1) electronic copy of the Submittals to the Director, and one (1) hard copy if requested. Work requiring the submittal of working drawings, descriptive data or samples shall not begin prior to approval of said Submittal by the Director.

The time allowed for review of each Submittal will be as indicated in the Supplemental Conditions. Review time will start upon receipt of the Submittal by the Director and will end upon the Director's mailing of the Submittals to the Contractor. Defective, incomplete or partial Submittals will be returned to the Contractor unreviewed.

Submittals shall be made by a letter of transmittal that shall contain a list of all matter submitted and identification of all variations from the Contract Documents contained in the Submittal. The letter and all items accompanying the same shall be fully identified as to project name and location, Contractor's name, district, county, and Contract number, with ample cross-references to the Contract Documents, to facilitate identification of items and their location in the Work.

All Shop Drawings and supporting data, catalogs, schedules, shall be submitted as the instruments of the Contractor, who shall be responsible for their accuracy and completeness. These Submittals may be prepared by the Contractor, Subcontractors, or Suppliers, but the Contractor shall ascertain that Submittals meet all of the requirements of the Contract Documents, while conforming to structural, space, and access conditions at the point of Installation. The Contractor shall check all Submittals before submitting them to the Director.

2-1.08A **SHOP DRAWINGS.** The Contractor shall submit an electronic copy (searchable PDF) of all Shop Drawings required by the Supplemental Conditions or Specifications, and one (1) hard copy, if requested by the Director. Shop Drawings shall also be provided separately in AutoCAD format using the latest version of AutoCAD. An electronic

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copy will be returned to the Contractor either approved for use, as demonstrated by a stamp, or returned for correction and resubmittal. Materials, colors and/or samples will not be returned to the Contractor. Shop Drawings include any drawing, which requires execution by a draftsman as distinguished from printed matter. The size of Shop Drawings shall not exceed twenty-four inches (24") by thirty-six inches (36").

2-1.08B **DESCRIPTIVE DATA.** The Contractor shall submit an electronic copy (searchable PDF) of each set of manufacturer's brochures or other data required by the Supplemental Conditions or Specifications, and one (1) hard copy, if requested by the Director. The City will examine such Submittals and return either an electronic copy or a hard copy approved for use or returned for correction and resubmittal.

2-1.08C **SAMPLES.** The Contractor shall submit samples of articles, materials or equipment as required by the Supplemental Conditions or Specifications. The Work shall be in accordance with the approved samples. Samples shall be removed from City property when directed or may be incorporated in the Work if approved by the Director. Samples not removed by the Contractor will become the property of the City or, at the City's option, will be removed or disposed of by the City at the Contractor's expense.

2-1.08D **MANUALS, INSTRUCTIONS AND AFFIDAVIT.**

A. Manuals and Instructions. Where operation and maintenance manuals are required by the Supplemental Conditions, the Contractor shall submit two (2) sets of manuals, suitably bound, along with two (2) electronic copies in an approved format, to the Director within forty-five (45) Days after favorable review of the equipment or facilities. If operation and maintenance manuals are approved to be provided in PDF format, text shall be provided in searchable PDF format, making proper use of PDF for headings and heading levels,

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paragraphs, tables, and lists. Submitted operation and maintenance manuals shall be a collected, organized, and indexed set of bookmarked PDF documents comprising each operation and maintenance manual that corresponds to a hardcopy binder. All manuals shall be marked to indicate the specific equipment furnished for this project and shall include at a minimum:

1. Equipment summary form
2. Cover/Title page
3. Table of contents
4. Operating procedures including start-up, shutdown, normal operation, all operating modes, emergency shutdown, and safety precautions
5. Lubrication instructions (if required)
6. Preventative maintenance procedures
7. Troubleshooting and corrective maintenance procedures
8. Reinstallation instructions
9. Overhaul instructions (if applicable)
10. Parts identification list with exploded view and associated cross references
11. Recommended spare parts list
12. Operator safety requirements
13. Electrical and control system wiring drawings including panel wiring control (ladder) diagrams, logic diagrams, loop diagrams, and interconnection diagrams
14. Panel layout and assembly drawings

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15. Mechanical drawings

16. Printouts of all software programs and configuration files

17. Factory and field test procedures and results

Operation and maintenance manuals for complex equipment shall also include:

18. Alternate specified operating modes

19. Emergency shutdown instructions

20. Normal shutdown instructions

21. Long term shutdown instructions

Operation and maintenance manuals for systems comprised of separate pieces of equipment shall include a system explanation of items 4, 7, 18, 19, 20, and 21 as well as the instructions for the separate pieces of equipment.

B. Affidavits. Where required in the Supplemental Conditions or Specifications, manufacturers of equipment shall provide field service as a part of this project. Equipment shall not be considered ready for full time operation until after the authorized factory-trained and qualified manufacturer's representative for the specific equipment has checked and adjusted the equipment and certified by written affidavit that the equipment has been properly Installed, tested, adjusted, lubricated, and calibrated, and is ready for full time operation. Acceptable affidavits shall be submitted prior to completion of the Work. Affidavits shall contain the following specific wording:

"The (Name of Equipment) has been properly installed, tested, adjusted, lubricated, and calibrated, and is ready for full time operation. The installation has been inspected and has been found to be in conformance with our (the manufacturer's) standards and requirements."

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No amplification, dilution, or modification of this specific wording will be permitted.

2-1.08E **ALTERNATIVES.** For convenience in designation in the Contract Documents, certain materials, articles, or equipment may be designated by a brand or a trade name or the name of the manufacturer together with catalog designation or other identifying information, hereinafter referred to generically as "designated by brand name." Except in those instances where the product is designated to match others in use in a particular improvement, either completed or in the course of completion, an alternative material, article, or equipment which is of equal quality and of the required characteristics for the purpose intended may be proposed for use provided the Contractor complies with the following requirements:

A. The Contractor shall submit its proposal for an alternative in writing. Such request shall be made in ample time to permit review and approval without delaying the Work. The Contractor shall not be entitled to an adjustment of the Contract Time or an increase in the Contract Price based on any Contractor-proposed substitution.

B. No such proposal will be considered unless accompanied by complete information and descriptive data, necessary to determine the equality of the offered materials. The Contractor shall satisfy the Director as to the comparative quality, suitability, or performance of the offered material, articles, or equipment. In the event that the Director rejects the use of such alternative materials, articles, or equipment, then one of the particular products designated by brand name shall be furnished.

C. The burden of proof as to the quality and suitability of alternatives shall be upon the Contractor and it shall furnish all information necessary as required by the Director. The Director shall be the sole judge as to the quality and suitability of alternative articles or materials and such decisions shall be final. Where use of an alternative material

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involves redesign of, or changes to, other parts of the Work, the cost and time required to effect such redesign or changes will be considered in evaluating the suitability of the alternative material. Cost of redesign by the City will be borne by the Contractor.

D. Whenever classification, rating or other certification by a body such as Underwriters Laboratories (UL) or the National Electrical Manufacturers Association (NEMA) is a part of the specification for any material, Contractor's request for use of alternative articles or materials shall be accompanied by reports from the listed or equivalent independent testing Laboratory indicating compliance with the Contract Documents. The cost of all testing required to prove equality of the material proposed shall be borne by the Contractor. Approval of an alternative shall be only for the characteristics or use named in such approval, and shall not be used to change or modify any requirement of the Contract Documents.

E. At its election, the City reserves the right to consider any Contractor proposed substitution as a Cost Reduction Proposal under Section 3-1.07 of these General Conditions in the event that there is a significant savings resulting from the substitution.

The Director will examine, with reasonable promptness, such Submittals, and return of Submittals to the Contractor shall not relieve the Contractor from responsibility for deviations and alternatives from the Contract Documents, nor shall it relieve the Contractor from responsibility for errors in the Submittals. A failure by the Contractor to identify in its letter of transmittal material deviations from the Contract Documents shall void the Submittal and any action taken thereon by the Director. When specifically requested by the Director, the Contractor shall resubmit such Shop Drawings, descriptive data and samples as may be required.

If any mechanical, electrical, structural, or other changes are required for the proper Installation and fit of alternative materials, articles, or equipment, or because of deviations from

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the Contract, such changes shall not be made without the approval of the Director and shall be made without additional cost to the City.

2-1.09 **DISPOSAL OF MATERIAL OUTSIDE THE WORK SITE.** Unless otherwise stated elsewhere in the Contract Documents, the Contractor shall, at its own cost and expense, make its own arrangements for disposing of materials outside the Work Site.

Except when material is to be disposed of at a landfill or recycling center, when any material is to be disposed of outside the Work Site, the Contractor shall first obtain written permission from the City to dispose of the material at the intended location. The City's approval will be contingent upon the Contractor obtaining a written permit from the property owner on whose property the disposal is to be made. Prior to the disposal of any material at the intended location, the Contractor shall submit such permit or a certified copy thereof to the City, together with a written release from the property owner absolving the City from any and all responsibility related to the disposal of material on said property.

Disposal of Hazardous Materials must be done in accordance with all laws and regulations. Copies of all required regulatory documentation including copies of final manifests shall be supplied to the City.

2-1.10 **ACCESS TO THE WORK.** The Contractor shall satisfy itself that the jurisdictions through which its operations and haul routes pass will permit such operations with respect to the type of vehicle, laden weights, frequency and dimensions of loads, hours of operation and required traffic control. All necessary permits, licenses or bonds shall be obtained and paid for by the Contractor.

2-1.11 **TEMPORARY UTILITIES.** The Contractor shall make its own arrangements with utility companies for any temporary services it may require in performance of

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the Work and shall pay all costs of these services directly to these utility organizations.

2-1.12 **UTILITY FACILITIES.** The Contractor shall protect from damage those utility facilities that are to remain in place, be Installed, relocated or otherwise arranged.

The Contractor's attention is directed to the possible existence of facilities not shown, and of facilities in a location different from that, which is indicated. The Contractor shall take steps to ascertain the exact location of all facilities prior to doing any Work, which may damage such facilities or interfere with their service. Where the location of a facility is indicated or inferred from the presence of visible facilities such as buildings, meters, and junction boxes, the Contractor shall make such excavations and explorations as are necessary to ascertain the correct location. Unless provided for elsewhere in the Contract Documents, the cost of such excavations and explorations will be considered as a part of the cost of other items of Work and no additional payment will be made. Such excavations and exploratory Work shall not entitle the Contractor to an extension of time.

If the Contractor discovers underground facilities not indicated or inferred from the Contract Documents, the Contractor shall immediately give the Director written notification of the existence of those facilities. The Contractor shall determine the exact location of the underground facilities and the cost of the work will be paid for in accordance with the Contract Documents. The underground facilities shall be protected from damage as directed by the Director and the cost of that work will be paid for as extra work. The Contractor shall, if directed by the Director, repair any damage, which may occur to the underground facilities. The cost of that repair work, not due to the failure of the Contractor to exercise reasonable care, will be paid for as extra work. Damage due to the Contractor's failure to exercise reasonable care shall be repaired at the Contractor's cost and expense.

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Where it is determined by the City that the rearrangement of an underground facility, the existence of which is not shown on the Contract Drawings, is essential in order to accommodate the Work, the City will provide for the rearrangement of such facility by other forces or, when so ordered by Change Order, such rearrangement shall be performed by the Contractor and will be paid for as provided under a Change Order.

The Contractor shall be responsible for the maintenance of all utility facilities placed by the Contractor in temporary locations, and all utilities within the construction area not required to be relocated but which are required to be shored or supported during the construction period. The cost of such maintenance shall be borne by the Contractor, and no other compensation shall be due the Contractor for this Work.

The cost of providing and maintaining all necessary or required temporary structures, of making any necessary repairs, replacements, or similar operations, or furnishing indemnity or other bonds, if required, and all costs required by this Section shall be paid by the Contractor and shall be included in the prices bid in the schedule for other items of work.

2-1.13 **PRESERVATION AND CLEANING.** The Contractor shall clean up the Work at frequent intervals and at other times when directed by the Director. While finish Work is being accomplished, floors, Work areas and finished areas shall be kept clean, free of dust, construction debris and trash. Upon completion of the Work, the Contractor shall remove from the Premises its construction equipment and any waste materials not previously disposed of, leaving the Premises thoroughly clean and ready for final inspection.

2-1.14 **LIMITATIONS ON WORK SITE AND PREMISES.** The Contractor shall limit its construction operations to the Work Site unless otherwise shown on the Contract Drawings or specified. The Contractor shall perform no operation of any nature over or on the

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Premises except such operations as are authorized by the Contract Documents or as authorized by the Director.

2-1.15 **DUST CONTROL.** During the performance of all Work under this Contract, the Contractor shall assume all responsibility for dust control and shall furnish all labor, equipment, and means required to carry out proper and efficient measures wherever and whenever dust control is necessary to prevent the operations from producing dust damage and nuisance to persons and property. Any claims resulting from dust damage or nuisance shall be borne solely by the Contractor. The Contractor shall comply with all applicable Air Quality Act requirements.

2-1.16 **SANITATION.** The Contractor shall provide sanitary facilities for all persons working on the Work.

2-1.17 **NIGHT WORK AND NORMAL WORKING HOURS.** Normal working hours at the construction site shall be between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday. Legal holidays are excluded. Certain utility connections and street operations are anticipated to require night Work by the Contractor during low usage periods. The Contractor may also be required to prosecute the Work at night if, at any time, the Director shall deem it necessary for the progress of the Work, or if emergencies arise. The Contractor shall promptly comply with any such requirements made in writing by the Director. The Contractor will also be permitted to Work at night if Contractor satisfies the Director of the need therefor, in order to maintain the required progress or protect the Work from the elements. Certain activities are required to be performed at night for nominal progress of the Work and/or are specified to be performed at night by other portions of the Supplemental Conditions. When required, ordered, or permitted to Work at night, the Contractor shall provide sufficient and

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satisfactory lighting and other facilities therefor. The Contractor shall receive no extra payment for night Work, if specified or if required to be performed during the normal progress of the Work, but compensation shall be considered as having been included in the price stipulated for the Work.

If Contractor performs work during weekends, holidays or any non-normal work hours, Contractor shall pay for required City Inspectors.

2-1.18 **LINES AND GRADES.** Unless otherwise provided in the Supplemental Conditions, the Contractor shall lay out all Work, including structures and pipelines, and shall be responsible for any errors resulting therefrom. In all questions arising as to proper location of lines and grades, the Director's decision will be final.

As part of the bid price for the construction of the improvements, the Contractor shall provide and be responsible for the layout of all Work on this project. The Contractor shall provide all necessary surveys, field staking, and positioning for the construction of all components at the proper alignment, elevations, grades, and positions, as indicated on the Contract Drawings and as required for the proper operation and function. The Contractor shall stake its Work area limits. Contractor shall perform all construction staking using a land surveyor licensed in the State of California. Contractor shall provide a staking plan prior to commencement of Work for the City's review and maintain monuments, stakes, and marks, and shall update the plan as necessary. Director, or Director's designated representative, may verify the field condition. Errors or inconsistencies in the Contract Documents discovered by the Contractor shall be reported to the Director within twenty-four (24) hours and prior to constructive forms or related improvements. Any work Installed with this requirement shall be subject to removal and replacement at the Contractor's expense.

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The Contractor's lay-out shall be based on existing structures, property lines, survey control, and bench marks established by the City. All structures and pipeline connections shall be Installed based on actual elevation of existing structures to which connections are made.

The Contractor shall supply such labor as required, at no extra charge, to aid and assist the Director in checking location and grades of the Work as set by the Contractor if the Director desires to perform this checking. This shall include moving materials and equipment located between monuments and the construction Work.

2-1.19 **ARCHEOLOGICAL DISCOVERIES.** Upon discovery of prehistoric or historic artifacts, or other indicators or examples of cultural resources discovered during the course of site preparation, grading, excavation, construction or other development activities, all operations within fifty feet (50') of the find shall cease until such time as the City provides the services of a qualified archeologist to evaluate the finds and recommend appropriate action.

Prehistoric materials can include flaked stone tools (e.g., projectile points, knives and choppers) or tool making debris of obsidian, chert, quartzite and other materials, culturally darkened soil (i.e., midden, which often contains heat affected rock, ash and charcoal, shellfish remains, and cultural materials), and stone milling equipment such as mortars, pestles and hand stones. Historic material may include wood, stone, concrete or adobe footings, walls and other structural remains; debris filled wells or privies; and deposits of wood, metal, glass, ceramics and other refuse.

2-1.20 **PRESERVATION OF MONUMENTS.** Any monuments or bench marks disturbed by construction operations shall be repaired per the City's standard and promptly re-established by a registered land surveyor or civil engineer. A plat for each monument shall be furnished to the Director after the plat has been recorded with the Placer

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County Recorder's Office at no additional cost to the City. The recorded plat shall serve as a record of the re-establishment of said existing survey points.

2-1.21 **CONFORMITY WITH CONTRACT DOCUMENTS.** Work and materials shall conform to the lines, grades, cross sections, dimensions and material requirements, including tolerances, required by the Contract Documents. Although measurement, sampling and testing may be considered evidence as to such conformity, the City shall be the sole judge as to whether the Work or materials deviate from the Contract Documents. At its option, the City may elect to accept deviations from the Contract Documents with appropriate backcharge Assessments against the Contractor, and, if such an election is made, the City will provide written notice to the Contractor of such acceptance.

2-1.22 **FINAL CLEANUP.** Prior to final Acceptance of the Work, the Contractor shall thoroughly clean the Premises, remove all temporary structures built by or for the Contractor, and remove all equipment and surplus construction material and debris from the area. The entire project, before Acceptance by the City, shall be left in a neat and clean condition. All Work areas and temporary construction areas shall be returned to essentially the same conditions existing before the commencing of project construction.

2-1.23 **AS-BUILT DOCUMENTS AND DRAWINGS.** The Contractor shall maintain one set of the full size prints furnished by the City and mark thereon in color any deviations from plan dimensions, elevations, or orientations. Also, the Contractor shall locate on said prints, all underground facilities, such as piping, conduits and tanks by accurate field measurement from structure walls, corners, etc. The Contractor shall submit the prints and an electronic CD (searchable PDF or source file format such as AutoCAD) in good condition to the Director upon completion of the job as a condition of Acceptance of the project. Marked prints

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shall be updated at least once each week and shall be available to the Director for review as to currency prior to developing partial payment estimates. After the completion of testing, but prior to Acceptance, the Contractor shall submit As-Built electrical drawings in color and an electronic CD showing all components and their wiring, and as specified in the Supplemental Conditions.

2-1.24 **SUPERINTENDENCE.** The Contractor shall supervise and direct the Work, which shall be performed in accordance with the requirements of the Contract Documents. The Contractor shall be solely responsible for implementation of all construction means, methods, techniques, sequences, and procedures and for coordination of all portions of the Work under the Agreement. The Contractor shall be solely responsible for the safety of its employees, Subcontractors of any tier, Suppliers, visitors to the Contractor, and other third parties associated with the Contractor.

The Contractor shall designate in writing before starting Work, an authorized representative who shall have the authority to represent and act for the Contractor.

When the Contractor is comprised of two (2) or more persons, firms, partnerships, or corporations functioning on a joint venture basis, said Contractor shall designate in writing before starting Work, the name of one authorized representative who shall have the authority to represent and act for the Contractor. Instances of misconduct, contract non-compliance, unsatisfactory performance, or incompetence by these personnel shall be grounds for the City to direct Contractor to dismiss them from the Project. Contractor shall immediately comply with the City's request for dismissal, at no cost to the City, and shall designate a replacement, which shall be subject to approval by the City.

Said authorized representative shall be present at the site of the Work at all times while Work is actually in progress on the Contract. When Work is not in progress and during periods

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when Work is suspended, arrangements acceptable to the Director shall be made for any Emergency Work that may be required.

Whenever the Contractor or its authorized representative is not present on any particular part of the Work where it may be desired to give direction, orders will be given by the Director, which shall be received and obeyed by the superintendent or foremen who may have charge of the particular Work in reference to which the orders are given.

Any order given by the Director, not otherwise required by the Supplemental Conditions to be in writing, will on request of the Contractor, be given or confirmed by the Director in writing.

2-1.25 **CHARACTER OF WORKER.** If any Subcontractor or person employed by the Contractor shall appear to the Director to be incompetent or to act in a disorderly or improper manner, he or she shall be removed immediately on the requisition of the Director, and such person shall not again be employed on the Work.

2-1.26 **INSPECTION.** The Contractor shall at all times permit the Director to inspect the Work or any part thereof. The Contractor shall maintain proper facilities and provide safe access for such inspection by the Director to all parts of the Work, and to the shops where the Work is in preparation. Work shall not be covered up until authorized by the Director and the Contractor shall be solely responsible for notifying the Director where and when such Work is in readiness for inspection and testing. Should any such Work be covered without authorization, it shall, if so ordered, be uncovered at the Contractor's expense.

Unless otherwise designated as normal working hours, whenever the Contractor intends to perform Work on Saturday, Sunday, or a Legal Holiday, the Contractor shall give notice to the Director of such intention forty-eight (48) hours prior to performing such Work, or such longer

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period as may be specified so that the Director may make necessary arrangements.

The observation and/or approval of the workmanship or materials by the City shall not relieve the Contractor of any obligations to fulfill the requirements of the Contract Documents. Workmanship and materials not meeting such requirements shall be corrected and unsuitable Work or material may be rejected, notwithstanding that such Work or materials have been previously observed and/or approved by the City, or payment therefor has been included in a progress estimate.

The City may order re-examination of questioned Work at any time before final Acceptance. If so ordered, the Contractor shall uncover the Work. If such work is found to be in accordance with the Contract Documents, the City will pay for the cost of uncovering, removing, recovering and replacing the parts removed; but if such Work so exposed or examined is not in accordance with the Contract Documents, the uncovering, removal, recovering and replacement shall be at the Contractor's expense. Work that has been covered prior to observation by the City does not qualify as re-examined work; the City may order such work uncovered for observation without payment of any costs.

2-1.27 **REMOVAL OF REJECTED AND UNAUTHORIZED WORK.** All Work which has been rejected shall be remedied, or removed and replaced by the Contractor in a manner acceptable to the Director and no compensation will be allowed the Contractor for such removal, replacement, or remedial Work.

Any Work done beyond the lines shown on the Contract Drawings or established by the Director, or any Work done without written authority will be considered as unauthorized Work and will not be paid for. Upon order of the Director, unauthorized Work shall be remedied, removed, or replaced at the Contractor's expense.

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Upon failure of the Contractor to comply promptly with any order of the Director made under this section, the Director may cause rejected or unauthorized Work to be remedied, removed, or replaced, and the costs thereof will be deducted from any moneys due or to become due the Contractor.

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SECTION 3

CHANGES IN THE WORK

3-1.01 **CHANGES.** The Director, without invalidating this Agreement and without notice to Contractor's surety, may order changes in the Work, consisting of additions or deletions, or other revisions. The Contract Price and the Contract Time shall be adjusted accordingly. All such changes in the Work, including in the Contract Price and the Contract Time, shall be authorized only by Contract Change Order, signed by the Director.

If Contractor claims that performance of any work entitles it to additional compensation or to an extension of time for performance of the Work, Contractor shall provide written notice to the City of any such claim prior to undertaking such work. Contractor shall provide written notice of any anticipated impacts to the Contract Price or Contract Time within three (3) Days of discovering such impact, by submitting a Notice of Potential Claim described in Section 7-1.03 below, or notice of delay as described in Section 6-1.09 below. If the Director refuses to issue a Change Order for such work, Contractor shall perform that work if directed or obligated to do so and shall submit a complete and specific Claim for additional compensation and/or extension of time for performance within fifteen (15) Days after such work is performed, as described in Section 7-1.03 below. Failure to provide written notice of claims prior to undertaking such work, failure to provide a timely Notice of Potential Claim, or failure to submit timely a complete and specific Claim for additional compensation and/or extension of the time for performance, shall be deemed a waiver and abandonment of any such Claim. No Claim, dispute or controversy shall interfere with the progress or performance of the Work and the Contractor shall proceed with the Work as directed by the Director. Failure to so proceed shall amount to a

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default under this Agreement.

3-1.02 **PROPOSED CHANGE ORDERS.** The Contractor will be notified in writing of a proposed Change Order describing the intended change. Within fifteen (15) Days after receipt of a written request, the Contractor shall submit its proposed price to be added or deducted from the Contract Price due to the change and its estimate of the extent of the adjustment in the Contract Time, if any. The Contractor's proposed price to be added to or deducted from the Contract Price shall be supported by a detailed estimate of cost prepared by the Contractor, vendor or Supplier. The Contractor's proposed price submittal shall be accompanied by a statement of the time necessary for the changed Work, together with a description of how this time will be incorporated into the current Construction Schedule. The Contractor shall upon request by the Director permit inspection of its original Contract estimate, subcontract agreements or purchase orders relating to the change.

If agreement is reached on the adjustment in compensation as provided in Section 3-1.05, "Contract Price Adjustment," of these General Conditions, the Contractor shall proceed with the Work as changed at the agreed price.

If the Contractor and the Director fail to agree as to the adjustment in compensation for the performance of the changed Work, the Contractor, upon written order from the Director, shall proceed immediately with the changed Work and the Contract Price shall be adjusted in accordance with Section 3-1.06, "Force Account Payment," of these General Conditions.

If the Contractor fails to submit its cost estimate within such fifteen (15) Day period, the Contractor shall commence the Work as changed immediately upon receipt of written order of the Director, and the Contract Price will be adjusted in accordance with the Director's cost estimate for the changed Work.

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3-1.03 **EMERGENCY AND INDETERMINATE TYPE CHANGE ORDERS.** Changes in the Work made necessary by an Emergency, as determined by the Director, or changes of a kind where the extent of the Work cannot be determined until completed, may be authorized by the Director in writing. The Change Order shall state that it is issued pursuant to this Section 3-1.03. Upon receipt of an authorized Change Order or other written order of the Director, the Contractor shall proceed with the ordered Work and the Director will maintain a daily job record containing a detailed summary of all labor, materials and equipment required for the changed Work.

Within fifteen (15) Days after receiving a written request, the Contractor shall submit a detailed estimate of cost for the change and any requested change in Contract Time in the same manner as required for proposed Change Orders in Section 3-1.02 of these General Conditions.

3-1.04 **EXECUTED CHANGE ORDER.** A Contract Change Order signed by both the Director and the Contractor is an "executed Contract Change Order." By signing the Contract Change Order, the Contractor agrees that the specified compensation constitutes full compensation for the changed Work, including payment for interruption, disruption, acceleration, extended Overhead, delay or any other "impact" claim or "ripple effect" claim. The Contractor specifically understands and agrees that its execution of the Contract Change Order shall constitute a waiver of any right for the Contractor to claim any additional compensation with respect to the subject matter of the Contract Change Order.

3-1.05 **CONTRACT PRICE ADJUSTMENT.** If a Contract Change Order provides for an adjustment to the Contract Price, the amount of such adjustment shall be determined by one of the following methods, or a combination thereof, as determined by the City and in its sole discretion:

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A. Lump sum. The Contractor and the City may agree on a lump sum amount for the Change Order. At the City's request, the Contractor will provide pricing for the work. Maximum markups for Contract Change Orders paid for using lump sum pricing shall be paid for in the same manner and in the same amounts as markups for Force Account work, as described in Section 3-1.06 below.

B. Unit Prices. The unit prices set forth in the Contractor's Schedule of Bid Prices will be utilized where they are applicable and acceptable to the City. The Contractor's unit prices shall remain firm and shall not be subject to adjustment unless and until the actual quantity of work is increased or decreased by Contract Change Order in an amount greater than twenty-five percent (25%) from the estimated quantity indicated for such item. No markups will be given for Contract Change Orders paid for using unit prices.

Unit prices for new items included in the Contract Change Order but not included in the original bid shall be as mutually agreed upon or, in the absence of agreement, as determined by the City in the same manner as if the work were to be paid for on a Force Account basis, as described in Section 3-1.06 below.

C. Force Account. Where the City and the Contractor are unable to agree on lump sum pricing and if the City does not elect to utilize the unit prices in Contractor's bid, or such unit prices are not applicable, the changed work will be performed and tracked by the Contractor as Force Account work, as described in Section 3-1.06 below. The City will pay for such work, including markups, properly attributable to the change in accordance with those Force Account provisions.

D. Eliminated Items. The City reserves the right to delete any bid item of Work in its entirety. The City makes no representation that any work under a bid item of Work

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will be performed, and all work may be subject to a Contract Change Order that deletes such work. Bid items are distinct and severable from the other bid items, and the Contractor shall not be entitled to any anticipated profit, unabsorbed Overhead, or other indirect expense attributable to the deleted item, except as provided immediately below with regard to Force Account mark-ups on the direct and verifiable costs incurred prior to the City's order that deletes the work.

Should any bid item of Work be eliminated in its entirety and not accounted for as described immediately above and, in the absence of an executed Contract Change Order covering such elimination, payment will be made to the Contractor for actual direct and verifiable costs incurred in connection with such eliminated bid item if incurred prior to the date of notification in writing by the City of such elimination. If acceptable material is ordered by the Contractor for the eliminated item prior to the date of notification of such elimination by the City, and if orders for such material cannot be canceled, it will be paid for at the actual direct and verifiable cost to the Contractor. Actual direct costs shall include documented vendor shipping fees, Supplier restocking fees, if applicable, and Contractor handling costs directly related to the eliminated item(s). In such case, the material paid for shall become the property of the City and the actual cost of any further handling will be paid for by the City. If the material is returnable to the vendor and if the City so directs, the material shall be returned and the Contractor will be paid for the actual direct cost of charges made by the vendor for returning the material. The actual direct cost of handling returned materials will also be paid for by the City. The actual direct and verifiable costs to be paid by the City as provided herein will be computed in the same manner as if the work were to be paid for on a Force Account basis, including the application of Force Account mark-ups to said costs.

3-1.06 **FORCE ACCOUNT PAYMENT.** When Work performed pursuant to a

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Change Order is to be paid for on a Force Account basis, the Contractor's labor, materials and equipment used in the performance of such Work shall be subject to the approval of the City, and the compensation will be determined as set forth below in this section.

3-1.06A **LABOR.** The Contractor will be paid an amount based on the actual cost for the workers (including foremen when authorized by the Director) used in the actual and direct performance of the Work. All labor costs associated with Overhead, whether field or home office, are specifically excluded herein, as those labor costs are covered by the below mark-ups. The cost of labor, whether the employer is the Contractor, Subcontractor or other forces, shall include employer payments; assessment of benefits required by lawful labor union collective bargaining agreements; compensation insurance payments; contributions made to the State pursuant to the Unemployment Insurance Code; and for taxes paid to the Federal Government pursuant to the Social Security Act of August 14, 1935, as amended. No labor cost will be recognized at a rate in excess of the wages prevailing in the locality at the time the Work is performed, nor will the use of a labor classification, which would increase the cost, be permitted unless the Contractor establishes to the complete satisfaction of the Director the necessity for payment at a higher rate.

3-1.06B **MATERIALS.** Only materials furnished by the Contractor and necessarily used in the performance of the Work will be paid for. Such cost of materials may include the costs of procurement, transportation and delivery if necessarily incurred. If a cash or trade discount by the actual supplier is available to the Contractor, it shall be credited to the City. If materials are procured by the purchaser by any method which is not a direct purchase from and a direct billing by the actual supplier to such purchaser, the cost of such materials shall be deemed to be the price paid to the actual supplier plus the actual costs, if any, incurred in the

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handling of such materials. If the materials are obtained from a supply or source owned wholly or in part by the purchaser, the cost of such materials shall not exceed the price paid by the purchaser for similar materials furnished from said source on Bid items or the current wholesale price for such materials delivered to the job site, less any discounts as provided herein, whichever is lower. If, in the opinion of the Director, the cost of materials is excessive, or if the Contractor fails to furnish satisfactory evidence of the cost to it from the actual supplier within sixty (60) Days after the date of delivery of the materials or within fifteen (15) Days after Acceptance of the Agreement, whichever occurs first, the cost of the materials shall be deemed to be the lowest current wholesale price at which similar materials are available in the quantities required, less any discounts provided herein. The Department reserves the right to furnish such materials required by the Change Order as it deems advisable, and the Contractor shall have no claim for cost or markups on material furnished by the Department.

3-1.06C **EQUIPMENT.** The Contractor will be paid an amount based on the actual cost for the use of equipment directly required and approved by the Director in the performance of the changed Work. No payment will be made for time while equipment is inoperative due to breakdowns or on Days when no Work is performed. In addition, the rental time shall include the time required to move the equipment to the Work from the nearest available source of such equipment, and to return it to the source. If such equipment is not moved by its own power, then loading and transportation costs will be paid. Moving time, loading and transportation costs will only be paid if the equipment is used exclusively on the changed Work during the time between move in and move out. Individual pieces of equipment having a replacement value of One Thousand Dollars ($1000) or less shall be considered to be tools or small equipment, and no payment will be made therefore. For equipment owned,

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furnished, or rented by the Contractor, no cost therefore shall be recognized in excess of the equipment rental rates published by Caltrans at the following website address: http://www.dot.ca.gov/hq/construc/equipmnt.html. Equipment located at a Work Site and utilized on non-Force Account work shall not eligible for standby payment, and shall be charged on a Force Account basis only when solely performing pre-approved Force Account work tasks.

3-1.06D **MARKUPS.** When a Change Order increases the cost of the Work, the Contractor may add the following maximum markups to its actual costs of labor, materials, or equipment rental:

15 percent for labor;

10 percent for materials; and

5 percent for equipment rental.

The above markups include full compensation, covering the costs of all supervision, bonds, profit, Overhead, and other general expenses not specifically designated as a direct cost in Sections 3-1.06A through 3-1.06C above. The total payment (i.e., direct cost plus applicable markups) shall be deemed to be the actual cost of such work and shall constitute full compensation therefor. The Contractor specifically understands and agrees that such payment shall include any Contractor costs for interruption, disruption, and acceleration, extended Overhead, Change Order management, delay or other "impact" claim or "ripple effect" claim.

When work paid for on a Force Account basis is performed by forces other than the Contractor's own forces, the maximum allowable mark-ups for the Subcontractors' costs shall be fifteen percent (15%) for the cost of labor, ten percent (10%) for the cost of materials, and five percent (5%) for the cost of rented equipment. In these situations where the work is being performed by Subcontractors, the Contractor will only be entitled to an additional five percent

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(5%) mark-up and will not be entitled to receive the additional mark-ups specified in this section.

When a Change Order decreases the cost of the Work, the reduction in cost shall include a five percent (5%) markup on the estimated cost for furnishing the labor, materials and equipment, which would have been used on such Work, had the Change Order not been issued.

When a Change Order involves both added Work and deleted Work, the markup or markups to be used shall be as follows:

The actual costs of labor, materials, and equipment rental for added and deleted Work shall be calculated separately without adding markups. If the difference between the calculated costs for labor results in an increased cost, a markup of fifteen percent (15%) shall be applied to the increased cost. If the difference between the calculated costs of materials or equipment rental results in an increased cost, a markup of ten percent (10%) and five percent (5%) respectively, shall be applied to the increased costs of materials or equipment rental, as the case may be. If the difference between the calculated costs for labor, materials or equipment rental results in a decreased cost, a markup of five percent (5%) shall be applied to the decreased costs of labor, materials or equipment rental, as the case may be.

Contractor shall not add mark-ups on work performed and billed by City staff nor add mark-ups to successive iterations of proposed Change Order cost proposals returned to Contractor by the City due to incomplete or inaccurate information being originally submitted by the Contractor. If the Contract Price increases by the issuance of Change Orders, the penal amounts of the bonds required shall increase accordingly.

3-1.06E **RECORDS.** The Contractor shall maintain its records in such a manner as to provide a clear distinction between the direct costs of extra work paid for on a Force Account basis and the costs of other operations.

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From the above records, the Contractor shall furnish the City completed daily extra work reports, on forms acceptable to the City, for each Day's extra work to be paid for on a Force Account basis. The daily extra work reports shall itemize the materials used, and shall cover the direct cost of labor and the charges for equipment rental, whether furnished by the Contractor, Subcontractor, or other forces. The daily extra work reports shall provide names and identifications and classifications of workers, the hourly rate of pay and hours worked, and also the size, type, and identification number of equipment, and hours operated. Daily extra work and Force Account reports (actual or claimed) shall be signed by both the City's and the Contractor's representatives within twenty-four (24) hours of the performance of the work.

Valid copies of vendor's invoices shall substantiate material charges. Such invoices shall be submitted with the daily extra work reports, or if not available, they shall be submitted with subsequent daily extra work reports. Should said vendor's invoices not be submitted within sixty (60) Days after the date of delivery of the material or within fifteen (15) Days after the Acceptance of the Agreement, whichever occurs first, the City reserves the right to establish the cost of such materials at the lowest current wholesale prices at which said materials were available in the quantities, less any discounts.

The City will compare its records with the completed daily extra work reports furnished by the Contractor and make any necessary adjustments. When these daily extra work reports are agreed upon and signed by both parties, said reports shall become the basis of payment for the work performed, but shall not preclude subsequent adjustment based on a later audit by the City.

The Contractor's cost records pertaining to Work paid for on a Force Account basis shall be open to inspection or audit by representatives of the City during the life of the Agreement and for a period of not less than three (3) years after the date of Agreement completion and the

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Contractor shall retain such records for that period. Where payment for materials or labor is based on the cost thereof to forces other than the Contractor, the Contractor shall make every reasonable effort to insure that the cost records of such other forces will be open to inspection and audit by representatives of the City on the same terms and conditions as the cost records of the Contractor. If an audit is to be commenced more than sixty (60) Days after the date of Acceptance of the Agreement, the Contractor will be given fifteen (15) Days' notice of the time when such audit is to begin.

3-1.07 **COST REDUCTION PROPOSALS.** The City encourages the Contractor to submit Cost Reduction Proposals whenever the Contractor identifies areas and/or instances in which there can be savings to the Work. Contractor may submit to the City, in writing, proposals for modifying the plans, Specifications or other requirements of the Agreement for the sole purpose of reducing the total cost of construction, including the time for completion of the Work. The City may consider such Cost Reduction Proposals and, if accepted, the Agreement will be equitably adjusted. The City has no obligation to consider or accept Cost Reduction Proposals.

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SECTION 4

CONTROL OF MATERIALS

4-1.01 **MATERIALS.** The Contractor shall furnish all materials required to complete the Work, except materials that are designated in the Supplemental Conditions to be furnished by the City and materials furnished by the City in accordance with Section 3, "Changes in the Work," of these General Conditions.

Unless otherwise specified in the Supplemental Conditions, materials furnished by the Contractor for incorporation into the Work shall be new. When the quality or kind of materials, articles, or equipment is not particularly indicated, then the quality or kind thereof shall be similar to those that are indicated.

Articles or materials to be incorporated in the Work shall be stored in such a manner as to insure the preservation of their quality and fitness for the Work, and to facilitate inspection.

All materials which do not conform to the requirements of the Contract Documents as determined by the Director, will be rejected whether in place or not. Rejected material shall be removed immediately from the site of the Work, unless otherwise permitted by the Director. No rejected material, the defects of which have been subsequently corrected, shall be used in the Work, unless approval in writing has been given by the Director. Upon failure of the Contractor to comply promptly with any order of the Director made under these provisions, the Director shall have the authority to cause the removal and replacement of rejected material and to deduct the cost thereof from any moneys due or to become due the Contractor.

Manufacturer's warranties, guaranties, instruction sheets and parts lists, which are furnished with certain materials incorporated in the Work, shall be delivered to the Director

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before Acceptance of the Contract.

Unless otherwise designated in the Supplemental Conditions or Specifications, materials furnished by the City will be delivered to the job site. Materials furnished by the City that are designated in the Supplemental Conditions as available at locations other than the job site shall be hauled to the site of the Work by the Contractor at its expense, including any necessary loading and unloading that may be involved.

The Contractor will be held responsible for all materials furnished to it, and shall pay all demurrage and storage charges. City-furnished materials lost or damaged from any cause whatsoever shall be replaced by the Contractor. The Contractor will be liable to the Department for the cost of replacing City-furnished material and such costs may be deducted from any moneys due or to become due the Contractor.

4-1.02 **PRODUCT AND REFERENCE STANDARDS.** When descriptive catalog designations, including manufacturer's name, product brand name, or model number are referred to in the Contract Documents, such designations shall be considered as being those found in industry publications in effect on the day the Notice to Contractors for the Work is dated, except as may be otherwise stated.

When standards or test designations of the Federal Government, trade societies, or trade associations are referred to in the Contract Documents by specific date of issue, these shall be considered as part of the Contract. When such references do not bear a date of issue, the edition in effect on the day the Notice to Contractors for the Work is dated shall be considered as part of the Contract.

4-1.03 **SAMPLING AND TESTING OF MATERIALS.** Unless otherwise specified, all tests shall be performed in accordance with the methods used by the State

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Department of Transportation (Caltrans) and shall be made by the Director or his or her designated representative.

The State Department of Transportation has developed test methods for testing the quality of materials and Work. These test methods are identified by a California Test followed by the serial number. Copies of individual tests are available at the State Department of Transportation Laboratory, Sacramento, California, and will be furnished to interested persons upon request.

Whenever a reference is made in the Supplemental Conditions to a California Test by number, it shall mean the California test in effect on the day the Notice to Contractors for the Work is dated.

Whenever the Supplemental Conditions provide an option between two (2) or more test methods, the Director will determine the test method to be used.

Whenever a Supplemental Condition, manual, or test designation provides for test reports (such as certified mill test reports) from the manufacturer, copies of such reports, identified as to the lot of material, shall be furnished to the Director. The manufacturer's test reports shall supplement the inspection, sampling and testing provisions of this Section 4-1.03 and shall not constitute a waiver of the City's right to inspect. When material which cannot be identified with specific test reports is proposed for use, the Director may at his or her discretion, select random samples from the lot for testing. Testing specimens from the random samples, including those required for retest, shall be prepared in accordance with the referenced Supplemental Conditions and furnished by the Contractor at its expense. The number of such samples and test specimens shall be entirely at the discretion of the Director.

When requested by the Director, the Contractor shall furnish, without charge, samples of

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all material entering into the Work, and no material shall be used prior to approval by the Director, except as provided in Section 4-1.04, "Certificates of Compliance," of these General Conditions.

A. Inspection and Access for Testing. The Contractor shall provide safe access for the Director and his or her inspectors to adequately inspect the quality of Work and conformance with the General and Supplemental Conditions. The Contractor shall provide adequate lighting, ventilation, ladders and other protective facilities as may be necessary for the safe performance of inspections.

The Contractor shall submit samples or specimens of such materials to be furnished or used in the Work as the Director may require. The Contractor shall furnish the Director all necessary labor and facilities for such things as excavation in the compacted fill to depths required to take samples.

Inspections, tests, or favorable review by the Director or others shall not relieve the Contractor from its obligations to perform the Work in accordance with the requirements of the Contract Documents.

Work covered without the favorable review or consent of the Director shall, if required by the Director, be uncovered for examination at the Contractor's expense.

If the Engineer, Architect, or Director considers it necessary or advisable that covered Work be inspected or tested by others, the Contractor, at the Director's request, will uncover, expose or otherwise make available for observation, inspection or testing as the Director may require, that portion of the Work in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such Work is defective, the Contractor will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of

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satisfactory reconstruction. If, however, such Work is not found to be defective and the Work was not covered without favorable review of the Director, the Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, to cover its costs directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction and an appropriate Change Order shall be issued.

Whenever the Contractor varies the period during which Work is carried on each Day, the Contractor shall give due notice to the Director so that proper inspection may be provided. Any Work done in the absence of the Director may be subject to rejection. Proper facilities for safe access for inspection to all parts of the Work shall at all times be maintained for the necessary use of the Director and other agents of the City. Authorized representatives and agents of the Director shall be permitted access to inspect all Work and materials wherever it is required for preparation of progress reports, and the Contractor shall provide proper facilities for such access and inspection.

It is the Contractor's responsibility to supervise the Work and complete the project in accordance with the Contract Documents. In the course of managing that effort, the Contractor shall generate its own punch lists as deemed necessary. The Director may prepare punch lists for the Director's own use in communicating with the Contractor; however, the Director shall be under no obligation to prepare punch lists for the Contractor. In general, the Director will prepare punch lists only after the Contractor has given the Director written notice that the subject Work is completed and tested in accordance with the Contract Documents and is ready for operation and/or use and/or occupancy. Failure of the Director to include an item in a punch list shall not relieve the Contractor of its duty to satisfactorily complete all Work required by the Contract Documents.

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Upon Final Completion of the construction Work and request by the Contractor, the Director will conduct a final inspection as a basis for recommending to the City that the Work be accepted.

B. Field and Materials Testing. Where the Supplemental Conditions require Work to be specially field tested or approved, it shall be tested only in the presence of the Director after timely notice of its readiness for inspection and test, and the Work after testing shall be covered up only upon the consent thereto of the Director.

The results of any tests made are for the information of the Director. Regardless of any test results, the Contractor is solely responsible for the quality of workmanship and materials and for compliance with the requirements of the Contract Drawings and Supplemental Conditions.

Except as specifically required under the Supplemental Conditions, all tests by the Director of materials furnished by the Contractor will be done in accordance with commonly recognized standards of national organizations. The Contractor shall furnish such samples of all materials as required by the Director without charge. No material shall be used unless it has been favorably reviewed by the Director.

Where such inspection and testing are to be conducted by an independent Laboratory or agency, the sample or samples of materials to be tested shall be selected by such Laboratory or agency, or the Director, and not by the Contractor.

C. Costs of Testing.

1. Initial Services: The City shall furnish and pay for all initial testing services required by the Contract Documents. When initial tests indicate non-compliance with the Contract Documents, the cost of initial tests associated with that non-compliance will be

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deducted by the City from the balance owed the Contractor. The Contractor shall furnish samples of materials for testing as may be required by the Director. Such samples shall be furnished without cost to the City.

2. Retesting: When initial tests indicate non-compliance with the Contract Documents, all subsequent retesting occasioned by the non-compliance shall be performed by the same testing Laboratory and the cost thereof will be deducted by the City from the balance owed the Contractor. Contractor shall be billed for each additional test.

3. Contractor Convenience Testing: Inspection or testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor.

4. Additional Tests and Inspections: When in the opinion of the Director additional tests or inspections are required because of the manner in which the Contractor executes its Work, such tests and inspections shall be paid for by the City, but will be deducted from the Contract Price. Examples of such tests and inspections are tests of materials substituted for previously accepted materials or substituted for specified materials, retests made necessary by failure of material to comply with the requirements of the Specifications, load tests made necessary because of portions of the structure not fully meeting Specifications or plan requirements, etc.

4-1.04 **CERTIFICATES OF COMPLIANCE.** A Certificate of Compliance shall be furnished prior to the use of any materials for which the Supplemental Conditions require that such a Certificate be furnished. In addition, the Director may permit the use of certain materials or assemblies prior to sampling and testing if accompanied by a Certificate of Compliance. The Certificate shall be signed by the manufacturer of the material or the manufacturer of assembled materials and shall state that the materials involved comply in all

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respects with the requirements of the Supplemental Conditions. A Certificate of Compliance shall be furnished with each lot of such materials delivered to the Work and the lot so certified shall be clearly identified in the Certificate.

All materials used on the basis of a Certificate of Compliance may be sampled and tested at any time. The fact that material is used on the basis of a Certificate of Compliance shall not relieve the Contractor of responsibility for incorporating material in the Work which conforms to the requirements of the Contract Documents and any such material not conforming to such requirements will be subject to rejection whether in place or not.

The Department reserves the right to refuse to permit the use of material on the basis of a Certificate of Compliance.

The form of the Certificate of Compliance and its disposition shall be as directed by the Director.

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SECTION 5

LEGAL RELATIONS AND RESPONSIBILITY

5-1.01 **LAWS TO BE OBSERVED.** The Contractor shall keep informed of and observe, and comply with and cause all of its agents and employees to observe and comply with, all prevailing Federal and State laws, and rules and regulations made pursuant to said Federal and State laws, and county and municipal ordinances, and regulations, which in any way affect the conduct of the Contract. If any conflict arises between provisions of the Contract and any such law above referred to, the Contractor shall notify the Director at once in writing. To the fullest extent allowed by law, the Contractor shall defend, indemnify, and save and hold harmless the City or any of its officers, agents, employees, and volunteers against any claim or liability arising from or based on the violation of any such law, rule, or regulation, whether by itself or its agents or employees.

5-1.02 **HOURS OF LABOR.** Eight (8) hours labor constitutes a legal Day's work. The Contractor or Subcontractor shall, as a penalty to City, forfeit Twenty-five Dollars ($25) for each worker employed in the execution of the contract by the respective Contractor or Subcontractor for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one (1) calendar day and forty (40) hours in any one (1) calendar week in violation of the provisions of the Labor Code, and in particular, Section 1810 to Section 1815, thereof, inclusive, except that Work performed by employees of Contractors in excess of eight (8) hours per day, and forty (40) hours during any one (1) week, shall be permitted upon public work upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half (1-1/2) times the basic rate of pay, as provided in said

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Section 1815. In addition, Contractor and/or its Subcontractors may be required to pay double the basic rate of pay for all hours worked in excess of twelve (12) hours in any workday and under other circumstances. (See California Code of Regulations, Title 8, Sections 16100(c)(6) and (16200(a)(3)(F) and applicable Department of Industrial Relations prevailing wage determinations.)

5-1.03 **NONDISCRIMINATION.**

A. Attention is directed to Labor Code Section 1735, which reads as follows:

"A contractor shall not discriminate in the employment of persons upon public works on any basis listed in subdivision (a) of Section 12940 of the Government Code, as those bases are defined in Sections 12926 and 12926.1 of the Government Code, except as otherwise provided in Section 12940 of the Government Code. Every Contractor for public works who violates this section is subject to all the penalties imposed for a violation of this chapter."

B. During the performance of this Contract, Contractor and its Subcontractors shall not unlawfully discriminate against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status. The Contractor and Subcontractors shall insure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination. The Contractor and Subcontractors shall comply with the provisions of the California Fair Employment and Housing Act (Government Code §12900, et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, §7285.0 et seq.) and other applicable State and Federal regulations and City

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policies pertaining to nondiscrimination and affirmative action which are incorporated into this Agreement by reference and made a part hereof as if set forth in full. The Contractor and its Subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

C. Contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform Work under the agreement.

5-1.04 **PREVAILING WAGE.** The Contractor and any Subcontractor shall comply with Labor Code Sections 1770 et seq. In accordance with said Section 1775 the Contractor and any Subcontractor under the Contractor shall, as a penalty, forfeit to the state or City not more than $200 for each calendar day or portion thereof, for each worker paid less than the prevailing rate as determined by the Director of Industrial Relations for the work or craft in which such worker is employed for under the Contract by the Contractor or by any Subcontractor under the Contractor.

The amount of the penalty shall be determined by the Labor Commissioner based on consideration of both of the following: (a) whether the failure to pay the correct rate of per diem wages was a good-faith mistake and, if so, whether the error was promptly and voluntarily corrected when brought to the attention of the Contractor or Subcontractor; and (b) whether the Contractor or Subcontractor has a prior record of failing to meet its prevailing wage obligations.

The penalty may not be less than forty dollars ($40) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, unless the failure of the Contractor or Subcontractor to pay the correct rate of per diem wages was a good faith mistake and, if so, the error was promptly and voluntarily corrected when brought to the attention of the Contractor or Subcontractor.

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The penalty may not be less than eighty dollars ($80) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, if the Contractor or Subcontractor has been assessed penalties within the previous three (3) years for failing to meet its prevailing wage obligations on a separate contract, unless those penalties were subsequently withdrawn or overturned.

The penalty may not be less than one hundred twenty dollars ($120) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, if the Labor Commissioner determines that the violation was willful, as defined in subdivision (c) of Section 1777.1 of the Labor Code.

If the amount due under this section is collected from the Contractor or Subcontractor, any outstanding wage claim under Chapter 1 (commencing with Section 1720) of Part 7 of Division 2 of the Labor Code against the Contractor or Subcontractor shall be satisfied before applying that amount to the penalty imposed on that Contractor or Subcontractor pursuant to this section.

The determination of the Labor Commissioner as to the amount of the penalty shall be reviewable only for an abuse of discretion.

In addition to said penalty, the difference between such stipulated prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the stipulated prevailing wage shall be paid to each worker by the Contractor or Subcontractor.

If a worker employed by a Subcontractor on a public works project is not paid the general prevailing per diem wages by the Subcontractor, the Contractor is not liable for any penalties described above unless the Contractor had knowledge of that failure of the Subcontractor to pay

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the specified prevailing rate of wages to those workers or unless the Contractor fails to comply with all of the following requirements:

1. The contract executed between the Contractor and the Subcontractor for the performance of work on the public works project shall include a copy of the provisions of Sections 1771, 1776, 177.5, 1813, and 1815 of the Labor Code.
2. The Contractor shall monitor the payment of the specified general prevailing rate of per diem wages by the Subcontractor to the employees, by periodic review of the certified payroll records of the Subcontractor.
3. Upon become aware of the Subcontractor's failure to pay its workers the specified prevailing rate of wages, the Contractor shall diligently take corrective action to halt or rectify the failure, including, but not limited to, retaining sufficient funds due the Subcontractor for work performed on the public works project.
4. Prior to making final payment to the Subcontractor for work performed on the public works project, the Contractor shall obtain an affidavit signed under penalty of perjury from the Subcontractor that the Subcontractor has paid the specified general prevailing rate of per diem wages to its employees on the public works project and any amount due pursuant to 1813 of the Labor Code.

Pursuant to Section 1775 of the Labor Code, the Division of Labor Standards Enforcement shall notify the Contractor on a public works project within fifteen (15) Days of the receipt by the Division of Labor Standards Enforcement of a complaint of the failure of a Subcontractor on that public works project to pay workers the general prevailing rate per diem wages.

Pursuant to the provisions of California Labor Code Section 1773, the City has obtained

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the general prevailing rate of wages applicable to the categories of workers the City anticipates will be utilized for this project for straight time, overtime, Saturday, Sunday, and holiday Work. The holiday wage rate listed shall be applicable to all holidays recognized in the collective bargaining agreement of the particular craft, classification or type of worker concerned or, if no collective bargaining applies, those holidays identified in Government Code Section 6700. These wage rates may be obtained from the State Department of Industrial Relations and/or the following website address: http://www.dir.ca.gov/dlsr/DPreWageDetermination.htm, which is incorporated herein as a part of this Contract.

Pursuant to Labor Code Section 1773.2, the general prevailing wage rates set forth above, which forms a part of this Contract, shall be posted by the Contractor at a prominent place at the site of the Work.

Pursuant to Labor Code Section 1773.6 and California Code of Regulations Section 16204, Title 8, changes in general prevailing wage determinations shall apply to the project only if issued by the Director of Industrial Relations prior to the City's bid issuance date.

The City will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wage rate set forth in the Contract. The possibility of wage increases is one of the elements to be considered by the Contractor in determining its Bid, and will not under any circumstances be considered as the basis of a claim against the City or Contract.

When both California and Federal prevailing wage rates apply, the Contractor and any Subcontractors shall pay their workers the higher of the two rates. The Contractor and any Subcontractors shall insert this clause in any lower tier contract.

5-1.05 **REGISTRATION REQUIRED AS QUALIFICATION TO BID.**

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Pursuant to Labor Code Section 1771.1(b), notice is hereby given that a Contractor or Subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contractor for public work, as defined in Labor Code Sections 1720, et seq., unless currently registered and qualified to perform public work pursuant to Labor Code Section 1725.5. It is not a violation of Labor Code Section 1771.1 for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5.

5-1.06 **PAYROLL RECORDS.** The Contractor's attention is directed to the following provisions of Labor Code Section 1776. The Contractor shall be responsible for the compliance with these provisions by its Subcontractors.

A. The Contractor and each Subcontractor shall keep accurate and current payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by it in connection with the public work. Each payroll record shall contain or be verified by a written declaration that is made under penalty of perjury, stating both of the following:

1. The information contained in the payroll record is true and correct.

2. The employer has complied with the requirements of Section 1771, 1811, and 1815 for any work performed by his or her employees on the public works project.

B. The payroll records enumerated under subdivision (A) shall be available for inspection at all reasonable hours at the principal office of the Contractor on the following

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basis:

1. A certified copy of an employee's payroll record shall be made available for inspection or furnished to such employee or his or her authorized representative on request.

2. A certified copy of all payroll records enumerated in subdivision (A) shall be made available for inspection or furnished upon request to a representative of the City, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations. The City reserves the right to withhold any progress payments to the Contractor in the event of noncompliance with the subsection.

3. A certified copy of all payroll records enumerated in subdivision (A) shall be made available upon request by the public for inspection or for copies thereof. However, a request by the public shall be made through either the City, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. The public shall not be given access to such records at the principal office of the Contractor.

C. The certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the Division.

D. Each Contractor shall file a certified copy of the records enumerated in subdivision (A) with the entity that requested the records within ten (10) Days after receipt of a written request.

E. Any copy of the records made available for inspection as copies and furnished upon request to the public or any public agency by the City, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement shall be marked or

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obliterated to prevent disclosure of an individual's name, address and social security number. The name and address of the Contractor awarded the Contract or Subcontractor performing the Contract shall not be marked or obliterated. Any copy of records made available for inspection by, or furnished to, a joint labor-management committee established pursuant to the federal Labor Management Cooperation Act of 1978 (Section 175a of Title 29 of the United States Code) shall be marked or obliterated only to prevent the disclosure of an individual's name and social security number. A joint labor-management committee may maintain an action in a court of competent jurisdiction against an employer who fails to comply with Section 1774. The court may award restitution to an employee for unpaid wages and may award the joint labor-management committee reasonable attorneys' fees and costs incurred in maintaining the action. An action under this subdivision may not be based on the employer's misclassification of the craft of a worker on its certified payroll records. Nothing in this subdivision limits any other available remedies for a violation of this section.

F. The Contractor shall inform the City of the location of the records enumerated under subdivision (A), including the street address, city and county, and shall, within five (5) business days, provide a notice of a change of location and address.

G. The Contractor shall have ten (10) Days in which to comply subsequent to receipt of written notice requesting the records enumerated in subdivision (A). In the event that the Contractor or Subcontractor fails to comply within the ten (10) Day period, the Contractor shall, as a penalty to the State or City, forfeit twenty-five ($25) Dollars for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from any progress payment or final payment then due. A contractor

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is not subject to a penalty assessment pursuant to this section due to the failure of a Subcontractor to comply with this section.

5-1.07 **SAFETY REQUIREMENTS.** It is the intent of the parties that the City is not an exposing, creating, controlling, or correcting employer under California Labor Code Section 6400. In accordance with generally accepted construction practices and State law, the Contractor shall have the authority and be solely and completely responsible for conditions on the Work Site, including safety of all persons and property during performance of the Work. Moreover, the Contractor shall be the controlling employer and has the authority and responsibility to enforce Work Site safety. The Contractor shall be responsible for conducting daily safety inspections and assuring all hazards and violations are abated. The Contractor is responsible for assuring that all Subcontractors adhere to the minimum Cal/OSHA safety requirements and that each Subcontractor has an effective Cal/OSHA IIPP (Illness and Injury Prevention Program) in place that specifically addresses all potential exposures, such as, but not limited to, fall protection, confined space, and trenching/shoring. These requirements shall apply continuously and not be limited to normal working hours. The Contractor shall be responsible for any delay costs or damages in the event the progress of Work is slowed or stopped due to a safety violation.

The Contractor shall designate a safety officer and have in place a health and safety plan in accordance with the laws of State of California and conduct safety meetings and document them in accordance with the law. The Contractor shall have the safety record available for inspection during working hours and shall submit job site safety meeting reports with each Application for Payment.

Prior to Contractor commencing construction project work on City property, Contractor

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shall make available copies of its Health and Safety Plan (HASP) that meets or exceeds applicable Cal/OSHA regulations. The Contractor's HASP shall also meet or exceed the requirements of any applicable City-wide or departmental specific Injury and Illness Prevention Programs (IIPP) and other HASP programs, procedures, and plans. Potentially applicable HASP programs, procedures, and plans include, but are not limited to, the following:

1. Bloodborne Pathogens Exposure Control Plan;
2. Confined Space Entry Procedure;
3. Electrical Safety Program (Lockout/Tagout);
4. Emergency Action Plans (Site Specific);
5. Fire Prevention Plans (Site Specific);
6. Hazardous Waste Operations Emergency Response Plan (or Equivalent);
7. Hazard Communication Program (SDS's and Right-to-Know training);
8. Heat Illness & Prevention Plan;
9. Hearing Conservation Program;
10. Hot Work/Welding Procedure;
11. Job Hazard Analyses/Standard Operating Procedures;
12. Traffic Control & Flagging;
13. Excavation/Dig Safe Procedure;
14. Fall Protection Plan;
15. Personal Protective Equipment Plan;
16. Respirable Crystalline Silica Exposure Control Plan;
17. Respirator Program;
18. Soils Management Plan (for contaminated soils); and

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19. Transite (Asbestos) Pipe Work Procedure.

Additionally, Contractor shall be responsible for complying with all City-wide and departmental specific safety requirements as identified in the Supplemental Conditions or presented at a pre-construction meeting.

Contractor shall inform City in advance of the quantity of chemical(s) to be used for the project and the total quantity of chemical(s) that will be brought onto City property. In addition, Contractor shall provide City with one copy of the Safety Data Sheet (SDS) for each chemical expected to be used to complete the project and for each chemical brought to the Work Site, regardless of whether such chemicals are ultimately used for the project.

The services of the Director in conducting construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's Work methods, equipment, bracing or scaffolding, or safety measures, in, on, or near the construction site. If a City employee observes a safety violation, the City employee will report the violation to the Contractor who is then responsible for assuring the violation is abated.

The Contractor is hereby informed that Work on this project could be hazardous. The Contractor shall carefully instruct all personnel working in potentially hazardous Work areas as to potential dangers and shall provide such necessary safety equipment and instructions as are necessary to prevent injury to personnel and damage to property. Special care shall be exercised relative to Work underground.

All Work and materials shall be in strict accordance with all applicable State, City, County, and Federal Rules, Regulations, and Codes, and attention is drawn to the requirements of Cal/OSHA. The Contractor shall be solely responsible for compliance with all City, County and State blasting requirements and for any damages caused by its operations.

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To ensure compliance with California Labor Code Section 6705, the Contractor shall submit to the City, at least five (5) Days in advance of excavation of any trench five feet (5') or more in depth, Working Drawings to the Director showing the design of shoring, bracing, sloping and other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such Working Drawings vary from the shoring system standards established by the Cal/OSHA Construction Safety Orders of the Division of Industrial Safety, the plan shall be prepared and signed by a registered civil or structural engineer in the State of California. This in no way relieves the Contractor from the requirement of maintaining safety in all operations performed by the Contractor or the Contractor's Subcontractors and nothing in this section shall be deemed to allow the use of a shoring, sloping or protective system less effective than that required by the Cal/OSHA Construction Safety Orders of the Division of Industrial Safety Contractor's Working Drawings shall be subject to approval insofar as the details affect the character of the finished Work and for compliance with design requirements applicable to the construction when specified or called for, but details of the design will be left to Contractor who shall be responsible for the successful construction of the Work. The City shall approve Working Drawings before any Work involving such drawings is performed. Approval and/or acceptance by the City or its designated agent only constitutes acknowledgment of the submission and does not constitute review or approval of the designs, design assumptions or criteria, completeness of submissions, applicability to areas of intended use, nor implementation of the plans, which are solely the responsibility of the Contractor and its registered engineer.

The Contractor shall perform its Work as not to expose personnel to, or to discharge into the atmosphere from any source whatever, smoke, dust, asbestos, toxic chemicals or other air

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contaminants in violation of the laws, rules, and regulations of the governmental entities having jurisdiction and shall bear full and exclusive responsibility for any release of hazardous or non-hazardous chemicals or substances during the course of the Work. The Contractor shall immediately report any such release to the City. The Contractor shall be solely responsible for all claims and expenses associated with the response to, removal and remediation of the release, including, without limitation, payment of any fines or penalties levied against the City by any agency as a result of such release and shall defend, indemnify, and save and hold harmless the City, its officers, agents, employees, and volunteers from any claims arising from such release. For purposes of this section only, the term "claims" shall include:

1. All notices, orders, directives, administrative or judicial proceedings, fines, penalties, fees, or charges imposed by any governmental agency with jurisdiction; and

2. Any claim, cause of action, or administrative or judicial proceeding brought against the City, its officers, agents, employees, and volunteers for any loss, cost (including reasonable attorneys' fees), damage or liability, sustained or suffered by any person or entity, including the City.

If the performance of the Work creates any hazardous wastes, those wastes shall be properly disposed of according to federal, state, and local laws, at the expense of the Contractor. The Contractor shall dispose of the wastes under its own EPA Generator Number. In no event shall the City be identified as the generator. The Contractor shall notify the City of any such hazardous wastes and the City reserves the right to a copy of the results of any tests conducted on the wastes, and, at its cost, to perform additional tests or examine those wastes, prior to disposition. The Contractor shall defend, indemnify, and save and hold harmless the City, its

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officers, agents, employees, and volunteers from any claims arising from the disposal of the hazardous wastes, regardless of the absence of negligence or other malfeasance by the Contractor. Disposal of all Hazardous Materials must be done in accordance with all laws and regulations. Copies of required regulatory documentation including copies of final manifests shall be supplied to the City.

Contractors or Subcontractors removing one hundred or more square feet (100') of asbestos must be "Certified" in accordance with State law. All Work involving exposure to asbestos and all other hazardous materials shall be performed with protection of personnel in compliance with all applicable regulations and safety requirements including, but not limited to, California Code of Regulations Section 1529, Title 8.

Nothing in these General Conditions is to be construed to permit Work not conforming to governing codes. When Contract Documents differ from governing codes, the Contractor shall furnish and Install the higher standards called for without extra charge.

5-1.08 **SUBSURFACE EXCAVATIONS, NOTIFICATION.** The Contractor shall contact the regional notification center, "Underground Service Alert," and schedule its Work to allow ample time for the center to notify its members and, if necessary, for any member to field locate and mark its facilities. Without limiting the foregoing, the Contractor's attention is directed to Government Code Sections 4216 to 4216.9, and in particular Section 4216.2.

5-1.09 **PUBLIC SAFETY.** The Contractor shall assume all responsibility for public safety during the performance of its Work, and all costs arising therefrom shall be included in the Contract Price. Whenever the Contractor's operations create a condition hazardous to traffic or to the public, it shall furnish, erect and maintain, at its expense, such fences, barricades, lights, signs, and other devices and take such other protective measures as are

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necessary to prevent accidents or damage or injury to the public. The Contractor shall establish the pedestrian detours with comparable lighting to the original pedestrian areas. The Contractor shall arrange for such flaggers as are necessary to give adequate warning to traffic or to the public of any dangerous conditions affecting traffic. For Work in a public right-of-way, the Contractor shall comply with the rules and regulations of the State, County, or local agency that owns the right-of-way.

The Contractor shall promptly and fully comply with and carry out, and shall without separate charge therefor to the City, all safety and first aid requirements prescribed by all applicable Federal, State, and local laws and regulations, rules, and orders. The Work shall be done in a safe manner; and the Contractor shall safeguard the safety and health of its employees, Subcontractors, and the people of local communities. The Contractor shall also be reasonable for ensuring that its Subcontractors comply with the provisions of this section.

Upon the failure of the Contractor to comply with any of the requirements of this section, the City shall have the authority, but not the duty, to stop the Work until such failure is remedied. The Contractor shall not be entitled to an adjustment of the Contract Time or an increase in the Contract Price due to any such suspensions.

When required by the Contract Documents, the Contractor shall construct, maintain, and remove detours for use of public traffic, without additional cost to the City, unless separate payment is specified in the Special Provisions.

The failure or refusal of the Contractor to construct and maintain detours at the proper time shall be sufficient cause for closing down the work until such detours are in satisfactory condition for use by public traffic.

Due care shall be exercised to avoid injury to existing improvements or facilities, utility

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facilities, adjacent property and trees, shrubs, and other plants that are not to be removed.

Trees, shrubs and other plants that are not to be removed, and pole lines, fences, signs, survey markers and monuments, buildings and structures, conduits, pipe lines, sewer and waterlines, highway facilities, and any other improvements or facilities, under or above ground, that are within or adjacent to the work limit line shall be protected from injury or damage, and the Contractor shall provide and Install suitable safeguards to protect such objects from injury or damage. If such objects are injured or damaged by reason of the Contractor's operations, they shall be replaced or restored at the Contractor's expense. The facilities shall be replaced or restored to a condition as good as when the Contractor entered upon the Work Site, or as good as required by the Contract Documents if any such objects are part of the Work. The City may make or cause to be made such temporary repairs as are necessary to restore to service any damaged facility. The cost of such repairs shall be borne by the Contractor, and the costs may be deducted from any monies due or to become due to the Contractor under the Agreement.

The fact that any underground facilities is not shown on the Contract Drawings shall not relieve the Contractor of its responsibility pursuant to "Utility Facilities" in Section 2-1.12 elsewhere in the Contract Documents. It shall be the Contractor's responsibility, pursuant thereto, to ascertain the location of such underground improvements or facilities, which may be subject to damage by reason of its operations.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the Work involved in protecting or repairing property as specified in this section, shall be considered as included in the prices paid for the various Contract items of work and no additional compensation will be allowed therefor.

5-1.10 **EMERGENCIES.** In an Emergency affecting the safety of life, the

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Work, or adjoining property, the Contractor, without special instructions or authorization from the City, shall act at its discretion to prevent such threatened loss or injury. In such an Emergency, the Contractor may perform such additional work as is reasonably required. Any compensation claimed by the Contractor on account of Work performed to an Emergency shall be determined in accordance with the provisions relating to Force Account payment contained elsewhere in the Contract Documents.

5-1.11 **APPRENTICES.** Attention is directed to Labor Code Sections 1777.5, 1777.6 and 1777.7 and Title 8, California Code of Regulations Section 200 et seq. In accordance with Section 1777.5, the Contractor shall secure the necessary certificates and shall contribute to the apprenticeship fund or funds, a provided therein. The Contractor shall require each Subcontractor who will perform work or labor or render service to the Contractor in or about the construction of the work to fully comply with Sections 1777.5 and 1777.6 of the Labor Code. To insure compliance and complete understanding of the law regarding apprentices, and specifically the required ratio thereunder, each Contractor or Subcontractor should, where some questions exist, contact the Division of Apprenticeship Standards, , or one of its branch offices prior to commencement of Work on the public works Contract. Responsibility for compliance with this section lies with the prime Contractor.

It is State and City policy to encourage the employment and training of apprentices on public works Contracts as may be permitted under local apprenticeship standards.

5-1.12 **FAIR LABOR STANDARDS ACT.** Attention is invited to the fact that the City has been advised by the Wage and Hour Division, U.S. Department of Labor, that Contractors engaged in construction Work are required to meet the provisions of the Fair Labor Standards Act of 1958 and as amended (52 Stat. 1060).

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5-1.13 **WORKERS' COMPENSATION.** Pursuant to the requirements of Labor Code Section 1860, the Contractor will be required to secure the payment of workers' compensation to its employees in accordance with the provisions of Labor Code Section 3700.

Prior to the commencement of Work, the Contractor shall sign and file with the Director a certification in the following form:

> "I am aware of the provisions of Labor Code Section 3700 which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the Work of this Contract."

5-1.14 **AIR POLLUTION CONTROL AND ASBESTOS.** The Contractor shall comply with all air pollution control rules, regulations, ordinances and statutes which apply to any Work performed pursuant to the Contract, including any air pollution control rules, regulations, ordinances and statues, specified in Government Code Section 11017.

In the absence of any applicable air pollution control rules, regulations, ordinances or statutes governing solvents, all solvents, including but not limited to the solvent portions of paints, thinners, curing compounds, and liquid asphalt used on the project shall comply with the applicable material requirements of the applicable Air Quality Management District. All containers of solvent, paint, thinner, curing compound, or liquid asphalt shall be labeled to indicate that the contents fully comply with said requirements.

Unless otherwise provided in the Supplemental Conditions, material to be disposed of shall not be burned, either inside or outside the Premises.

The Contractor shall also comply with all rules, regulations, statutes and ordinances

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regarding asbestos removal and disposal, including but not limited to, 42 U.S.C. Sections 7401, 7412 and 7601, 40 C.F.R. Part 61, Subpart M, and California Code of Regulations Section 1529, Title 8.

If the Contractor discovers that a building to be demolished or renovated contains asbestos containing material, the Contractor shall immediately cease Work and notify the City.

5-1.15 **USE OF PESTICIDES.** The Contractor shall comply with all local, state and federal rules and regulations of the Department of Food and Agriculture, the Department of Health, the Department of Industrial Relations and all other agencies which govern the use of pesticides required in the performance of the Work.

Pesticides shall include but shall not be limited to herbicides, insecticides, fungicides, rodenticides, germicides, nematocides, bactericides, inhibitors, fumigants, defoliants, desiccants, soil sterilants, and repellents.

Any substance or mixture of substances intended for preventing, repelling, mitigating, or destroying weed, insects, diseases, rodents, or nematodes and any substance or mixture of substances intended for use as a plant regulator, defoliant or desiccant shall be considered as pesticide.

5-1.16 **SOUND AND LIGHT CONTROL REQUIREMENTS.** The Contractor shall comply with all local sound control, light control, and noise level rules, regulations and ordinances which apply to any Work performed pursuant to the Contract. Work shall not begin before 7 a.m. nor occur after 7 p.m., unless otherwise permitted by the City.

Each internal combustion engine, used for any purpose on the Work or related to the Work, shall be equipped with a muffler, in good working order, of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said

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muffler.

5-1.17 **WEIGHT LIMITATIONS.** Unless expressly permitted elsewhere in the Contract Documents, the Contractor shall not operate construction equipment or vehicles of any kind which, laden or unladen, exceed the maximum weight limits set forth in Division 15 of the Vehicle Code over completed or existing base, surfacing, pavement or structures.

5-1.18 **ENVIRONMENTAL CLEARANCES; MITIGATION MONITORING PROGRAMS; AND REGULATORY AGENCY PERMIT REQUIREMENTS.** The Department will obtain all environmental clearances and other authorizations necessary for this project as set forth in the Contract Documents. The Contractor shall comply with the provisions, including giving notices during construction when required, of said authorizations. In the event the obtaining of said authorizations delays completion of all or any portion of the Work, an extension of time determined pursuant to the provisions in Section 6-1.08, "Liquidated Damages," of these General Conditions will be granted.

Contractor shall comply with: (1) all mitigation identified in the mitigation monitoring program (attached to and adopted as a component of the mitigated negative declaration or Environmental Impact Report) to mitigate impacts to protected natural resources; and (2) all related permit requirements issued by the regulatory agencies authorizing the project. Contractor shall defend, indemnify, and save and hold harmless the City, its officers, agents, employees, and volunteers from any fines, claims, suits, actions or regulatory sanctions of every name, kind and description brought forth, or on account of, damage to protected natural resources from or arising out of Contractor's negligence or willful misconduct in the performance of this Agreement.

5-1.19 **PERMITS AND LICENSES.** The Contractor acknowledges and agrees that, prior to the submission of its bid for the Work, it fully familiarized itself with the

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requirements of all applicable federal, state, county and municipal laws, codes, rules, and regulations, as well as the conditions of any required licenses and permits.

The Contractor shall procure all permits and licenses, including any applicable building permits (except those procured or to be procured by the City which are listed elsewhere in the Contract Documents), in coordination with the Director, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the Work. Contractor shall be responsible for applying, paying all fees, and coordination for obtaining all permits for completion of the Work. All permits and licenses shall be obtained in sufficient time to prevent delays to the Work. Contractor will apply to the City for reimbursement for such permits costs. Accordingly, Contractor should not include the anticipated costs for permits in its bid, as the necessary permit costs will be reimbursed by the City.

The California Environmental Quality Act (Public Resources Code, Section 21000 to 21177) may be applicable to permits, licenses and other authorizations which the Contractor must obtain from State or local agencies in connection with performing the Work. The Contractor shall comply with the provisions of that Act in obtaining such permits, licenses and other authorizations, and all permits, licenses and other authorizations shall be obtained in sufficient time to prevent delays to the Work.

The Contractor shall maintain the applicable Contractor's license as identified in the Notice to Contractors and City business license for the duration of the Work.

5-1.20 **WATER POLLUTION.** The Contractor shall comply with all water pollution control rules, regulations, ordinances and statutes which apply to any Work performed pursuant to the Contract, including any water pollution control rules, regulations, and statutes, specified by the most current State of California NPDES General Permit for Stormwater

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Discharges Associated with Construction Activity.

The Contractor shall take all necessary precaution to protect streams, vernal pools, ponds, reservoirs, and lakes from pollution with fuels, oils, bitumen, calcium chloride, and other harmful materials as consistent with the law. Also, the Contractor shall conduct and schedule operations so as to avoid discharging pollutants, such as but not limited to: sediment and silt to the storm drain system. The storm drain system consists of all facilities that are designed to convey stormwater to the Waters of the State as defined in the California Water Code. The storm drain system includes, but is not limited to, all streets, gutters, drain inlets, roadside ditches, streams, vernal pools, ponds, and lakes. Care shall be exercised to preserve roadside vegetation beyond the limits of construction.

5-1.21 **PROTECTION AND USE OF PROPERTY.** The Contractor shall be responsible for and provide and maintain all proper temporary walkways, covered walkways, barriers, roads, guards, railings, lights, warning signs, and take precaution at all times to avoid injury or damage to any person or any property, and upon completion of the Work, or at other times as directed, restore Premises and adjacent property to a proper condition. In the event of such injury or damage, Contractor shall report such injury and damage to City within forty-eight (48) hours of occurrence.

The Contractor shall protect adjoining property and nearby buildings, including City buildings, City roads, and public streets or roads, from dust, dirt, debris, or the nuisance arising out of the Contractor's operations or storage practices, and, if ordered by the Director, the Contractor shall provide and Install suitable safeguards, approved by the Director, to protect such objects from damage. If such objects are damaged by reason of the Contractor's operations, they shall be replaced or restored at the Contractor's expense.

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If the Contractor damages any buildings, roads, utilities, or other property which belong to the City, or any Department or agency thereof, then the Director, at his or her option, may retain from the money due under the Contract an amount sufficient to insure repair of the damage.

The Director may make or cause to be made such temporary repairs as are necessary to restore to service any such damaged facility. The cost of such repairs shall be borne by the Contractor and may be deducted from any moneys due or to become due the Contractor under the Contract.

5-1.22 **RESPONSIBILITY FOR DAMAGE AND INDEMNIFICATION.**

The City of Roseville, its officers, agents, employees, and volunteers, including but not limited to the Director and his or her designee, shall not be answerable or accountable in any manner: for any loss or damage that may happen to the Work or any part thereof; for any loss or damage to any of the materials or other things used or employed in performing the Work; for injury to or death of any person, either workers or the public; or for damage to property from any cause which might have been prevented by the Contractor, its workers, or anyone employed by the Contractor or the Contractor's Subcontractors.

The Contractor shall be responsible for any liability imposed by law and for injuries to, or death of, any person including, but not limited to, workers and the public, or damage to property resulting from defects or obstructions, or from any cause whatsoever during the progress of the Work or at any time before its completion and final Acceptance.

To the fullest extent allowed by law, the Contractor shall defend (through counsel acceptable to the City), indemnify, and save and hold harmless the City, and its respective officers, agents, Subcontractors, employees, and volunteers, and the successors and assigns of

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any of them, (hereinafter referred to as "Indemnitees") from and against all claims, demands, liability, suits, actions, costs or expenses for any and all loss or damage, including but not limited to, personal injury, property damage, or economic loss, arising out of or resulting from allegations of (1) Contractor's use of the City's property or any activities or Work performed hereunder by the Contractor; (2) the Contractor's performance of the Work under the Agreement; or (3) the Contractor's breach of any provision of the Agreement. The duty of the Contractor to indemnify and save harmless includes the duties to defend as set forth in Civil Code Section 2778. The only exception to these provisions is that the Contractor's obligations under this section will not apply to the extent that the claims, demands, liability, suits, actions, costs or expenses are caused by Indemnitees' active negligence, willful misconduct, criminal acts, or for defects in design furnished by the Indemnitees, misconduct, criminal acts, or for defects in design furnished by the Indemnitees.

The Contractor waives any and all rights to any type of express or implied indemnity against the City, its officers, agents, employees, or volunteers.

The Contractor's responsibility for such defense and indemnity obligations shall survive the termination or completion of this Contract for the full period of time allowed by law. The defense and indemnity obligations of this Contract are undertaken in addition to, and shall not in any way be limited by, the insurance obligations contained in this Contract. The parties intend that the defense and indemnity obligations in this Contract shall be broadly construed.

Any person, firm or corporation that Contractor authorizes to Work on the City's property including Subcontractors, shall be deemed to be an agent of the Contractor for purposes herein, shall be subject to all the applicable terms herein, and shall be within the scope of the Contractor's indemnity obligation described herein.

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In addition to any remedy authorized by law, so much of the money due the Contractor under and by virtue of the Contract as shall be considered necessary by the Department may be retained by the City until disposition has been made of such suits or claims for damages.

The retention of money due the Contractor shall be subject to the following:

A. The City will give the Contractor thirty (30) Days' notice of its intention to retain funds from any partial payment which may become due to the Contractor prior to Acceptance of the Contract. Retention of funds from any payment made after Acceptance of the Contract may be made without such prior notice to the Contractor.

B. No retention of additional amounts out of partial payments will be made if the amount to be retained does not exceed the amount being withheld from partial payments pursuant to Section 7-1.07, "Progress Payments," of these General Conditions.

C. If the City has retained funds and it is subsequently determined that the City is not entitled to be indemnified and saved harmless by the Contractor in connection with matter for which such retention was made, the Department shall be liable for interest on the amount retained at the legal rate of interest for the period of such retention.

5-1.23 **INSURANCE COVERAGE.**

A. Evidence of Maintenance Required. The Contractor shall, at its expense, procure and at all times maintain in full force and effect at a minimum the insurance required by this section on all of its operations; and the Contractor shall not allow any Subcontractor to commence work until similar insurance required of the Subcontractor has been obtained and filed. An original Certificate of Insurance, and copies of all required endorsements, all in a form approved by the Risk Manager, evidencing all required coverage or policies shall be filed after the award of the bid and prior to approval of the Contract by the City Council. Contractor shall

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provide ten (10) days prior written notice to the City of any reduction of coverage limits or cancellation of the coverage or policies shall be given to the City of Roseville as Certificate holder.

B. Qualifying Insurers. With the exception of the State Compensation Insurance Fund, all required insurance policies shall be issued by companies acceptable to the City and licensed to do business in the State of California and who hold a current policy holders alphabetic and financial size category rating of not less than AVII according to the most recent issue of Best's Insurance Reports.

C. Insurance Required.

1. Commercial General Liability (CGL): Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations with limits of no less than Two Million Dollars ($2,000,000) per occurrence for bodily injury, personal injury and property damage for projects under One Million Dollars ($1,000,000) and limits of no less than Five Million Dollars ($5,000,000) per occurrence for bodily injury, personal injury and property damage for projects over One Million Dollars ($1,000,000). If a general aggregate limit applies, either the aggregate limit shall apply separately to this project or the general aggregate limit shall be twice the required occurrence limit.

The Commercial General Liability insurance shall include the following, copies of which shall be provided:

a. Inclusion of the City of Roseville, and its officers, agents, employees, and volunteers, as additional insureds (except for workers' compensation) as respects services or operations under the Contract. The additional insured endorsement for the general liability policy shall be at least as broad as the ISO CG 2010 10 01 combined with ISO CGL

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Endorsement CG 2037 10 01. Any other endorsement must be approved in writing by the City. Endorsements must include coverage for on-going and completed operations, which coverage shall be maintained for four (4) years following completion of the Project. Endorsements shall cover the City of Roseville, its officers, agents, employees, and volunteers.

b. The insurance shall provide coverage for claims by one insured against another insured and the policies shall not contain any cross-suits exclusions, cross-liability exclusions, or insured versus insured exclusions. The policies shall not contain any classification exclusions purporting to deny coverage for any work to be performed by Contractor or any of its Subcontractors.

c. Stipulation that the insurance is primary and noncontributory, as evidenced by a separate endorsement (CG 20 01 04 13 or an equivalent) or section of the policy, and that neither the City nor its insurers will be called upon to contribute to a loss.

d. Such insurance shall specifically cover the contractual liability of the Contractor.

e. Any available insurance proceeds in excess of the specified minimum insurance coverage requirements and limits shall be available to the additional insureds. Furthermore, the requirements for coverage and limits shall be: (1) the minimum coverage and limits specified in this Agreement; or (2) the full coverage and maximum limits of any insurance proceeds available to the named insureds, whichever is greater.

f. Waiver of subrogation endorsement.

g. The Contractor shall furnish a certificate for this period covered.

2. Automobile Liability: Insurance Services Office Form Number CA 0001 covering Code 1 (any auto), or if Contractor has no owned autos, Code 8 (hired) and Code 9

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(non-owned), with limits of no less than One Million Dollars ($1,000,000) per accident for bodily injury and property damage.

3. Workers' Compensation: In accordance with the provisions of the California Labor Code, Contractor is required to be insured against liability for Workers' Compensation or to undertake self-insurance. Statutory Workers' Compensation and Employers' Liability of at least One Million Dollars ($1,000,000) shall cover all Contractors staff while performing any work incidental to the performance or this Agreement.

4. Professional Liability: Professional Liability (Errors and Omission) Insurance appropriate to Contractor's profession, with a limit of liability not less than One Million Dollars ($1,000,000) per occurrence or claim and Two Million Dollars ($2,000,000) aggregate to cover all design and engineering services rendered by Contractor pursuant to the Agreement. Coverage must commence from the first day that Contractor or any of its Subcontractors provided any design or engineering services in connection with the Project.

5. Builder's Risk/Course of Construction Insurance (If Required by Risk Management): The Contractor shall be responsible for all loss, damage or destruction whatsoever to the work called for by this Contract until the approval of a Notice of Completion or acceptance of the Work if no Notice of Completion is to be recorded.

The Contractor shall secure "All Risk" type of builder's Risk Insurance of the type covering one hundred percent (100%) of the value of the work performed under this Contract (the value is presumed to be the Contract amount unless otherwise stated in Supplemental Conditions) and all materials, equipment, or other items to be incorporated therein while the same are located at the construction site, a bonded warehouse, or its place of manufacture. At any time, the policy shall cover the value of the work completed. The policy shall cover hazards

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including the losses due to fire, explosion, hail, rain, lightning, flood (separate insurance as needed), vandalism, malicious mischief, wind, collapse, aircraft, and smoke.

The policies providing such insurance shall name the City as a loss payee as its respective interests may appear, and certified copies of such policies shall be filed with the City. The maximum deductible allowable under the Builder's All Risk policy shall be five percent (5%) of the Contract amount.

Builder's Risk Insurance is not required for coverage of losses in excess of five percent (5%) of the Contract amount for damages resulting from earthquake in excess of a magnitude of 3.5 on the Richter scale, or tidal waves. Coverage in the amount of five percent (5%) of the Contract amount for such losses is required.

6. Pollution Coverage: Contractor shall procure pollution liability coverage or other insurance covering claims for bodily injury or property damage arising out of the abatement, removal, storage, transportation, or other exposure to hazardous materials or pollutants, in limits not less than Two Million Dollars ($2,000,000). Contractor shall add the City and all parties required to be indemnified by Contractor as additional insured on all pollution liability policies.

7. Higher Coverage Limits: If Contractor maintains higher coverage limits than the amounts shown above, then the City requires and shall be entitled to coverage for the higher coverage limits maintained by Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the City.

8. Claims Made Coverage: Liability insurance coverage may not be written on a "claims made" or modified occurrence basis. The Certificate of Insurance must clearly provide that the coverage is on an "occurrence" basis.

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5-1.24 **OTHER INSURANCE PROVISIONS.**

A. The requirements of the Standard Specifications as to types and limits of insurance coverage to be maintained by the Contractor, and any approval of insurance by the City, are not intended to, and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to the Contract, including, but not limited to, the provisions concerning indemnification, nor preclude the City from taking any other action available to it under any other provision of the Contract or law.

B. The City acknowledges that some insurance requirements contained in these Standard Specifications may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by Contractor under the Contract. Any self-insurance must be approved in writing by the City, in its sole discretion and shall not reduce the limits of liability. Any deductibles or self-insured retentions ("SIR") must be declared on the certificate of insurance and approved by City in writing. Policies containing any SIR provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named insured or City. City reserves the right to obtain a full certified copy of any insurance policy and endorsements. The failure to exercise this right shall not constitute a waiver of such right.

C. The Contractor agrees to include in its contracts with all subcontractors the same requirements and provisions of this Contract, including the indemnity and insurance requirements, to the extent they apply to the scope of the subcontractor's work. Furthermore, the Contractor shall require its subcontractors to agree to be bound to the Contractor and the City in the same manner and to the same extent as the Contractor is bound to the City under this Contract. Additionally, the Contractor shall obligate its subcontractors to comply with these

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same provisions with respect to any tertiary subcontractor, regardless of tier. A copy of the City's indemnity and insurance provisions will be furnished to the subcontractor or tertiary subcontractor upon request. Alternatively, the Contractor may insure subcontractor(s) under its own policy.

D. The City, its officers, agents, employees, and volunteers are to be covered as insureds with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the Contractor; and with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts or equipment furnished in connection with such work or operations. Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under California Insurance Code Section 11580.04.

E. The limits of insurance required in this Contract may be satisfied by a combination of primary and excess insurance. Any excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and noncontributory basis for the benefit of the City (if agreed to in a written contract) before the City's own insurance shall be called upon to protect it as a named insured.

F. The insurance procured by Contractor shall be subject to the approval of the City, but any acceptance of insurance certificates by the City shall in no way limit or relieve Contractor of its duties and responsibilities under the Agreement.

G. Contractor shall be responsible for all premiums, deductibles and self-insured retention applicable to the insurance it is required to procure under the Contract. All deductibles or self-insured retentions over five hundred thousand dollars ($500,000) must be approved by the City, in writing. Contractor shall be responsible for all deductibles, self-insured

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retention payments, and/or increased premiums incurred if the City's policies of insurance are forced to cover damages or respond to claims for which Contractor or its Subcontractors were obligated to provide insurance under the Contract.

H. Failure of the City to enforce in a timely manner any of the requirements of these insurance provisions shall not act as a waiver to enforcement of any of these provisions at a later date.

I. Contractor's indemnity obligations shall not be limited by these insurance provisions and shall survive the expiration of the Contract and the insurance provisions of the Contract shall likewise not be limited by the indemnity provisions of the Contract.

J. THE CITY RESERVES THE RIGHT TO WITHHOLD ANY PROGRESS PAYMENTS TO THE CONTRACTOR IN THE EVENT OF NONCOMPLIANCE WITH ANY INSURANCE REQUIREMENTS.

5-1.25 **THIRD PARTY BENEFICIARY.** No provisions in the Contract Documents shall in any way inure to the benefit any third party (including the public at large or any member thereof) so as to constitute such person a third party beneficiary of the Contract, or of any term or condition or other provision of the Contract or otherwise give rise to any cause of action in any person not a party to the Agreement, except as expressly provided elsewhere in the Contract Documents.

5-1.26 **COORDINATION AND ACCESS.** The Contractor acknowledges that the City may award, or has already awarded, other construction contracts for additional work or may perform additional work with its own forces and that such work may affect the Work under this Agreement. Additionally, the Contractor acknowledges that the State and other public and private agencies may be granted a right-of-entry by the City for the purpose of constructing

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facilities within and adjacent to the Work Site. It is the obligation of the Contractor to coordinate its Work with the work of others working within or adjacent to the City's property.

During performance of its Work, the Contractor shall not have exclusive access to or use of the work areas. The City may also require that certain facilities and areas be used concurrently by the Contractor and by other contractors working in the area. When two (2) or more contractors are employed on related or adjacent City work, each shall conduct its operations in such a manner as not to cause any unnecessary delay or hindrance to the other. Each contractor shall be responsible to the other for all damage to any work, to persons or property caused to the other by its operations, and for loss caused the other due to any unnecessary delays or failure to finish the work within the time specified for completion.

If any party of the Contractor's Work depends on the work of any other contractor and/or the City for proper execution and/or results, the Contractor shall promptly notify the City of any discrepancies and/or defects in said other work that would render its work unsuitable for proper execution and/or results prior to proceeding with the Contractor's own Work. If it becomes necessary, the City will resolve coordination and access problems.

The Contractor and its representative in charge of the Work shall familiarize themselves with the City's property and Work Site, and adjacent surroundings in the vicinity of said Wok, and any private or public operations on adjoining properties.

5-1.27 **OCCUPANCY BY THE DEPARTMENT PRIOR TO ACCEPTANCE.** The City may at any time notify the Contractor in writing that it intends to take Beneficial Occupancy of any portion of the Work even though the Work may not be substantially complete. Unless the reason for the City's taking Beneficial Occupancy is that the Contractor has not completed the Work (or portions thereof) in accordance with the Contract

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Time, the City's Beneficial Occupancy shall relieve the Contractor from its responsibility for maintenance, loss or damage to that portion of the Work for which the City has taken Beneficial Occupancy other than that resulting from the Contractor's act or omission, negligence, willful misconduct or breach of warranty.

Should the Work (or portion thereof) not be completed in accordance with the Construction Schedule within the Contract Time (as adjusted under the terms of the Contract Documents), the City shall have the right, but not the obligation, to take Beneficial Occupancy of the Work. In such event, the Contractor shall not be entitled to any additional compensation on account of said occupancy by the City, nor shall the Contractor be relieved of any of its responsibilities under the Contract Documents, including, without limitation, Contractor's obligation to complete the Work in accordance with the Construction Schedule.

Beneficial Occupancy shall not be deemed an Acceptance by the City either of the Work or of any portion thereof, nor will it relieve the Contractor of full responsibility for correcting defective Work or materials found at any time before the formal written Acceptance of the entire Contract by the Director or during the full warranty period after such Acceptance, as provided in Section 7-1.12, "Warranty," of these General Conditions.

The City's Beneficial Occupancy shall not relieve the Contractor of its responsibility to maintain all insurance and bonds required under the Contract Documents until the entire project is accepted by the City.

5-1.28 **RIGHT TO OPERATE UNSATISFACTORY FACILITIES AND EQUIPMENT.** If, after Installation, the operation or use of the facilities or equipment to be furnished under this Contract proves to be unsatisfactory to the Director, the City shall have the right to operate and use such facilities or equipment until they can, without damage to the City,

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be taken out of service for correction or replacement. Such period of use of the defective facilities or equipment, pending correction or replacement, shall in no way decrease the warranty period required for the acceptable corrected or replaced facilities or equipment.

5-1.29 **CONTRACTOR'S RESPONSIBILITY FOR THE WORK.** Except as otherwise provided herein, the Contractor shall have the charge and care of the Work and shall bear the risk of injury or damage to any part of the Work by the action of the elements or from any other cause whether arising from the execution or from the nonexecution of the Work until the Acceptance of the Contract by the Director. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the Work occasioned by any cause before its completion and Acceptance, and shall bear the expense thereof. In case of suspension of Work from any cause whatever, the Contractor shall be responsible for the Work and it shall also be responsible for all materials, and shall properly store them if necessary, and shall provide suitable drainage and erect temporary structures where necessary.

The Contractor will be relieved of responsibility for any injury or damage to the Work caused by the following:

A. An earthquake in excess of a magnitude of 3.5 on the Richter Scale or a tidal wave, when the effect of such has been proclaimed a disaster or state of emergency by the Governor of the State of California or by the President of the United States, or was of such magnitude at the site of the Work as to have been sufficient to have caused a proclamation of disaster or state of emergency, had it occurred in a populated area.

B. Occupancy and use by the Department or the public prior to the completion of the entire project.

C. Acts of the Federal Government or the public enemy.

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5-1.30 **RESPONSIBILITY FOR UTILITIES.** The Contractor shall be responsible at its own cost for any and all Work, expense or special precautions caused or required by the existence or proximity of utilities encountered in performing the Work, including without limitation, repair of any or all damage and all hand or exploratory excavation required. The Contractor is cautioned that such utilities may include communication cables or electrical cables which may be high voltage, and when working or excavating in the vicinity of such cables, or the ducts enclosing such cables, the Contractor shall undertake at its own cost any special precautions required. Suitable warning signs, barricades, and safety devices shall be erected as necessary or required.

However, if during the course of the Work the Contractor encounters utility Installations which are not shown or indicated in the Contract Documents or which are found in a location substantially different from that shown, and such utilities are not reasonably apparent from visual examination, then the Contractor shall promptly notify the Director in writing. Where necessary for the Work of the Contract, the Director shall issue a written order to the Contractor to make such adjustments, rearrangement, repair, removal, alteration, or special handling of such utility, including repair of the damaged utility. The Contractor shall perform the Work described in such written order, and compensation therefor will be made in accordance with Section 3 of these General Conditions relating to changes in the Work. Except for the items of cost specified in said Section 3, the Contractor shall receive no compensation for any other cost, damage, delay, interference, or hindrance to him or her due to the presence of such utility. If the Contractor fails to give the notice specified above and thereafter acts without instructions for the Director, then the Contractor shall be liable for any or subsequent to discovery thereof, and the Contractor shall repair and make good such damage at its own cost.

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The precise location of underground facilities can only be determined by careful probing or hand digging in compliance with Article 6 of the Cal/OSHA Construction Safety Orders which states in part:

> "Prior to opening an excavation, effort shall be made to determine whether underground installations, i.e., sewer, water, fuel, electric lines, etc., will be encountered, and if so, where such underground installations are located. When the excavation approaches the approximate location of such an installation, the exact location shall be determined by careful probing or hand digging, and, when it is uncovered, adequate protection shall be provided for the existing installation."

The location of known existing utilities and pipelines are shown on the Contract Drawings in their approximate locations. Some of the locations include multiple conduits. The Contractor shall exercise care in avoiding damage to those facilities which are to remain in service subsequent to the construction of the particular new facility involved and the Contractor will be held responsible for any repairs if damaged. The Contractor shall also exercise care in maintaining those pipes and facilities required for continuing operation of the existing facilities until such time as they can be abandoned. There is no guarantee that all utilities or obstructions are shown on the Contract Drawings or that the locations indicated are accurate.

The Contractor shall exercise extreme caution in working in the area adjacent to the existing pipelines and utility services. It is essential that all the existing facilities be maintained in service. Construction of the connections between the existing facilities and the new facilities shall be at times and during periods acceptable to the City. The Contractor shall advise the Director in writing of its proposed Construction Schedule for these connections at least forty-eight (48) hours in advance.

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The Contractor shall uncover all piping and conduits, to a point one foot (1') below the pipe, where crossings, interferences, or connections are shown on the Contract Drawings, prior to trenching or excavating for any pipe or structures, to determine actual elevations. New pipelines shall be laid to such grade as to clear all existing facilities which are to remain in service. If the Contractor does not expose all required utilities, it shall not be entitled to additional compensation for Work necessary to avoid interferences nor for repair to damaged utilities. Excavations around underground electrical ducts and conduits shall be performed using extreme caution to prevent injury or damage to workers and to the electrical ducts or conduits.

5-1.31 **PROPERTY RIGHTS IN MATERIALS.** Nothing in the Contract shall be construed as vesting in the Contractor any right of property in the materials used after they have been attached or affixed to the Work or soil or after partial payment has been made as provided in Section 7-1.07, "Progress Payments," of these General Conditions for material delivered on the ground or stored subject to or under the control of the City and unused. All such material shall become the property of the City upon being so attached or affixed or upon payment for materials delivered on the ground or stored subject to or under the control of the City and unused, as provided in said Section 7-1.07.

5-1.32 **COURT ORDERED DELAY.** If, pursuant to court order, the Department temporarily suspends performance of all or any portion of the Work, an extension of time determined pursuant to the provisions in Section 6-1.08, "Liquidated Damages," of these General Conditions will be granted.

5-1.33 **NO PERSONAL LIABILITY.** Neither the Director, nor any other officer or authorized employee of the City, shall be personally responsible for any liability arising under or by virtue of the Contract.

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5-1.34 **RIGHTS IN LAND AND IMPROVEMENTS.** The Contractor shall make no arrangements with any person or entity to permit occupancy or use of any land, structure or building within the limits of the Work, for any purpose whatsoever, either with or without compensation, in conflict with any agreement between the City and any third party owner, former owner, or tenant of such land, structure or buildings. The Contractor shall not occupy City-owned property outside the limit of the Work shown on the Contract Drawings unless it obtains prior approval.

5-1.35 **ANTITRUST CLAIMS.** The Contractor's attention is directed to the following provision of Public Contract Code Section 7103.5(b), which is applicable to the Contractor and its Subcontractors:

> " In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 [commencing with Section 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the contractor, without further acknowledgement by the parties."

5-1.36 **RIGHTS TO DRAWINGS, TECHNICAL DATA PATENTS.** Shop

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Drawings and Working Drawings submitted to the City by the Contractor, Subcontractor or any lower tier Subcontractor pursuant to the Agreement, are the property of the City and the City may use, and disclose in any manner and for any purpose, Shop Drawings and Working Drawings delivered under the Contract.

Technical Data including manuals or instructional materials, computer or microprocessor software which are delivered or submitted to the City by the Contractor, Subcontractor, or any lower tier Subcontract pursuant to the Contract are the property of the City, and the City may use or disclose same in any manner and for any purpose.

The Contractor shall assume all costs arising from the use of patented materials, equipment, devices, or processes used on or incorporated in the Work, and shall defend, indemnify and save and hold harmless the City, and its duly authorized representatives, from all suits at law, or in equity, and actions of every nature for, or on account of the use of any patented materials, equipment, devices or processes. In case some materials, equipment, devices or processes are held to constitute an infringement and their use enjoined, the Contractor, at its expense, shall:

1. Secure for the City the right to continue using said materials, equipment, devices or processes by suspension of the injunction or by procuring a license or licenses; or
2. Replace such materials, equipment, devices, processes; or
3. Modify them so that they become non-infringing or remove the enjoined materials, equipment, devices or processes and refund the sums paid therefor without prejudice to any other rights of the City.

5-1.37 **PAYMENT OF TAXES.** Contractor shall pay all taxes and duties applicable to and assessable against any Work, equipment, materials, services, processes, and

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operations incidental to or involved in the Agreement, including but not limited to, retail sales and use, transportation, export, import, business, and special taxes. The Contractor is responsible for ascertaining and acquainting itself with such taxes and making all necessary arrangements to pay them. The Contractor will maintain records that are auditable records, and these records shall be subject to the City's review to verify that Contractor's tax payments are current at all times.

The Contract Price paid for the Work shall include full compensation for all taxes which the Contractor is required to pay, whether imposed by Federal, State or local government, including, without being limited to, Federal excise tax. No tax exemption certificate nor any document designed to exempt the Contractor from payment of any tax will be furnished to the Contractor by the Department, as to any tax on labor, services, materials, transportation, or any other items furnished pursuant to the Contract.

The Contractor shall withhold and pay any and all sales and use taxes, withholding taxes, whether Federal, State, or local, Social Security taxes, State Unemployment Insurance charges and all other taxes which are now or hereafter may be required to be paid or withheld under any laws.

5-1.38 **GRATUITIES AND CONFLICT OF INTEREST.** The Contractor shall not offer or provide gratuities in the form of gifts, entertainment, loans, meals, rewards, and/or services to representatives of the City, including but not limited to, officers, employees, agents, Engineering Service Consultants, Consulting Engineers and Architects, Inspectors and/or Testing Agencies retained by the City. If it is found that the Contractor has violated this provision, the Contract may be subject to termination for default as defined elsewhere in these General Conditions.

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During the term of the Contract and until the final payment has been made to the Contractor, the Contractor shall not employ or compensate in any manner whatsoever, the City's officers, employees and authorized representatives, agents, and any Engineering Service Consultants, Consulting Engineers and Architects, Inspectors, and/or Testing Agencies retained by the City. Any exception to the employment or compensation to any of the above named parties must be made in writing by the City. If the Contractor offers or provides employment or compensation to those named above during the term of the Contract, the Contract may be subject to termination for default.

5-1.39 **COOPERATION.** Should construction be under way by City forces or other forces or by other Contractors within or adjacent to the limits of the Work or should Work of any other nature be under way by such forces within or adjacent to said limits, the Contractor shall cooperate with all such forces to the end that any delay, interference or hindrance to their Work will be avoided. The right is reserved to perform other or additional Work at or near the site at any time, by the use of such forces.

5-1.40 **DIGGING TRENCHES OR OTHER EXCAVATIONS.** In the event any work involves digging trenches or other excavations that extend deeper than four feet (4') below the surface, City and Contractor shall comply with the following:

A. The Contractor shall promptly, and before the following conditions are disturbed, notify City in writing of any:

1. Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.

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2. Subsurface or latent physical conditions at the site differing from those made available to Contractor for inspection as provided in the project proposal.

3. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Contract.

B. The City shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the Work shall issue a Change Order under the procedures described in the Contract.

C. In the event that a dispute arises between the City and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, the Contractor shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all work to be performed under the Contract. The Contractor shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties. However, no claim of the Contractor under this clause shall be allowed unless the Contractor has given the notice required by this Section. No claim by the Contractor for an equitable adjustment hereunder shall be allowed if asserted after final payment under this Contract.

5-1.41 **CONTRACTOR REGISTRATION.** No contractor or subcontractor may work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. During the performance of this Contract, the Contractor and its subcontractors shall have a continuing legal obligation to maintain current

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registration with the Department of Industrial Relations. The Contractor is hereby notified that this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

5-1.42 **CITY OF ROSEVILLE ENCROACHMENT PERMITS AND RIGHTS-OF-WAY.** The Contractor need not obtain a separate encroachment permit from the City prior to construction within street rights-of-way or other City rights-of-way. Execution of the Contract by the City shall be deemed an encroachment permit for work required by the Contract within rights-of-way. All work shall conform to the rules and regulations of encroachment permits and shall be subject to the inspection and approval of the Director and City Engineer.

To the extent indicated in the Contract Drawings, the City will provide the rights-of-way over private lands or the site to enable the Contractor to perform its work. The Contractor shall be solely responsible for securing any additional rights-of-way desired by the Contractor. The City will not be a party to nor assume any liability for any separate agreements reached between the Contractor and any third parties with respect to these additional rights-of-way. The Contractor shall procure evidence that agreements are in place with said third parties before the Contractor uses those areas covered by the agreements. Any damage to such private lands caused by the Contractor's operations shall be the sole responsibility of the Contractor.

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SECTION 6

PROSECUTION AND PROGRESS

6-1.01 **SUBLETTING AND SUBCONTRACTING.** The Contractor shall be responsible for all Work performed under the Contract. The Contractor shall give its personal attention to the fulfillment of the Contract and shall keep the Work under its control. Nothing in the Contract Documents shall create any contractual relationship between the City and any Subcontractor. The Contractor is fully responsible to the City for the acts and omissions of its Subcontractors of any tier. When any Subcontractor fails to prosecute a portion of the Work in a manner satisfactory to the Director, that Subcontractor shall not again be employed on the Work. Although the sections of the Contract may be arranged according to various trades, or general grouping of the Work, the Contractor is not obligated to sublet the Work in such manner. The Director will not arbitrate disputes among Subcontractors or between Contractor and one or more Subcontractors concerning responsibility for performing any part of the Work.

The on-site production of materials produced by other than the Contractor's own forces shall be considered as subcontracted. The erection, establishment or reopening of on-site plants for production of materials and the operation thereof in the production of materials for use on the Work shall conform to the requirements relating to labor set forth in the Contract Documents.

The Contractor shall also be responsible for coordinating the Work performed by Subcontractors and Suppliers.

The Contractor shall not substitute any person as Subcontractor in place of a Subcontractor listed on its bid proposal without the written approval of the Director. Substitutions must be in accordance with the provisions of the "Subletting and Subcontracting

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Fair Practices Act" beginning with Public Contract Code Section 4100. Violations of this Act by the Contractor may subject it to penalties which may include cancellation of Contract, Assessment of ten percent (10%) of the Subcontractor's bid, and disciplinary action by the Contractors State License Board.

The Contractor shall pay any Subcontractors approved by the City for work that has been satisfactorily performed no later than seven (7) Days from the date of Contractor's receipt of progress payments by the City. Within seven (7) Days after receipt from the City of funds attributable to work performed by a Subcontractor, Contractor shall release any retainage payments withheld to the Subcontractor. In the event Contractor does not make progress payments or release retention to Subcontractors in accordance with the time period specified herein, Contractor may be subject to prompt payment penalties per statute.

6-1.02 **ASSIGNMENT.** The performance of this Contract may not be assigned, except upon the written consent of the City Council of the City of Roseville. Consent will not be given to any proposed assignment which would relieve the original Contractor or its surety of their responsibilities under the Contract nor will the City consent to any assignment of a part of the Work under the Contract.

The Contractor may assign moneys due or to become due to it under the Contract and such assignment will be recognized by the City, if given proper notice thereof, to the extent permitted by law, but any assignment of moneys shall be subject to all proper set-offs in favor of the City and to all deductions provided for in the Contract and particularly all money withheld, whether assigned or not, shall be subject to being used by the City for the completion of the Work in the event that the Contractor should be in default therein.

6-1.03 **BEGINNING OF WORK.** After the execution of the Contract by both

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parties, the City will issue the Notice to Proceed upon its determination that it is appropriate for the Contract Time to commence.

The Contractor shall begin Work within fifteen (15) Days after receiving the Notice to Proceed from the Director, subject to the requirements stated elsewhere in the Contract Documents regarding, among other things, the submittal of Baseline Schedule, and shall diligently prosecute the same to completion within the time limit provided in the Supplemental Conditions. Contractor shall also achieve any and all Contract milestones as described elsewhere in the Contract Documents.

The Contractor shall notify the Director, in writing, of its intent to begin Work at least seventy-two (72) hours before Work is begun. The notice shall be delivered to the Director and shall specify the date the Contractor intends to start. If the project has more than one (1) location of Work, a separate notice shall be given for each location.

The Contractor is not authorized to perform any Work until it has received a Notice to Proceed from the City. Should the Contractor begin Work in advance of receiving notice that the Contract has been approved as above provided, any Work performed by it in advance of the said date of approval shall be considered as having been done by the Contractor at its own risk and as a volunteer unless said Contract is so approved thereafter.

6-1.04 **PROGRESS SCHEDULE.**

A. Preliminary Progress Schedule. The Contractor shall submit to the Director, within twenty (20) Days after date of the Notice to Proceed, a Preliminary Progress Schedule covering the Contractor's activities over the first three (3) months of operation in detail and the remainder of the project in summary. The Preliminary Progress Schedule shall schedule the project within the Contract Time for completion of the Work, and shall be subject to

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favorable review by the Director.

B. CPM Schedule. The Contractor shall submit an acceptable Critical Path Method (CPM) Schedule to the Director within thirty (30) Days after the receipt of the Notice to Proceed. Subsequent revisions to said schedule shall be submitted as set forth hereinafter. The requirement for the CPM schedule is included to allow for adequate planning and execution of the Work, to determine the critical nature of delays, and to assist the Director in appraising the reasonableness of the proposed schedule and evaluating progress of the Work. The CPM schedule submitted under this Section shall utilize a CPM format, either the precedence or arrow diagramming method. The definitions of CPM terms and functions shall be as provided in the Associated General Contractors of America book *CPM in Construction, A Manual for General Contractors*, or a favorably reviewed alternative publication or reference. No progress payment will be made prior to submission and acceptance of the CPM Schedule.

1. The CPM schedule system shall consist of diagrams and accompanying mathematical analyses. The diagrams shall show elements of the project in detail and an entire project summary. Diagrams shall show the order and interdependence of activities and sequence in which the Work is to be accomplished as planned by the Contractor. The basic concept of a network analysis diagram shall be followed to show how the start of a given activity is dependent on the completion of preceding activities and its completion restricts the start of following activities. Detailed network activities shall include, in addition to construction activities, the submittal and favorable review of samples of material and Shop Drawings, the procurement of critical materials and equipment, fabrication of special material and equipment, and their Installation and testing. All activities of the City and the Director that affect progress and required Contract dates for completion of all or parts of the Work shall be shown. The

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selection and number of activities shall be subject to favorable review by the Director. Summary networks shall be time scaled. Durations shall be in Days and shall not exceed fifteen (15) Days, except for submittal and delivery items. Where the duration of continuous Work exceeds fifteen (15) Days, Work items in the Construction Schedule shall be subdivided by location, approximate stationing or other sub-element of the Work.

The graphic network diagram shall include for each activity, the description, activity number, the estimated duration in Days, and all activity relationship lines. The network diagram shall be drawn for the early start of activities. All significant Submittals shall be scheduled along with manual Submittals and training on all large or critical pieces of equipment. If the precedence technique is utilized, the schedule project shall include a calendar in Work Days, a network report sorted by early start and a logic table report sorted by preceding Work item. If the arrow technique is utilized, the schedule report shall include a calendar in Work Days, a network report sorted by early start, a network report sorted by I-J numbers, and a network sorted by slack time and I-J numbers.

2. The critical path shall be shown on all reports and on the graphic network diagram. The activities which constitute the critical path shall be identified.

3. The mathematical analysis of the network diagram shall include a tabulation of each activity. The following information shall be furnished as a minimum for each activity:

(a) preceding and following event numbers

(b) activity description and number

(c) estimated duration of activities

(d) earliest start date (by calendar date)

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(e) earliest finish date (by calendar date)

(f) actual start date (by calendar date)

(g) actual finish date (by calendar date)

(h) latest start date (by calendar date)

(i) latest finish date (by calendar date)

(j) slack or float

(k) percentage of activity completed

4. The program shall be capable of accepting revised completion dates as modified by approved time adjustments and recomputations of all tabulation dates and float accordingly.

5. Submission and review of the system shall be as follows:

(a) The complete network analysis system, consisting of the detailed network mathematical analysis and network diagrams, shall be submitted within thirty (30) Days after receipt of the Notice to Proceed.

(b) The Contractor shall participate in a review and evaluation of the proposed network diagrams and analysis by the Director. Any revisions necessary as a result of this review shall be resubmitted for review by the Director within ten (10) Days. When completed, the favorably reviewed schedule shall then be the schedule to be used by the Contractor for planning, organizing and directing the Work and for reporting progress. If the Contractor thereafter desires to make significant changes in its method of operating and scheduling, the Contractor shall notify the Director in writing stating the reasons for the change.

(c) The Contractor shall submit at monthly intervals a report of the actual construction progress. Each monthly report shall cover a period of approximately thirty

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(30) Days ending around the 20th of each month. The monthly reports shall be submitted within ten (10) Days of the end of the reporting period.

(1) If the project is proceeding on schedule, the monthly update report may consist of a marked-up copy of the graphical network diagram. This submittal shall clearly indicate the status of any minor shifts in sequence or schedule and the estimated completion date or percent complete of all activities currently in progress. The Contract completion date shall also be indicated. The Contractor shall submit a narrative report relating to status of construction, the schedule, and factors which may affect the remainder of the schedule. The report shall show the activities or portions of activities completed during the reporting period. The report shall state the percentage of the Work actually completed and scheduled as of the report date and the progress along the critical path in terms of Days ahead or behind the allowable dates.

(2) If, in the opinion of the Director, the project is behind schedule, the monthly report shall include a revised network diagram and/or mathematical analysis showing the Contractor's proposed revised schedule. An analysis of the effect that the delay has on progress along other paths shall also be included in the report. The Contractor shall also submit a narrative report with each updated analysis which shall include but not to be limited to a description of current and anticipated problem areas, delaying factors and their impact, and an explanation of corrective actions taken or proposed.

(3) Periodic report shall be submitted in sufficient copies to cover Contractor needs plus five (5) copies and an available electronic copy to be retained by the Director.

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6. To the extent that the favorably reviewed initial Construction Schedule, or revisions thereto, indicate anything not jointly agreed upon, it shall be deemed to be not favorably reviewed by the Director. Any omission of Work from the detailed schedule, otherwise required for Contract compliance, will not excuse the Contractor from completing such Work within any applicable completion date. The CPM schedule shall be generated by computer methods.

C. Schedule Review. Once each month, on a date mutually agreed upon, but no later than seven (7) business days after the monthly schedule progress report date, a Work Site meeting will be held to review the Construction Schedule and job progress. The Contractor shall also attend weekly meetings scheduled by the Director to review the progress of the Work in the preceding week and in the subsequent week, coordinate the Work with public agencies or other Contractors as required, and allow the Director to plan his or her activities for testing, inspection, etc.

D. Schedule Revisions. The conditions under which the Director will require revisions of the Construction Schedule include the following:

1. When delay in completion of any Work item or sequence of Work items results in an estimated extension of project completion by either twenty (20) business days or by ten percent (10%) of the remaining duration of time to complete the Contract, whichever is less.

2. When delays in Submittals or deliveries make replanning or rescheduling of the Work necessary.

3. When the schedule does not represent actual prosecution and progress of the Work.

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4. When any change to the sequence of activities, the completion date for major portions of the Work, or when changes occur which affect the critical path.

5. When Contract Amendments or a Change Order necessitates schedule revision, the Contractor shall submit a schedule analysis of all Change Order Work with its proposal.

E. Cash Flow Projection. A cash flow projection shall be submitted with the Construction Schedule. This cash flow projection shall be revised and resubmitted when revisions of the Construction Schedule will result in changes to the projected cash flow.

F. Schedules showing project completion dates earlier than specified in the Supplemental Conditions will be rejected unless justification can be provided for early completion.

6-1.05 **SCHEDULE OF VALUES.** Prior to preparation of the first estimate for a progress payment, the Contractor shall submit for favorable review by the Director a detailed Schedule of Values or cost breakdown of the Work under each bid item awarded. The breakdown will then become the basis for partial payment determination. Elements of Work shall be grouped by structure, pipeline, system, etc. Within each grouping, Work should be itemized by readily measurable quantities of Work complete in place. For example, concrete should be in units of cubic yards including form Work and reinforcing steel. Move-on costs, bond and insurance costs, and Overhead costs shall not be considered an item of cost for this purpose but shall be prorated over items of Work. In the event the Schedule of Values is not favorable reviewed by the Director, another Schedule of Values shall be submitted that is mutually acceptable to the Contractor and the Director.

6-1.06 **CITY'S RIGHT TO STOP WORK.** The Director shall have the

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authority to order the Contractor, in writing, to suspend the Work wholly or in part, for such period as the Director may deem necessary due to the failure on the part of the Contractor to correct Work that is not in accordance with the requirements of the Contract Documents or if Contractor persistently fails to carry out Work in accordance with the Contract Documents.

The Contractor shall immediately comply with the written order of the Director to suspend the Work wholly or in part. The suspended Work shall be resumed when conditions are favorable and methods are corrected, as ordered or approved in writing by the Director.

Any stoppage of work under this section shall be at the Contractor's sole expense, and the Contractor shall have no claim against the City based on the Contractor's failure to perform the Work in accordance with the Contract Documents.

In addition to the City's right to stop Work, the City may order the Contractor to submit to the City at no additional cost to the City, additional information concerning Contractor's planned Work if the Contractor fails to promptly correct Work that is not in accordance with the requirements of the Contract Documents or persistently fails to carry out Work in accordance with the Contract Documents. The additional information ordered by the City may include, but is not limited to, preparation of Submittals or Working Drawings not otherwise required to be submitted under the Contract Documents.

In the event the City discovers that the Contractor has created an unsafe condition the City may arrange for other work forces to remedy the condition. Such remedial work shall be at the sole discretion of the City. If this action is required, the City may unilaterally terminate Work under the Contract, and will pay only for the quantities of Work actually performed, less the cost of the City's remedial Work. In the event that Work is not halted, the Contractor must take immediate steps to correct the situation. There will be no extra payment for Work required

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to correct unsafe conditions.

The right of the City to suspend the Work shall not give rise to a duty on the part of the City to exercise this right for the benefit of the Contractor or any other person or entity. This right shall be in addition to and not in restriction or derogation of the City's other rights under the Contract Documents.

In the event of a suspension of Work under any of the conditions set forth in this Section 6-1.06, such suspension of Work shall not relieve the Contractor of its legal responsibilities as set forth in these General Conditions.

6-1.07 **TIME OF COMPLETION.** The Contractor shall complete the entire Work, including Installation, repairs, startup, troubleshooting, painting, and touchup, training, submittal or record drawings, and manuals, cleanup, demobilization, and all other Work within the number of Days set forth in the Supplemental Conditions. The time for completion includes an allowance for working time lost due to normal inclement weather.

Extensions of time may be allowed for unusual inclement weather under the provisions hereinafter described. Unusual inclement weather is weather which adversely affects "controlling" operations or the critical path of construction and which meets one of the following criteria:

A. For the particular calendar month in question, the number of individual Days with rainfall exceeding 0.10 inches exceeds the average number of such Days for that month over the immediately preceding five (5) years of record by at least three (3) Days.

B. For the particular calendar month in question, the total cumulative rainfall for that month exceeds the average cumulative rainfall for that month over the immediately preceding five (5) years of record by at least two inches (2").

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Rainfall shall be measured at a publicly operated, maintained, and reported station in reasonable proximity to the construction site. A claim for delay shall indicate the period of rainfall which is claimed as "unusual," the specific dates during which the unusual rainfall and subsequent wet soil conditions prevented Work, and the specific critical path tasks adversely affected by such unusual weather. A claim for delay due to unusual inclement weather shall be filed within ten (10) Days of the apparent end of the unusual inclement rainfall period, whether or not the monthly totals are available at that time. The burden of proof that weather meets the criteria for unusual weather shall be solely the responsibility of the Contractor.

It is the responsibility of the Contractor to order materials required for the Work properly and promptly on a Notice to Proceed. If evidence presented demonstrates that, in spite of the Contractor's efforts, government-established priorities controls delay material deliveries, suitable extension of time will be made.

If performance of extra Work ordered by the City or failure of the City to provide the necessary site for Installation affects construction tasks which are "controlling" or which are on the "critical path" of the Construction Schedule, suitable extensions of time will be made.

The Contractor shall not be entitled to a time extension for delays in activities on non-critical paths of the favorably reviewed schedule unless the duration of the excusable delay exceeds the total float of the activities being delayed. If the duration of an excusable delay does exceed the total float of the activities affected by the delay, the Contractor shall be entitled to an extension equal to the difference.

C. Determination that a day is a non-working day by reason of inclement weather or conditions resulting immediately therefrom, shall be made by the Director.

6-1.08 **LIQUIDATED DAMAGES.** It is agreed by the parties to the Contract

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that in case all the Work called for under the Contract in all parts and requirements is not completed within the number of Days as set forth in the Supplemental Conditions, damage will be sustained by the City and that it is and will be impracticable and extremely difficult to ascertain and determine the actual damage which the City will sustain in the event of and by reason of such delay; and it is therefore agreed that the Contractor will pay to the City, the monetary amount indicated in the Supplemental Conditions in dollars (U.S.) per day for each and every calendar day of delay in completing the Work in excess of the number of Days prescribed and the number of additional calendar days, if any, authorized by Contract Change Order; and the Contractor agrees to pay said Liquidated Damages herein provided for, and further agrees that the City may deduct the amount thereof from any moneys due or that may become due the Contractor under the Contract.

It is further agreed that in case the Work is not finished and completed in all parts and requirements within the number of Days specified, the City shall have the right to increase the number of Days or not, as it may deem best to serve the interest of the City, and if it decides to increase the said number of Days, it shall further have the right to charge to the Contractor, its heirs, assigns or sureties and to deduct from the final payment for the Work all of any part, as it may deem proper, of the actual cost of engineering, inspection, superintendence, and other Overhead expenses which are directly chargeable to the Contract, and which accrue during the period of such extension, except that cost of preparation of final statement shall not be included in such charges.

6-1.09 **DELAYS AND EXTENSIONS TO THE WORK.** The Contractor must complete all Work within the time specified in the Agreement. The Contractor will be granted an extension of time and will not be assessed with liquidated damages or the cost of engineering

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and inspection for any delay in substantially completing the Work (or parts thereof) beyond the time set forth in the Agreement, provided that such delay was caused by unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include acts of public enemy, fire, floods, abnormal weather (as described below), earthquakes, epidemics, quarantine restrictions, strikes, labor disputes and freight embargoes, fire, changes made pursuant to the provisions of "Changes in the Work" under Section 3 of these General Conditions or acts or neglect of the City not contemplated by the Contract Documents. In all cases, any extension of time is conditioned on the following:

1. That the cause is not due to the fault or negligence of the Contractor, and the Contractor has taken reasonable precautions to prevent and minimize the effects thereof; and

2. That the Contractor notifies the Director in writing within three (3) Days from the beginning of such delay specifying the nature of the delay and the measures that have been or will be taken to prevent or minimize the delay. Failure to submit written notice within this time period shall constitute an absolute waiver of any claim for a time extension.

No extension of time will be granted for a delay caused by a shortage of materials, unless the Contractor furnishes to the City documentary proof that it has diligently made every effort to obtain such materials from all known sources within reasonable reach of the work and further proof, as acceptable to the Director, that the inability to obtain such materials when originally planned did in fact cause a delay in Final Completion of the entire Work which could not be compensated for by revising the sequence of the Contractor's operations. Only the physical shortage of material will be considered as a cause for extension of time, and no consideration

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will be given to any claim that material could not be obtained at a reasonable, practical or economical cost or price, unless it is shown to the satisfaction of the City that such material could have been obtained only at exorbitant prices entirely out of line with current rates, taking into account the quantities involved and the usual practices in obtaining such quantities.

No extension of time will be granted for a delay caused by Contractor's staff turnovers, understaffing or insufficient quantity of qualified staff able to perform the necessary work.

The term "shortage of materials," as used in this section, shall apply only to materials, articles, parts or equipment which are standard items and shall not apply to materials, parts, articles or equipment which are processed, made, constructed, fabricated or manufactured to meet the specific requirements of the Contract Documents.

No extensions of time will be granted for delays that have no measureable impact on the completion of the Work (or parts thereof) under the Contract Documents. When extensions of time are granted, they will be limited to the period equivalent to the actual number of Days lost on the critical path or controlling operations of the Construction Schedule, taking into account the extent to which that delay could be decreased by reasonable mitigation measures by the Contractor. All requests for extensions of time must be supported with a critical path analysis showing the critical path and impacts to it. Contractor's failure to submit this analysis will be sufficient cause for denial of any request for a time extension.

Within a reasonable period of time after the Contractor submits the notice and information required by this section, the City will determine whether an extension of time is justified and, if so, the number of days for the extension.

Abnormal weather may be a valid basis for a time extension under the Agreement. "Abnormal Weather" occurs when the number of days of rain above 0.5 inches in a 24 hour

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period exceeds the average for such rainfall in a particular month as determined by the National Weather Service. The Contractor will only be entitled to, at most, a time extension for the number of days of rain exceeding the average for that month in the locale where the Work is to be performed. If delays are caused by the Contractor or those for whom the Contractor is responsible, the Contractor will only be entitled to, at most, a time extension for the number of rain days exceeding the average for the month when the Work should have been performed.

In addition, before a time extension may be granted for abnormal weather, the Contractor must establish that the rain either significantly impacted at least sixty percent (60%) of the planned work of the controlling operations for a particular day or prohibited at least five (5) hours of work on the controlling operations planned for that day. Contractor shall employ reasonably methods to mitigate the impact of abnormal weather (i.e., dewatering, protection of site, etc.) The occurrence of rain during non-work hours or having minimal impact to work on the controlling operation shall not constitute a day of abnormal weather.

In the event that the project experiences favorable weather for a particular month (e.g., the number of actual rain days in a month less than that indicated above for allowable rain days per months), the additional float resulting from such favorable weather shall accrue to the project.

Any Contractor claim for damages or additional compensation based on delay shall be limited to only those circumstances where the Contractor has fulfilled each of the following three (3) requirements:

1. Contractor has established its entitlement to a time extension pursuant to the provisions described above regarding delay and extensions to the Work.
2. The delay was caused solely by the City's issuance of changes made pursuant to the

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provisions of "Changes in the Work" under Section 3 of these General Conditions or by acts or neglect of the City.

3. The delay was unreasonable under the circumstances and not within the contemplation of the parties.

It is expressly understood and agreed that delays caused by the City will be non-compensable when there are concurrent delays caused by the Contractor. Also, the Contractor shall have no entitlement to additional compensation for any delay where there have been concurrent delays caused by non-compensable delays, including, but not limited to, fire, floods, earthquakes, epidemics, quarantine restrictions, strikes, labor disputes, and freight embargoes.

Contractor's damages and/or additional compensation for delays will consist solely of the extended costs of maintaining the Contractor's Work Site presence. The Contractor will not be entitled to any extended home office overhead.

Compensation for idle time of equipment will be determined in the same manner as determinations are made for equipment used in the performance of extra work paid for on a Force Account basis with the following exceptions:

1. The time for which compensation will be paid will be the actual normal working hours during which such delay conditions exists, but in no case will exceed eight (8) hours in any one day.
2. The days for which compensation will be paid will be each calendar day of the work week (defined elsewhere in the Contract Documents) and Legal Holidays, during the existence of such delay, except that when rental of the equipment is paid for under the provisions in Section 3-1.06C, "Force Account Payment – Equipment," of these General Conditions, no payment will be made for delays in accordance with the

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provisions of this section.

Actual loss shall be understood to include no items of expense other than idle time of personnel, cost of extra moving of equipment, and cost of longer hauls. Compensation for idle time of equipment will be determined as provided in this section and compensation for idle time of personnel will be determined pursuant to Section 3-1.06A, "Force Account Payment – Labor," of these General Conditions. No markup will be added in either case for Overhead and profit. The cost of extra moving of equipment and the cost of longer hauls will be paid for as extra work as provided pursuant to "Changes to the Work" elsewhere in the Contract Documents.

6-1.10 **TERMINATION.**

6-1.10A **TERMINATION OF AGREEMENT – CONVENIENCE OF CITY.** The Department reserves the right to terminate the Contract at any time and for any reason if the Director determines that to do so would be in the best interest of the City. Any termination which is not based on the circumstances set forth in Section 6.1-10B below shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which performance of Work under the Contract is terminated, and the date upon which such termination becomes effective.

Upon the Contractor's receipt of a written Notice of Termination for convenience, the Contractor shall cease Work as to those portions of the project so terminated and shall undertake the steps outlined in Section 6-1.10B below.

1. Acceptance of the Contract as hereinafter specified shall not relieve the Contractor of responsibility for damage to materials except as follows:

   a. The Contractor's responsibility for damage to materials for which partial payment has been made as provided in Section 7-1.07, "Progress

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Payments," of these General Conditions and for materials furnished by the City for use in the Work and unused shall terminate when the Director certifies that such materials have been stored in the manner and at the locations he or she has directed.

b. The Contractor's responsibility for damage to materials purchased by the City subsequent to the issuance of the notice that the Contract is to be terminated shall terminate when title and delivery of such materials has been taken by the City.

c. When the Director determines that the Contractor has completed the Work under the Contract directed to be completed prior to termination and such other Work as may have been ordered to secure the project for termination, the Contractor will recommend that the City formally accept the Work, and immediately upon and after such Acceptance by the City, the Contractor will not be required to perform any further Work thereon and shall be relieved of its contractual responsibilities for injury to persons or damage to property which occurs after the formal Acceptance of the project by the City.

2. The total compensation to be paid to the Contractor shall be determined by the Director on the basis of the following:

a. The reasonable cost to the Contractor, without profit, for all Work performed under the Contract, including mobilization, demobilization and Work done to secure the project for termination. Reasonable cost will include a reasonable allowance for project overhead and general

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administrative Overhead not to exceed a total of seven percent (7%) of Direct Costs of such Work.

b. A reasonable allowance for profit on the cost of the Work performed as determined under subsection (a), provided the Contractor establishes to the satisfaction of the Director that it is reasonably probable that it would have made a profit had the Contract be completed and provided further, that the profit allowed shall in no event exceed four percent (4%) of said cost.

c. The reasonable cost to the Contractor of handling material returned to the vendor, delivered to the Department or otherwise disposed of as directed by the Director.

d. A reasonable allowance for the Contractor's administrative costs in determining the amount payable due to termination of the Contract.

All records of the Contractor and the Contractor's Subcontractors, necessary to determine compensation in accordance with this Section, shall be open to inspection or audit by representatives of the Department at all times after issuance of the notice that the Contract is to be terminated and for a period of three (3) years, and such records shall be retained for that period.

After Acceptance of the Work by the Director, the Director may make payments on the basis of interim estimates pending issuance of the Final Statement, when in his or her opinion the amount thus paid, together with all amounts previously paid or allowed, will not result in total compensation in excess of that to which the Contractor will be entitled. All payments, including payment upon the Final Statement, shall be subject to deduction for prior payments and amounts, if any, to be kept or retained under the provisions of the Contract.

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In the event that the City terminates this Contract under Section 6-1.10B below and it is determined for any reason that there was not sufficient cause to do so, the City's termination automatically will convert to a termination for convenience under this section and the terms and conditions outlined in this section automatically will be applied to effectuate the Contract termination. Thus, damages to which a Contractor may be entitled as a result of an improper default termination will be limited to the amounts provided for in this section.

The provisions of this section shall be included in all subcontracts.

6-1.10B **TERMINATION OF AGREEMENT - FOR CAUSE.** An "Event of Default" as referred to in this section shall occur if the Contractor:

1. Fails to maintain progress of the Work in accordance with the requirements of the Contract Documents; or
2. Fails to prosecute the Work or any of its components in accordance with the Contract Documents; or
3. Persistently or repeatedly fails or refuses to supply sufficient properly skilled workers or proper material to permit the performance of the Work in accordance with the Contract Documents; or
4. Fails to make prompt payment to Subcontractors or Suppliers in accordance with the respective agreements between the Contractor and the Subcontractor and Contractor and Supplier; or
5. Fails to comply with applicable laws, ordinances or rules, regulations or orders of a public authority having jurisdiction over the Work; or
6. Abandons, assigns or sublets the Contract without approval of the City; or
7. Becomes bankrupt or is subject to appointment of a receiver on behalf of the

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Contractor; or

8. Otherwise is guilty of a substantial breach of a provision of the Contract Documents.

Upon the City's reasonable belief that there has been an Event of Default by the Contractor, the City may elect to give the Contractor written notice thereof. The Contractor thereafter shall cure the default as soon as possible and in no event after ten (10) Days from the Contractor's receipt of the City's written notice.

If the Contractor does not timely cure its default, the City may, without waiver of any of its other rights and remedies, elect to terminate the Contract, or portion thereof.

Upon the City's election to terminate the Contract, or portion thereof, the City shall have the right to complete the Work, or portion involved, by whatever means and methods it deems expedient, including the hiring of others on such terms as the City deems advisable. The City shall have the right to take possession of the Contractor's materials, plant, tools, equipment and property of any kind provided by or on behalf of the Contractor for the purpose of the Work, or a portion of them, without being responsible to the Contractor for wear and tear. The Contractor shall have no rights in such property during its use by the City. The City shall not be required to obtain the lowest prices for completing the Work or a portion of it but shall make such expenditures as, in the City's sole judgment, best accomplish such completion.

The expense of completing such Work or portion thereof, together with a reasonable charge for engineering, managerial and administrative services, as certified by the City, shall be charged to the Contractor, and the expense so charged shall be deducted by the City out of such monies as may be due or may at any time thereafter become due to the Contractor. In case such expense is more than the sum which otherwise would have been payable to the Contractor under the Agreement, then the Contractor or its surety or sureties shall promptly pay the amount of

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such excess so due. When the City terminates the Contract under this section, the Contractor shall not be entitled to receive any further payments until the Work is completed and there has been a final settlement of costs of completing the Work covered by such notice of default.

The City will issue to the Contractor a written notice specifying that the Contract, or portion thereof, is terminated. Upon receipt of said written notice and, except as otherwise directed in writing by the City, the Contractor shall:

1. Stop all Work under the Contract; or if partial termination, stop Work relating to the terminated portion of the Agreement;
2. Perform Work the City deems necessary to secure the Work Site for termination including measures to leave the Work Site in a safe condition;
3. Remove equipment from the site of Work, as specified by the City;
4. Take such action as is reasonably necessary to protect materials from damage;
5. Notify all Subcontractors and Suppliers that the Contract or portion thereof is being terminated and that their contracts or orders are not to be further performed unless otherwise authorized in writing by the City;
6. Provide the City with an inventory list of all materials previously produced, purchased or ordered from Suppliers for use in the Work and not yet used in the Work, including its storage location, and such other information as the City may request;
7. Dispose of materials not used in the Work as directed by the Director. It shall be the Contractor's responsibility to provide the City (a) with good title to all materials purchased by the City hereunder, including materials for which partial payment has been made by the City and (b) with bills of sale or other documents of title for such

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materials;

8. Subject to the prior written approval of the City, settle all outstanding liabilities and all claims arising out of Subcontractors or orders for materials terminated hereunder. To the extent directed by the City, the Contractor shall assign to the City all rights, title and interests of the Contractor under subcontracts or orders for materials terminated hereunder. The City shall be at liberty to negotiate with and engage any Subcontractors who had contracted with the Contractor for the Work;
9. Furnish the City with the documentation required to be furnished by the Contractor under the provisions of the Contract Documents, including, on projects as to which Federal funds are involved, all documentation required under the Federal requirements included in the Agreement; and
10. Take such other actions as the City may direct.

If only a portion of the Work has been terminated, the Contractor shall perform the remainder of the Work in conformity with the Contract Documents and in such a manner as not to interfere with the City or others in their performance and completion of the portion of the Work which was terminated.

The City may recover from the Contractor the amount of any loss or damage, including consequential damages, suffered or incurred as a result of the Contractor's default.

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SECTION 7

ACCEPTANCE AND PAYMENT

7-1.01 **ACCEPTANCE.** When the Contractor believes that the entire Work is fully and finally completed, including the satisfactory completion of inspections, tests, and documentation specified in the Contract Documents and completion of all punch list and clean-up items, the Contractor shall submit to the City a written request for final Acceptance within fifteen (15) Days thereafter, specifying that the Work is fully and finally completed and the date on which it was completed. Within thirty (30) Days after receipt of the request for final Acceptance, the City will inspect the Work and will either:

1. Reject the request for final Acceptance, specifying the defective and/or uncompleted portions of the Work; or
2. Notify the Contractor that the Work will be accepted by Resolution of the City Council of the City of Roseville, and a Notice of Completion will be caused to be recorded by the City Clerk; or
3. Notify the Contractor that the Work has been accepted by the City but no Notice of Completion will be recorded.

If the City rejects the request for final Acceptance, the Contractor shall promptly remedy the defective and/or uncompleted portions of the Work. Thereafter, the Contractor shall again submit a written request for final Acceptance of the Work, specifying a new date based on the date the defective and/or uncompleted portions of the Work were corrected. Thereafter, the foregoing procedure shall apply successively until the City has verified that the Work is fully and finally completed and accepted the Work by Resolution of the City Council or by written

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notification from the Director. Immediately upon such Acceptance, the Contractor shall be relieved of the duty of maintaining the Work as a whole.

All warranties commence upon final Acceptance of the Work. The City's final Acceptance of the Work shall not be construed as an acceptance by the City of any latent defects discovered with regard to the Contractor's work. Furthermore, Contractor's obligations under Section 5-1.22 "Responsibility for Damage and Indemnification" shall still remain applicable after the City's grant of final Acceptance of the Work.

Prior to final Acceptance, the Contractor shall submit to the City the Record Documents and Operation and Maintenance Manuals as specified in the Contract Documents.

7-1.02 **SCOPE OF PAYMENT.** The Contractor shall accept the compensation provided in the Contract as full payment for furnishing all labor, materials, tools, equipment, and incidentals necessary to the completed Work and for performing all Work contemplated and embraced under the Contract; also for loss or damage arising from the nature of the Work, or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the Work until the Acceptance by the Director and for all risks of every description connected with the prosecution of the Work, also for all expenses incurred in consequence of the suspension or discontinuance of the Work as provided in the Contract; and for completing the Work according to the Contract. Neither the payment of any estimate nor of any retained percentage shall relieve the Contractor of any obligation to make good any defective Work or material.

No compensation will be made in any case for loss of anticipated profits.

7-1.03 **NOTICE OF POTENTIAL CLAIM.** The Contractor shall not be entitled to the payment of any additional compensation for any act or failure to act by the City,

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including failure or refusal to issue a Change Order, or for the happening of any event, thing, occurrence or other cause unless the Contractor has given the City due written Notice of Potential Claim as hereinafter specified, provided, however, that compliance with this Section 7-1.03 shall not be a prerequisite as to matters within the scope of the notice provisions in Section 6-1.07, "Time of Completion," or the notice provisions in Section 6-1.08, "Liquidated Damages," of these General Conditions, nor to any claim which is based on differences in measurement or errors of computation as to correct quantities.

The written Notice of Potential Claim shall set forth the reasons for which the Contractor believes additional compensation will or may be due, the nature of the costs involved, and, insofar as possible, the amount of the potential claim. The said Notice as above required must have been given to the Director prior to the time that the Contractor shall have performed the Work giving rise to the potential claim for additional compensation, if based on an act or failure to act by the Director, or in all other cases within seven (7) Days after the happening of the event, thing, occurrence or other cause giving rise to the potential claim.

If the Notice of Potential Claim does not include complete information about the claim or the parties do not execute a Contract Change Order in connection with the Notice of Potential Claim, Contractor shall submit complete information about its claim for additional compensation and/or extension of time for performance within fifteen (15) Days after such work is performed. Failure to provide written notice of claim prior to undertaking such work or failure to timely submit a complete and specific information about the claim for additional compensation and/or extension of the time for performance shall be deemed a waiver and abandonment of such claim.

If there is a dispute over any claim, the Contractor shall continue to Work during the dispute resolution process in a diligent and timely manner as directed by the City, and shall be

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governed by all applicable provision of the Agreement.

The Contractor shall maintain cost records of all Work that is the basis of any dispute. On a daily basis, Contractor shall submit to City completed daily forms, the format of which will be acceptable to the City, with respect to the Contractor's costs of performing the disputed work. These daily forms shall itemize all of Contractor's costs in performing the disputed work, including, but not limited to, all costs relating to materials, labor and equipment with respect to the disputed work. These daily forms shall provide names or identification and classification of affected workers, the hourly rate of pay and hours worked, and also the size, type, and identification number of equipment and hours operated. Said daily work forms shall be duly signed and verified by the Contractor or its authorized representative. The City's receipt of the Contractors' daily forms shall not constitute an approval of the Contractor's claim. Contractor's failure to submit the daily forms on a daily basis shall constitute a waiver of the Contractor's right to claim any additional compensation for the disputed work.

Each Contractor claim shall include full and complete information concerning the Claim. Contractor shall provide a clear, concise recital of the basis, upon which the claim is asserted, including a designation of the provisions of the Contract Documents upon which the claim is based. Contractor shall also include a statement as to the amount of time and/or compensation sought pursuant to the claim; if Contractor's claim arises from an ongoing occurrence, Contractor shall so state in its claim, including a description of the specific Work activities affected by the claim. All costs, expenses or damages and extensions of time claimed shall be described in reasonable detail under the circumstances together with complete supporting documentation.

The City will review any timely Notice of Potential Claim and supporting information

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submitted by Contractor. In conducting this review, the City shall have the right to require the Contractor to submit such additional or supporting documents, data and other information as the City may require.

If an agreement can be reached which resolves the Contractor's claim, the parties will execute a Contract Change Order to document the resolution of the claim. If the parties cannot reach agreement with respect to the Contractor's claim, the Contractor shall still be obligated to comply with the claim identification provisions identified in these General Conditions, including but not limited to Section 7-1.04.

It is the intention of this Section 7-1.03 that differences between the parties arising under and by virtue of the Contract be brought to the attention of the Director at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action promptly taken. The Contractor hereby agrees that it shall have no right to additional compensation for any Claim that may be based on any such act, failure to act, event, thing or occurrence for which no timely written Notice of Potential Claim as herein required was filed.

7-1.04 **CLAIMS.** Contractor must submit all Claims, for which it has previously submitted a Notice of Potential Claim, prior to Acceptance of the Work. Each such Claim must be sent to the City by registered mail or certified mail with return receipt requested and must contain reasonable documentation to support the Claim.

Upon receipt of a Claim, the City shall conduct a reasonable review of the Claim and, within a period not to exceed forty-five (45) Days, or such further time as mutually agreed upon or necessary pursuant to Public Contract Code Section 9204, the City shall provide the Contractor a written statement identifying what portion of the Claim is disputed and what portion is undisputed. If the City does not respond to a Claim from the Contractor within the time

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specified herein, such Claim shall be deemed rejected in its entirety.

Any payment due on an undisputed portion of the Claim shall be processed and made within sixty (60) Days after the City issues its written statement.

If the Contractor disputes the City's written response, or if the City does not respond within the time specified herein, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the City shall schedule a meet and confer conference within thirty (30) Days for settlement of the dispute.

Within ten (10) business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the City shall provide the Contractor a written statement identifying the portion of the Claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the Claim shall be processed and made within sixty (60) Days after the City issues its written statement. Any disputed portion of the Claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation, with the City and the Contractor sharing the associated costs equally. The City and the Contractor shall mutually agree to a mediator within ten (10) business days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the Claim remaining in dispute shall be resolved in accordance with Section 7-1.05 below.

7-1.05 **DISPUTE RESOLUTION PROCEDURE** All Claims not resolved

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pursuant to Section 7-1.04, shall be resolved pursuant to Public Contract Code Section 10240, et seq.

7-1.06 **STOP PAYMENT NOTICES.** The City, by and through the Department or other appropriate office or officers, may at its option and at any time retain out of any amounts due the Contractor, sums sufficient to cover claims, filed pursuant to Civil Code Section 9350, et seq., including an amount to provide for the reasonable cost of any litigation thereunder.

7-1.07 **PROGRESS PAYMENTS.** Within fifteen (15) Days after the effective date in the Notice to Proceed, but in any event prior to Contractor's first Application for Payment, the Contractor shall submit to the City a detailed Schedule of Values.

Upon its approval, the Schedule of Values will form a basis for determining the compensation payable to the Contractor based on its actual progress of Work with respect to each Lump Sum bid item. The City, prior to any progress payment being made, must approve the Schedule of Values.

At the Director's discretion the approved Schedule of Values may be used as the basis for calculating the adjustment in compensation for a lump sum bid item due to changes ordered by the Director. When an ordered change increases or decreases the quantities shown in an approved Schedule of Values, at the Director's discretion, the adjustment in compensation may be determined in the same manner specified for increases and decreases in the quantity of a bid item of work in accordance with Section 3-1.05(B), "Contract Price Adjustment," of these General Conditions.

The Contractor once in each month shall submit an Application for Payment, for approval by the Director. Contractor's Applications shall be based on the Schedule of Values submitted to the City. These applications shall be supported by: (1) documentation requested by the City to

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substantiate the payment request; (2) statutory releases from Contractor and all Subcontractors and suppliers pursuant to Civil Code Sections 8132 and 8138; and (3) certified payroll records for the period for which payment is requested. Specifically, the Contractor will submit conditional waivers upon progress payment executed by all contractors and suppliers that will be receiving sums sought in the instant payment request and also submit unconditional waivers upon progress payment executed by all contractors and suppliers that have been paid to the date of the payment request. The Contractor shall certify that the Work for which payment is requested has been accomplished. When requested by the City, the Contractor shall submit receipts, invoices and other documentation that the City requires to be furnished for purpose of evaluating the application.

The City will pay the Contractor within thirty (30) Days after its receipt of an undisputed and properly submitted Application for Payment, after deducting all previous payments, retention, and other sums as described in the Contract Documents. Within seven (7) Days of its receipt of the Contractor's Application for Payment, the City will determine whether it complies with the provisions of the Contract Documents. As appropriate, the City will return the application to the Contractor accompanied by a document prepared by the City setting forth the reasons for the rejection. Thereafter, the Contractor shall correct and resubmit the Application for Payment. Progress payments may be withheld for Work that is not performed in accordance with the Contract Documents.

The City may deduct the following from each progress payment:

1. An amount equal to one hundred and twenty-five percent (125%) of the amount claimed under any stop payment notice or other lien filed against the Contractor, which includes an amount to provide for the reasonable cost of any litigation

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thereunder.

2. Any Liquidated Damages or Assessments that have accrued as of the date of the Application for Payment.
3. Any sums expended by the City in performing any of the Contractor's obligations under the Agreement that the Contractor has failed to perform.
4. Any other sums that the City is entitled to recover from the Contractor under the terms of the Contract including damages to the City's property.
5. The failure of the City to deduct any of the above identified sums from a progress payment shall not constitute a waiver of the City's right to such sums.

No such estimate or payment shall be construed to be an acceptance of any defective Work or improper materials.

Under no circumstances will the City make payment to unlicensed Contractors. As a condition of payment, the Contractor is required to maintain the applicable Contractor's license as identified in the Notice to Contractors for the duration of the Work.

7-1.08 **PAYMENT FOR MATERIALS AND EQUIPMENT ON HAND.**

Partial payments may be made to the extent of seventy-five percent (75%) of the cost of materials and equipment plus delivery to be incorporated in the Work, provided that such materials and equipment meet the requirements of the Contract Documents and are delivered to acceptable sites on the plant site or at other sites in the vicinity that are acceptable to the City and only with the prior written approval by the City. Such delivered costs of stored or stockpiled materials and equipment may be included in the next progress payment after the following conditions are met:

A. Equipment and materials will only be eligible if given conditional or final

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Acceptance by the Director and are in apparent compliance with favorably reviewed Submittals.

B. Only equipment or materials which have received favorable review of Shop Drawings will qualify.

C. The material or equipment has been stored or stockpiled adequately protected against damage in a manner acceptable to the Director at an approved site.

D. The Contractor has furnished the Director with acceptable evidence of the quantity and the quality of such stored or stockpiled materials or equipment with identification of where they will be incorporated into the project with Specification reference.

E. The Contractor has furnished the Director with satisfactory evidence that the material or equipment and transportation costs have been paid.

F. The Contractor has furnished the City legal title (free of liens or encumbrances of any kind) and lien releases to the material or equipment so stored or stockpiled.

G. The Contractor has furnished the City evidence that the material or equipment so stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the Work.

It is understood and agreed that the transfer of title and the City payment for such stored or stockpiled materials or equipment shall in no way relieve the Contractor of its responsibility for furnishing and placing such materials or equipment in accordance with the requirements of the Contract Documents.

In no case will the amount of progress payments for materials or equipment on hand exceed the Contract Price for such materials or equipment or the Contract Price for the Contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant

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materials.

The Contractor shall bear all costs associated with the progress payment of stored or stockpiled materials or equipment in accordance with the provisions of this Section.

7-1.09 **RETENTION ON PROGRESS PAYMENTS.** From each progress payment estimate, five percent (5%) will be deducted and held in retention by the City. The remainder, less any deductions described in Section 7-1.07, "Progress Payments," of these General Conditions, will be paid to the Contractor as progress payments.

Pursuant to Public Contract Code Section 22300, the successful Bidder may submit Securities in lieu of retention payments by the City. Upon the Contractor's request, the City will make payment of funds withheld from progress payments, pursuant to the requirements of California Public Contract Code Section 22300, if the Contractor deposits in escrow with the City or with a bank acceptable to the City, securities eligible for investment under California Government Code Section 16430, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by the Contractor and the City, upon the following conditions:

1. The Contractor shall bear the expenses of the City and the escrow agent in connection with the escrow deposit made.
2. Securities or certificates of deposit to be placed in escrow shall be of a value at least equivalent to the amounts of retention to be paid to the Contractor pursuant to this section.
3. Contractor shall enter into an escrow agreement satisfactory to the City, which agreement shall be substantially similar to the form provided in California Public Contract Code section 22300.

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4. The Contractor shall obtain the written consent of the surety to such agreement.

7-1.10 **FINAL PAYMENT.** Final payment will be made only after Contractor has achieved Final Completion of the Work pursuant to the provisions of Section 7-1.01, "Acceptance," of these General Conditions. Before final payment can be made, the Contractor shall have furnished the City with the following:

1. All Record Documents, catalogues, instruction sheets and information as required by the Contract Documents.
2. Conditional Waivers and Releases Upon Final Payment executed by Contractor and all Subcontractors and Suppliers, as provided by Civil Code Section 8136. Unconditional Waivers and Releases Upon Final Payment, as provided in Civil Code Section 8138, executed by Contractor and all Subcontractors and Suppliers, must be provided for all Subcontractors and Suppliers that have been paid in full.

Within thirty (30) Days of the date of the City's Acceptance of the Work, the Contractor shall prepare and submit a Final Invoice, showing the proposed total amount due the Contractor, segregated by Bid item quantities, Change Order Work, and other basis for payments; deductions made or to be made for prior payment; and amounts previously retained. Prior invoices and payments shall be subject to correction in the proposed Invoice for Final Payment. Payments to the Contractor will be made only for actual quantities of the Contract items of work constructed in accordance with the Contract Documents.

The City will review the Contractor's proposed Final Invoice and necessary changes or corrections will be forwarded to the Contractor. Within ten (10) Days thereafter, the Contractor

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shall submit a revised proposed Final Invoice incorporating changes or corrections made by the City together with any new claims resulting therefrom. Upon approval by the City, the corrected proposed Final Invoice will become the approval Final Invoice.

If agreements are reached on all questions regarding the Final Invoice, the City will pay the entire sum found due on the approved application. However, the City will withhold sums sufficient to pay all unsettled claims for which stop payment notices have been filed pursuant to Section 9350, et seq. of the California Civil Code, together with the reasonable cost of any litigation thereunder.

Final payment will be made within thirty (30) Days after receipt of an approved Final Invoice and other required Submittals referenced above or within sixty (60) Days after Acceptance of the work by the City, whichever is later, provided, however, that if an approved Final Invoice has not been submitted within sixty (60) Days after Acceptance of the Work by the City, the City may elect to make payment of sums not in dispute without prejudice to the right of either the City or the Contractor in connection with such disputed sums. Notwithstanding the foregoing, if a Notice of Completion is recorded, final payment shall not be made prior to the expiration of the thirty-five (35) calendar day lien period. The start of this lien period is the date the Placer County Recorder's Office records the Notice of Completion.

The City may withhold from the Final Payment an amount not to exceed one hundred fifty percent (150%) of any amount in dispute between the City and the Contractor.

The making of Final Payment shall not operate to release the Contractor or its sureties from obligations arising under the Contract, the Contract bonds and warranties as herein provided. Specifically, the making of final payment shall not constitute a waiver and release of claims by the City arising from:

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1. Unsettled or future liens;

2. Failure of the Work to comply with the requirements of the Contract Documents;

3. The terms of any warranties required by or contained in the Contract Documents;

4. The right to any insurance proceeds or the right to make any insurance or bond claims;

5. Any claims with respect to Contractor's obligations of indemnity with respect to claims asserted by third parties; or

6. Any latent deficiencies with the Work or Contractor's fraud.

7-1.11 **CLERICAL ERRORS.** Notwithstanding the provisions of Section 7-1.10, "Final Payment," of these General Conditions, for a period of three (3) years after Acceptance of the Work, all estimates and payments made pursuant to said Section 7-1.10, are subject to correction for clerical errors in the calculations involved in the determination of quantities and payments. The Contractor and the City agree to pay to the other any sum due under the provisions of this Section 7-1.11, provided, however, if the total sum to be paid is less than $100, no such payment shall be made.

7-1.12 **WARRANTY.** Notwithstanding inspections and Acceptance by the City of Work furnished under the Contract Documents, the Contractor hereby unconditionally guarantees that all materials and equipment furnished will be of good quality and new, that the Work will be free from defects in workmanship and materials and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective.

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This warranty by the Contractor is in addition to any warranties or guarantees required elsewhere in the Contract Documents. This warranty shall be in effect notwithstanding any disclaimers, or limiting or conditional terms contained in such separate warranties furnished by manufacturers or suppliers.

The Contractor hereby agrees to repair or replace any and all Work, together with any other adjacent Work which may be displaced in so doing, that may prove to be not in accordance with the requirements of the Contract or that may be defective in its workmanship or material during the greater of a period of one (1) year after Acceptance of the Work by the City or the period specified in the Special Conditions, without any expense whatsoever to the City, ordinary wear and tear and unusual abuse or neglect excepted.

The Contractor further agrees, that within ten (10) Days after being notified in writing by the Department of any Work not in accordance with the requirements of the Contract Documents or of any defects in the Work, the Contractor will commence and prosecute with due diligence all Work necessary to fulfill the terms of this warranty, and to complete such Work within a reasonable period of time. In the event Contractor fails to comply, it does hereby authorize the Department to proceed to have such Work done at the Contractor's expense and the Contractor will honor and pay the cost and charges therefore upon demand. The Department shall be entitled to all costs and expenses, including reasonable attorneys' fees, necessarily incurred upon the Contractor's refusal to honor and pay the above costs and charges.

All warranties set forth in the Contract Documents shall be deemed cumulative and not alternative or exclusive. Nothing contained in this section shall be construed to establish a period of limitation with respect to any other obligation, which Contractor has under the Contract Documents or under any separate warranty or guaranty required thereby. The establishment of a

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specific warranty period relates only to the specific obligation of Contractor to correct defective Work, and it has no relationship to the time within which its obligation to comply with the Contract Documents or applicable provision of law may be sought to be enforced, nor to the time within which proceedings may be commenced to establish Contractor's liability with respect to its obligations other than specifically to correct the Work. Without limiting the foregoing, it is understood and agreed that Contractor shall remain responsible for latent defects with its work, regardless of the expiration of any warranty period set forth in the Contract Documents.

7-1.13 **WARRANTY OF TITLE.** No material, supplies, or equipment for the Work under this Contract shall be purchased subject to any chattel mortgage, security agreement, or under a conditional sale or other agreement by which an interest therein or any part thereof is retained by the seller or supplier. The Contractor warrants good title to all material, supplies, and equipment Installed or incorporated in the Work and agrees upon completion of all Work to deliver the Premises, together with all improvements and appurtenances constructed or placed thereon by it, to the City free from any claim, liens, security interest, or charges, and further agrees that neither the Contractor nor any person, firm, or corporation furnishing any materials or labor for any Work covered by this Contract shall have any right to a lien upon the Premises or any improvement or appurtenances thereon. Provided, that this shall not preclude the Contractor from Installing metering devices and other equipment of utility companies, the title of which is commonly retained by the utility company. In the event of the Installation of any such metering device or equipment, the Contractor shall advise the City as to the legal owner thereof. Nothing contained in this paragraph, however, shall defeat or impair the right of such persons furnishing materials or labor under any bond given by the Contractor for their protection or any rights under any law permitting such persons to look to funds due the Contractor in the hands of the City.

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The provisions of this paragraph shall be inserted in all subcontracts and material Contracts, and notice of its provisions shall be given to all persons furnishing materials for the Work when no formal Contract is entered into for such materials.

[END OF GENERAL CONDITIONS]

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SUPPLEMENTAL CONDITIONS

Project: RAC Slide and Water Play Structure Replacement

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Scope of Supplemental Conditions

1. The Work shall be performed in accordance with the General Conditions and Department Standards, except as the General Conditions may be modified by the following additional City Standards, incorporated herein by this reference, if so indicated.

	COMMUNITY DESIGN GUIDELINES 311 Vernon Street, Roseville, CA 95678
	SPECIFICATIONS FOR COMMERCIAL CONSTRUCTION (ELECTRIC) 2090 Hilltop Circle, Roseville, CA 95747
X	PARKS CONSTRUCTION STANDARDS 316 Vernon Street, Suite 400, Roseville, CA 95678
X	DESIGN AND CONSTRUCTION STANDARDS 311 Vernon Street, Roseville, CA 95678
	OTHER

Above documents are available at: www.roseville.ca.us.

2. Numbering in these Supplemental Conditions conforms to that in the General Conditions. The existence of a section in these Supplemental Conditions means that the corresponding section in the General Conditions is modified in some respect. Unless otherwise specified, the modified General Condition is deleted entirely and the provisions of these Supplemental Conditions are substituted.

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SECTION 1. DEFINITIONS AND TERMS

1-1.24 **DEPARTMENT.** Section 1-1.24 of the General Conditions is amended to include the following:

The Department for Contract Administration is the PARKS, RECREATION & LIBRARIES Department of the City of Roseville.

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SECTION 2. CONTROL AND SCOPE OF THE WORK

2-1.08 **SUBMITTALS.** Section 2-1.08 of the General Conditions is amended to include the following:

The time allowed for review of each submittal is 14 Days after receipt of the submittal by the Director.

2.1.28 **PROJECT DOCUMENTS.** Potential bidders are advised to obtain all documents and specifications related to this project directly from the City of Roseville. The City of Roseville does not guarantee the accuracy of any forms, plans, or project manuals obtained through outside sources other than the City of Roseville. Furthermore, the City does not guarantee the distribution of any addendums or the accuracy of their content if obtained from a third party. Bidders expressly assume the risk that their bid will be rejected from the use of plans and manuals obtained from third parties other than the City of Roseville.

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SECTION 3. CHANGES IN THE WORK

There are no amendments to the General Conditions.

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SECTION 4. CONTROL OF MATERIALS

4-1.01 **MATERIALS.** Section 4-1.01 of the General Conditions is amended to include the following:

City to furnish and install, by separate contract, all equipment engineered by slide supplier. The scope of work under separate contract includes: furnish and install labor, materials, equipment, and engineering for one outdoor body flume ride inclusive of fiberglass flume components, flume support system, starting platform with shade structure, stair, railing, and steps, and concrete footings and foundations.

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SECTION 5. LEGAL RELATIONS AND RESPONSIBILITY

5-1.14 **AIR POLLUTION CONTROL AND ASBESTOS.** Section 5-1.14 of the General Conditions is amended to include the following:

To the best of the City's knowledge, asbestos is not present in the vicinity of the Project. Additional information shall be made available to Contractor upon request.

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SECTION 6. PROSECUTION AND PROGRESS

6-1.04 **PROGRESS SCHEDULE.** Section 6-1.04F of the General Conditions is amended to include the following:

Progress schedules showing project completion dates more than __0____ Days earlier than specified in Section 6-1.07 shall be rejected.

6-1.07 **TIME OF COMPLETION.** Section 6-1.07 of the General Conditions is amended to include the following:

The Contractor shall begin Work within _10__ business days after receiving a Notice to Proceed and shall diligently prosecute the Work to completion. The Work shall be completed no later than April 30, 2022.

If landscaping plants require an establishment period, that period will be _90_ calendar days. Start of the establishment should be as outlined in the Specifications.

6-1.08 **LIQUIDATED DAMAGES.** Section 6-1.08 of the General Conditions is amended to include the following:

The amount of Liquidated Damages is the sum of $_800____ per Day.

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SECTION 7: ACCEPTANCE AND PAYMENT

7-1.07 **PROGRESS PAYMENTS.** Section 7-1.07 of the General Conditions is amended to include the following:

The Contractor shall email an electronic copy of Certified Payroll Reports to the Project Manager along with each Application for Payment.

[END OF SUPPLEMENTAL CONDITIONS]

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SPECIFICATIONS

Project: _____

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SECTION 00 31 46
PERMITS

PART 1 - GENERAL

1.01 General Requirements

A. The requirements set forth in the General Conditions shall be in addition to the standards provided herein.

B. The requirements set forth in the Supplemental Conditions shall be in addition to the standards provided herein.

C. The intent of this Section is to furnish bidders with the known list of required permits for the Work under the Contract Documents. Bidders should note that the list is not necessarily complete and that additional requirements may exist or arise.

1.02 Permits

A. The Contractor shall obtain copies of the following permits from the Project Manager. Copies of these shall be obtained prior to start of work and shall be kept on the jobsite.

1. State Water Resources Control Board General Permit for Discharges of Storm Water Associated with Construction Activity:

   Contractors must comply with General Conditions 5-1.20 Water Pollution. .
2. City of Roseville Department of Development Services, Building Permit for all structural items associated with this project, including, but not limited to, accessibility improvements, pool slide structure, mechanical/plumbing improvements, lighting, , and miscellaneous electrical.
3. Placer County Environmental Health Permit for remodel of existing Pool C (recreation pool) and Pool D (water play structure).

B. Contractor shall comply with the conditions of these permits, and will be solely responsible for all costs associated with meeting permit conditions unless specifically specified otherwise in these Contract Documents.

C. A trench/excavation permit must be on file with the City. Submit a copy of the notification letter to CAL OSHA, which outlines the project, and contracted scope of work.

PART 2 - PRODUCTS

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PART 3 - EXECUTION

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END OF SECTION

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SECTION 01 10 00
SUMMARY OF WORK

PART 1 - GENERAL

1.01 General

A. The requirements set forth in the General Conditions shall be in addition to the standards provided herein.

B. The requirements set forth in the Special Conditions shall be in addition to the standards provided herein.

1.02 Project Description

A. Project Name and address:

Roseville Aquatics Complex Slide and Water Play Structure Replacement Project
Roseville Aquatics Complex
3051 Woodcreek Oaks Boulevard
Roseville, CA 95747

B. Project description/scope of work:

The scope of this project includes, but is not limited to: removal and replacement of existing pool slide, water play structure, and associated piping, pool deck modifications, removal and replacement of existing pool and water play structure equipment, and replaster of existing recreation pool. Slide procurement and installation shall be by separate contract and will include: labor, materials, equipment, and engineering to furnish and install one outdoor body flume ride inclusive of fiberglass flume components, flume support system, starting platform with shade structure, stair, railing, and steps, and concrete footings and foundations.

C. The Contractor, prior to submission of his bid, shall visit the site and become familiar with the physical site conditions, the plans and specifications. All existing site conditions, apparent in a detailed, on-site inspection, shall be a part of the project. Submission of a bid shall represent the Contractor's acknowledgment of the existing site conditions and its effect on the implementation of the contract documents.

1.03 Engineering

A. Field Engineering, as a part of this contract, shall include:

1. Layout of the work and establishment of lines and grades.

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2. Said work to be performed by a California Registered Civil Engineer or a California licensed Land Surveyor.
3. When discrepancies between the drawings and actual site conditions are discovered, notify the Inspector for instruction on how to proceed.
4. All work shall:
   a) Establish indicated layout in relation to the property survey and existing reference points.
   b) Establish and preserve permanent reference points during the course of construction.
   c) Set locations and elevations of all site elements as required for proper completion of the work.

1.04 Permits, Fees and Notices

A. The Contractor and/or his assigned Subcontractors shall obtain any and all required permits (beyond those provided in the Appendix) from all governing authorities, including other City Departments, prior to start of construction.

1.05 Construction Plans

A. Any discrepancies or omissions found in the Contract Documents shall be reported to the City's project manager immediately. The City's project manager will clarify discrepancies or omissions, in writing, within a reasonable time.
B. In resolving inconsistencies among two or more sections of the Contract Documents, precedence shall be given in the following order:
   1. Notice to Contractors
   2. Special Provisions
   3. City of Roseville Parks Construction Standards
   4. City of Roseville Design and Construction Standards
   5. Drawings

   Addenda shall take precedence over all sections referenced therein. Figure dimensions on Drawings shall take precedence over scale dimensions. Detailed Drawings shall take precedence over general Drawings.

1.06 Definitions

A. The term "accepted" where used within, shall mean accepted in writing by the City of Roseville's Project Manager.
B. The term "Inspector", where noted, shall mean the project representative, appointed by the City of Roseville, who will oversee the project on a day-to-day basis.
C. The term "Project Manager", where noted, shall mean the project representative appointed by the Parks Department.

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D. The term “Consultant”, where noted, shall mean the prime Consultant listed on the cover sheet of these Specifications.
E. The term “accepted equal”, where used herein, shall mean the equal in the opinion of the Project Manager, in consultation with the Consultant, when necessary, and as accepted in writing by the Project Manager.
F. The term “Project Owner”, where used herein, shall mean the landowner or developer.
G. The term “provide”, where used herein, shall mean furnish and install complete.
H. The term “as selected”, where used herein, shall mean as selected by the Consultant and as accepted by the Project Manager.
I. The term “substantially complete”, where used herein, shall mean the state of which the project can be used in the manner of which it is intended with the exception of minor items as determined by the Project Manager.
J. See Section 1 of the General Conditions for additional definitions and terms.

1.07 Standards

A. Numerous standards are referenced in these contract documents. The referenced standards shall be the current edition as of the date of these contract documents. Also, see Section 4 - 1.02 of the General Conditions.
B. The codes adopted by the City, County, State and federal agencies shall govern minimum requirements for this project. Where codes conflict with these Specifications, the more stringent shall apply, and such conflicts shall be brought to the attention of the Project Manager. Caltrans Standards shall be applied where specifically referenced. In the absence of specific reference requirements in the contract documents, the applicable codes shall govern.
C. In addition to the standards noted in individual sections of these Specifications, standards of the following organizations shall be noted by initials only.
    1. ANSI: American National Standards Institute.
    2. ASTM: American Society for Testing and Materials.

1.08 Submittals

A. All submittals shall be submitted at one time within ten (10) working days from issuance of Notice to Proceed. The review time for submittals shall be as noted in Section 2 - 1.04 of the Special Conditions. Items returned for re- submittal shall be returned to the City within two weeks
B. The Contractor shall include a cover sheet indicating the following (A sample is provided in Section 5: Forms):
    1. Drawing sheet or specification section reference (by section, paragraph and sub-paragraph numbers);
    2. Item description;
    3. Indication whether this item is “as specified” or “proposed substitution” and

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4. A space for itemized response summary, e.g. “reviewed” or “resubmit”.

C. Contractor shall provide submittals electronically in PDF file format and physical product samples as required in specifications. It shall be the Contractor’s responsibility to ensure that the summary sheet is included in the submittal package. Incomplete submittal packages (i.e., the lack of a summary sheet or lack an appropriate product sample) will not be reviewed.

D. Proposed substitution requests must include a comparison between the originally specified item and the proposed substitute. The burden of proof of compliance for proposed substitutions with project requirements rests with the Contractor. Coordination of the installation of accepted substitutions, including incidental changes/modifications to accommodate proposed products shall be at no additional cost to the Owner.

E. Where required in specified Section of these Specifications, submittals shall include proof of order of site furnishings, play equipment or other materials within two weeks (ten working days) of receipt of the returned, approved submittal. Submittals of orders shall be made at one time. Exceptions will be considered, with justification.

1.09 Tests

A. In addition to Section 4 - 1.03 of the General Conditions, testing and inspections may be performed by a private testing laboratory. The testing laboratory, provided by the City, shall be under the direction of a California registered civil engineer. All work shall conform to requirements set forth by ASTM B329, and shall be acceptable to the City.

B. Copies of the laboratory reports/results of each test or inspection shall be provided to the Project Manager, Inspector and Contractor.

1.10 Temporary Facilities

A. Sanitary provisions shall be the responsibility of the Contractor. Existing restroom facilities shall be not utilized by the Contractor, his Sub-contractors, or employees thereof, unless specifically accepted by the Project Manager. Provide chemical toilets or water closets and urinals connected to the sewer in a location accepted by the Project Manager.

B. Barricades shall be the responsibility of the Contractor and shall be erected as necessary to protect the property, the construction and the public from hazards due to construction.

C. Signs, other than those identified in these Specifications, shall be prohibited. Notices, required by law, shall be posted and maintained.

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1.11 Utilities

A. All utility fees, including, but not limited to, connection fees, installation fees, meters, monthly service fees and cost of utilities used during the course of construction are considered a direct cost and are the responsibility of the Contractor until project acceptance by City Council.

1.12 Dust/Noise Control Requirements

A. Dust and other air pollution nuisances on or adjacent to the site shall be abated, per Section 2 - 1.15 of the General Conditions. Dirt shall not be allowed to accumulate on streets or sidewalks nor be washed into sewer.

B. Noise from construction operations shall be kept to a minimum. Allowable hours of operations shall be from 7 a.m. to 7 p.m. Monday through Friday. Work on weekends and holidays must be approved by the Project Manager. Work on weekends and holidays shall not begin before 8 a.m. and must be completed by 8 p.m. Requests for weekend work shall be submitted to the Project Manager 7 days in advance.

1.13 Tree Replacement Schedule

A. Trees damaged or removed without prior approval shall be replaced at an inch per inch basis on-site, except otherwise accepted. New stock shall follow the table provided:

Plant Size	Inch Value
3 Five Gallon Stock	One Inch
1 Fifteen Gallon Stock	One Inch
1 24” Box Stock	Two Inches
1 36” Box Stock	Three Inches

1.14 Inspection of Construction

A. In addition to the routine inspections performed by the Parks Inspector, portions of work may be inspected by the other city departments. Notify the Parks Inspector and Project Manager a minimum of 48 hours prior to date of inspection.

B. The Parks Inspector shall be the main line of communication between the site superintendent, the project manager and other City department inspectors. Changes in scope of work or standards shall be approved by the project manager.

C. Refer to the parks inspection record. This shall be issued at the Pre-Construction meeting and shall be utilized by the Contractor throughout the course of construction. A completed “hard card” shall be submitted to the Project Manager along with required turn in items (See 1.19 this Section) upon final acceptance of the project. The Notice of Completion shall not be filed until all record documents have been received and accepted.

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1.15 Adverse Impacts to Site Conditions Due to Construction

A. Impacts that affect the site conditions to the detriment of the park or streetscape Impacts that affect the site conditions to the detriment of the park or streetscape construction or long term viability of the site shall be mitigated by the contractor prior to acceptance of the project. Such impacts shall include, but are not limited to:
   1. Soil compaction in non-structural areas;
   2. Diesel or gas fuel leaks/spillage;
   3. Buried concrete or other construction debris;
   4. Hazardous material contamination;
   5. Lime treatment in planting areas;
   6. and more.

1.16 Pre-final (Punch List) Review

A. Notify, in writing, to the Parks Construction Inspector, that the work is substantially complete. Substantially complete is defined as “the state of work where it may be used in a suitable and intended manner with exception of minor corrections”. Partial acceptances will not be granted. Items to be reviewed as a part of substantial completion include:
   1. All construction items
   2. Installation of all site furnishings, including lights and signs
   3. Seeding or sodding of all turf areas
   4. All planting, including weeding of planted areas
   5. The irrigation system is fully functioning as designed and as confirmed by the Parks Construction Inspector.

B. Within five workings days of receipt of notification, the Parks Construction Inspector will confirm substantial completion. The Parks Construction Inspector will schedule the punch list walk (pre-final review) within five working days after the project has been determined as substantially complete. A formal punch list will be developed at the punch list walk. The Parks Construction Inspector will provide a copy of the formal punch list to the Contractor within five working days of punch list walk. .
   1. If at any point during this review that it becomes apparent that the Contractor has not properly prepared for the site review, the inspection shall immediately be terminated and re-scheduled at such a time as the site has been readied for a review. Any costs for the re-scheduling of the review shall be the responsibility of the Contractor.

C. Concurrent to the pre-final review, the City will make a formal request for all required turn-in items to be submitted to the City. All turn-in items shall be submitted to the City (single point of contact), at one time and only by

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appointment. Do not drop off the turn-in items at the front counter and without an appointment.

1.17 Establishment Period – not applicable

1.18 Final Review

A. A final on-site review shall be conducted to review project readiness for final turn-over. All punch list items must be satisfactorily addressed prior to the final review.
B. The project shall be prepared and cleaned per Section 2 - 1.12 of the General Conditions; the turf shall be mowed; and the irrigation heads shall be adjusted appropriately one day prior to the scheduled final review.
C. Acceptance of the project shall be considered "field accepted" and a recommendation will be forwarded to the City Council for "final acceptance" per Section 7 - 1.01 of the General Conditions.
D. Turn over for City maintenance shall occur only after:
    1. A Notice of Completion (NOC) for city-built parks and for streetscapes has been approved by the City Council.
E. Contractor shall provide a written guarantee covering all improvements associated with this project. See 1.19 – Warrantees and Guarantees.

1.19 Record Documents

A. Record documents or as-built plans shall be maintained on-site and updated routinely as specified in Section 2 - 1.13 of the General Conditions. Record documents shall include **all items under the contracted scope of work**.
B. Record documents shall be submitted:
    1. one full size set of final as-built drawings (verified/initialed by the Parks Inspector)
    2. one set of 11 x 17 reductions of the complete as-built package; and
    3. one USB storage device containing PDF scanned images (in color) of the verified/initialed as-built drawings.
    4. For City of Roseville CIP projects, SWPPP binder, if applicable.

1.20 Warranties and Guarantees

A. Warranties are required under various Sections of these Specifications. Prior to final acceptance, the Contractor shall assemble all warranties into a single, bound or stapled package. All warranties shall be clearly labeled and the number of years highlighted. Also, see Sections 7 - 1.10 and 7 - 1.11 of the General Conditions.

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1. Warranties for equipment shall be submitted in the manufacturer's standard form and shall be countersigned by the subcontractor or supplier and the Contractor.
2. All other warranties shall be provided in the following format, written on subcontractor's or supplier's letterhead, signed by the subcontractor or supplier and countersigned by the Contractor:

WARRANTY FOR _____ YEARS

"We hereby warrant that the ***product*** which we have installed at ***project name*** has been done in accordance with the contract documents, and that the work, as installed will fulfill the warranty requirements included in the Specifications.

We agree to repair or replace any or all of our work, together with any other adjacent work which may be displaced by so doing, that may prove to be defective in its workmanship or material within the warranty period stated above commencing from the date of final acceptance of the above named project by the City of Roseville's City Council, without additional expense to the City, ordinary wear and tear and unusual abuse or neglect excepted.

In the event of failure to comply with the above conditions within thirty (30) days of notification by the City, we collectively or separately do hereby authorize the City to proceed with the repairs or replacement of such defects at our expense. Payment of said costs and charges will be forwarded to the City upon demand.

Signed: _____ _____
Subcontractor or Supplier Date

Countersigned:_____ _____
Contractor Date

B. Guarantees shall be a minimum of one (1) year for all plant material including trees and shrubs. The guarantee shall state that plant materials (trees & shrubs) to be free of all defects or disease and all plants are in a healthy and thriving condition at the completion of the contract. Deciduous plant material shall be warranted beyond the time of contract completion until such time as growth becomes evident.

PART 2 - PRODUCTS

Intentionally left blank.

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PART 3 - EXECUTION

Intentionally left blank.

END OF SECTION

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SECTION 01 57 23
STORM WATER POLLUTION CONTROL

PART 1 - GENERAL

1.01 General

A. The requirements set forth in the General Conditions shall be in addition to the standards provided herein.
B. The requirements set forth in the Special Conditions shall be in addition to the standards provided herein.

1.02 References

A. State Water Resources Control Board Order No. 2009-0009-DWQ National Pollutant Discharge Elimination System General Permit No. CAS0000002, for Storm Water Discharges Associated with Construction and Land Disturbance Activities.
B. CASQA California Stormwater BMP Handbook – Construction, November 2009

1.03 Definitions

A. NOI: Notice of Intent
B. NOT: Notice of Termination
C. QSP: Qualified SWPPP Practitioner
D. QSD: Qualified SWPPP Developer
E. SWPPP: Storm Water Pollution Prevention Plan
F. SWRCB: State Water Resources Control Board
G. NPDES: National Pollutant Discharge Elimination System General
H. WDID: Waste Discharger Identification number
I. BMP: Best Management Practices

PART 2 - PRODUCTS

Intentionally left blank.

PART 3 - EXECUTION

3.01 SWPPP

A. Comply with State Water Resources Control Board Order No. 2009-0009-DWQ National Pollutant Discharge Elimination System General Permit No.

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CAS0000002, for Storm Water Discharges Associated with Construction and Land Disturbance Activities.

B. A SWPPP has not been developed for this project. Contractors must comply with General Conditions 5-1.20 Water Pollution.

C. Implementation of the Erosion and Sediment Control Plan is the responsibility of the Contractor and a part of this project. Costs associated with implementation and maintenance of the BMPs per the Erosion and Sediment Control Plan shall be included in the lump sum base bid.

D. Major changes to the Erosion and Sediment Control Plan shall be reviewed by the Parks Inspector prior to implementation. Cost associated with the major changes will be paid for using the unit cost listed in the Additions or Deletions Sheet of the Proposal

E. The Parks Inspector will perform inspections of the jobsite. Implementation of and minor changes to the Erosion and Sediment Control Plan as directed by the Parks Inspector shall be incidental to the Work. Contractor shall start all inspection corrective actions within 72 hours of observation, and complete as soon as possible.

F. All BMPs installed will be inspected by the Parks Inspector for compliance with the Erosion and Sediment Control Plan and BMP Fact Sheets. BMPs that are not in compliance shall be brought into compliance by the Contractor at no cost to the City.

G. Keep one copy of the Erosion and Sediment Control Plan and amendments at the project site.

H. The Erosion and Sediment Control Plan shall be readily available throughout the course of construction and until the Project has been accepted by the City. The Erosion and Sediment Control Plan shall be made available upon request by a representative of the Regional Water Quality Control Board, State Water Resources Control Board, United States Environmental Protection Agency, or City' storm water staff.

I. When requested by the City for pre-fianl (punch list) review, the Contractor shall submit the project site copy of the Erosion and Sediment Control Plan to the City's Project Manager.

3.02 Schedule

A. Contractor shall develop a Water Pollution Control Schedule that describes the timing of grading or other work activities that could affect water pollution. The schedule shall be updated by the Contractor to reflect changes in the Contractor's operations that would affect the necessary implementation of water pollution control practices. The typical sequence of work shall be adjusted by the Contractor based on weather conditions and forecasted rain events. The schedule is considered an appropriate and applicable BMP.

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3.03 Penalties and fines

A. Contractor is responsible for all penalties and fines assessed to or levied on the project related to the implementation of the Erosion and Sediment Control Plan.

B. In an effort to maintain compliance with the General Permit, the Contractor may be asked to make changes to the BMPs. If the Contractor is unable to perform these services in a timely manner the City reserves the right to address any areas of concern and deduct the cost from the contract.

3.04 BMP's

A. Construction BMP's shall be installed per the Erosion / Sediment Control Plan, and in accordance with the CASQA California Stormwater BMP Handbook. Use of alternative BMP's will be reviewed and accepted at the discretion of the City's Parks Inspector.

3.05 Cleaning

A. Thoroughly clean all areas where work has occurred. Remove from the site excess material, debris and rubbish.

B. Take all precautions to protect completed work. Immediately repair or replace all damaged areas due to tire ruts, erosion, compaction failure, etc. Keep all erosion control measures intact.

END OF SECTION

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SECTION 02 41 13

SELECTIVE SITE DEMOLITION

PART 1 - GENERAL

1.01 WORK INCLUDED:

A. General Description of Work: Clear the construction site of existing structures as indicated on the plans, below grade foundations as indicated, walls, retaining walls, or other structures; asphaltic and concrete paving; trees, shrubs, grass, roots and other vegetation; utility piping and accessories, and trash and grass, other waste materials, where indicated or necessary to prepare the site for construction.

1.02 RELATED WORK:

A. Section 01 10 00: Summary of Work

B. Section 31 10 00: Clearing and Grubbing

C. Section 31 20 00: Earthwork

D. Section 33 00 00: Utilities

1.03 PERFORMANCE REQUIREMENTS:

A. Clear the construction site of existing obstructions such as structures, walls, concrete, paving, utilities, planting, grass and other materials, where indicated or as necessary to prepare the site for construction.

B. Arrange and complete clearing and site preparation work required for the start of construction before the start of earthwork. Erect temporary barricades, enclosures and protection of adjacent property and existing work before site clearing is started.

1.04 PROJECT CONDITIONS:

A. The drawings show general information only. Examine the site to determine the exact existing conditions and character and extent of the construction activities to be performed and clearing operations required.

1. The failure or omission to visit the site and become acquainted with the existing conditions shall not be considered as relief from obligations with respect to contract.

B. Traffic: Conduct site clearing operations to ensure minimum interference with roads, streets, walks, other adjacent occupied or used facilities. Do not close or obstruct streets, walks or other occupied or used facilities without permission from authorities having jurisdiction.

C. Existing Utilities.

1. Existing underground and overhead lines indicated are shown from best possible information available and shall be verified before start of site clearing operations.

2. It shall be understood and agreed that certain lines cannot be or have not been located

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and no indication is contained on the Drawings or referred to in the Specifications (i.e. storm drainage, electrical, plumbing, sewer, water or gas); therefore, exercise extreme caution during clearing, grading, excavating, trenching, and similar construction activities. Should such lines be encountered, give notice, in writing, and do not proceed until adequate investigation has been made, the line identified, and instructions issued as to how to proceed.

D. Barricades and Work Areas: Provide barricades, warnings (signs and lighting), and maintenance and supervision thereof, in accordance with applicable Federal, State and local Codes and their respective requirements, or as may be directed from time to time. Do not commence site clearing until barricades and warnings are in place.

E. Protection of Existing Trees and Vegetation: Protect existing trees and other vegetation indicated to remain against unnecessary cutting, breaking or skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line. Provide temporary guards to protect trees and vegetation to remain. Refer to the Plans and Specifications for existing trees to be removed. Utility lines and other facilities may require field adjustment in alignment to protect healthy trees.

1.05 RECYCLING OF MATERIALS

A. Contractor shall develop and implement a waste management plan, quantifying material diversion goals. Recycle and/or salvage at least 75% of construction, demolition and land clearing waste. Calculations can be done by weight or volume, but must be consistent throughout.

B. Demolished building materials should be recycled in accordance with City of Roseville policies.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 EXAMINATION:

A. Examine and review the site and determine existing conditions which affect construction operations.

3.02 PROTECTION:

A. Protect existing appurtenances and improvements, which are to remain. Repair or replace damaged facilities promptly.

B. Provide and maintain bracing and shoring as required by applicable regulations for safety.

C. Protection of Utilities: Preserve in operating condition, active utilities traversing or within and about the site, protect property and items, including but not limited to piping, conduits, drains, manholes, mains, laterals, catch basins, valve boxes, meters, and other appurtenances and structures. Promptly repair damage to such utility or work due to construction activities under this Contract, to the satisfaction of the Owner.

D. No blasting or on site burning will be permitted.

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3.03 SITE CLEARING:

A. Equipment: The use of proper equipment is the responsibility of the Contractor.

B. Disposition of Materials:

1. Materials shall be recycled per City of Roseville policies.

2. Removed material is the property of the Contractor and shall be promptly recycled, or where it cannot be recycled it shall be removed to a legal disposal area unless otherwise indicated on the plans or called out in the Specifications.

3. Stockpiling of removed materials on the project site will not be permitted without written approval from the Architect. Material suitable for topsoil may be stockpiled on site at a location to be approved by the Architect.

C. Clear the site of all obstructions including trees, shrubs and miscellaneous debris that may be present. After clearing, strip the ground surface of surface vegetation. Dispose of materials from the clearing and stripping operations off-site to a legal disposing area.

D. Remove from the project site, existing structures, concrete, paving, walks, curbs and similar items indicated to be removed. The extent of the boundaries of such existing work removal shall be as indicated and as required to accomplish the contract work.

E. Remove subsurface obstructions which interfere with the new subsurface construction activities. The drawings indicate the approximate location of known existing sub-surface utilities, piping, and other subsurface conditions. If existing subsurface obstructions are discovered or encountered which are not indicated, suspend the site preparation work at such locations and notify the Architect immediately and obtain instructions from him before proceeding.

F. Remove existing materials and items which are required to be removed, in such manner that minimum damage and disturbance is caused to adjacent and connecting construction. Repair or replace existing construction which is damaged by these operations.

G. Existing utility lines, either above ground or sub-surface, such as gas, water, electric, sewer, telephone, landscape irrigation, other existing utilities, that are to be removed or relocated are indicated, based on available information. Before their removal, complete required new re-routing as well as required temporary connections and make operative so that their functions to other existing structures served by them can be continuous and uninterrupted. Cut off existing construction which is to be removed from their connections beyond this project site before excavation is started.

H. Grubbing: Remove and dispose of roots larger than 3 inches in diameter, matted roots, and stumps from the indicated grubbing areas. Excavate this material together with logs, organic and metallic debris, brush, and refuse and remove to a depth of not less than 18 inches below the original soil surface in areas indicated to be grubbed and in areas indicated as construction areas under this contract. Fill depressions made by grubbing with suitable material and compact in accordance with the requirements specified in Section 02200, "Earthwork", to make the new surface conform with the existing adjacent surface of the ground.

3.04 NOISE ABATEMENT AND DUST CONTROL:

A. Noise Abatement: Limit noise to a reasonable level as related to specific items of equipment

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used and their hours of use. This does not preclude use of mechanical equipment, i.e. jack hammers, power-driven fasteners, and similar equipment. Noise abatement control shall meet the requirements of the Owner. Refer to Section 5-1.16 of the General Conditions.

B. Dust Control: During demolition and site clearing, keep dust, dirt and pollen from vegetation from blowing or spreading by means of watering down at regular intervals and as directed. Refer to Section 2-1.15 of the General Conditions.

END OF SECTION

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SECTION 13 11 13

POOL GENERAL

1. GENERAL

1.01 SECTION INCLUDES

A. Project administrative requirements that relate to Division 13 11 Pools.

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

B. The following contain requirements that relate in Division 13 11:
   1. Mechanical/Electrical/Equipment Coordination: General Conditions, Supplementary General Conditions and Division 01 General Requirements
   2. Earth Work and Pool Excavation: Division 31
   3. Concrete Deck Work: Division 03
   4. Mechanical: Plumbing Systems - Division 22, HVAC Systems and Equipment - Division 23
   5. Electrical: Division 26

C. Applicable requirements of the following Codes and Standards apply to Work in Division 13 11:
   1. Association of Pool and Spa Professionals (APSP)
      a. Minimum Standard for Public Swimming Pools
   2. National Electrical Code (NEC)
   3. National Sanitation Foundation (NSF): Seal of Approval Program
   4. American Society for Testing and Materials (ASTM): Specifications referenced herein.
   5. Governmental Health and Building Codes
   6. ADA Accessibility Guidelines for Buildings and Facilities
   7. American National Standards Institute

1.03 REFERENCES

A. Refer to individual Division 13 11 sections.

1.04 DESCRIPTION OF WORK

A. Work of Division 13 11 includes, but is not limited to, the following:
   1. Layout of all pool(s) and pool related work required under Division 13 11.
   2. Project benchmarks and control points.
   3. Excavation and stone fill as required for pool tank structure and pipe trenching. Refer to Division 01 and 31 for special conditions.
   4. Pool vessels, as detailed on Contract Drawings and Shop Drawings.
   5. Pool mechanical systems, including piping, recirculation system, filtration system, activity mechanical systems and water chemical treatment system.
   6. Heating system for swimming pool. Coordinate venting and interlocking for pool heater(s) with HVAC Contractor.
   7. Waterslide and water activity mechanical systems including all piping.
   8. Interior pool finishes.

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9. Pool deck equipment and accessory equipment shown and/or specified, including required anchors embedded within the pool deck and coordination with Deck Contractor.
10. Coordination of all electrical interlocks for pool and pool related equipment.
11. Miscellaneous pool testing, safety and control equipment.
13. Low voltage wiring for pool and pool related equipment is installed and connected by the Swimming Pool Contractor unless required otherwise by code. Where code requires that low voltage wiring is installed by a licensed electrical contractor, low voltage wiring is specified in Electrical Documents.

B. Definitions
1. The term "pool" as used in Division 13 11 shall refer to the following:
   a. Pool C – Leisure Pool Existing
   b. Pool D – Spray Pad Existing
2. The term "concrete" as used in Division 13 11 refers to concrete for swimming pool construction only.
3. The term "Architect/Engineer" as used in Division 13 11 refers to the swimming pool designer only.
4. The term "Contractor" as used in Division 13 11 refers to the swimming pool contractor only.
5. The term “Low Voltage Wiring” as used in Division 13 11 includes wiring <= 24V. All Low Voltage Wiring is Provided with the Equipment. Low voltage wiring is shown in Low Voltage Wiring Diagram included in the pool drawings except where specified by Electrical Consultant.
6. The term “Control Wiring” as used in Division 13 11 refers to connections from individual equipment components to the Building Management System (BMS).

C. Applicable Code Permit and Inspection Responsibilities.
1. State and/or County Health Department permit fees by Owner.
2. Local Departments of Health inspection fees by Contractor.
3. Other permits/fees required paid by Contractor.
4. Scheduling of Required Inspections – Contractor
5. Documentation and Submission of accepted modifications to approved plans to Permit Authorities – Contractor.

D. Related Work Not in Division 13 11 Specified Elsewhere
Pool deck construction, including finishes, sealants, and drains.
1. Potable water or fresh water: Fresh water connection to auto fill and wastewater connections (see Contract Drawings).
2. Pool electrical work: Electrical connections shall be by the General Construction Contract Electrical Sub-Contractor. The Pool Contractor shall provide the filter pumps, motors, solenoids, relays, water level probes (with housing), motorized valves, etc., as shown on Contract Drawings and required by pool systems equipment manufacturer. The Electrical Contractor shall install and wire electrical equipment furnished by the Pool Contractor and shall provide motor starters and disconnect switches as indicated or required by Codes. The Electrical Contractor shall provide grounding and bonding per NEC Article 680.
3. Control Wiring for all electrical and HVAC equipment shall be by the control system sub-contractor.
4. Heating system for pools, heater by the Pool Contractor; venting and controls by Division 23.
5. Surge Tank Ventilation System
   a. All surge tank equipment shall be purchased and installed by the Pool Contractor.
   b. All surge tank ventilation and plumbing shall be purchased and installed by the Mechanical Contractor.
   c. All plumbing shall be Schedule 40 PVC.
   d. Exhaust fan shall be of non-corrosive materials, Plastec 20 model PLA 20, or equal.

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e. Pool Contractor to coordinate surge tank penetrations with Mechanical Contractor.
f. The Electrical Contractor shall provide all wiring, bonding, and grounding per NEC Article 680.

1.05 QUALITY ASSURANCE

A. Qualifications of Pool Contractor:
1. Work of Division 13 11 shall be performed by a Pool Contractor who has a minimum of five (5) projects with a proven five (5) year record of competence and experience in the construction of similar facilities of this size and complexity.
2. Pool Contractor prequalification is required prior to bid. This must be received by the Architect fourteen (14) days prior to the bid date on the appropriate AIA form. (AIA A305)
3. Pool Contractor shall meet all Local and State Certifications and License requirements prior to bidding. Copies of the required Certificates and Licenses shall be made available upon request.

B. Performance Criteria: Certain sections of Division 13 11 contain performance criteria rather than product descriptions. It shall be the obligation of the Pool Contractor to ensure that all criteria are satisfied and the burden of proof of conformance shall rest with the Pool Contractor. The Architect/Engineer shall require complete calculations, past performance records and, if required, inspection trips of similar facilities to substantiate conformance with these criteria. The Architect/Engineer shall be sole judge of conformance, and the Pool Contractor is cautioned that he will be required to provide a finished product meeting all stated criteria and meeting or exceeding Department of Public Health requirements.

C. All work of Division 13 11 shall be performed by the qualified Pool Contractor or a Subcontractor to the qualified Pool Contractor unless otherwise pre-approved in writing by the Architect/Engineer. A representative of the Pool Contractor shall oversee work subcontracted by the Pool Contractor.

D. The following shall be performed during construction of the project.
1. Refer to General Conditions, Division 01, and other Division 13 11 sections for further requirements.

1.06 SUBMITTALS

A. Submittals Required
1. Refer to General Conditions, Division 01, and individual Division 13 11 sections for number required.
2. The Contractor shall submit for approval to the Architect/Engineer complete lists, including descriptions, catalogs, product cut sheets, etc., and where applicable dimensioned shop drawings of all material, fixtures, and equipment to be furnished and installed as part of Division 13 11.
3. Submittals shall adequately and completely describe the equipment, including where necessary or requested complete construction and installation dimensions, complete capacity and performance data, all accessories and auxiliary equipment and all pertinent details of manufacture.
4. Submittals shall be provided complete and bound in a 3-ring binder or as pre-approved by Architect/Engineer.
a. Contractor's Option – In lieu of paper copies indicated above, submit in Adobe PDF electronic file format via email file size (10 MB max.). Create PDFs at native size and right-side up; illegible, partial, unlabeled, or unorganized submittal sections will be returned rejected. Contractor shall make their own copies from the original returned by the Architect.

B. Product Data: Provide manufacturer's/installer's written installation instructions.

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C. Shop Drawings
   1. The drawings accompanying this Specification are diagrammatic in nature and show the general arrangement of all equipment, piping, ductwork, services, etc. Because of the small scale of the drawings, it is not possible to show all offsets, fittings and accessories that may be required. The Contractor shall carefully investigate the structural and finish conditions of his work and shall arrange such work; accordingly, furnishing all fittings, pipe and accessories that may be required to meet such conditions. Where conditions necessitate a rearrangement, the Contractor shall obtain the Architect/Engineer's approval.
   2. Shop drawings for equipment shall be submitted, and Engineer's review of shop drawing shall be obtained before proceeding with fabrication. Shop drawings shall not be "doctored" reproductions of Architect/Engineer's drawings.

D. Samples: Submit samples of materials, finishes, and trim as requested by the Architect/Engineer.

E. Schedule of Values
   1. Provide Architect/Engineer with a copy of the Schedule of Values developed for this project relevant to Division 13 11 for approval.

F. Valve Charts: Submit two (2) copies of valve charts for each piping system, consisting of Isometric Drawings or piping layouts showing and identifying each valve and describing its function to the Architect/Engineer for approval.
   1. Upon completion of the Work, one (1) copy of each chart sealed to rigid backboard with clear lacquer placed under glass and framed, shall be hung in a conspicuous location in the equipment room.

G. Furnish to the Architect/Engineer the following:
   1. Refer to individual Division 13 11 sections for additional requirements.
   2. Submittals
      a. Shotcrete Nozzle Man Qualifications and Certifications
      b. Pool Finish Experience/Qualification Requirements
      c. Concrete Mix Design
      d. Non-shrink Grouts
      e. PVC and Pre-formed Plastic Adhesive Waterstop
      f. Expansion/Construction Joint Materials
      g. Caulking/Sealants
      h. Pumps and Strainers
      i. Heater(s)
      j. Chemical Controller(s)
      k. Chemical Feeders
      l. Bulk Chemical Storage Tanks
      m. Valves
      n. Gauges
      o. Flow Meters
      p. Thermometers
      q. Pool Water Test Kit
      r. Inlets
      s. Grating
      t. Pre-fabricated Submerged Outlets
      u. Under Water Pool Lighting
      v. Deck Equipment
      w. Safety Equipment
      x. Maintenance Equipment
      y. Piping Materials (pipe, fittings, solvents, cements)
      z. Wall Sleeves and Seals for Piping

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aa. Tile Setting Materials and Joint Fillers

3. Shop Drawings
   a. Reinforcing Steel
   b. Water Activities
   c. Filters
   d. Stainless Steel Gutter
   e. Precast Pool Coping Stone
   f. UV Disinfection System
   g. Concrete Pump Pit & Surge Tank Penetration Drawings
4. Test Results
   a. Water Treatment Analysis
   b. Compaction
   c. Piping Pressure Testing
5. Samples
   a. Special Aggregate – Factory and Field Applied
   b. Tile
   c. Gratings
6. Guarantees/Warranties
   a. Standard 1-Year
   b. Standard 5-Year on Quartz Aggregate Finish
   c. Standard 2-Year on Pool Finish Application
   d. Special Equipment – Standard Manufacturer's Warranty
   e. Future 3-Days of Instruction and Operational Checkout
7. Close Out Documents
   a. O & M Manuals
   b. Record Drawings
   c. Owner's Certification of Instruction
   d. Extra Materials

1.07 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

B. Along with the Shop Drawings, the Contractor shall submit, in duplicate, a certificate properly attested, stating the material, equipment, and construction comply with the requirements of the Contract Documents, for all equipment and materials proposed as a Substitute for the specified equipment and materials.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Refer to General Requirements and Division 01 of the Specifications for additional requirements.

B. Deliver all materials and equipment to the work site in original packages, fully identified with manufacturer's label. Store off ground and protect from weather with a suitable covering.

C. Protect plastic pipe from exposure to chemicals (aromatic hydrocarbons, halogenated hydrocarbons and other esters and ketones) that might attack the material. Protect all pipes from mechanical damage and long exposure to sunlight during storage.

1.09 WARRANTIES

A. Warranty: Provide one (1) year warranty covering all pool workmanship, materials, and equipment. Refer to General Requirements and Division 01 of the Specifications for additional requirements.

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B. All standard manufacturer's warranties shall apply to all equipment and products provided by this Contractor.

2. PRODUCTS

2.01 NOT USED

3. EXECUTION

3.01 EQUIPMENT BASES AND SUPPORTS

A. Provide for major equipment, reinforced concrete housekeeping bases poured directly on structural floor slabs (or as required by equipment manufacturer) 4 inches thick minimum; unless noted otherwise on plans, extended 4 inches beyond machinery bedplates. Provide templates, anchor bolts, vibration isolators, and accessories required for mounting and anchoring equipment. Anchorage system shall be in accordance with the equipment manufacturer's specifications and local code requirements. Consult with equipment manufacturer for length and installation of anchor bolts.

3.02 CLEAN UP AND PROTECTION

A. After work of Division 13 11 has been completed, cleanup work areas and remove all equipment, excess materials, and debris. Protect pool from damage until substantial completion. Remove and replace equipment and finishes that are chipped, cracked, abraded, improperly adhered, or otherwise damaged.

B. At turnover to Owner, Contractor shall be responsible for, but not limited to, the following:
1. Vacuuming and cleaning all pool floors, steps, and walls.
2. Cleaning all depth marker tiles, pool tile and gutter grating.
3. Cleaning and waxing of all pool deck equipment, water features and stainless-steel products per Manufacturer's instructions.
4. See also Division 01 Specification requirements.

END OF SECTION

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SECTION 13 11 14

POOL START-UP, MAINTENANCE & OPERATIONS TRAINING

1. GENERAL

1.01 SECTION INCLUDES

A. Pool start-up and chemical balancing of water.

B. Training of the Owner's personnel in pool operations procedures.

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 DESCRIPTION OF WORK

A. Water treatment and balancing.

B. Operations and maintenance instruction and manuals.

1.04 SUBMITTALS

A. Operations and Maintenance (O&M) Manual
   1. Pool Contractor shall deliver to the Architect/Engineer water sample location, analysis test results, SI calculation, and chemical adjustment calculations as required per Part 3.02.
   2. Pool Contractor shall deliver to the Architect/Engineer, bound together in a three-ring binder a complete manual, four (4) complete sets of operating and maintenance instructions for the swimming pool structure(s), finishes, and all component equipment. O&M Manual shall include, but is not limited to, the following:
      a. Table of contents.
      b. All equipment cut sheets.
      c. Accurate parts lists.
      d. Pool start-up, emptying, and winterization instructions.
      e. Pool cleaning instructions.
      f. Pool maintenance requirements, divided into the following:
         1) Daily
         2) Weekly
         3) Monthly
         4) Seasonally
         5) Annually
      g. Narrative on the pool operation through all sequences.
      h. A DVD of complete start-up and shut-down procedures and training session.
      i. Trouble shooting information and procedures.
      j. A schematic of piping as installed.
      k. Valve charts for each piping system, consisting of isometric drawings or piping layouts showing and identifying each valve and describing its function.
      l. Record Drawings
      m. Warranties

   3. Slide Contractor shall deliver to the Architect/Engineer, bound together in a three-ring binder a complete manual, four (4) complete sets of operating and maintenance

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instructions for the swimming pool structure(s), finishes, and all component equipment. O&M Manual shall include, but is not limited to, the following:

a. Table of contents.
b. All equipment cut sheets.
c. Accurate parts lists.
d. Slide start-up, emptying, and winterization instructions.
e. Slide cleaning instructions.
f. Slide maintenance requirements, divided into the following:
    1) Daily
    2) Weekly
    3) Monthly
    4) Seasonally
    5) Annually
g. Narrative on the Slide operation through all sequences.
h. A DVD of complete start-up and shut-down procedures and training session.
i. Trouble shooting information and procedures.
j. Record Drawings
k. Warranties

2. MATERIALS

2.01 NOT USED

3. EXECUTION

3.01 OPERATIONS & MAINTENANCE INSTRUCTION

A. Provide an experienced swimming pool operator-instructor (NSPF Certified Pool Operator, or equivalent certification) for a period of not less than three (3) days (two (2) full days operations and start-up, and one (1) full day shut-down assistance) after the pool has been filled and initially placed into operation.
    1. During this period, the Owner's designated representative(s) shall be thoroughly instructed in all phases of pool and pool equipment operation and maintenance (O&M).
    2. At a minimum, the swimming pool training and O&M Manuals must include the following:
        a. General pool operations,
        b. Pool materials and deck equipment maintenance,
        c. Pool fill and operating water level
        d. Pool/Equipment start-up, shut-down, emptying, and winterizing procedures.
        e. Circulation pumping, pipe, fittings, valves, and ancillary equipment,
        f. Filtration equipment,
        g. Heating/cooling equipment,
        h. Chemical treatment & monitoring systems,
        i. Water features
    3. Equipment training must be provided by the certified swimming pool operator-instructor and qualified equipment manufacturer representatives. See individual Specification sections for pool materials/equipment training and O&M requirements.

B. Contractor shall obtain written certification from the Owner's designated representative acknowledging that all O&M instructions/training and materials have been provided. Certification shall include the detailed listing of equipment above with training completion and delivery dates, instructor contact information, and Owner representative's signatures.

C. Include the cost of three (3) additional days of instruction and operational checkout/verification by an experienced swimming pool operator-instructor during the first year's operation. Written reports of each of these three (3) visits outlining the pool's operation, competence and performance of the pool's operating personnel and other

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pertinent comments shall be submitted to the Owner and Architect/Engineer within one week after each visit.

D. Provide a DVD documenting training and operational requirements, including start-up, emptying, and winterizing procedures.

E. In addition to initial pool instruction listed, the Pool Contractor shall perform the first season pool closing (winterizing) and the following season pool start-up, including all labor and materials required.

3.02 WATER TREATMENT AND BALANCING

A. Obtain a chemical analysis of the source/pool make-up water supply from a location as close as possible to the actual pool autofill. Conduct laboratory testing for the following parameters:
1. Total Alkalinity [Parts per Million (ppm)]
2. pH
3. Calcium Hardness [ppm]
4. Free Chlorine [ppm] & Combined Chlorine [ppm]
5. Total Dissolved Solids (TDS) [ppm]
6. Iron (Must test to a lower detectable limit of <=0.05 ppm)
7. Manganese (Must test to a lower detectable limit of <=0.01 ppm)
8. Copper (Must test to a lower detectable limit of <=0.1 ppm)

B. The following are ideal ranges for the water analysis test results. If results fall outside these ranges the Contractor shall make chemical adjustments to the water during the pool filling process until values within the ideal ranges are obtained.
1. Total Alkalinity: 80-100 ppm (for high pH disinfectants) 100-120 ppm (for low pH disinfectants)
2. pH: 7.4-7.6
3. Calcium Hardness: 200-400 ppm (Pools), 150-250 ppm (Spas)
4. Free Chlorine: 2.0-4.0 ppm & Combined Chlorine: 0.0-0.2 ppm
5. Total Dissolved Solids: Acceptable Start-up Range is not applicable (Maintain future TDS levels to within 1200 ppm above the start-up measurement)
6. Temperature: Ideal Range is +-2 degrees F from the desired pool operating water temperature.
7. Iron: <=0.05 ppm
8. Manganese: <=0.01 ppm
9. Copper: <=0.1 ppm

C. Contractor shall calculate the Langlier Saturation Index (LSI) using values from the water analysis. The formula for LSI is shown below. Calculations may be made easier using through use of Orenda Technologies Mobil App, or a similar calculator. The LSI values shall fall within an acceptable “balanced” range of -0.3 to +0.3. If the LSI is outside this range OR test values are outside the ideal range listed above, the Pool Contractor shall prepare to add chemicals to the pool water volume as required until all parameters are within the ideal ranges previously listed, and the LSI is considered “balanced”, Contractor is responsible for calculating required chemical additions and for adding all adjustment chemicals up until the time of project completion. Owner is responsible for providing the chemicals.

LSI Equation:
(pH) + (Temperature ºF) + (Calcium Hardness) + [(Total Alkalinity) – (CYA correction factor @ current pH)] – (TDS factor) = LSI

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Equivalent Factors - Langelier Saturation Index (LSI)

Temperature (°F)	Temperature Factor	Calcium Hardness (PPM)	Calcium Hardness Factor	Alkalinity (PPM)	Alkalinity Factor	Cyanuric Acid (if present)	Cyanurate Correction Factor	Total Dissolved Solids	TDS Factor
32	0.0	5	0.3	5	0.7	**pH**	**Factor**	< 1000 ppm	12.10
37	0.1	25	1.0	25	1.4	7.0	0.23	1000 ppm	12.19
46	0.2	50	1.3	50	1.7	7.2	0.27	2000 ppm	12.29
53	0.3	75	1.5	75	1.9	7.4	0.31	3000 ppm	12.35
60	0.4	100	1.6	100	2.0	7.6	0.33	4000 ppm	12.41
66	0.5	150	1.8	150	2.2	7.8	0.35		
76	0.6	200	1.9	200	2.3	8.0	0.36		
84	0.7	300	2.1	300	2.5	Note: Only use if CYA is used in your pool. Only applies to >7.0pH. If so, select correction factor based on pool pH.		Note: most calculators assume **12.1** for under 1000ppm, or **12.2** for anything over 1000.	
94	0.8	400	2.2	500	2.6				
105	0.9	800	2.5	800	2.9				

D. Contractor shall provide a submittal to the Engineer/Architect after receiving the water analysis. Submittal shall include the following:
   1. Water sample location and analysis test results,
   2. SI Calculation,
   3. Chemical adjustment calculations indicating the following:
      a. Pool Volume
      b. Chemical Parameters requiring adjustment
      c. Chemicals required to make the adjustments
      d. Calculations showing amounts of each chemical addition that is required

E. Contractor shall provide list of required balancing chemicals with quantities to the Owner for Owner purchase immediately after receiving the approved submittal from the Engineer/Architect.

F. The Owner shall be responsible for payment of water required to fill each pool one time for leak testing and a second time for the final pool start-up process. The Contractor shall be responsible for payment of any additional water and chemicals required due to draining and refilling of pools as needed for pool or pool piping repairs.

G. Contractor shall make chemical adjustments to the pool water during the pool startup process based on calculations provided in the approved submittal. It is critical to keep the pool water clean and balanced during the initial fill and while the pool plaster finish is curing. Follow all recommendations of the National Pool Plasterers Council for initial adjustments required during the plaster cure time. See additional requirements in Pool Finish Specification Section/s.

H. Stabilize pool water to within a range of 5 to 15 ppm maximum of cyanuric acid.

I. Heat pool water to within 5 degrees Fahrenheit of the desired pool operating temperature. Once this temperature is attained, the Pool Contractor shall enter the chemical controller settings for all chemical parameters. Do not enter chemical controller settings prior to reaching the desired pool operating temperature range.

END OF SECTION

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SECTION 13 11 18

POOL CONCRETE

1. GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Cast-in-Place Concrete to be used for pool floor and wall construction and related structures including surge/collector/balance tanks.
   2. Shotcrete alternate to pool wall construction only if Contractor's qualifications have been pre-approved by Architect/Engineer.
   3. Admixtures.
   4. Curing and Treatment Requirements.
   5. Formwork, shoring, bracing, and anchorage.
   6. Concrete reinforcement and accessories.

B. Related Sections:
   1. Applicable provisions of Division 01 – General Requirements shall govern all work under this Section

1.02 REFERENCES

A. Incorporated Guides and References:
   1. American Concrete Institute (ACI):
      a. ACI 302.1R – Guide for Concrete Floor and Slab Construction.
      b. ACI 304R – Guide for Measuring, Mixing, Transporting and Placing Concrete.
      c. ACI 304.2R - Placing Concrete by Pumping Methods.
      d. ACI 305R - Hot Weather Concreting.
      e. ACI 309R – Guide for the Consolidation of Concrete.
      f. ACI 347 – Guide to Formwork for Concrete.
      g. ACI SP-66 – ACI Detailing Manual.
   2. Concrete Reinforcing Steel Institute (CRSI):
      a. CRSI Manual of Standard Practice
      b. CRSI 63 – Recommended Practice for Placing Reinforcing Bars.
   3. National Electric Code (NEC):
      a. Article 680 – Swimming Pools, Fountains, and Similar Installations.

B. Specifications & Standards:
   1. American Concrete Institute (ACI):
      a. ACI 117 - Specifications for Tolerances for Concrete Construction and Materials.
      b. ACI 301 - Specifications for Structural Concrete.
      c. ACI 305.1 – Specification for Hot Weather Concreting.
      d. ACI 306.1 – Standard Specification for Cold Weather Concreting.
      e. ACI 308.1 – Specification for Curing Concrete.
      f. ACI 315 - Details and Detailing of Concrete Reinforcement.
      g. ACI 318 - Building Code Requirements for Structural Concrete and Commentary
      h. ACI 350.1 – Specification for Tightness Testing of Environmental Engineering Concrete Containment Structures
      i. ACI 506.2 – Specification for Shotcrete
   2. ASTM International (ASTM):

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a. ASTM D2487 – Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
b. ASTM A615 – Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
c. ASTM C31 – Standard Practice for Making and Curing Concrete Test Specimens in the Field.
d. ASTM C33 – Standard Specification for Concrete Aggregates.
e. ASTM C39 – Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
f. ASTM C94 – Standard Specification for Ready-Mixed Concrete.
g. ASTM C143 – Standard Test Method for Slump of Hydraulic-Cement Concrete
h. ASTM C150 – Standard Specification for Portland Cement.
i. ASTM C171 – Standard Specification for Sheet Materials for Curing Concrete.
j. ASTM C172 – Standard Practice for Sampling Freshly Mixed Concrete.
k. ASTM C231 – Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
l. ASTM C260 – Standard Specification for Air-Entraining Admixtures for Concrete.
m. ASTM C321 – Standard Test Method for Bond Strength of Chemical-Resistant Mortars.
n. ASTM C494 – Standard Specification for Chemical Admixtures for Concrete.
o. ASTM C618 – Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for use in Concrete.
p. ASTM C672 – Standard Test Method for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals
q. ASTM C1602 – Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete.
r. ASTM D1037 – Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials.
s. ASTM D4541 – Standard Test Methods for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
t. ASTM E96 – Standard Test Methods for Water Vapor Transmission of Materials.

3. Corps of Engineers:
   a. CRD C-527 - Corps of Engineers Specification for Polyvinylchloride Water Stop.
4. NSF International (NSF)
   a. NSF/ANSI Standard 61 – Drinking Water System Components

1.03 SUBMITTALS

A. Submit proposed mix design of each class of concrete to Engineer/Architect not later than 10 days after Notice to Proceed or twenty-one (21) days prior to the first concrete placement, whichever comes first.

B. Submit shop drawings of reinforcing steel under provisions of Division 01 – General Requirements.
   1. Initial submittal of reinforcement shop drawings shall be complete. No partial submittals will be accepted.
   2. Indicate reinforcement sizes, spacing, locations and quantities of reinforcing steel, bending and cutting schedules, splicing, supporting and spacing devices. Include additional reinforcement for opening through concrete structures.
   3. Reinforcement placement shop drawings shall conform to ACI SP-66 providing full wall elevations.

C. Material Certificates: For each of the following, signed by the manufacturers:
   1. Cementitious materials.

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2. Admixtures.
3. Waterstops.
4. Non-shrink grouts.
5. Expansion Joint Materials.
6. Sealants.
7. Waterproof Bondcoat
   This is Basecrete and is the product that replaces THOROSEAL which can no longer be used on pools. Delete if you are using stainless steel gutters.
8. Concrete Densifier
   This is Basecrete + and is used in tandem with Basecrete under tiled surfaces on RENOVATIONS ONLY.

D. Material Test Reports: For the following, from a qualified testing agency, indicating compliance with requirements:
   1. Aggregates.
   2. Concrete Testing
   3. Compaction

E. Shotcrete Nozzleman Qualifications.

F. Pool Finish Experience/Qualification Requirements.

1.04 QUALITY ASSURANCE

A. Perform work in accordance with ACI 301, 305.1, and 306.1.

B. Maintain copy of ACI 301 on site.

C. Qualifications of Pool Contractor
   1. Work of this Section shall be performed by a Contractor who has a proven record of competence and experience in the construction of similar facilities of this size and complexity for not less than five (5) years. Contractors shall have an established record of reliability.

D. Qualifications of Nozzleman and Gunman
   1. Except when shotcrete is applied under a fully automated process, the quality of shotcrete depends largely on the skill of nozzleman and gunman, and the Contractor shall satisfy the Architect/Engineer that the nozzleman has had a minimum of two years' continuous experience on shotcreting of this type of work, and that the gunman has handled the gun for a period of at least six months. The nozzleman shall show proof of good quality successful shotcreting work similar to that required for this project. Experience gained on shotcrete and ditch construction will not be considered as experience for qualifying the nozzleman.

E. Concrete Testing: The following tests shall be performed during construction of the project. Refer to General Conditions and Division 01 for further requirements.
   1. Tests to measure slump, entrained air content and compressive strength shall be conducted by independent testing laboratory employed by the Contractor unless noted otherwise in front-end specifications.
      a. Provide minimum of two 6 by 12 in. cylinders or three 4 by 8 in. cylinders per 150 cubic yard or fraction thereof for each class of concrete poured each day. Comply with ACI 318 (samples secured - ASTM C172, cylinders prepared and cured - ASTM C31, and tested - ASTM C39). Identify samples moist cure at 70 degrees F for five (5) days and ship samples to laboratory.

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2. Slump and Air Content Tests
    a. Perform on concrete from same batch as sampled for strength tests and whenever there is consistency of concrete. Slump tests shall be made in accordance with ASTM C143. Air content tests shall be made in accordance with ASTM C231. If measured slump or air content falls outside specified limits, check shall be made immediately on another portion of same sample. In event of second failure, concrete shall not be used in Work.
3. Compliance
    a. Average of any three (3) consecutive strength tests for each class of concrete shall be equal to or greater than specified strength, and no individual test shall fall more than 500 psi below specified strength.
    b. When tests results are below specified requirements or when tests of field cured cylinders indicate deficiencies in protection and curing, Architect/Engineer may require additional tests in accordance with ACI 318.

F. Wet Mix Process Cylinder Sample
1. Where automated wet mix equipment is used, shotcrete cylinders shall be taken from the mixer or ready-mix truck and tested in accordance with the requirements specified in this Section. Wet mix processes shall only be used with approved automated equipment.

G. Pools, surge tanks, and gutters shall have a water tightness performed per ACI 350.1. Documentation of testing and results shall be submitted for review. Refer to Water Tightness Test section of this specification.

1.05 REGULATORY REQUIREMENTS

A. Conform to requirements of local, state and federal rules and regulations applicable to Work and Project location.

1.06 ENVIRONMENTAL REQUIREMENTS

A. Cold Weather Concreting
1. Placement and curing of concrete where (1) average daily temperature for three consecutive days is less than 40 degrees F, and (2) air temperature is not greater than 50 degrees F for more than one-half of a 24-hour period from midnight to midnight shall be in accordance with ACI 306.1.

B. Hot Weather Concreting
1. Placement and curing of concrete subject to a combination of (1) rising air temperature (generally greater than 75 degrees F) and (2) wind and low relative humidity shall be in accordance with ACI 305.1.
2. Contractor shall provide plan for minimizing exposure of concrete to adverse conditions due to combinations of high air temperature, direct sunlight, drying winds, and high concrete temperature.
3. Protect concrete from rapid temperature drop.
4. Pre-wet subgrade and forms.

1.07 WARRANTIES

A. Special 2-Year on Concrete Structure: The Pool Contractor shall guarantee for two (2) years repair of the concrete pool structure.

2. PRODUCTS

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2.01 SUBGRADE, SUBBASE AND BACKFILL MATERIALS

A. Pool Subgrade:
   1. In-situ soils meeting the Project Geotechnical Report requirements for materials and preparation.
   2. Subgrade soils must meet the soil parameters for pool structural design as stated in the Pool Structural Drawings for:
      a. Net allowable soil bearing capacity in pounds per square foot (PSF),
      b. Stated equivalent fluid pressure in pounds per square foot per foot (PSF/FT),
      c. Ground water elevation
   3. Pool subgrade materials shall be free of large rocks, organic matter, and other deleterious substances.

B. Filter Fabric:
   1. MIRAFI 140N: Nonwoven polypropylene geotextile barrier, 4.8 oz/yd2, by Tencate Geosynthetics.

C. Pool Subbase & Backfill Materials:
   1. Existing subsoil materials shall not be used for pool subbase.
   2. ASTM D 2487 Class IA Manufactured Aggregate:
      a. Aggregate containing little or no fines (clear), including angular, crushed stone or rock, crushed slag, cinders, or shell.
      b. Gradation: Open graded, clean: < = 10% Passing No.4 sieve, < 5% Passing No. 200 sieve.
      c. Pool Subbase: ¾" to 1" nominal sized aggregate.
      d. Pool backfill: ¾" nominal sized aggregate.

2.02 FORM MATERIALS

A. Plywood Forms: Douglas Fir or Spruce-Pine-Fir species: Sound, undamaged sheets with clean true edges, exterior glue, facing material to provide finish specified.

B. Lumber: Douglas Fir or Spruce species; construction grade or better; with grade stamp clearly visible.

C. Preformed Steel Wall Forms: Minimum 16 gage thick, Vertically and horizontally matched, tight fitting, stiffened to support weight of concrete without deflection detrimental to tolerances and surface appearance.

D. Tubular Column Type: Round, spirally wound laminated fiber material; inside surface treated with release agent.

E. Form Ties for Exposed Surfaces: Plastic cone snap ties with 1-inch outside diameter by 1-inch (nominal) long cones, with no metal within 1-inch of concrete face after removal.
   1. Manufacturers:
      a. Advance Concrete Formwork, Inc.
      b. Dayton Superior.
      c. Symons - A Dayton Superior Company.
      d. Williams Form Engineering Corporation.
      e. Substitutions: As approved by Engineer/Architect.

2.03 SHOTCRETE

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A. Mix Design
   1. Wet-mix design only. Dry mix, mixed at the nozzle, shall not be allowed.
   2. A proven mix design shall be used for all Shotcrete applications.
   3. In addition to cylinders, testing of shotcrete shall be done per ACI 506.2.

B. Rebound
   1. Rebound materials shall not be reused in any form for shotcrete work and shall never be worked into the construction by the nozzleman.

2.04 REINFORCING STEEL

A. Reinforcing Steel: ASTM A615, 60 ksi yield grade carbon steel deformed bars; uncoated, finish.

B. Reinforcement Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded wire fabric, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete. Supports shall have a minimum 2" concrete cover on waterside of pool concrete.

2.05 CONCRETE MATERIALS

A. Cementitious Materials
   1. Portland Cement: ASTM C150, gray color, Type I except as specified below.
   2. Fly Ash: ASTM C618, Class C.
   3. Limit cement replacement to 20%.

B. Fine and Coarse Aggregates: ASTM C33.

C. Water: ASTM C1602, clean and not detrimental to concrete.

D. Admixtures
   1. Admixtures to be used in the concrete mixture shall be submitted to the Engineer for approval as part of the mixture proportions.
   2. Admixtures containing intentionally-added chlorides, sulfides, or nitrides are not permitted.
   3. Admixtures shall be certified to NSF/ANSI 61.
   4. Air-Entraining Admixture: ASTM C260.
   5. Water Reducing Admixture: ASTM C494, Type A.
   6. Retarding Admixture: ASTM C494, Type B or Type D.
   7. Accelerating Admixture: ASTM C494, Type C or Type E.
   8. High-Range Water-Reducing Admixture: ASTM C494, Type F.
   9. Workability-Retaining Admixture: ASTM C494, Type S.
   10. Shrinkage-Reducing Admixture: ASTM C494, Type S.
   11. Crystalline Waterproofing Admixture: ASTM C494, Type S.
   12. The amount of admixture added to the concrete shall be in accordance with the manufacturer's recommendations.
   13. Admixtures permitted shall be supplied by a single manufacturer for project.
   14. Approved Manufacturers:
       a. Axim Italcementi Group.
       b. BASF Corporation
       c. Grace Construction Products.
       d. The Euclid Chemical Company.
       e. Xypex

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15. Substitutions: As approved by Engineer/Architect.

2.06 ACCESSORIES

A. Pool Concrete PVC Waterstop
   1. Center bulb type, as shown on Drawings, extruded from an elastomeric plastic compound, the basic resin of which shall be polyvinyl chloride (PVC). The size shall be as shown. Specific gravity shall be approximately 1.37, and the Shore durometer Type A hardness approximately 80. No reclaimed PVC shall be used in the compound. Meet the performance requirements of CRD C-572.
   2. Waterstop shall have a constant thickness from the edge of the bulb to the outside edge. All waterstops shall have a number of parallel ribs or protrusions on each side of the center of the strip. Corrugated type or tapered waterstops are not acceptable. The minimum weight per foot for waterstop shall be 1.62 pounds for 3/8-inch by 6-inch and 2.30 pounds for 3/8-inch by 9-inch.
   3. Manufacturers and suppliers who have provided samples meeting the specified geometry and who have the specified waterstop readily available are listed below. Other products shall not be used without prior review and acceptance by the Architect/Engineer.
      a. Sika Greenstreak Waterstops, P.O. Box 7139, St. Louis, Missouri 63177, phone: (314) 225-9400 or fax: (314) 225-9854. Style 717 for the 6-inch by 3/8-inch and Style 735 for the 9-inch by 3/8-inch.
      a. BoMetals, Inc., 141 Hammond Street, Carrollton, GA. Phone 770-832-2000 or fax (770-832-2095.Style RCB638NT for the 6-inch by 3/8” and style RCB938NT for the 9-inch by 3/8”.
      b. Paul Murphy Plastics Company, Wirestop Waterstop, 15301 Eleven Mile Road, Roseville, Michigan, 48066, phone 800-544-2200 fax 586-774-9146. Style CR-6380 for the 6-inch x 3/8” and Style CR-9380 for the 9-inch by 3/8”.

B. Pool Concrete Compressible Waterstop
   1. Use as illustrated in drawing details for the following:
      a. Sealing non-moving cold joints and construction joints between structural elements against penetration of water from wet-face of structure with less than 30-foot hydrostatic head.
      b. Sealing pool piping penetrations against water penetration from wet-face of structure with less than 30-foot hydrostatic head.
   2. Product Description: The product shall be a 0.59” x 0.39” compressible hydrophilic sponge rubber strip composed of vulcanized rubber and urethane polymer as the hydrophilic agent.
   3. Product & Manufacturer:
      a. Adeka KBA-1510FP waterstop, manufactured by Adeka Corporation and distributed by OCM, Inc., Chicago, IL. USA.
      b. Website: www.adeka.com
      c. Physical & Swelling Property Requirements: The product shall at a minimum meet the physical properties as shown in the official Adeka literature as follows.
      d. Expansion Pressure: The product shall not produce more than 0.03MPa (4.35 psi) expansion pressure when fully hydrated.
      e. Tensile Strength: At least 0.78 MPa (113 psi),
      f. % Elongation: No greater than 350% when fully hydrated.
      g. Volume (thickness) % Change: No greater than 30% volume change or increase in thickness when fully hydrated.
      h. Alternative Products:
         1) General: Drawing documents have been completed using the specified Adeka waterstop product as a basis of design. Alternative compressible waterstops shall not be used without approval from Engineer/Architect. Considerations such as

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concrete coverage requirements and wall thicknesses must be considered when substituting alternative products. Contractor will be responsible for any structural changes required due to alternate product concrete coverage requirements.

2) Product Requirements: Compressible waterstop alternatives may not contain bentonite materials and may not have swelling properties that exceed the specified product.
3) Acceptable Alternative: An acceptable alternative may be Synko-Flex SF302 Preformed Plastic Adhesive Waterstop with Synko-Flex SF311 primer or equal, but it must be approved prior to use. Manufacturer: Henry Company, Houston, TX. Website: http://us.henry.com/

C. Non-Shrink Grout: Premixed compound with non-metallic aggregate, cement, water reducing and plasticizing agents; capable of minimum compressive strength of 2400 psi.
   1. Upcon High Flow, the Upco Company, Cleveland, Ohio; MasterFlow 713, BASF Corporation, Cleveland, Ohio; Crystex, L & M Construction Chemicals, Inc., Omaha, Nebraska.

D. Joint Materials:
   1. Waterstop: See Pool Concrete PVC Waterstop.
   2. Expansion Joint Dowel Sleeves: PVC or molded plastic sleeve with end cap/plug. Size sleeve to allow movement of dowel.
   3. Pre-molded Expansion Joint Filler: Multicellular, closed cell, flexible polyethylene plastic foam as manufactured by Dow Chemical Co., Midland, MI. Ethafoam expanded polyethylene closed-cell foam, W.R. Meadows, Elgin, IL, Ceramar or a pre-approved equal.
   4. Backer Rod Joint Backing Material: Closed cell, polyethylene, flexible, rope-like foam joint backing material. Material shall be fully compatible with polysulfide sealant and for use in swimming pools. Product shall be Kool-Rod as Manufactured by W.R. Meadows, Elgin, IL, or pre-approved equal.
   5. Gun Grade Sealant: Two-part polysulfide sealant and primer certified by Manufacturer as suitable for use in pools including submerged locations. “Deck-O-Seal Gun Grade” and “P/G” solvent based primer as manufactured by W.R. Meadows or equal. Color shall be white.

E. Adhesive Waterproof Bondcoat
   This is Basecrete and is the product that replaces THOROSEAL which can no longer be used on pools.
   1. Provide adhesive waterproof bondcoat where indicated on drawings.
      a. Impact strength: 19 lbs / 8.6 kg
      b. Compressive strength: 7050 psi / 48.61 MPa
      c. Tensile strength: 732 psi / 5.05 MPa
      d. Flexural strength: 2380 psi / 16.41 MPa
      e. Adhesive strength (concrete): 1372 psi / 9.46 MPa
      f. Shear bond adhesion: 720 psi / 4.96 MPa
      g. ASTM C321
      h. ASTM C672
      i. ASTM D4541
      j. ASTM E96
   2. Materials
      a. Basecrete or equal.

F. Concrete Densifier
   This is Basecrete + and is used in tandem with Basecrete under tiled surfaces on RENOVATIONS ONLY.
   1. Provide concrete densifier under tile pool installations and where indicated on drawings.
      a. Basecrete + or equal.

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2.07 CURING AND TREATMENT MATERIALS

A. Water: Potable and clean.

B. Burlap shall be clean, evenly woven, free of encrusted concrete or other contaminating materials, and shall be reasonably free of cuts, tears, broken or missing areas.

C. Polyethylene Film: ASTM C171, 6 mil thick, clear.

D. Curing Paper: ASTM C171;
   1. Manufacturers:
      a. Fortifiber – Orange Label Sisalkraft 280.
      b. Sabel Sisalkraft 280.
         308.1 Keep concrete slabs and walls continuously wet for a 7-day perior. Intermittent wetting is not acubstitutions: As approved by Engineer.

2.08 CONCRETE MIXTURE

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture of field test data, or both, according to ACI 301.

B. Mix concrete in accordance with ASTM C94.

C. Concrete mix designs shall be designed and submitted in accordance with Division 01 and included as part of cost of this Work.

D. Mix designs shall be prepared by a qualified agency acceptable to Engineer/Architect. Electronic copies of mix designs shall be submitted for Engineer/Architect's review prior to placing any concrete.

E. Mix design shall indicate brands, types, and quantities of admixtures included, compressive strength, slump, sieve analysis for fine and coarse aggregate, quantities of all ingredients, type and brand of cement, source of aggregate, whether fine aggregate is natural or manufactured.

F. Design of mix shall assure placing and finishing characteristics that meet Project requirements.

G. Mix designs contained in the Schedule of Mixes may be modified and submitted to Engineer for approval, by use of mid or high range water reducing admixtures to control slumps required for pumping of concrete. Strength, placing and finishing requirements shall be maintained.

H. Concrete mixtures shall be designed to have low shrinkage characteristics and designed to minimize slab curling.

I. Initial and final set times of concrete mix designs shall be coordinated between the contractor and concrete supplier.

2.09 SCHEDULE OF MIXES

A. Pool Structures: Proportion normal-weight concrete mix as follows:
   1. Compressive Strength (28 Days): 4500 psi.

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2. Maximum Aggregate Size: 1 inch.
3. Maximum Slump (Inch): 3
4. Air Entrainment: 6 percent air content is required with an acceptable air content of plus or minus 1.5 percent. Required for pool structures subject to freeze/thaw cycles.
5. Maximum Water-Cementitious Materials Ratio: 0.45.
6. Additional admixtures may be required as indicated on Structural Drawings.

B. Surge Tanks (Walls and Floor): Proportion normal-weight concrete mix as follows:
1. Compressive Strength (28 Days): 4500.
2. Maximum Aggregate Size: 1- inch.
3. Air Entrainment: 6 percent air content is required with an acceptable air content of plus or minus 1.5 percent. Required for tanks subject to freeze/thaw.
4. MasterLife 300D or Xypex C-500 admixture: Provide dosage per manufacturer's recommendations.

C. Shotcrete: Proportion normal-weight concrete mix as follows:
1. Compressive Strength (28 Days): 5000 psi.
2. Wet-mix design only. Dry mix, mixed at the nozzle, shall not be allowed.
3. Maximum Aggregate Size: 3/8 - inch.
4. Air Entrainment: 6 percent air content is required with an acceptable air content of plus or minus 1.5 percent. Required for pool structures subject to freeze/thaw cycles.
5. Additional admixtures may be required as indicated on Structural Drawings.

3. EXECUTION

3.01 SUBGRADE, SUBBASE AND BACKFILL PLACEMENT

A. Prepare pool subbase using in-situ soils in compliance with the Project Geotechnical Report placement methods and testing requirements. Materials shall be graded to proper elevations, free of large rocks, organic matter, and other deleterious substances.

B. Place geotextile barrier below entire pool and up the sides of the pool walls separating the subbase aggregates and pool backfill aggregates from the subgrade and remaining backfill or in-situ soils to prevent mitigation of fines.

C. Place pool subbase & backfill aggregate materials in 6” compacted lifts to minimize void spaces and eliminate potential future settlement. Compact materials using walk-behind plate compactors properly sized and operated to prevent damage to pool pipes.

3.02 FORMWORK

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until concrete structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance per ACI 117.

C. Verify lines, levels, and measurement before proceeding with formwork.

D. Earth forms are not permitted.

E. Align form joints.

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F. Do not apply form release agent where concrete surfaces receive special finishes or applied coatings which may be affected by agent.

G. Coordinate work of other Sections in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts.

3.03 REINFORCEMENT

A. Place, support, and secure reinforcement against displacement.

B. Locate reinforcing splices as shown on Drawings.

C. Place reinforcing steel in conformance with the information on the drawings and CRSI 63 and CRSI, except as modified herein. Minimum length of splices shall be as shown in table on drawings. Tie splices with 18-gauge annealed wire as specified in the referenced CRSI standard. All tie wires shall be "made tight" for electrical bonding purposes, as required by NEC, Article 680.

3.04 WATERSTOP

A. PVC Waterstop
   1. Split formwork is generally required for slab-to-slab, slab-to-wall and wall-to-wall joints where ribbed style waterstops are used. The centerline of the waterstop should be aligned with the center of the joint. The split form shall firmly hold the waterstop in position to prevent misalignment of waterstop during concrete placement. Secure waterstop with hog rings or integral wire loops prior to concrete placement. Loop tie wires through the hog ring/wire loops and tie off to adjacent reinforcing steel to prevent displacement of the waterstop during concrete placement. Fasteners through the body of the waterstop are not permitted.
   2. Lapping of the waterstop is not permitted. PVC waterstop may be butt spliced in the field with Teflon coated, thermostatically controlled splicing iron. Direct exposure to a flame is not permitted. Factory fabricated fittings are recommended for ells, tees and crosses.
      a. The following defects at splices will not be acceptable:
         1) Use of adhesives, solvents, or free lap joints
         2) Misalignment of center bulb greater than 1/16"
         3) Misalignment that reduces waterstop cross section area more than 15%.
         4) Bond failure at joint, deeper than 1/16" or 15% of material thickness.
         5) Combination misalignment and bond failure with net reduction of waterstop cross-section area greater than 15%.
         6) Misalignment of waterstop splice resulting in misalignment of waterstop in excess of ½" in 10 feet.
         7) Visible porosity in the weld joint, including pinholes
         8) Charred or burnt material
         9) Bubbles or inadequate bonding detectable with a penknife
         10) Visible signs of splice separation when cooled splices are bent at a sharp angle.
         11) Edge welding
   3. Thoroughly consolidate the concrete around the waterstop to prevent voids or honeycombing next to the waterstop. Maintain adequate clearance between reinforcing steel and the waterstop. Typical clearance should be twice the maximum aggregate size. Maintain continuity of the entire waterstop system. Properly store PVC waterstops prior to installation to prevent UV degradation.

B. Compressible Waterstop – Adeka KBA-1510FP
   1. Non-moving Joint Installation:

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a. Consult manufacturer and follow all recommended installation instructions.
b. Allow concrete to cure a minimum of 24 hours.
c. Concrete must be dry and free from form oils, release agents, curing compounds, laitance and other dirt or debris prior installation. Use a wire brush to remove contaminants prior to installation of waterstop.
d. Use butyl tape to attach KBA-1510FP to a dry and clean substrate. The butyl tape comes in a 3/4" X 1/8" X 82-foot roll (1 roll per roll of KBA-1510FP). Press the butyl strip onto the substrate and remove the release paper. Press the KBA-15010FP firmly onto the butyl tape.
e. Check for any gaps between the product and the substrate. If gaps are present, fill in using Adeka P-201 applied to the side of the strip. Use P-201 on corner joints and on side-by-side splice joints.
f. Once installed, keep the product covered, clean, and dry prior to concrete placement. For best results, place the waterstop product immediately before pouring concrete. Check to make sure the waterstop is firmly adhered before placing concrete.
g. During concrete placement, assure that the concrete is well consolidated around the waterstop at all locations with no voids or gaps.

2. Penetration Installation:
   a. Consult manufacturer and follow all recommended installation instructions.
   b. Pipe must be dry and free from form oils, release agents, curing compounds, laitance, and other dirt or debris prior to installation.
   c. Press the butyl strip onto the clean pipe completely around the pipe diameter and remove the release paper. Press the KBA-15010FP firmly onto the butyl tape. Tightly butt strip ends together with 1” overlap or side lap.
   d. Once installed, keep the product covered, clean, and dry prior to concrete placement. For best results, place the waterstop product immediately before pouring concrete. Check to make sure the waterstop is firmly adhered before placing concrete.
   e. During concrete placement assure that the concrete is well consolidated around the waterstop at all locations with no voids or gaps.
3. Alternative Products Installation:
   a. Drawing documents have been completed using the specified Adeka waterstop product as a basis of design. Alternative flexible adhesive waterstops shall not be used without approval from Engineer/Architect. See Section 2 for additional information.
   b. If Synko-Flex has been approved during the submittal process, the following installation requirements shall be met, as well as all manufacturer’s installation instructions.
      1) Allow concrete to cure a minimum of 24 hours before priming with Synko-Flex primer.
      2) Concrete must be dry and free from form oils, release agents, curing compounds, laitance and other dirt or debris prior to priming. Use a wire brush to remove contaminants prior to installation of primer.
      3) Apply Synko-Flex SF311 primer.
      4) Apply Synko-Flex SF302 Preformed Plastic Adhesive Waterstop over primed areas. Place Synko-Flex to primed areas at an approximately 5/8” thickness and approximately 1 ½” width.
      5) Tightly butt strips together with 1” overlap or side lap.

3.05 PLACING CONCRETE

A. Notify Engineer/Architect a minimum of 48 hours prior to commencement of concreting operations.

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B. Failure to notify Engineer/Architect may result in rejection of concrete placed without observation.

C. Place concrete in accordance with ACI 301.

D. Place pumped concrete in accordance with ACI 304.2R. Line coating mix to initiate pumping shall not be used in pour but shall be wasted.

E. Ensure reinforcement and embedded items are not disturbed during concrete placement.

F. Concrete with excessive honeycomb or embedded debris shall be rejected and replaced at no cost to OWNER.

G. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures and mechanical injury.

H. Placing During Hot Weather:
   1. Place concrete during hot weather conditions in accordance with ACI 305.1.

I. Placing During Cold Weather:
   1. Place concrete during cold weather conditions in accordance with ACI 306.1.

J. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

3.06 POOL WALL SHOTCRETE

A. Wet Mix Process
   1. The delivery equipment shall be of an approved design and size that has given satisfactory results in similar previous work.
   2. The equipment must be capable of discharging mixed material into the hose under close control, and it must be able to deliver a continuous smooth stream of uniformly mixed material at the proper velocity to the discharge nozzle, free from slugs of any kind.
   3. The nozzle shall be of a design and size that will ensure a smooth and uninterrupted flow of materials.
   4. Delivery equipment shall be thoroughly cleaned at the end of each shift.

B. Surface Preparation
   1. Verify forms are true to line and dimensions, adequately braced against vibration, and constructed to permit escape of air and rebound during gunning operations.
   2. Do not place shotcrete on any surface which is frozen, spongy, or where there is free standing water.

C. Alignment Control
   1. Provide alignment wires to establish thickness and plane surface.
   2. Install alignment wires at corners and offsets not established by form work.
   3. Verify alignment wires are tight, true to line, and placed to allow further tightening.

D. Application
   1. Ensure correct placement of reinforcement. Ensure sufficient clearance around reinforcement to permit complete encasement.
   2. Allow easy access to shotcrete surfaces for screeding and finishing, permitting uninterrupted application.

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3. Determine operating procedures for placement in close quarters, extended distances, or around unusual obstructions where placement velocities and mix consistency must be adjusted.
4. In shotcreting walls, begin application at bottom. Ensure work does not sag.
5. Hold nozzle as perpendicular to surface as work will permit, to secure maximum compaction with minimum rebound.
6. Follow routine that will fill and completely encase reinforcement, using maximum layer thickness.
7. Build up layers by making several passes of nozzle over work area. Completely encase reinforcement with first layer.
8. After initial set, remove excess material outside of forms and alignment lines.
9. Allow each layer of shotcrete to take initial set before applying succeeding layers.
10. Remove laitance that has taken final set, by sandblasting. Clean with air-water jet.
11. Sound work with hammer for voids. Cut out voids and replace with succeeding layers.
12. Keep rebound, and other loose or porous material out of new construction.
13. Remove rebound that does not fall clear to work. Discard salvaged rebound.
14. Remove trapped rebound at construction and expansion joints.

E. Protection of adjacent surfaces
1. Contractor shall take every possible precaution to protect adjacent concrete surfaces, equipment, etc., from being damaged by overshooting concrete. Overshot concrete and rebound materials deposited shall be removed at the Contractor's expense.

3.07 EXPANSION & CONTROL JOINTS

A. All control and expansion joints require PVC waterstop.

B. Installation of Joint Filler: At locations where joint sealant is to be applied, the pre-molded joint filler shall be installed in the joint accurately as detailed. Precut the pre-molded expansion joint filler to the required depth. Filler material shall be of sufficient width to completely fill the joint and shall be accurately cut to butt tightly against the waterstop and the side forms. Attach filler material to concrete with a bonding agent. Bonding agent shall be approved in writing by the joint sealant and joint filler manufacturer for compatibility.

C. Concrete shall be thoroughly vibrated along the joint form to produce a dense, smooth surface. Surface irregularities along the joint sealant cavity, due to improper concrete consolidation or faulty form removal, shall be repaired with an approved compound compatible with the joint sealant in a manner that is satisfactory to the sealant manufacturer.

D. All expansion and control joints require gun grade sealant. Cavities for joint sealant shall be formed with precut or pre-molded joint filler that can be removed as needed for sealant. Circular backer rod shall be used in joints as detailed to provide accurate shape for sealant.

3.08 CONSTRUCTION JOINTS

A. Construction joints shall be located as required for the contractor’s scheduling, means and methods.

B. All construction joints require waterstop.

C. Contractor shall provide a submittal showing construction joint locations and detailing for review and approval.

3.09 ADHESIVE WATERPROOF BONDCOAT PLACEMENT

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A. Clean and prepare surfaces and apply all products in accordance with manufacturer's recommendations.

B. Pool Renovations: Apply concrete densifier to all pool concrete surfaces receiving a tile finish and where indicated on drawings.

This concrete densifier is Basecrete+ and is used in tandem with Basecrete under tiled surfaces on RENOVATIONS ONLY. Apply adhesive waterproof bondcoat beneath gutter grating on the exposed sides and bottom of all concrete gutter trenches, and where indicated on drawings. Apply material in two coats (one horizontal and one vertical). Each layer shall be 1/16 inch in thickness.

C. Pool Renovations: Provide fiberglass mesh to bridge over cold joints and cracks in accordance with product manufacturer's recommendations.

This fiberglass mesh is for use beneath the Basecrete product and is only required on Renovations as needed for cold joints and cracks.

D. Do not apply materials to frozen substrates or when temperatures are below 40 or above 105 degrees Fahrenheit.

3.10 CURING AND TREATMENT

A. Curing shall begin promptly to prevent drying of concrete. Curing shall continue for seven (7) days after placing.

B. Provide a moist cure for a full seven (7) days in accordance with ACI 308.1. Keep concrete slabs and walls continuously wet for a 7-day period. Intermittent wetting is not acceptable. Material shall completely cover the concrete surface and shall be weighted down to prevent shifting due to wind or other factors.

3.11 REPAIR OF VERTICAL SURFACE DEFECTS

A. Upon stripping of forms, vertical surfaces shall be inspected for defects caused by surface air voids, honeycombing, form tie holes, peeling, and fins.

B. Surface air voids shall be repaired with a unit packaged mixture of sand and cement mixed on job site with water and a unit of acrylic. Mixture shall be brushed uniformly on to surface and into voids. Where surface is to be exposed, surface finish of repair shall match adjacent surface.

C. Honeycombed and other defective concrete shall be removed down to sound concrete and patched to match adjacent surfaces. Cut edges perpendicular to surface at least 1 inch deep – no feathered edges allowed.
   1. Areas not subject to water shall be repaired similar to surface air voids as indicated above. A bonding agent shall be used prior to filling the holes. Patches shall be kept moist for a minimum of 7 days.
   2. Areas subject to water shall be moist for a period of 24 hours prior to patching. Holes shall be filled with non-shrink grout and cured per recommendations by manufacturer. Concrete surface shall be prepared per recommendations by manufacturer.

D. Form tie holes shall be filled with non-shrink grout. Surface of concrete to prepared per recommendations by manufacturer. Grout shall be cured per recommendations by manufacturer.

3.12 FINISHING

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A. Floor slabs shall not vary from level or true plane more than ¼ inch in 10 feet when measured with a straightedge. Floor slabs shall receive a broom finish to accommodate special aggregate mechanical bonding requirements.

B. After removal of forms and repair of defects, surfaces of concrete shall be given finishes specified below.

C. Rough Form Finish: Surface left with texture imparted by forms; form facing material not specified; tie holes and defects shall be patched; all fins shall be chipped or rubbed off. The surface shall be finished in such a way that will leave the surface for the substrate rough, coarse, and porous enough to ensure that subsequent application of the cementitious surface coating can achieve a good mechanical bond to the substrate similar to a broom finish.

D. Tops of walls or buttresses, horizontal offsets, and similar unformed surfaces occurring adjacent to formed surfaces shall be struck smooth after concrete is placed and shall be floated to a texture reasonably consistent with that of formed surface.

E. Final finish on formed surfaces shall continue uniformly across unformed surfaces.

3.13 WATER TIGHTNESS TEST

A. General
1. This test applies to the pool, the surge tank, and the gutter system. A water tightness test shall be completed on each pool, surge tank and gutter system, independently of each other, prior to the application of the pool finish.
2. The cost of the water shall be allocated as outlined in Specifications Section 13 11 14, Part 3, 3.02, F.
3. Contractor shall include and itemize these requirements in the overall construction schedule.
4. The Owner may elect to waive leak test requirements if schedule becomes a critical factor. Only the Owner may waive these requirements. If the Owner elects to waive these requirements the Contractor is still responsible for providing leak-free structures, and at a minimum, all specified applicable warranties shall apply.

B. Water Tightness Test Procedure
1. Preparation
   a. Visually examine the concrete structure and joints for potential leakage prior to fill. Contractor shall repair areas of potential leakage prior to fill.
   b. Allow the concrete structure to cure a minimum of 28 days, or as required to gain sufficient strength to withstand the test load, prior to initiating test.
   c. Securely seal all inlets/outlets and penetrations prior to fill.
   d. The test shall not be scheduled when the weather forecast indicates the water surface could freeze before the test is completed.
2. Fill
   a. Fill the pool with potable water from an approved water source, and then isolate the pool, the surge tank, and the gutter system. The water tightness test and measurement documentation shall begin after the test structure has been filled for a minimum of three (3) days to allow the concrete to absorb water and minimize absorption effects during the testing period.
   b. Fill each structure to the design maximum liquid level or 4 inches below any fixed overflow level.
   c. After the initial fill, remove ground water to a level below the bottom of the structure main drain or floor slab (below lowest concrete plane) utilizing the pool observation

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tube, the pool de-watering system, or the construction dewatering system. This shall be completed prior to the start of the water tightness test and maintained for the duration of the test.

d. For elevated pools with secondary containment structure, the secondary containment structure shall be monitored for the presence of water for the duration of the test. Groundwater elevation is not a factor in these pools.

3. Evaporation/Precipitation Measurement Procedure
   a. Partially fill a floating, restrained, calibrated (known volume and surface area), open container (hereafter "container" or "control container") with water and allow this container to float within the filled structure during the testing period. This will be used to measure total evaporation and precipitation.
   b. Mark and measure the change in container's water level. If the container water level has gone down (evaporation), this change shall be subtracted from each structure's water loss measurement. If the container water level has risen (rain), this change shall be added to each structure's water loss measurement.
4. Measurement
   a. Conduct all measurements with the Architect or Owner's representative present and document all measurements on the table below.
   b. Provide an as-built drawing or sketch the pool, surge tank, and gutter identifying measurement locations and the evaporation control container's location.
   c. The water surface elevation shall be recorded to within 1/16 of an inch, measured from a fixed point on the structure above the water surface.
   d. Average multiple sample locations for structures exposed to wind.
   e. Repeat and record the measurements for a total of three (3) consecutive days.

Measurement Times	Pool Measurements	Gutter System Measurements	Surge Tank Measurements	Control Container Measurements
12 Hrs.				
24 Hrs.				
36 Hrs.				
48 Hrs.				
60 Hrs.				
72 Hrs.				

5. Water Leakage
   a. Calculate water leakage as follows:

Leakage [Gallons] = [7.481 x Structure Surface Area (SF)] x
[Structure Loss Measurement* (FT) – Control Container Measurement (FT)].

- Structure loss measurement is a generic term referring to Pool Measurement, Gutter System Measurement or Surge Tank Measurement independently. Calculate the leakage from the pool, gutter, and surge tank independently.

   b. Add the measurements for two consecutive 12-hour periods to obtain the total daily loss due to leakage.
   c. Record Daily losses due to leakage for Day #1, #2, and #3 in the table below.

Total Daily Loss Due To Leakage	Pool Leakage	Gutter Leakage	Surge Tank Leakage
Day 1			
Day 2			
Day 3			

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6. Submittal
   a. Provide test location as-built/sketch, measurement tables, and Water Leakage calculations to Engineer in the form of a submittal for review and records.
7. Allowable Loss from Leakage
   a. The allowable leakage rate for an unlined, open concrete structure (i.e. backfilled pool, gutter, and surge tank) shall not exceed 0.1 percent of the total water volume in a 24-hour period. (Example: 0.001 x 200,000-gallon pool = 200 gallons per 24-hour period.)
   b. Elevated pools and gutters with a secondary containment vessel shall have no measurable loss; the drop in the water surface shall not exceed 1/8" over the three-day test period when adjusted for evaporation and precipitation.
8. Repair and Retest
   a. If the leakage volume calculated exceeds the "allowable loss" in section 7, Contractor shall locate and identify leakage points, repair the structure and provide documentation on the location of repaired areas.
   b. After proper curing of all repair work, re-test the water tightness of structure following the procedure specified in this section.

END OF SECTION

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SECTION 13 11 20

POOL PIPE AND PIPE FITTINGS

1. GENERAL

1.01 SECTION INCLUDES

A. Pipe, pipe fittings, connections, wall penetrations.

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 REFERENCES/PIPE – FITTING REQUIREMENTS

A. The following latest edition reference specifications, guides, and standards shall become part of this Specification as if herein written. If provisions conflict, the more stringent provisions shall apply.
   1. ANSI/ASTM D2564 - Solvent Cements and ASTM F656 – Primers for Polyvinyl Chloride (PVC) Plastic Pipe and Fittings
   2. ASTM D2855 – Practice for Making Solvent Cemented Joints with PVC Pipe and Fittings
   3. ANSI/ASTM D1785 – Standard Specification for Polyvinyl Chloride (PVC) Plastic Pipe Schedules 40, 80 and 120, NSF Seal for Potable Water
   4. ASTM D2466 – PVC Plastic Pipe Fittings, Schedule 40, Injection Molded, Sizes Through 12”, NSF Listed. As manufactured by Spears Manufacturing Company, “or approved equal”.
   5. ASTM D2467 – Socket Type PVC Plastic Pipe Fittings, Schedule 80, Injection Molded, Sizes through 12”, NSF Listed. As manufactured by Spears Manufacturing Company, “or approved equal”.
   6. ASTM D2487 – Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
   7. ASTM D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
   8. ASTM D-1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (Modified Proctor Maximum Dry Density)
   9. ASTM F679 – PVC Large Diameter Plastic Gravity Sewer Pipe and Fittings, Bell Gasketed Joints, Sizes 18” Through 36”. As manufactured by J-M Manufacturing Co., Inc. “Perma-Loc”, “or approved equal”.
   10. ASTM B88 – Seamless Copper Water Tube
   11. Eslon Engineering Manual for Plastic Piping Systems
   12. ASTM D2563 – Fabricated, Fiberglass Wrapped PVC Pipe Fittings 12”, 14”, and above, Schedule 40 or 80 manufactured from PVC pipe conforming to ASTM D1785 and compliant to the most recent publication of the “Spears General Specification for Standard Fabricated Fittings (FAB-7-702)”. Butt-fusion welded fabricated fittings are not acceptable. All fittings shall be certified for potable water service by NSF. As manufactured by Spears Manufacturing Company or “approved equal”
   13. CLASS 150 - All plastic pipe flanges shall be Class 150 and of the same schedule as the associated pipe with neoprene gaskets where required.

1.04 QUALITY ASSURANCE

A. Qualifications of Pool Contractor

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1. Work of this Section shall be performed by a Contractor who has a proven record of competence and experience in the construction of similar facilities of this size and complexity for not less than 5 years. Contractors shall have an established record of reliability.

B. The following tests shall be performed during construction of the project. Refer to General Conditions and Division 01 for further requirements.
   1. Testing and Flushing of Piping
      a. Contractor shall be responsible for discovering leaks and making necessary repairs.
         1) Pressure piping and suction piping: After the piece is laid, the joints completed and the trench partially backfilled, leaving joints exposed for examination, subject new lines to a hydrostatic pressure of not less than 50 pounds per square inch. Joints shall remain watertight under this pressure for a period of two (2) hours. All air must be expelled from pipes prior to testing.
         2) Gravity lines: A water test shall be applied to all gravity drain piping systems, either in their entirety or in sections. All openings shall be tightly plugged and each system filled with water and tested with at least a 10 foot head of water (4.3 psi). The water shall be kept in the system, or in the portion under test, for at least fifteen (15) minutes before the inspection starts. System shall be watertight at all joints.
         3) Leaks shall be repaired and tested repeatedly until leakage or infiltration is approved.
      b. Provide test results to the Architect/Engineer before covering with concrete.

1.05 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Product Data: For each type of manufactured material and product indicated.

C. Provide Shop Drawings showing all pipe penetration locations through concrete pump pit walls and concrete surge tank walls. Include dimensioned location of pipe penetrations in plan and elevation view, pipe sizes, sleeve sizes, link-seal sizes, and sleeve and link-seal material/product information.

D. Provide a submittal including system drain valves and location of drain valves for Owner's use during pool shutdown and/or pool winterizing.

1.06 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

2. PRODUCTS

2.01 PIPE BEDDING & BACKFILL MATERIALS

A. Pipe Trench Foundation/Subbase: In-situ soils meeting the Project Geotechnical Report requirements for preparation. Trench base materials shall be free of large rocks, organic matter, and other deleterious substances.

B. Pipe Trench Embedment Zone (bedding, haunching, initial backfill):
   1. Existing subsoil materials shall not be used for pipe bedding.
   2. Condition 1: ASTM D 2487 Class IA Aggregate.
      a. Manufactured aggregates containing little or no fines including angular, crushed stone or rock, crushed slag, cinders, or shell.

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b. Open graded, clean: < = 10% Passing No.4 sieve, < 5% Passing No. 200 sieve
c. Maximum pipe diameters >=6": Maximum aggregate size <= 1.5".
d. Maximum pipe diameters <6": Maximum aggregate size 3/4".
e. Where conditions may cause migration of fines into the trench from adjacent soil (and loss of pipe support) apply Condition 2 and use Class 1B Aggregate. Alternatively, include the addition of a filter fabric between the trench and Class 1A aggregate to prevent migration of fines into the embedment zone.

3. Condition 2: ASTM D 2487 Class IB Aggregate.
   a. Use where conditions may cause migration of fines from adjacent soil and loss of pipe support. Process materials as required to obtain gradation which will minimize migration of adjacent materials.
   b. Manufactured processed aggregates; angular, crushed stone (or other Class IA materials) and stone/sand mixtures with gradations selected to minimize migration of adjacent soils.
   c. Dense graded, clean: < = 50% Passing No.4 sieve, < 5% Passing No. 200 sieve
   d. Maximum pipe diameters >=6": Maximum aggregate size <= 1.5".
   e. Maximum pipe diameters <6": Maximum aggregate size 3/4".

C. Final Pipe Trench Backfill: Use on-site existing soils meeting the Project Geotechnical Report requirements for backfill materials. Final trench backfill may not include organic material, clay, topsoil, or other deleterious substances. The source and suitability of all proposed off-site fill shall be confirmed by the Project Geotechnical Engineer prior to bringing material on site.

2.02 PIPE & FITTINGS

A. Refer to Section 1.03 for pipe and fitting requirements.

B. Refer to pipe schedule(s) on drawings for size and type.

2.03 THREAD TAPE

A. Teflon 2

2.04 SOLVENT CEMENTS AND PRIMERS

A. PVC pipe shall be installed using solvent weld materials including primers, cleaners, and cements. All solvent weld materials, methods, and applicator tools shall conform to all ASTM Standards for solvent cements used for plastic pipe installations.

B. Manufacturer: IPS Corporation, Weld-On Product Line

2.05 WALL SLEEVES

A. Pipes penetrating all watertight walls shall use "Century Line" thermoplastic wall sleeves in combination with "Link Seals" having stainless steel service designation. As manufactured by Thunderline Corporation, or the Metraflex Company, "or approved equal".

2.06 NON-SHRINK GROUT

A. Upcon High Flow, The Upco Company, Cleveland, Ohio; Masterflow 713, The Master Builder Company, Cleveland, Ohio; Crystex L & M Construction Chemicals, Inc., Omaha, Nebraska.

2.07 PIPE SIGNAGE

A. Brady, B-946, custom legend, self-sticking markers, and arrows or equal.

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3. EXECUTION

3.01 PIPE INSTALLATION

A. Pool Pipe Trench Excavation
   1. General:
      a. Excavation for all pool systems and related piping shall comply with the following:
         i. Division 31 Earthwork Specifications for buried utilities.
         ii. Project Geotechnical Report requirements for pipe trench preparation, backfilling, and engineered fill.
         iii. Current OSHA criteria and regulations.
      b. See pool pipe plans for additional piping details, notes/requirements, pipe routing, material types and sizes.
   2. Pipe Trench Requirements: Excavate pool piping trenches to proper depths for pool operations, required pipe slopes, and a minimum final cover plus backfill depth of 36-inches. Trench widths shall be minimized as indicated in the Pool Drawings “Typical Pool Pipe Trench Detail” and as required for proper compaction. Maintain a clear trench width of 6 to 12-inches beyond the nearest pipe wall. Maintain a minimum of 6-inches between each adjacent pipe. Protect the soils adjacent to the trench to maintain an undisturbed condition for optimal pipe support.
   3. Pipe Trench Foundation/Subbase: The trench bottom shall be smooth and free from large dirt clods, frozen material, and stones greater than 1.5-inches in diameter. A subbase is necessary only when native subgrade soils are unstable. For such conditions, over excavate the subgrade soils and place a layer of supportive engineered fill material as the trench subbase. Compact subbase materials to provide a firm foundation for the subsequent pipe embedment materials. Match the compaction effort specified in the Final Backfill layer of the pipe trench.

B. Pool Pipe Bedding & Backfill
   1. Embedment Zone: Controlled placement of pipe trench materials is required in the embedment zone for pipe performance and to minimize deflection. Schedule inspections prior to the backfilling as needed, however backfilling the embedment zone should follow pipe assembly as closely as possible to protect the pipe from falling debris, minimize the possibility of flooding an open trench and avoiding shifting pipe. See Part 2 PRODUCTS for material specifications and assure selected embedment zone materials are free from dirt clods, clay, frozen materials, and rocks greater than 1.5-inches in diameter. Place materials in six-inch lifts in the following three subzones:
      a. Bedding: Place six inches of supportive, compacted bedding materials beneath the pool piping to provide uniform longitudinal support under the pipe, prevent low spots, and to set piping to the proper grade. Do not use blocking of any type to bring the pipe to grade. If the native trench soil is comprised of fine grain soils and migration of those soils into the bedding material is anticipated, a well-graded bedding material without voids or a fabric barrier should be used to avoid compromising the trench backfill materials. Consult the Geotechnical Report for specific recommendations.
      b. Haunching: Haunching is required from the bottom of the pipe to the centerline of the pipe (“springline”). To provide resistance to pipe deflection compaction of the haunching zone is required prior to placement and compaction of the initial and final backfill. Place the haunching materials by hand to give effective support of the pipe. Compact materials using shovel slicing and/or firmly tamping the materials under the pipe haunches, around the pipe, up to the spring-line of the pipe and out to the trench walls. If automatic tampers are used, avoid contacting and damaging the pipe. Control haunching to avoid vertical and horizontal displacement of the pipe from proper alignment.
      c. Initial Backfill: The initial backfill extends from the pipe springline to a point above the top of the pipe. Place the initial backfill to a 12-inch minimum compacted depth of cover above the pipe.

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2. Final Backfill: This zone extends from the top of the initial backfill to the top of the trench and up to final grade. Adjust final grades as required to allow for landscaping, flatwork, or roadwork materials if applicable. Place materials for this zone using materials and compaction efforts in accordance with the Geotechnical Report and/or Division 31 Specification requirements. If those requirements are not provided, place materials in accordance with the following:
    a. +- 2% of the optimum moisture content
    b. 12-inch maximum lifts, as measured in loose thickness.
    c. Uniformly compact each lift to a minimum of 95 percent of the material's ASTM D-1557 Modified Proctor Maximum Dry Density, prior to placement of subsequent lifts.
    d. Place each subsequent lift and compact in a similar manner until achieving proposed finished grades.
    e. Final cover plus backfill materials shall measure a minimum of 36-inches above the top of the pipe/s unless noted otherwise on the plans or details.

C. Piping Placement and Use
1. Base Bid shall be on pipe materials shown. See the PL Drawings and associated schedules for required pipe material types.
2. All material transitions shall be above-grade, flange to flange connections and include ribbed EPDM type rubber gaskets. Below-grade materials transitions will not be allowed.
3. Piping must be laid on a grade so it will drain completely by gravity. In all instances where gravity drainage is not provided, the contractor shall install drain valves so that all lines can be drained completely. Shop drawings will be required on any such installation.
4. No installation shall be made that will provide a cross connection or inter-connection between distribution supply for drinking purposes and the swimming pool that will permit a backflow of water into the potable water supply. Pipe openings shall be closed with caps or plugs during installation. Equipment and pool fittings shall be tightly covered and protected against dirt, water and chemical or mechanical injury. At the completion of work the fittings, materials and equipment shall be thoroughly clean and adjusted for proper operation.
5. All gutter lines shall drain by gravity to the surge tank.
6. All above grade outdoor piping shall be painted, in accordance with the manufacturer's recommendations, to protect against ultraviolet degradation.

D. PVC Pipe
1. Cut all pipe with mechanical cutter without damage to pipe.
2. Placing and laying: Inspect pipe for defects before installation. Clean the interior of pipe thoroughly of foreign matter and keep clean during laying operation. Pipe shall not be laid in water or when trench conditions are unstable. Water shall be kept out of the trench until the pipe is installed. When Work is not in progress, open ends of pipe and fittings shall be securely closed so that no trench water, earth or other substance will enter the pipes or fittings.
3. Threaded joints: After cutting and before threading, the pipe shall be reamed and shall have burrs removed. Screw joints shall be made with graphite or inert filler and oil or with an approved graphite compound applied to male threads only. Threads shall be full-cut and not more than 3 threads on the pipe remained exposed. Use Teflon tape on the male threads of all threaded pipe joints. Caulking of threaded joints to stop or prevent leaks will not be permitted. Unions shall be provided where required for disconnection of exposed piping. Unions will be permitted only where access is provided.
4. All PVC pipe connections shall be flanged or solvent welded.
5. Solvent welded joints shall be made in accordance with the manufacturer's printed instructions and the following minimum standards:
    a. All fittings shall fit easily on the pipe before applying cement. The outer surface area of pipe and inner wall of fitting shall be dry and clean. Cleaner is to be applied to the outer surface of the pipe and to the inner surface of the fitting. Cement is to be applied to the outer surface of the pipe, or on the male section of fittings only. When

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the outside surface area of the pipe is satisfactorily covered with cement allow ten (10) seconds open time to lapse before inserting pipe end into fittings. After full insertion of pipe into fitting, turn fitting about the pipe end approximately 1/8 to 1/4 of a turn. Wipe off excess cement at the joint in a neat cove bead. Follow manufacturer's instructions on solvents. Remove all debris, including, containers, brushes, applicators and other items from premises, dispose of properly. Burying of debris on site is not permitted.

b. In addition to the requirements outlined above, the solvent weld process for pipe sizes of 6" diameter and larger includes additional requirements outlined below. As pipe diameter increases, so does the difficulty in installing it. Follow all of the solvent weld manufacturer's recommendations for larger diameter pipe.
   1) The installer shall use proper size applicators to ensure enough cement is applied to fill the larger gap that exists between the pipe and fittings.
   2) Use the applicable cement for the size of pipe and fittings being installed.
   3) End of pipe must be cut square and chamfered (beveled).
   4) Provide adequate crew size to properly handle and fit pipe installations.
   5) It is important in large diameter joining that the primer and cement be applied simultaneously to the pipe and fittings. Apply a second, full layer of cement to the pipe. Pipe must be bottomed into the fitting.
   6) Large diameter pipe and fittings require longer set and cure times. Prefabricate as many joints as possible. If pipe is to be buried, fabricate as many joints as possible above ground, after joints have cured, carefully lower into trench.

c. All joints shall remain completely undisturbed for a minimum of 10 minutes from time of jointing the pipe and fitting. If necessary, to apply pressure to a newly made joint, limit to 10% of rated pipe pressure, during the first 24 hours after the joint has been made.

d. Make provisions for expansion and contraction by way of swing joints or snaking.

e. Protect plastic pipe from exposure to aromatic hydrocarbons, halogenated hydrocarbons, and most of esters and keytones that attack the material. Protect all pipe from mechanical damage and long exposure to sunlight during storage.

f. PVC welding is not allowed without prior approval of the Architect/Engineer.

E. Field Coordination
   1. It is the Contractor's responsibility to provide piping by means that account for all necessary coordination, including, but not limited to: water stops, oversize sleeves, pipe supports, valves and other attachments, over-excavations required for fusion machinery or other equipment, etc.
   2. Provide pipe extensions and temporary caps necessary for pressure testing requirements.
   3. Contractor is required to provide coordination and adequate protection as needed to all external services (i.e., ducts, pipes, cables) that run throughout the project site. Plumbing shall be located and placed to prevent damage during and after construction from traffic loads above.

F. Overhead piping in mechanical room/pool room shall be run such that a minimum head clearance of 7'-0" is observed to all piping, pipe fittings and pipe hangers/supports. Piping runs shall not create path obstruction or a tripping hazard.

G. Pipe Identification
   1. Provide identification on all piping located in mechanical equipment, chlorine, acid rooms, heater courts, etc.
   2. All piping in Mechanical Room to be labeled with description of line and arrows indicating direction of flow.
   3. Mark at least once on each line and at 5 ft. intervals minimum. Consult Health Department Code for minimum marking requirements.

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4. Color code per Health Department requirements. If code does not identify color coding requirements consult Architect/Engineer.

3.02 SLEEVES AND WALL PENETRATIONS

A. Patch exterior side of wall penetrations with non-shrink grout. Other methods of water tightness shall be pre-approved by the Architect/Engineer.

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SECTION 13 11 23

POOL PIPE SUPPORTS

1. GENERAL

1.01 SECTION INCLUDES

A. Pipe Hangers & Supports.

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Product data including manufacturer's specifications, installation instructions.

C. Shop Drawings showing type and locations.

1.04 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

1.05 DELIVERY, STORAGE AND HANDLING

A. Refer to General Requirements and Division 01.

2. PRODUCTS

2.01 MATERIALS

A. Hangers and Supports
   1. General
      a. All hangers, pipe supports, threaded rod, hardware, etc. shall be hot-dipped galvanized steel, ASTM A123, or type 304 stainless steel or better grade.
      b. All piping connections and support hardware inside surge tanks and gutters shall be stainless steel.
   2. Strut
      a. Minimum height 1 5/8", minimum width 1 5/8", minimum thickness 12-gauge material.
      b. Finish shall be hot-dipped galvanized steel, ASTM A123; or type 304 stainless steel or better grade, ASTM A240.
   3. Strut Clamps
      a. Pipe sizes ½" thru 12", two-piece clamps with clamping bolt and nut. Pipe sizes 14" and larger, provide "U" bolts, nuts and washers.
      b. Finish shall be hot-dipped galvanized steel, ASTM A123; or type 304 stainless steel or better grade, ASTM A240.
   4. Strut Accessories
      a. Flat plate fittings, corner braces, post bases, etc. Finish shall be hot-dipped galvanized steel, ASTM A123; or type 304 stainless steel or better grade, ASTM A240.

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5. Wedge Anchors
    a. One-piece assembly, 3/8” minimum body diameter.
    b. Grade 2, hot-dipped galvanized steel anchors and clips, ASTM A123; or type 304 stainless steel or better grade, ASTM A240.
6. Beam Clamps
    a. Steel “C” clamp type with locknut.
    b. Finish shall be hot-dipped galvanized, ASTM A123; or type 304 stainless steel or better grade, ASTM A240.
7. Support Components
    a. All threaded rod, threaded rod couplings, nuts, washers, etc. Finish shall be hot-dipped galvanized, ASTM A123; or type 304 stainless steel or better grade, ASTM A240.

3. EXECUTION

3.01 GENERAL

A. All mechanical room piping must be properly supported using the schedule indicated on the drawings as a guideline for maximum allowable spacing between supports.

B. It shall be the contractor’s responsibility to properly support piping at all valves, pumps, equipment, overhead areas, and changes in direction.

C. All piping must be supported laterally as well as vertically hung.

D. Ring, clevis, roller, and J hook type hangers are not acceptable.

E. Comply with manufacturer’s written instructions.

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SECTION 13 11 24

POOL VALVES

1. GENERAL

1.01 SECTION INCLUDES

A. Butterfly Valves

B. Ball Valves

C. Check Valves

D. Expansion Joint/Flexible Connector

E. Modulating Float Valves

F. Modulating Electrical Main Drain Valves

G. Submerged Service Operators

H. Valve Operator Extension

I. Drainage Valves

J. Reducers

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 REFERENCES

A. The following latest edition reference specifications, guides and standards shall become part of this Specification as if herein written. If provisions conflict, the more stringent provisions shall apply.
   1. ANSI – American National Standards Institute
   2. ASTM – American Society of Testing Materials

1.04 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Submit Shop Drawings, clearly indicating make, model, location, type, size, pressure rating, and type of service.

C. Valve charts
   1. Submit two copies of valve charts for each piping system, consisting of isometric Drawings, or piping layouts showing and identifying each valve and describing its function to the Architect/Engineer for approval.

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2. Upon completion of the Work, one copy of each valve chart sealed to rigid backboard with clear lacquer, placed under glass and framed, shall be hung in a conspicuous location in the equipment room.

1.05 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

1.06 DELIVERY, STORAGE AND HANDLING

A. Refer to General Requirements and Division 01.

1.07 WARRANTIES

A. Standard Manufacturer's Warranty

2. PRODUCTS

2.01 GENERAL

A. Cast Iron valves 3" and larger shall have an epoxy coated body on all interior and exterior surfaces, ductile iron-nylon II coated disc, one piece 416 stainless steel shaft with Buna-N or EPDM seat minimum, 150 PSI rating, or cast aluminum ASTM S12A housing and fully coated with Rilsan on all interior and exterior surfaces. Internal components include EPDM resilient lining, Rilsan coated ductile iron disc and T304 stainless steel shaft. 150 psi rating.

B. Cast Aluminum valves 3" and larger shall have an ASTM S12A body and coated with Rilsan on all interior and exterior surfaces. Internal components include Buna-N or EPDM resilient lining and seat, Rilsan coated ductile iron disc and T304 stainless steel shaft. 150 psi rating.

C. Thermoplastic valves 3" and larger shall be constructed from PVC Type 1 Cell Classification 12454 or CPVC type 4 cell classification 23447. Thermoplastic valves shall include PVC disc with solid type 316L stainless steel shaft with Buna-N or EPDM seat pressure rated to 150 psi @ 73 degrees Fahrenheit.

2.02 BUTTERFLY VALVES

A. Butterfly valves 3" - 12" shall be wafer or lug bodies and shall be suitable for use between ANSI 125 and 150 lb. Flanges.

B. Bodies of the flangeless design shall be provided with at least two bolt guides to center the valve in the pipeline.

C. All valves shall be as manufactured by Bray Valve (713) 894-5454, Dominion or equal.

D. All bolts and, nuts and washers shall be corrosion resistant hot-dipped galvanized, ASTM A123 or type 304 stainless steel with plated washers to be used when secured to PVC flanges.

2.03 UV LAMP STRAINER VALVE

A. EZ Strainer 4" to 12" butterfly type valve with stainless steel strainer disc and shaft, case aluminum Rilsan (nylon) coated valve housing, with manual locking valve handle as manufactured by Neptune Benson. Install on downstream side of UV lamp per UV installation details.

2.04 BALL VALVES

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A. PVC True Union Ball Valves, Ipex, Asahi, Spears or equal.

2.05 CHECK VALVES

A. ½" thru 2 ½" shall be PVC body, true union, ball type, seal material EPDM as manufactured by Ipex, Asahi Spears or equal as indicated on Contract Drawings.

B. 3" thru 20" diameter check valves:
   1. Type: Split disc wafer style
   2. Valve Body: Ductile or cast iron with an epoxy painted exterior
   3. Lining: Fully lined with a Buna N elastomer
   4. Shaft: 316 stainless steel shaft and shaft plug
   5. Plates: 316 stainless steel (3" – 12") or Aluminum Bronze (14"+)
   6. Spring & Plate Travel Stop: 316 stainless steel
   7. Manufacturer: Center Line Series 800 as manufactured by CRANE ChemPharma & Energy, or Model CVXXK Series by Metraflex, or approved equal.

2.06 EXPANSION JOINT/FLEXIBLE CONNECTOR (where required)

A. Shall be the Metrasphere, Style R with EPDM body and threaded bolt holes, Model #MSREE Series manufactured by Metraflex, as indicated on drawings. Install with a control unit assembly (tie rods) from flange to flange per manufacturer's instructions to minimize expansion joint damage caused by excessive motion.

2.07 MODULATING FLOAT VALVES

A. Float operated modulating valve shall be designed for submerged service.

B. The housing body shall be fabricated using Sch. 80 PVC pipe with Sch. 80 PVC van stone flanges. The internal wafer shall be 12 gauge T304L material and positioned with 1/8" (+1/16") clearance around the perimeter. The body shall also incorporate an interior stop plate constructed of PVC to define that allowable range of arm motion. Close fitting Delrin bushings shall be included on the shaft penetration of the body to provide a seal against water loss and air entrance.

C. The valve shaft shall be T304L material 1" in diameter. Float arms shall securely fasten to shaft using T316SS nuts with washers to provide adjustability. Arms shall be ½" diameter all thread rod T316SS with length as required. Valve sizes 14" – 20" shall have ¾" square tubing for arms.

D. Ball floats shall be constructed of T304L stainless steel and be 7" in diameter with internal weighting. Floats shall also be adjustable using T316SS nuts with washers as previously described. Provide one (1)/two (2) float arms as shown on the drawings. Valve sizes 14" – 20" shall have 12" diameter cylindrical floats.

E. The float arms shall be hinged to allow for vertical operation. A 12 gauge T304L bracket shall be provided as a guide to maintain the vertical float positions.

2.08 MODULATING ELECTRONIC MAIN DRAIN VALVES

A. The modulating electronic main drain valves shall be assembled and installed as specified in the Contract Drawings. The purpose of the valve is to use the surge tank and/or balance tank water level as a means of electronically adjusting and controlling the flow from the pool main drain plumbing.

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B. Provide and install equipment as detailed in the Contract Drawings and as follows:
   1. The surge tank sensor and transmitter (Basis of Design): Shall be a BECSys, Model SLS continuous level sensor, or equal with the following characteristics:
      a. Piezoresistive pressure measurement of the water column.
      b. Automatically adjusts for changes in atmospheric pressure.
      c. Factory calibrated.
      d. Field configurable sensor length.
      e. Solid-state; no moving parts that can wear out over time.
      f. Installation options for wall mount and stand pipe glass configurations.
   2. Digital Processor (Basis of Design): Is internal with the BECSys 7 Chemical Controller or approved equal (see pool mechanical and main drain detail on PL drawings). Program settings as shown on detail per the manufacturer's instructions. The controller shall continuously monitor, display and data log surge tank level with 10 mm (0.4") resolution or better. The controller shall also use the surge tank level to control a water makeup valve to maintain water level (Autofill) and/or control a main drain modulating valve.
   3. Valve: One (1) butterfly valve. Valve shall be one pipe size smaller than the main drain pipe.
      a. See "Butterfly Valves" within this specification section for additional valve material and manufacturer requirements.
   4. Valve Positioner:
      a. DHC-100 digital positioner, electronic actuator with manual over-ride wheel operator, and battery back-up.
      b. Positioner: Pushbutton calibration to plus/minus 0.1 degree within a 90-degree quadrant. See detail for range of positions. Fail position (loss of command/signal) shall be 100% closed.
      c. Electronic Actuator: Provide Series 92 Quarter master Protek Failsafe electric actuator with rechargeable battery pack and low battery indicator. Voltage: Available in 115/230VAC and 12/24VDC, 0.2 to 4.0 amp draw.
      d. Manufacturer: Asahi America, Inc., www.asahi-america.com; or equal.

2.09 SUBMERGED SERVICE OPERATORS

A. Use only approved service operators for the valve requiring underwater operation in the surge tank or in manhole used for pool draining.

2.10 VALVE OPERATOR EXTENSION

A. Extensions shall be stainless steel and by same manufacturer as the valve manufacturer.

2.11 DRAINAGE VALVES

A. Provide min. 3/4" True Union Ball valve on all piping at such a location to allow complete drainage of system.

2.12 REDUCERS

A. Use Eccentric reducers on pump suction lines only and concentric reducers on pump discharge lines only.

B. Stainless steel body and flanges, T304 materials, ANSI 125# rated flanges.

C. Use Neptune Benson, 15-CNS/15ECS series "or equal".

D. Provide valves of same manufacturer throughout where possible and practical.

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E. Provide valves with manufacturer's name and pressure rating clearly marked on outside of body.

2.13 VALVE LABELS

A. Provide and install 2” round, 1/16” thick, multi-layered valve tags with contrasting lettering with non-corrosive beaded tie on all valves. All labels shall be me labeled in accordance with the valve chart per Section 13 11 14.

3. EXECUTION

3.01 VALVE CONNECTIONS

A. Provide valves suitable for connection to adjoining piping.

B. Valve size shall be the same as the pipe size.

3.02 VALVE USE

A. Pipe sizes 3" - 14" – Butterfly

B. Miscellaneous valves 1/2" – 2-1/2" - PVC True Union Ball Valves

C. All chemical lines and equipment - PVC True Union Ball Valves

3.03 VALVE OPERATORS

A. All butterfly valves shall have gear operators and chain operators as required unless drawings indicate otherwise. Chain operators shall be required on all gear operators located 7’-0” or higher above finished floor.

B. Provide extension lengths as necessary to operate submerged or below surface valves and the appropriate valve box access cover.

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SECTION 13 11 25

POOL CENTRIFUGAL PUMPS

1. GENERAL

1.01 SECTION INCLUDES

A. Pumps
   1. Flooded Suction

B. Pump Accessories
   1. Pump Strainers
   2. Gauges
   3. Flow meters

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 REFERENCES

A. The following latest edition reference specifications, guides, and standards shall become part of this Specification as if herein written. If provisions conflict, the more stringent provisions shall apply.
   1. Hydraulic Institute Standards
   2. Institute of Electrical and Electronics Engineers Standards (IEEE)
   3. National Electrical Manufacturers Association Standards (NEMA)
   4. Occupational Safety and Health Administration Rules and Regulations (OSHA)
   5. National Sanitary Foundation (NSF)
   6. American Society for Testing and Materials Standards (ASTM)
   7. American Iron and Steel Institute (AISI)
   8. American National Standards Institute (ANSI)
   9. ASTM A48 – Standard Specification for Gray Iron Castings
   10. ASTM B584 – Standard Specification for Copper Alloy Sand Castings for General Applications
   11. AISI 1045
   12. ASTM B62 – Standard Specification for Composition Bronze or Ounce Metal Castings

1.04 DESCRIPTION OF WORK

A. The pumping units shall be installed in accordance with the instructions of the manufacturer and as shown on the drawings by the Architect/Engineer.

B. Pump capacity, horsepower, TDH (Total Dynamic Head), speed, suction and discharge diameters, type, and other requirements shall be as shown on the drawings and shall comply with the requirements as specified herein.

C. The General Conditions shall apply to this Section as fully as if repeated herein.

1.05 QUALITY ASSURANCE

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A. To assure a properly integrated and compatible system, the Equipment Manufacturer shall assume full responsibility for the warranty and proper operation of the pumps and/or accessory equipment.

B. Acceptable Products and Manufacturer: As listed on the contract documents or included herein or, an Engineer approved equal product and manufacturer.

C. All pumps and strainers shall be NSF50 certified as provided, including required coatings, and shall be labeled as such on the serial number identification tag.

1.06 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Submit complete motor and pump data together with shop drawings for the driven machine. All material is to be collated in a card stock binder, with pockets for large drawings, and with index. This data shall be prepared by the motor and/or pump manufacturer and shall include:
   1. Pump manufacturer and model number, name of motor manufacturer, type of pump and motor with dimensioned drawings.
   2. Characteristic curves at full load motor speed showing flow, TDH, efficiency, horsepower, and NPSH required. For all VFD applications include a family of performance curves, separate of the full load motor speed curve, for speeds of 105%, 100%, 89%, 83%, 66%, and 50% of the scheduled RPM.
   3. Nominal motor horsepower, speed at full load, frame size, enclosure construction, winding insulation class and treatment, temperature rise at nominal horsepower, service factor, voltage rating (indicate if dual voltage), number of phases, frequency rating, full-load amperes at nominal horsepower for application voltage, starting code letter, or locked rotor KVA or amperes.
   4. Complete pump description plus material list including casings, impellers, seals, shaft, bearing frame, motor mounts, guards, base plate, exterior coating type and mill thickness.
   5. Installation Instruction and Operation and Maintenance Manuals shall include recommended protection and maintenance required for storage prior to putting pumps in service and may be submitted any time before shipment of the pumps.

1.07 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Refer to General Requirements and Division 01.

1.09 WARRANTIES

A. Manufacturer's standard pump warranty. Warranty on mechanical seals covering 100% of the cost on all parts and labor extending over the same time period as the standard pump warranty.

B. Flooded Suction Pumps
   1. Pump failure of any pump component directly attributable to materials and/or workmanship within one (1) year after substantial completion shall be repaired or replaced by the pump manufacturer at no cost to the Owner.
   2. Motor failure of any motor component directly attributable to materials and/or workmanship within three (3) years after substantial completion shall be repaired or replaced by the pump manufacturer at no cost to the Owner.

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2. PRODUCTS

2.01 END SUCTION, CENTRIFUGAL PUMPS

A. General
1. Pump performance shall be optimized with provision of variable speed drives where designated in the drawings.
2. Operational Pump Characteristics
   a. Engineer has the right to reject any pump with a pump curve having a design point operating efficiency more than 5% below the operating efficiency of the scheduled pump provided on the drawings.
3. Furnish and install horizontal close-coupled end suction centrifugal pumps as specified on the Contract Drawings or as pre-approved by the Architect/Engineer.

B. Materials of Construction:
1. Flooded Suction Pumps
   a. Pump internal materials shall be as follows:
      1) Casing – Cast Iron (ASTM A48)
      2) Impeller – 316 Stainless Steel
      3) Shaft – 316 Stainless Steel
      4) Shaft Sleeve – 316 Stainless Steel
   b. Coating: All internal cast iron wetted parts shall be sandblasted and coated per the coating manufacturer's recommendations with Scotchkote 134 or equal product.
   c. Casing
      1) The casing will be of the end suction design with tangential discharge outlet. For suction piping diameters of 2" or greater, the suction and discharge shall be bolt through flanged connections. Flange connections shall be ANSI 125# rated with NPT gauge tapings.
      2) The casing shall have tapped and plugged holes for priming and draining. The casing bore shall be large enough to allow "back pullout" of the impeller without disturbing the casing or suction and discharge piping. The casing shall be supported by casing feet to avoid pipe strain.
   d. Impeller: The impeller shall be of the enclosed type, vacuum cast in one piece. It shall be finished all over, the exterior being turned and the interior being finished smooth and cleaned of all burrs, trimmings and irregularities. The impeller shall be dynamically balanced. The impeller will be keyed to the shaft, and fastened with 316 stainless steel washers, gasket and cap screw.
   e. Mechanical Seal: Shaft sealing shall be accomplished by means of a John Crane Type 21 or equal mechanical seal with solid silicone carbide face/primary ring; solid silicone carbide seat/mating ring; 316 stainless drive band, retainer and spring; and Buna-N elastomers.
   f. Shaft: The impeller shall be direct coupled to the 316SS motor shaft. The motor shaft shall be machined to provide a key way and drilled and tapped to accept the impeller fastener. Stub shafts are not acceptable.
   g. Shaft Sleeve: The pump shaft shall be fitted with a 316SS shaft sleeve to minimize shaft wear. The sleeve shall be sealed to the impeller hub by an O-ring and shall be positively driven by a pin to the key way. The use of adhesive compounds to fasten the sleeve to the shaft shall not be accepted.
   h. Pump / motor must mount on the same plane and preserve back-pull-out design. 304SS MOTORIZER shall be supplied when pump mounting feet and motor feet do not align.
   i. Pump nameplate shall be engraved via computer on 316SS data plate.
   j. Motor
      1) The motor shall be a NEMA-JM configuration motor meeting current NEMA Premium Efficiency Standards and shall be totally enclosed fan cooled (TEFC).

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NEMA –JP configurations shall only be used on large pumps (Aurora 6x8x13.5 & 8x10x13.5) only.

2) The motor shall have a service factor of a least 1.15. The service factor is reserved for variations in voltage and frequency.
3) Motor must be rated for use with a Variable Frequency Drive and meet the NEMA MG1 Standard, Part 30.
4) Motors shall have 316SS shaft
5) Motors must achieve 15:1 constant torque turndown.
6) Motors shall come equipped with internal shaft grounding brush.
7) Motors Frames 326 and below shall have removable feet to achieve F1, F2, & F0 field convertible conduit box position.
8) Motor Conduit box shall have NPT threaded entry
9) The motor shall have a sufficient horsepower rating to operate the pump at any point on the pump's head capacity curve at full load speed (60 Hz) regardless of selected operating speed without overloading the nameplate horsepower rating of the motor, regardless of service factor. Vendor shall confirm that motor current does not exceed allowable full load amperage at reduced frequency. Vendor shall verify scheduled horsepower meets above requirements. In no case shall the horsepower be less than indicated on the Drawings without specific approval from the Engineer.
10) Electrical requirements including phase, frequency, and voltage are indicated on the Drawings.

2.02 PUMP ACCESSORIES

A. Pump Strainers
   1. All Horizontal Pumps
      a. Unless the pump has an integral hair and lint strainer, supply and install strainers equal to those indicated on the Contract Documents.
      b. Provide each strainer with two strainer baskets.

B. Gauges
   1. Provide compound gauges where called for on Drawings and as required by Code.
   2. Compound gauges shall be Liquid Filled, 30 Hg to 60 PSI with gauge cock and snubber as manufactured by Weksler, Marsh, Winters or equal.

C. Flowmeters
   1. Provide flow meters where called for on the Drawings and as required by Code on main lines and on branch lines of flow ranges indicated.
   2. Flowmeters shall be as specified on the contract documents or approved equal.
   3. Transmitter shall have an operating voltage of 12-24VDC and meet appropriate CE, CSA & UL standards. Reading accuracy must be within +/- 0.5% of reading at 25°C. Device shall meet NEMA 4X & IP65.

D. Pump Labels
   1. Provide corrosion-resistant, permanent pump labels with contrasting lettering.
   2. Label shall include pump ID from contract drawings and a description. (e.g. "P1A Lap Pool Filtration Pump")

3. EXECUTION

3.01 PUMP INSTALLATION

A. The pumping units shall be installed in accordance with the instructions of the manufacturer and as shown on the drawings by the Pool Engineer.

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B. Ensure that the pumps and motors are properly supported and aligned with no pipe strain transmitted to the pump casing.

C. Installation shall include furnishing the required oil and grease for initial operation. The grades of oil and grease shall be in accordance with the manufacturer's recommendations.

D. Permanently affix pump label to the pump.

3.02 ACCESSORY INSTALLATION

A. Install accessories as shown on the contract documents and in accordance with manufacturer’s instructions.

B. Strainers shall be supported on a concrete housekeeping pad and provided with sufficient space for maintenance.

C. Gauges shall be positioned to be read adjacent to the pump or from above, where pumps are in a pump pit.

D. Field mount the flowmeter and flow meter transmitter as located and shown on the pool plans. Mount transmitter at 4-5 feet above the floor utilizing the 3-8050 universal mounting kit.

E. Permanently affix pump label to the pump in an easily visible location.

3.03 FACTORY TRAINED REPRESENTATIVE

A. Provide a factory-trained representative for the purpose of supervising installation, start-up, final field acceptance testing, and providing instruction to the owner's operating personnel in the proper operation and maintenance of the equipment in this section.

B. Contractor and factory-trained representative shall verify pump flow aligns with the pump curve and calibrate flowmeter as required.

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SECTION 13 11 26

POOL PUMP VFD

1. GENERAL

1.01 DESCRIPTION

A. Work Includes:
   1. Furnish all labor, materials, tools, and equipment, as indicated, in accord with provisions of Contract Documents.
   2. Completely coordinate with work of all other trades.
   3. Although such work is not specifically shown or specified, all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation shall be furnished and installed as part of this work.
   4. See Section 26 0001 for General Electrical Requirements.
   5. See Division 1 for General Requirements.
   6. Coordinate all requirements with Contractor providing equipment including but not limited to contacts bypass and controls.

1.02 RELATED WORK

A. Section 26 05 26 – Grounding and Bonding
B. Section 26 05 53 – Electrical Identification
C. Section 26 28 13 - Fuses
D. Section 26 28 16 – Enclosed Switches

1.03 REFERENCE STANDARDS

A. ANSI/IEEE 519 Guide for Harmonic Control and Reactive Compensation of Static Power Converters.

1.04 SUBMITTALS

A. Submit shop drawings and product data under provisions of Division 01, General Conditions of the Contract, and Section 26 0001.

B. Include physical, electrical, and performance characteristics of each variable frequency drive and associated components, including dimensions; weight; input and output performance; voltage, phase, current and overcurrent characteristics; installation instructions; protective features; wiring and block diagrams indicating specified options; electrical noise attenuation equipment where required to meet the criteria specified; line side voltage notch wave form and line side current harmonics; certified efficiency versus load and speed curves; and required operating environment.

1.05 OPERATING AND MAINTENANCE INSTRUCTIONS

A. Submit operation and maintenance data under provisions of Section 26 0001 and Division 01.

B. Instructions to include recommended maintenance procedures, maintenance schedules, recommended spare parts list, and vendor name for those parts.

1.06 EQUIPMENT STARTUP AND AGENCY TRAINING

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A. Provide the services of a factory trained and certified technician to approve the installation; start-up, test, and adjust for proper operation; and instruct and train the Agency's representative in the operation and maintenance of the unit(s). Upon completion of the equipment startup, submit a complete manufacturer's field report, including startup and test log, signed by the factory trained technician. Coordinate with other Contractors as required. The startup shall be completed within ten (10) working days from the startup date.

1.07 WARRANTY

A. The warranty shall be for a period of 36 months applied from the date of project Substantial Completion, but not to exceed 42 months from shipment. Further, the warranty shall include all parts, labor, travel time, administrative costs, overhead, travel expenses, technical support and any and all other costs to provide the warranty service.

1.08 COORDINATION

A. All line voltage power wiring to equipment, factory mounted control panels, to motor control centers, to and from disconnect switches, and to individually mounted starters, and from starter to motors, shall be provided by the Electrical Contractor.
B. Vendor/Contractor that specifies "starters by Electrical Contractor" shall furnish project specific wiring diagrams to Electrical Contractor for all equipment and devices furnished by this Contractor and indicated to be wired by the Electrical Contractor. In addition, furnish complete sets of wiring diagrams for Owner's bound maintenance manual.
C. All line, or low voltage, wiring which is not indicated on the drawings, or specified, but necessary to complete the installation, shall be provided by this Division.

2. PRODUCTS

2.01 MANUFACTURERS

A. ABB or Eaton.

2.02 DESIGN AND CONSTRUCTION

A. The unit shall be variable torque, modular design for control of the motors as specified by others, to be furnished by Electrical Contractor and rated at the motor full load nameplate amps.

B. The unit shall be U.L. listed, solid state, micro processor-based with a pulse width modulated (PWM) output wave form (none others are acceptable).

C. The VFD shall employ a full wave bridge rectifier, to prevent line notching, with DC output bus choke, capacitors to minimize the ripple of the rectified voltage to maintain near constant DC voltage. Insulated gate bipolar transistors (IGBT's) shall be employed as the output switching device.

D. Control circuitry shall be plug-in, plug-out modular basis with a corrosion resistant coating on printed circuit boards.

E. Units to be suitable for an operating environment from 0°C to 40°C temperature and humidity up to 90% non-condensing.

F. Electrically and physically isolate control circuitry and conductors from power circuitry and power conductors. Control conductors and power conductors shall not be run in the same conduit.

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G. The unit enclosure shall be UL Type 12 enclosure for the application minimum and all components shall be fully factory assembled and tested prior to leaving the manufacturing facility.

H. Include the following operating and monitoring devices mounted on the front cover:
   1. Fused disconnect switch with door interlocked handle and lock-open padlocking provisions (VFDs with no bypass).
   2. Operating mode selector switch marked "hand-off-auto". Manual speed adjustment via keypad, mounted on the door.
   3. Manual bypass selector switch to select power through drive or bypass where indicated on drawings.
   4. Pilot light marked "RUN".

I. Provide a manual bypass circuit and bypass starter to transfer from variable frequency drive operation to bypass operation where indicated on drawings.

J. Provide partitioning within drive enclosure to separate and isolate bypass section from variable frequency drive section and to house bypass wiring, contactors, relays, and manual bypass circuit so that devices within the converter/inverter compartment are able to be serviced without electrical danger to the service technician.

K. Starters shall have provisions for additional control requirements such as, but not limited to inputs and outputs for connection to external relays and equipment where required.

2.03 PERFORMANCE REQUIREMENTS

A. Units shall be suitable for input power of electrical system as scheduled on the drawings ±10%, 3 phase, 60 Hertz nominal.

B. Provide minimum 5% line reactor in each AC phase on the input side or 5% dual DC bus reactors to reduce harmonic voltage distortion. Limit line noise, as measured at the point of common coupling, to a voltage factor of 5% or less as defined in IEEE-519, latest edition. If the distortion is greater than that allowed by IEEE-519, latest edition, the line reactor shall be changed in size to ensure compliance. The supplier of the VFD shall provide distortion calculations to be used for setup and analysis.

C. Use a current limiting control device to limit output current to 110% continuous for one minute; also refer to Protection Features in this section. Full load output current available from drive shall not be less than motor nameplate amperage. The full load amp rating of the VFD shall not be less than the values indicated in the NEC Table 430-150.

D. Output power shall be suitable for driving standard NEMA B design, three phase alternating current induction motors at full rated speed with capability of 6:1 turndown.

E. Additional performance capabilities to include the following:
   1. Ride through a momentary power outage of 15 cycles.
   2. Start into a rotating load without damage to drive components or motor.
   3. Capable of automatic restart into a rotating load after a preset, adjustable time delay following a power outage.
   4. Input power factor: Min 0.95 throughout the speed range.
   5. Minimum efficiency: 95% at 100% speed, 85% at 50% speed.

2.04 CONTROL FEATURES

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A. Use control circuits compatible with input signal from control system in the automatic mode and from manual speed control in the manual mode. Vary motor speed in response to the input control signal. Include components necessary to accept the signal from the control system in the form that it is sent. Coordinate with Vendor/Contractor supplying control system and or motor.

B. Include the following additional control features:
   1. Hand-Off-Automatic (HOA) selector switch to select local or remote start/stop and speed control.
   2. Analog input, selectable 0-10v or 4-20 mA, for automatic control from the temperature control system. Include a RS485 Port with BACnet protocol.
   3. Local speed control at the VFD.
   4. Adjustable acceleration and deceleration rate so that the time period from start to full speed and from full speed to stop can be field adjusted.
   5. Adjustable minimum and maximum speed settings for both automatic and manual modes of operation.
   6. Manual transfer bypass circuit where required.
   7. Field adjustment of minimum and maximum output frequency.
   8. Three (3) sets of programmable form “C” contacts for remote indication of variable frequency drive condition. Note: default programming to be set for “Drive Run & Fault”.
   9. Illuminated display keypad.
   10. External Fault indicator.
   11. One (1) input for a N.O. dry contact type input for a 2-wire remote start/stop.
   12. One (1) input for a N.C. dry contact type input for external faults: (freezestats, fire alarm, smokes, etc). This input shall be factory wired to prevent both the VFD and bypass starter operation when external fault is present.

2.05 PROTECTION FEATURES

A. Use electronic protection circuitry in the power circuits to provide an orderly shutdown of the drive without blowing fuses or tripping circuit breakers and prevent component loss under the following abnormal conditions:
   1. Activation of any safety device.
   2. Instantaneous overcurrent and/or over voltage of output.
   3. Power line overvoltage and undervoltage protection.
   4. Phase loss.
   5. Single and three phase short circuiting.
   6. Ground faults.
   7. Control circuit malfunction.
   8. Over temperature.
   9. Output current over limit.

B. Provide the following additional protective features:
   13. Input transient overvoltage protection up to 3000 volts per ANSI 37.90A;
   14. DC bus fusing or other electronic controls which limit the rate of rise of the DC bus current and de-energizes the drive at a predetermined current level;
   15. Fusing for the control circuit transformer;
   16. Grounded control chassis; and
   17. Devices and/or control circuitry to ensure that the
   18. variable frequency drive and bypass starter are not both energized and driving motor simultaneously.

2.06 DIAGNOSTICS

A. Provide an English character display (no error codes) with indicators for the following:

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1. Phase Loss
2. Ground Fault
3. Over Current
4. Over Voltage
5. Under Voltage
6. Over Temperature
7. Overload
8. DC Buss Status

2.07 QUALITY ASSURANCE TESTS

A. Use a factory heat stress test to verify proper operation of all functions and components under full load.

B. Field performance test of variable frequency drives to determine compliance with this specification will be performed at the owner's discretion and may include any specified feature, including operation of protective devices through a simulated fault. Contractor will pay for initial testing. Should drive be found deficient by this testing, drive manufacturer will be required to make any and all changes necessary to bring unit(s) into compliance with the specified performance and demonstrate this performance by retesting. Cost of changes and retest will be by this contractor.

C. Variable frequency drive manufacturer or designated representative to perform a field test of each drive, in the presence of the owner's representative, for the following items:
1. Provide general inspection to verify proper installation;
2. Demonstrate drive reaction to simulated power interruptions of two seconds and sixty seconds;
3. Demonstrate adequate protection during switching from variable frequency drive operation to bypass starter operation and back again;
4. Measure and record voltage distortion factor and line notch depth at the point of common coupling. Provide the recorded value as part of the startup report.

2.08 BYPASS EQUIPMENT

A. Bypass Starters:
19. The bypass starters shall be across-the-line magnetic starter type.

B. Bypass Configuration:
1. Provide one main fused disconnect switch or circuit breaker to isolate both the drive and bypass circuit. Bypass configuration shall consist of one input drive contactor or disconnect, one output drive contactor and one output bypass contactor. The two output contactors shall be mechanically and electrically interlocked.

C. Provide motor overload protection in the bypass circuit.

D. Provide bypass equipment inside the main VFD panel enclosure.

2.09 LINE REACTORS

A. Furnish and factory install line reactors to comply with the specified limits on electrical line noise.

B. Line reactors shall be designed for operation on the input side of the VFD.

C. Line reactors shall be installed in each phase of the AC input side of the VFD and mounted within a common enclosure with the VFD.

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D. Line reactor shall be suitable for the voltage of the system ± 10%, 3 phase, 60 Hertz.

E. Line reactor ampere rating shall be sized in accordance with the variable frequency drive manufacturer's recommendations with the minimum size equal to the NEC Table 430-150 full load ampere rating of the connected motor.

F. Line reactor shall be a three-phase inductor, 3% impedance, iron core, 600V, Class H insulation, 115 degree C rise, copper windings with screw type terminal blocks.

3. EXECUTION

3.01 VARIABLE FREQUENCY DRIVES

A. Install where indicated on drawings and in accordance with approved submittals and manufacturer's published recommendations. Installation to be by the Division 26 contractor.

B. Input wiring shall be installed in a separate conduit system, output wiring shall be installed in a separate conduit system and control wiring shall be installed in a separate conduit system. Do not mix input power, output power, or control wiring in a common conduit.

C. Control signal for drive will be provided as indicated on drawings.

D. VFD manufacturer to perform a field test of each drive and provide Owner operational and maintenance training.

END OF SECTION

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SECTION 13 11 32

POOL FIBERGLASS FILTERS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Pool Fiberglass Filters

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 REFERENCES

A. The following latest edition reference specifications, guides and standards shall become part of this Specification as if herein written. If provisions conflict, the more stringent provisions shall apply.
   1. National Sanitary Foundation (NSF)
   2. ASTM D-2150 – Specification for Woven Roving Glass Fabric for Polyester

1.04 DESIGN REQUIREMENTS

A. As assurance that each item of apparatus is properly sized to perform in conjunction with each other, the Owner requires bidders to use the filter manufacturer as a single source of supply for the items of equipment as listed and described herewith.

B. The system shall be supplied complete by the manufacturer and shall include: internals, face piping and valves, gauge panel with tubing and petcocks, sight glass, air relief connection, bottom drain connection with internal strainer.

C. System shall be fabricated and fully assembled at the manufacturer's plant for pressure testing and dimensional verification. System shall be knocked down for shipping purposes in subassemblies for minimum field assembly. Internal manifold and lateral piping shall be factory installed and shipped in place. Loose fitted piping furnished for field assembly will not be accepted.

D. The filter system including tank quantity, size, filter rate, capacity and model number shall match the basis of design as indicated on the drawings.

1.05 SUBMITTALS

A. Provide detailed shop drawings of the items of equipment being provided, indicating the dimensions, material of the filter tanks, exterior face piping, internal manifolds and laterals and filter media.

B. Provide a complete set of operating instructions, embracing the operational functions and recurring maintenance processes involved in connection with the complete filtration system.

C. Provide all warranties relating to filter systems including valves, internal piping, face piping, controls and all standard accessories.

1.06 CERTIFICATIONS

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A. Shall bear the NSF Seal of Approval, Standard #50 for sand type filters.

1.07 QUALIFICATION STATEMENTS

A. The equipment described herein shall be a product of a manufacturer regularly engaged in the fabrication of fiberglass pressure vessels for at least fifteen years.

1.08 WARRANTY

A. The equipment supplier shall guarantee that the equipment to be furnished is of the correct capacity, that the various parts are designed to operate correctly and in conjunction with each other, that if the installation is made in accordance with his drawings and operated in accordance with his instructions, the system will perform the prescribed functions correctly, the water entering the pool will be clear, bright, free from suspended matter visible to the unaided eye, will not produce any toxic effect or impart undesirable taste, odors or colors, and will be sanitary to the satisfaction of all authorities having jurisdiction.

B. Equipment Warranties
   1. Filter tanks shall carry a 15 year non-prorated warranty as regularly offered by the tank manufacturer.
   2. Internal and external face piping shall carry a non-prorated 3 year warranty.
   3. Valve bodies shall carry a 5 year non-prorated warranty.
   4. Valve operators and system accessories including sight glass, pressure gauges and air relief valve shall carry one year warranty as provided by the product manufacturer.
   5. Unless otherwise specified, workmanship is to carry a one (1) year warranty

1.09 SYSTEM STARTUP

A. An authorized representative of the equipment supplier shall provide the supervisory services of an Installation Engineer for at least one day to fully instruct designated personnel in the operation, care and maintenance of the filter system.

1.10 MANUFACTURER

A. The equipment manufacturer shall be per the basis of design as listed in the drawings equipment schedule.

B. Alternative manufacturers meeting the specifications within may also be accepted. Product submittal and review with approval by the Aquatics Engineer/Architect shall be required.

C. Equipment not meeting these specifications must be pre-approved prior to bid. Other treatment systems may be considered with Owner's approval and only if a complete set of drawings and specifications detailing such equipment as it pertains to this project are submitted for evaluation ten (10) days prior to the bid date. The submission should include a list of five (5) operating installations with names and telephone numbers of the operating personnel. The technical contents of the submittal shall include hydraulic calculations, equipment fabrication details, filter room layout in plan and elevation views, warranties, installation and operating instructions.

PART 2 - PRODUCTS

2.01 FILTERS

A. Fiberglass Filter Tank

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1. The filter tank shall be suitable for 50 psi working pressure, hydrostatically tested to 75 psi and designed with a 4:1 safety factor.
2. Two saddle style bases shall be provided for tank support. Systems that incorporate stacked tanks shall include similar bases and mounting saddles for the upper vessel. Access to the tank shall be provided by a 14" x 18" manhole with a two-bolt, 4-point yoke. Manhole seal shall be complete with one piece ¼" neoprene gasket and positioned so that internal pressure from the filter will augment the seal. Externally mounted bolt-on covers will not be accepted.
3. Drain out system shall consist of one (1) 3/4" fiberglass coupling mounted to the tank bottom. Each coupling to be fitted with a slotted PVC sand retainer. Air relief connection shall be one (1) 3/4" coupling provided on top of the tank. Bulkhead fittings will not be accepted.
4. Each filter tank shall be equipped with the necessary flanges and connections for the internal and external piping. Connections shall be comprised of 1" minimum thickness fiberglass flanges with ANSI standard 150 lb. bolt pattern. Connections requiring bolt-thru hardware will not be accepted.
5. The resin used shall be a commercial grade, premium corrosion resistant vinyl ester that has been evaluated in a laminate by test in accordance with ASTM C-581 in service comparable to the intended service and recommended for this service by the manufacturer. Other generic types of resin such as isophthalics or general purpose polyester resins shall not be acceptable.
6. Ultraviolet absorbers shall be added to the exterior surface for improved exterior resistance.
7. Chopped strand mat shall be constructed from commercial grade E-type glass strands bonded together using a binder. The strands shall be treated with a sizing that is chemically compatible with the resin system used. Continuous roving shall be a commercial grade of E-type glass fiber with a sizing that is chemically compatible with the resin system used.
8. The inner surface exposed to the corrosive environment shall be followed with a layer composed of vinylester resin, reinforced only with non-continuous glass fiber strands applied to a minimum thickness of 0.100 inches. The combined thickness of the inner surface and interior layer shall be 0.110 to 0.130 inches and in no case less than 0.100 inches.
9. The exterior laminate shall consist of filament winding and unilateral construction so as to create a modulus of elasticity to maintain no more than 0.1% strain in any direction.
10. Resin used in these layers shall be Hetron 922 incorporating a Cobalt/MEKP cure system as recommended by the manufacturer.

B. Filter Piping - Internal
1. The upper and lower internal distribution system shall be a horizontal header/lateral arrangement. The headers shall be Schedule 80 PVC construction, capped on one end and flanged on the other end. Lateral connections shall be spaced no more than 6" on the centers and shall be 1½" FPT connections.
2. Underdrain laterals shall consist of 1.5" Schedule 80 PVC pipe with machined double slotted openings on 1/8" centers. Machined openings shall be designed to retain all media particles as small as 0.012 inch (0.30 mm) particle size. Molded or drilled openings or retainer screens will not be acceptable. Each lateral shall be fabricated complete with a socket cap on one end and male adapter on the other. Both fittings to be solvent welded to the slotted pipe. Laterals shall be fitted with a rubber 0-ring to allow for proper positioning of the machined openings.
3. Upper laterals shall consist of 1½" Schedule 80 PVC pipe with 1/2" wide machine slotted openings on 1 1/4" centers. Upper laterals shall be designed and sized at the factory so as to provide uniform distribution and unrestricted flow during filter and backwash cycles. Laterals shall be fitted with a rubber 0-ring to allow for proper positioning of the machined openings.
4. All hardware shall be T304L stainless steel or non- metallic.

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C. Face Piping
   1. External face piping shall be Schedule 80 PVC pipe and fittings. All fittings, including 10" and 12" sizes shall be molded type. Fabricated or fiberglass wrapped fittings will not be acceptable. Flanges shall be located so as to allow for easy dismantling of face piping. All fittings shall be solvent cemented.
   2. Piping shall be drilled and tapped where necessary to accommodate gauge tubing connectors.
   3. All valves shall be constructed in accordance with the Specification 13 11 24 unless otherwise specified. All valves 3" – 12" shall be constructed with cast aluminum ASTM S12A housing and fully coated with Rilsan on all interior and exterior surfaces. Internal components include EPDM resilient lining, Rilsan coated ductile iron disc and T304 stainless steel shaft. Valves 14" and larger shall be constructed with cast iron housing epoxy coated and with nylon coated ductile iron disc.
   4. Unless otherwise specified, all nuts and bolts shall be stainless steel with stainless steel washers to be used when secured to PVC flanges.
   5. Standard accessory items shall include sight glass rated for 50 psi with polycarbonate glass, remote mounted gauge panel with two 4½" diameter pressure gauges, ¼" petcocks, ¼" poly vent tubing with PVC compression adapters.
   6. Face piping shall be fully factory assembled, knocked down and crated for shipment. The warranty of the face piping shall be provided by the filter manufacturer. Field gluing of the face piping by anyone other than the filter manufacturer will not be accepted.
   7. Face piping arrangement shall be as indicated on the drawings. All backwash control valves shall be located no greater than 60" off the floor.

D. Automatic Air Relief Valve
   1. A minimum 1" valve shall be provided to automatically and continuously release air in the filter. The valve shall be fabricated of plastic with Buna-N seals.

E. Air Relief & Drain Plumbing
   1. An air relief plumbing kit shall be provided for each filter with two (2) True Union PVC ball valves to allow manual air relief and isolation of the automatic valve. A filter drain plumbing kit shall be provided for each filter with a single True Union PVC ball valve to allow manual draining of each filter. Air relief and drain plumbing shall be properly supported and extended to as close as possible to the nearest floor area drain without crossing any maintenance aisle/s. Valves fabricated of cast iron, bronze or stainless steel shall not be acceptable.

F. Valve Control Assembly
   1. A mechanical linkage constructed of T304 stainless steel shall connect two valves in order to create simultaneous movement.
   2. Assembly shall be designed so that filter and backwash cycles can be accomplished by repositioning two pairs of valves.
   3. Each pair of valves shall be operated as specified with gear or electric actuation.
   4. All linkage components shall be grit blasted to a 1-2 mil profile. All linkage components shall be finish coated with minimum 3-4 mils Type 316 stainless steel paint.

G. Gear Operators
   1. Valves shall be provided with infinite position gear operators. Gear case (body) shall be constructed of cast iron painted internally and externally for maximum protection. Enclosure shall be sealed to IP65 and maintenance free.
   2. Self-locking gearing shall be capable of holding the disc in any position with no movement up the full pressure rating of the valve. Gear operator shall provide 90° of travel with ± 5° adjustment in closed position. Gear operator shall include a non-corrosive sealed indicator for remote visibility. Gear operator shall include manual adjustment capabilities.

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H. Electric Operators
   1. Electric service shall be 110 VAC unless otherwise indicated in drawings. Operator housing shall be corrosion resistant NEMA 4X (IP65). Electrical connectors shall be four-pole industrial style and meet DIN 43650 standards. Plug connection shall be gasketed and mechanically secured with a stainless steel screw. Harness assemblies from operator to control panel shall be factory fabricated. No field wiring shall be required.
   2. Drive assembly shall include hardened steel and polyamide reduction gears with permanent lubrication. Operator shall be equipped with a manual override. Operator shall have a visual position indicator.
   3. Electric drive motor minimum duty cycle rating to be 35%. Overloading protection shall be self-resetting. Limit switches shall be provided to allow adjustment of cycle. Two additional limit switch contacts shall be provided for indication or auxiliary.

I. Automatic Controller - MFP4
   1. The automatic controller shall provide total control of the system's filtration and backwash, and provide all necessary equipment interlocks and timing mechanisms to execute the filter program.
   2. The controller shall contain at least two microprocessors that will monitor all functions of the system.
   3. The controller shall control the operation of the following functions by time or pressure differential:
      a. Backwash: Manual or automatic; with or without security interlock for data logging
      b. Heater cool down delay
      c. Auxiliary contacts to interlock UV lamps, chemical control, or other equipment
      d. 7 inch Hi-Res LCD Screen with Tactile Feedback Membrane
      e. Step-by-step animated graphics
      f. Last backwash display
      g. Remote Operation via browser or phone
      h. Off Site Real-Time Status
      i. Data logging of process
      j. Differential Pressure Monitoring and Bump Control
      k. Exporting of process data logs to .csv Excel™ files
      l. Modbus Communications for PLC connectivity
      m. Nema 4X / IP66 approved / UL Listed
      n. Electrical Requirements: 120VAC-1Ø-60Hz, 15 amp Circuit Protection (CP)/230VAC-1Ø-50Hz, 10 amp CP

2.02 FILTER MEDIA

A. Each filter tank shall be provided with media as required per manufacturer's recommendations.

B. Gravel support media of a hard coarse aggregate with a subangular grain shape with a particle size of 1/8" x ¼" shall be used on the inside of the bottom head to the elevation where the filter media commences. The specific gravity shall not be less than 2.5. Place support media by hand to avoid damage to the underdrain system and level before the addition of the upper layer of filter media. Support gravel shall be delivered and stored in bags (approximately one cubic foot) for ease of handling and elimination of possible contamination. Concrete underfill shall not be used. Media shall be free from minerals that may precipitate onto pool surfaces.

C. Sand shall be a carefully selected grade of hard, uniformly graded silica material. Media shall be naturally rounded particles of silica or milled angularly shaped particles of silica quartz. Sand shall have a particle size between .45 mm and .55 mm (#20). No more than 1.5% shall be allowed to pass through a #40 sieve (.0164"). Uniformity coefficient shall not exceed 1.53.

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Specific gravity to be not less than 2.5. Bed depth shall be placed as required by the filter manufacturer. Sand shall be delivered and stored in bags (approximately one cubic foot) for ease of handling and elimination of possible contamination. Media shall be free from minerals that may precipitate onto pool surfaces.

3. EXECUTION

3.01 FILTER SYSTEM

A. All filter piping and valves shall be factory assembled and knocked down into sub-assemblies for shipment. The components shall be carefully packaged in a totally enclosed wooden crate to prevent damage during transport.

B. Filters shall be installed level and anchored to the floor.

C. Provide installation complete with factory representative training and equipment start.

D. Pool Contractor shall deliver operating and maintenance instructions for operation, maintenance and cleaning of Filter system.

E. Training and Start-Up
1. Filter installation shall include a filter system “start-up” and “system operator training (SOT)”. Start-up shall include the first-time use of the filter in recirculation mode and all system adjustments as needed for proper operation of all filter modes. SOT shall include written and verbal instructions and demonstrations required for the system operator to properly operate and maintain the filter system in all filter operating modes.
2. Start-Up and SOT shall be completed by a fully trained and authorized filter manufacturer representative.
3. Prior to initiating the Start-Up procedures, the contractor shall complete all equipment installation and tests as required for proper filter operations. Contractor shall obtain the “Pre-Start-Up” requirements/checklist directly from the filter manufacturer.
4. Contractor shall coordinate and schedule the system start-up and training directly with the filter manufacturer and Owner.
5. SOT session shall be a minimum of one (1) day duration. Obtain written documentation with a dated signature from the system operator that training was provided to their satisfaction

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SECTION 13 11 35

POOL ULTRAVIOLET DISINFECTION EQUIPMENT

1. GENERAL

1.01 SECTION INCLUDES

A. Pool Ultraviolet Disinfection Equipment

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 REFERENCES

A. The following latest edition reference specifications, guides and standards shall become part of this Specification as if herein written. If provisions conflict, the more stringent provisions shall apply.
   1. NSF – National Sanitary Foundation
   2. MET – Met Laboratories, Inc.
   3. CSA – Canadian Standards Association
   4. UL – Underwriters Laboratory
   5. NEMA – National Electrical Manufacturers' Association
   6. ANSI – American National Standards Institute
   7. USEPA UVDGM- U.S. Environmental Protection Agency Ultraviolet Guidance Manual
   8. Din- German Institute of Standardization
   9. IP- International Electrotechnical Commission

1.04 SUBMITTALS

A. Drawings and Instructions
   1. Provide detailed Shop Drawings of the items of equipment being provided, indicating the dimensions, material, and characteristics.
   2. Provide a detailed Operations Manual, embracing the operation functions and recurring maintenance processes.

1.05 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

1.06 QUALITY ASSURANCE

A. All SYSTEM components shall be supplied to the CONTRACTOR by a single EQUIPMENT SUPPLIER.

B. The EQUIPMENT SUPPLIER shall have at least twenty (20) year experience providing medium pressure UV systems to the Aquatics market.

C. The EQUIPMENT SUPPLIER shall design, develop, manufacture and test the SYSTEM in a facility that is assessed and registered as conforming to the requirements of ISO 9001:2008 quality management system.

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1.07 DELIVERY, STORAGE, AND HANDLING

A. Refer to General Requirements and Division 01.

1.08 WARRANTY

A. A factory trained representative of the manufacturer shall perform all warranty work. Manufacturer to warranty Ultraviolet chamber and Spectra Control panel for a period of 5 years (see requirements) excluding lamps, quartz, and seals. Medium pressure Ultraviolet bulbs shall be warranted for a period of 8,000 hours. Intermittently operated lamps (≥ 1 on/off cycle per day) will be replaced free of charge should failure occur prior to 4,000 hours and replacement will be prorated between 4,000 and 8,000 hours.

B. Manufacturer must maintain spare or replacement parts in the USA for same day or no longer than next day delivery in North America, other areas based on expedited delivery available.

C. A Service Agreement (twice per year maintenance) from a qualified factory certified distributor shall be provided to initiate the service to maintain the five-year warranty.

2. PRODUCTS

2.01 GENERAL

A. The UV System shall have a MET or equivalent (ETL, CSA, or UL) listing, be NSF-50 (2016 or later) certified including Section 14.18 (crypto inactivation), and 3rd party validated to the USEPA UVDGM 2006 Guidelines.

B. Equipment General Description: The Ultraviolet System shall be provided in a complete package to include:
   1. Stainless steel chamber,
   2. Spectra Control System located in a NEMA 12 (IP52) rated panel,
   3. Medium pressure bulb(s) designed to emit wavelengths within the UVC electromagnetic spectrum,
   4. UV EZ Clean strainer,
   5. Automatic wiper system, and
   6. Project Commissioning by an Ultraviolet Technician certified by the manufacturer.

C. Manufacturer: Ultraviolet Lamp/Chamber and Spectra Control Panel by Neptune Benson / Evoqua Water Technologies Ltd., or Architect/Engineer approved equal. Any deviation/exception must be provided in writing to and approved by the designer prior to the bid date.

2.02 UNIT TYPE

A. Wafer (WF) UV Units: Ultraviolet manufacturer to offer unit capability of a horizontal or vertical installation application using state of art design and direct flow through characteristics. Direct flow will be required in order to reduce total head loss through the system. Unit shall be medium pressure system with a flow rating as scheduled in the drawings, or greater, @ a maximum of 94% UV Transmission (UVT). Chamber and Control Cabinet shall be as indicated on the drawings.

2.03 ULTRAVIOLET REACTOR/CHAMBER

A. The unit shall be constructed of 316L stainless steel, electropolished and passivated to prevent corrosion within the harsh pool environment. Pressure drop across the unit will be minimal.

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B. The Ultraviolet chamber shall come complete with the following equipment:
   1. Ultraviolet intensity monitor factory calibrated to provide intensity in mW/cm2 (monitors providing percentage of lamp output are not acceptable).
   2. Built-in alarm system to notify operator when output level drops below operator set dosing levels or the required level of 60 mj/cm2 for indoor pools and 40mj/cm2 for outdoor pools.

C. Ultraviolet temperature control system shall be provided to maintain system integrity in the event of flow interruptions to the chamber.

D. Ultraviolet chamber shall come complete with annealed quartz sleeve with “O” ring seals for water tightness. System shall be complete with advanced seal arrangement to reduce risk of quartz over compression on the seal face.

E. Chambers shall be complete with ANSI 150 or DN flanges (as specified) and all ports or vents shall be threaded NPT. The Ultraviolet chamber must be capable of installation in the system so that it remains full under all conditions.

F. Ultraviolet Reactor (Chamber) will be a validated system with third party testing to a recognized international standard such as the USEPA DGM.

G. The ultraviolet unit must be complete with integrated brackets or feet for ease of installation in either vertical or horizontal mounting.

H. The Chamber shall have a sacrificial anode attached to the chamber, extending inside the chamber and be bonded to the installation bond loop.

2.04 ULTRAVIOLET LAMP

A. Ultraviolet lamp shall be medium pressure high intensity. Each lamp shall be designed to emit continuous ultraviolet wavelengths in the range of 200nm to 400nm. This will provide optimal disinfection/inactivation of bacteria, algae, molds and viruses and destruction of the Monochloramine, Dichloramine, and Trichloramine compounds. The lamp(s) must remain unaffected by temperature variance of 0 degrees F (-17C) to 200 degrees Fahrenheit (93 degrees Celsius).

B. The lamp system must provide a constant calculated dose of not less than 60 mj/cm2 until the end of the lamp life for indoor applications and not less than 40 mj/cm2 for outdoor disinfection and this must be based on constantly treating the full recirculating flow rate, not on a side stream treatment. The system must be equipped with infinity variable power control of the lamp intensity & dose. Power stepping is not an acceptable alternative. The lamps shall be capable of turndown to 30% of the nominal rated power.

C. The lamp shall be connected via means of a plug connector and shall have a mechanical interlock to prevent lamp removal when lit for safety reasons.

2.05 AUTOMATIC WIPER SYSTEM

A. An automatic cleaning system shall be provided for cleaning of quartz sleeve and Ultraviolet monitor probe. The system shall travel the entire length of the quartz sleeve twice per desired cleaning cycle. Precision molded wiper rings shall be provided to ensure thorough quartz tube cleaning and quartz tube protection.

B. Wiper cycle shall be user selectable and adjustable within a range of 5 minutes to 24 hours depending on anticipated application and deposit build-up.

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C. Automatic Wiper system shall have the following characteristics:
   1. System shall utilize direct drive with square faced coupling and acme threaded shaft to prevent slippage and pin shearing. Systems utilizing shear pins or complicated gear boxes will be unacceptable.
   2. Wiper power supply shall be 24-volt DC for improved safety. Higher voltage not acceptable.
   3. System shall incorporate Direct Shaft Encoding for positional location. Systems relying on external limit switches or internally located magnets will be unacceptable.
   4. Wiper interval shall be operator selectable with optional override switch.
   5. Wiper faults are to be indicated on the control system display.
   6. Wiper System to utilize “Intelligent Operation” for automatic start-up commissioning.
      a. Records wiper position at chamber ends. Position must be fixed and not dependent on a timed interval or component striking end of chamber.
      b. Establish a travel run without setting limit adjustments to ensure system integrity and longevity.

2.06 UV STRAINER

A. The UV system must be provided with a downstream strainer to protect against the remote possibility of lamp /quartz breakage traveling downstream.

B. The UV strainer must be cleanable by manual action without removal from the piping system. If electrical or pneumatic automation of this valve is required, the valve control shall be integrated into each the filtration and UV control systems.

2.07 ULTRAVIOLET CONTROL SYSTEM

A. Control cabinet shall be a SPECTRA control unit and or pre-approved equal.

B. The cabinet shall be an epoxy coated NEMA 13 / IP54 rated cabinet. If mounted outdoors it must be a NEMA4X /IP56 rated cabinet with an integral A/C unit to protect the components from the environment.

C. The power must be controllable to provide full power, half power and infinite variable power based on real time interface with changes in UVT, Flow Rate or Combined Chloramines. The power panel must house the electronic ballasts required to ignite the lamps.

D. Three levels of operation shall be provided to meet the needs of the operator and pool environment:
   1. Simple Control (start, stop and reset),
   2. Full Parameter Display, and
   3. Customized Operator Configuration.

E. Modes of operation shall be password protected to secure system critical setup functions.

F. Control system shall have clearly identifiable start, stop, and reset icons (suitable for gloved operation) with Running and Fault LCD indicators.

G. The screen shall display the following:
   1. Ultraviolet Calculated Dose, derived from flow and intensity inputs
   2. Ultraviolet Intensity in units of % and mw/cm2
   3. Lamp Current
   4. Flow Rate. System shall accept a signal from an optional flow meter with display in units of gallons per minute (GPM) and m3/hour
   5. Chamber Temperature in units of deg. F and deg. C
   6. Operation Hour Meter

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7. System shall include alarm functions with simple text message display to assist in fault finding. Fault Indicators to include:
    a. Lamp fault,
    b. Low Ultraviolet Alarm
    c. Temperature Alarm
    d. Ground Fault Trip
    e. Wiper Fault.

H. Control system shall have a minimum of the following system interface control:
1. Remote Operation
2. Process Interrupt Features (from valves, flow meters)
3. Low UV Dose (configurable to shut down or alarm only)
4. Flow Meter Input
5. Auto-Restrike
6. Half to Full Power Ultraviolet Setting, with 24-hour/7-day settable timer
7. Variable Power/Dose Pacing Interface

I. Control system shall have built in data-logging capabilities to record the following information:
1. Ultraviolet Intensity Required
2. Ultraviolet Intensity Measured
3. Lamp Current
4. Chamber Temperature
5. Flow Rate (if flow meter is connected))Time and Date Stamp of all alarms generated

J. Control system must be capable of the following communications:
1. Interface with a Chemical Controller that can measure Total or Combined Chloramines to maintain the proper UV dosage required during the life of the lamp.
2. Interface with the Defender filtration controller.
3. Operating through Ethernet or Wi Fi with a method of uploading data to a Web based portal.
4. Interfacing with a SCADA system including Modbus.

K. Electrical Requirements:
1. See Drawings for scheduled units and electrical requirements. Confirm scheduled information with manufacturer prior to purchase.
2. Units include the following power/voltage capability:
    a. 208/220/230/240-Volt, single-phase for the 3” to 8” diameter UV units, 50/60 Hz
    b. 380/400/415/440/480-Volt, three-phase for the 10” and 12” diameter units, 50/60 Hz power.

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3. EXECUTION

3.01 SYSTEM INSTALLATION, STARTUP & TRAINING

A. Install in accordance with contract documents and manufacturer's instructions.

B. All UV electrical power supply and connections shall be performed by licensed electrician in conformance with all applicable Building/Electrical Code requirements.

C. Commissioning
   1. Ultraviolet Chamber and Control Panel shall be commissioned by a qualified factory trained technician to institute the Warranty.
   2. Final electrical and control cabling shall be connected from the control cabinet to the Ultraviolet disinfection chamber during the commissioning process.

D. TRAINING
   1. System operations and maintenance instructions shall be provided during a training session to the Owner's operations personnel. All training shall be conducted by a technician trained and certified by the UV manufacturer.
   2. Contractor shall obtain Owner signature and date upon completion of training and include copy in the project Operations & Maintenance Manual.

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SECTION 13 11 37

POOL CHEMICAL SYSTEMS AND CONTROLS

1. GENERAL

1.01 SECTION INCLUDES

A. Chemical Controller with the following sensors:
   1. pH Sensor
   2. ORP Sensor
   3. Temperature Sensor
   4. Flow Sensor

B. Free Chlorine Sensor

C. Acid (Hydrochloric or Sulfuric) Feed Pumps

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 QUALITY ASSURANCE

A. The controller shall carry the following product certifications:
   1. NSF Standard 50
   2. UL 61010-1

1.04 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Submittals required: For each type of manufactured material and product indicated. Provide Submittals indicating equipment provided, dimensions, material specifications, wiring diagrams and all accessory components including sensors.

1.05 SUBSTITUTIONS

A. Refer to General Conditions, Division 01.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Refer to General Conditions, Division 01.

1.07 WARRANTIES

A. Controller shall be covered by manufacturer's 5-year warranty.

B. ORP and pH sensors shall be covered by manufacturer's 2-year warranty.

C. Other sensors and flow cell components shall be covered by manufacturer's 1-year warranty.

D. Chemical feed pumps shall be covered by manufacturer's 2-year warranty.

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E. A factory trained/authorized representative shall provide training to the owner. The control system shall be provided with on-site start-up, on-site operator training, and 1-year on-site warranty service performed by a representative trained and authorized by the controller manufacturer.

2. PRODUCTS

2.01 All products listed as basis of design are acceptable, as are approved equivalents by Project Manager.

2.02 CHEMICAL CONTROLLER

A. The water chemistry control system shall provide continuous monitoring and control of the water chemistry and related disinfection equipment.
   1. The controller shall continuously monitor and control pH. Chemical feed shall be configurable for manual, automatic, proportional, and on/off modes.
   2. The controller shall continuously monitor and control sanitizer based upon the ORP reading, the free chlorine sensor, or both. Chemical feed shall be configurable for either on/off or time-based proportional feed.
   3. The controller shall have a programmable superchlorination function, based upon ORP or ppm superchlorination setpoint, which is triggered manually.
   4. The controller shall have a programmable dechlorination function, based upon ORP or ppm dechlor setpoint, which is triggered either manually or by the completion of the superchlorination function.
   5. The controller shall compute the Langelier Saturation Index and the Ryznar Saturation Index based upon sensor data and/or manual entered by the operator.
   6. The controller shall continuously monitor, display, and datalog system flow, maintaining a total flow volume. A Low Flow Alarm shall be operator settable, which can be programmed to disable chemical feeds.

   7. The controller shall control the boost function for a UV dosing based on real-time combined chlorine as calculated by the readings from an amperometric free chlorine and total chlorine sensor.

   8. The controller shall continuously monitor, display, and data log pool or surge tank level. The controller shall automatically control a water makeup relay to add makeup water to maintain pool level set point based on pool or surge tank level.

B. The standard display shall be a backlit transflective LCD that will continuously display information related to the following:
   1. All installed sensor readings
   2. Set points, with current control status
   3. All active alarms, including time activated

C. The flow sensor shall be used to prove flow to the chemical controller to prevent dosing of chemicals during a system low flow/no flow condition.

D. The controller shall automatically abort a Manual or Scheduled Turndown upon declining water chemistry and return to the standard programmed circulation rate to maintain optimal water quality. Declining water chemistry is signaled by any of the alarm conditions.

E. The controller shall signal all alarm conditions with the following indicators:
   1. A bright flashing LED on the front of the controller.
   2. Each active alarm listed on the LCD display along with time activated.

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3. Email and text alarm notifications.

F. The controller inputs are as follows:
   1. The controller shall have inputs available for pH, ORP, Temperature, free chlorine, and flow sensors.
   2. The controller shall come with a minimum of (3) fully assignable digital inputs available for items other than those listed above.

G. The controller outputs are as follows:
   1. The controller shall have integral line or dry contact 5A solid-state relay outputs capable of switching 3A under all normal operating conditions available for Acid or Co2 feed and sanitizer feed pumps.
   2. The controller shall come with a minimum of (2) fully assignable integral line or dry contact 5A solid-state relay outputs capable of switching 3A under all normal operating conditions available for items other than those listed above.
   3. All relays must account for the effects of the temperature gradient inside the IP66 or NEMA 4X enclosure. Systems that utilize relays that are not de-rated must submit an engineering evaluation justifying the use of relays at their full, optimal-condition capacity. All solid-state relays shall have a provision for an electrical interlock with the circulation pump motor starter.
   4. The controller shall come with a minimum of (8) separately isolated 4-20mA output signals.
   5. The controller shall be capable of expanded capabilities with optional expansion package.

H. Required controller safety features:
   1. The controller shall have built-in limits to the amount of time any relay control output may be forced on (i.e. in “Manual On” mode).
   2. The controller shall have programmable high and low alarm settings for pH, ORP, PPM, temperature, low flow & no flow. The controller shall have a programmable lockout of sanitizer feed upon pH high or low alarm.
   3. The controller shall activate a No Flow alarm when the dedicated sample stream flow switch indicates there is insufficient flow through the sample stream. This No Flow alarm shall lockout all chemical feed control operations.
   4. The controller shall have a dedicated Emergency Off button on the front panel of the system, which immediately halts all chemical feeds and control outputs when pressed. This feature shall require entry of a security access code.

I. Required controller remote communication and access features:
   1. The controller shall have the ability to allow field upgrades and updates and programming as needed. Controller must be capable of being accessed via remote communication.
   2. The controller shall have a means to preserve data logs during power outages, for input level recording and events. All input levels shall be recorded and maintained for 365 days on the controller, with a sample taken every minute. The controller shall record and maintain the events over the last 365 days recording all alarms, parameter changes, user logins, and operational cycles related to all control features.
   3. The controller shall also support the following types of connection to 3rd party applications such as EMS, BMS, BAC and SCADA systems:
      a. 1) MODBUS TCP/IP
      b. MS/TP (RS485)
      c. TCP/IP (Ethernet) BACnet connection
         The connection shall support access to Inputs (current readings), System Information, Set Points, Alarm Points, Control Status and Alarms. Set Points and Alarm Points shall be modifiable from the 3rd party application via the selected interface.
   4. The controller shall come with an integral Wi-Fi module.

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5. The controller shall be Windows 10 compatible or include the necessary software and apps to allow for the real-time monitor/ of the following via personal computer, smartphone, or tablet device:
   a. Auto-Polling – to allow automatic download of data logs.
   b. Graphical Operator's Console – to display current readings, setpoints, alarm points and control status mode.
   c. Data Logging
   d. Email and text alarms notifications.
6. The controller shall require security access codes.

J. The controller shall be housed in an IP66 or NEMA 4X polycarbonate enclosure. All high-voltage wiring shall be performed in a separate IP66 OR NEMA 4X enclosure that precludes access to the controller electronics.

2.03 pH SENSOR

A. The controller shall provide a measurement of pH by utilizing a sensor with the following characteristics:
   1. 2 – 12 sensing range
   2. operating temperature range of 32-140 °F (0-60°C)
   3. operating pressure range of 0 - 60 psi (0 TO 4.1 bar)

   The controller shall continuously monitor, display and data log pH with minimum 0.1 resolution.

2.04 ORP SENSOR

A. The controller shall provide a measurement of ORP by utilizing a sensor with the following characteristics:
   1. 0 to 999 mV sensing range;
   2. operating temperature range of 32- 140° F (0-60°C)
   3. operating pressure range of 0- 60 psi (0 TO 4.1bar)

   The controller shall continuously monitor, display and data log ORP with minimum 6mV resolution.

2.05 TEMPERATURE SENSOR

A. The controller shall provide a measurement of water temperature by utilizing a sensor with the following characteristics:
   1. 32 – 212°F (0 – 100°C) sensing range
   2. Operating temperature range of 32 – 212°F (0 – 100°C)
   3. Operating pressure range of 0-145 psi (0-10 bar)

   The controller shall continuously monitor, display and data log temperature with 5/9 °C (1°F) resolution.

2.06 CIRCULATION FLOW SENSOR

A. The controller shall provide a measurement of pool circulation flow rate and volume by utilizing a flow sensor with the following characteristics:
   1. paddle wheel flow sensor
   2. O-ring seal

   The controller shall continuously monitor, display and data log flow rate with 0.45 lpm (0.1 gpm) resolution.

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2.07 FREE CHLORINE SENSOR

A. The controller shall provide a measurement of free chlorine by utilizing a sensor with the following characteristics:
   1. 0.0 to 10.0 mg/l (ppm) measuring range
   2. 32° - 176°F (0°-80°C) operating temperature range
   3. Replaceable cleaning beads

   The sensor shall not utilize a membrane or electrolyte. Sensors utilizing a membrane and/or electrolyte, which must be replaced and/or replenished on a regular basis, shall not be considered equal. The controller shall continuously monitor, display and data log free chlorine with 0.1 mg/l resolution.

2.08 AUTO-FILL WATER LEVEL SENSOR

A. The controller shall provide a measurement of the water level by utilizing a continuous level sensor with the following characteristics:
   1. Field configurable sensor length,
   2. Installation options for wall mount and stand pipe glass configurations.
   3. 4 to 20 mA output

   The controller shall continuously monitor, display and data log the water level with 10 mm (0.4”) resolution or better. The controller shall use the sensor to control a water makeup valve to maintain water level (Autofill) and/or control a main drain modulating valve.

2.09 ACID (HYDROCHLORIC/SULFURIC) FEED PUMPS

A. All acid feed pumps shall be of the size and meet the output requirements indicated on the construction documents, meet all state and local code requirements, and shall meet the following criteria:
   1. Self-priming adjustable peristaltic pump
   2. 32-125° F (0-52°C) operating temperature range
   3. Operating pressure range: 0-25 psi (0-1.7 Bar)
   4. Required suction lift: 25’ (7.6 M) at sea level
   5. Motor: Variable Speed.
   6. Tubing: Norprene®, Norprene Chemical®, or Santoprene® tubes. Feed pump shall provide a mechanism to detect chemical spills from worn-out tubing and provide alarm notification.
   7. Chemical compatibility: All components of feed pump must be resistant to Hydrochloric and Sulfuric Acid at 50% maximum strength.

3. EXECUTION

3.01 CHEMICAL CONTROLLER INSTALLATION

A. Installation of the system shall be per the manufacturer’s specification and no exceptions shall be allowed. A factory trained/authorized representative shall provide training to the owner. The control system shall be provided with on-site start-up, on-site operator training and 1-year on-site warranty service performed by a representative trained and authorized by the controller manufacturer.

B. Provide coordination and instructional training of the chemical controller’s remote use functions and alarms with Owner’s designated staff and information technology personnel.

C. Calibration of chemical controller shall be executed only after the monitored pool temperature has been established to within 4 degrees of the design temp, or as required by the manufacturer’s installation instructions, if more stringent.

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3.02 MANUALS

A. Manufacturer shall supply an Installation, Operation and Maintenance Manual describing features, operating instructions, maintenance procedures and replacement parts.

END OF SECTION

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SECTION 13 11 42

PERIMETER OVERFLOW GUTTER GRATING

1. GENERAL

A. A perimeter overflow gutter system consisting of a continuous grating covered overflow channel as shown in documents shall be installed. The gutter shall be level throughout.

1.01 SECTION INCLUDES

A. PVC Parallel grating

B. PVC Perpendicular grating

C. Polymer / High Density Polyethylene (HDPE) Grating

1.02 RELATED DOCUMENTS

A. Drawings and Contract Requirements, including General and Supplementary Conditions and Division 01 – General Requirements, apply to this Section.

B. Division 13 11 Pool specifications apply to this section

C. Division 13 11 18 Pool Concrete

D. Division 13 11 43 Pool Stainless Steel Gutter

1.03 REFERENCES

A. The following latest edition reference specifications, guides and standards shall become part of this Specification as if herein written. If provisions conflict, the more stringent provisions shall apply.
   1. ANSI – American National Standards Institute
   2. ASTM – American Society of Testing Materials
   3. NSF – National Sanitation Foundation Standard 50
   4. MAHC – Model Aquatic Health Code

1.04 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Submit Shop Drawings, clearly indicating make, model, type, and size of grating

C. Submit 4” x 4” samples of each of MFG. standard colors

1.05 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

1.06 DELIVERY, STORAGE AND HANDLING

A. Refer to General Requirements and Division 01.

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1.07 WARRANTY

A. Manufacturer's Ten-Year Warranty, prorated after one year.

B. Grating installation shall be completed in accordance with all manufacturer's requirements for warranty coverage.

2. PRODUCTS

2.01 GENERAL

A. Provide perimeter overflow gutter grating type as identified and detailed in the drawings.

B. Perimeter overflow gutter grating shall be provided from a single manufacturer.

C. Materials shall meet product requirements within these specifications.

2.02 PARALLEL OVERFLOW GUTTER GRATING - PVC

A. The grating surface bars shall run parallel to the pool wall.

B. The grating shall be formed from molded, modular, interlocking, UV-stabilized PVC bars. The top surface of the grating bars shall be raised, water-shedding, slip-resistant and shall meet the IBC Classification C for Wet-Barefoot inclining platform (ramp) test for swimming pool surroundings.

C. Grating bars shall be a minimum of 15/32" (12mm) wide and an outside depth of 1.0" (25.4mm) with a middle depth that varies, dependent on grating width and load strength requirements.

D. Grating design shall meet ASTM D790-10 or ANSI/AS3996 Class A for covers and grates with load exceeding 10kN (2,248lb).

E. The grating shall provide at least 37.5% open area per foot for unrestricted water flow. The space between the bars shall not exceed 3/8" (9.5mm) and shall comply with IBC child finger/toe entrapment guidelines.

F. Grating width shall allow the insertion of the touchpad holding brackets between the grating and the gutter lip.

G. All inside and outside corners and custom radii sections under 3-feet inside diameter (short radius section) shall be custom fabricated and strengthened by the manufacturer.

H. Fasteners shall be SS-316, provided by the manufacturer, and installed per manufacturer instructions and as shown on drawings.

I. Colors selected by the Architect/Owner from manufacturer's standard colors.

J. Acceptable manufacturers:
   1. Daldorado LLC
   2. Lawson Aquatics

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2.03 PERPENDICULAR OVERFLOW GUTTER GRATING - PVC

A. The grating surface bars shall run perpendicular to the pool wall.

B. The grating shall be formed from molded, modular, interlocking, UV-stabilized PVC bars. The top surface of the grating bars shall be raised, water-shedding, slip-resistant and shall meet the IBC Classification C for Wet-Barefoot inclining platform (ramp) test for swimming pool surroundings.

C. Grating shall be a minimum of 15/32” (12mm) wide and an outside depth of 1.0” (25.4mm) with a middle depth that varies, dependent on grating width and load strength requirements.

D. Grating design shall meet ASTM D790-10 or ANSI/AS3996 Class A for covers and grates with load exceeding 10kN (2,248lb).

E. The grating shall provide at least 37.5% open area per foot for unrestricted water flow. The space between the bars shall not exceed 3/8” (9.5mm) and shall comply with IBC child finger/toe entrapment guidelines.

F. Grating width shall allow the insertion of the touchpad holding brackets between the grating and the gutter lip.

G. All inside and outside corners and custom radii sections under 3-feet inside diameter (short radius section) shall be custom fabricated and strengthened by the manufacturer.

H. Fasteners shall be SS-316, provided by the manufacturer, and installed per manufacturer instructions and as shown on drawings.

I. Colors selected by the Architect/Owner from manufacturer’s standard colors.

J. Acceptable manufacturers:
   1. Daldorado LLC
   2. Lawson Aquatics
   3. RenoSys

2.04 POLYMER / HDPE OVERFLOW GUTTER GRATING

A. The grating shall be machined from a marine grade polymer or High Density Polyethylene (HDPE) sheets using 1” thick, UV- stabilized material. Material must meet or exceed ASTM D696 for Coefficient of Linear Expansion of material.

B. The top surface of the grating shall be raised, water-shedding, slip-resistant and shall meet ASTM D2047 slip resistance (wet) with a nominal value of 0.62.

C. Grating design shall meet ASTM D790-10 or ANSI/AS3996 Class A for covers and grates with load exceeding 10kN (2,248lb).

D. The grating shall include machined slots providing at least 37.5% open area per foot for unrestricted water flow. The openings shall not exceed 3/8” (9.5mm) and shall comply with IBC child finger/toe entrapment guidelines. Direction of slots may be parallel and/or perpendicular to the pool wall as indicated in drawings.

E. Grating width shall allow the insertion of the touchpad holding brackets between the grating and the gutter lip.

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F. All inside and outside corners and custom radii sections under 3-feet inside diameter (short radius section) shall be custom fabricated and strengthened by the manufacturer.

G. Fasteners shall be SS-316, provided by the manufacturer, and installed per manufacturer instructions and as shown on drawings.

H. Colors selected by the Architect/Owner from manufacturer's standard colors.

I. Acceptable manufacturers:
   1. Paddock Pool Equipment Company
   2. RenoSys
   3. Natare Corporation

3. EXECUTION

3.01 GENERAL

A. Inspect project conditions prior to installation. Concrete support ledge must the grating manufacturer's minimum width requirements. Concrete surface shall be clean and level to allow a level grating installation. Report conditions detrimental to grating installation in writing to Architect prior to initiating installation.

B. Install grating per manufacturer's instructions. Include manufacturer's PVC grating accessories (PVC curb angle, supports, hand-holds, fasteners and other accessories) as required by project conditions and/or as detailed in drawings.

C. Installation shall not allow water flow beneath the grating and into the gutter trench. Follow manufacturer's installation methods and use manufacturer's approved sealant as required between grating and pool wall surface on the front skimming edge to assure water uniformly skims over the top skimming edge.

D. Provide templates for corners or other conditions for shop fabrication to the manufacturer, per manufacturer's requirements. Field fabrication of corners and short radius sections is not permitted.

E. Gap width between individual grating sections shall not exceed the specified machined opening width or width between bars. Gap width between grating and other surfaces shall not exceed 5/16" (8mm).

F. The skimming edge elevation at the face of the pool wall shall be within 1/8" +/- of the pool static water elevation and must provide continuous skimming around the entire pool perimeter.

G. Install manufacturer's fasteners to anchor grating. Space fasteners as indicated in drawings. Locate fasteners more frequently if required by code or manufacturer requirements.

H. Protect grating from damage and concrete splatter. Clean grating of all dirt, debris, concrete splatter, and staining per manufacturer's instructions. Replace grating that becomes permanently marked, damaged, or stained during the construction process.

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SECTION 13 11 46

POOL EQUIPMENT

1. GENERAL

1.01 SECTION INCLUDES

A. Pool Equipment
   1. Pool fittings, deck, maintenance, and safety equipment.

B. Pool Specialty Equipment
   1. Spray and play equipment manufactured for use in swimming pools and/or spray pads.

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 REFERENCES

A. Specialty Equipment
   1. Equipment submitted shall be designed by manufacturer to meet all federal, state, and local requirements.
   2. Equipment manufacturer shall meet applicable requirements of Consumer Product Safety Commission, ASTM, UL, and other applicable standards.
   3. Comply with ASTM F2461-09, standard practice for manufacture, construction, operation, and maintenance of aquatic play equipment.

1.04 DESCRIPTION OF WORK

A. Refer to General Requirements and Division 01 of the Specifications for additional requirements.

1.05 QUALITY ASSURANCE

A. Refer to General Requirements and Division 01 of the Specifications for additional requirements.

1.06 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Submittals required:
   1. Pool Fittings and Equipment
   2. Deck Equipment
   3. Safety Equipment
   4. Maintenance Equipment
   5. Pool Specialty Equipment
      a. Provide detailed Shop Drawings of equipment being installed, including but not limited to:
         1) Location
         2) Flow rates
         3) Safety equipment

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C. Provide a typed sheet of Operating Instructions, embracing the operation functions and maintenance processes involved in connection with the complete system, including routine maintenance, start-up, and winterization requirements.

D. Printed and bound operating, installation, and service manuals.

1.07 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Refer to General Requirements and Division 01.

1.09 WARRANTIES

A. Pool Equipment
   1. Manufacturer's Standard Warranty

B. Pool Specialty Equipment
   1. Manufacturer's Standard Warranty – 2-year minimum

2. PRODUCTS

2.01 GENERAL

A. Provide the equipment scheduled on the drawings, and any necessary fittings, anchors, and connectors as required and not provided by the manufacturer. The equipment shall be the manufacturer and model number listed or a pre-approved equal. Although unit quantities are shown for value engineering purpose, it is the installing contractor's responsibility to verify actual quantities required.

3. EXECUTION

3.01 INSTALLATION

A. Manufacturer's Installation Instructions
   1. All equipment of this section shall be installed in accordance with industry standards and comply with manufacturer's installation instructions/recommendation. The contractor shall notify the engineer in writing of any discrepancies between the contract documents and the manufacturer's instruction. This notification shall include a request for clarification prior to installation.

B. Install equipment true and level.

C. Protect Equipment from damage during installation and up to substantial completion. Repair or replace damaged parts.

END OF SECTION

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SECTION 13 11 60

POOL QUARTZ AGGREGATE FINISH

1. GENERAL

1.01 SECTION INCLUDES

A. Includes but is not limited to the complete installation of a quartz aggregate finish as designated in the plans and specifications within strict accordance to manufacturer instructions and listed references.

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 REFERENCES

A. The following latest edition reference specifications, guides and standards shall become part of this Specification as if herein written. If provisions conflict, the more stringent provisions shall apply.
   1. National Plasterer's Council "Pool Plaster Technology", Phone # 866-483-4672, www.mpconline.org
   2. National Spa and Pool Institute "Start Up Do's and Don'ts for Newly Plastered Swimming Pools; Why You Should Use Plaster in Your Swimming Pool; Care Tips for New Swimming Pool Plaster and Technical Manual", Phone # 703-838-0083.

1.04 QUALITY ASSURANCE

A. The installer shall provide documentation providing a minimum of five (5) successful installations of similar scope and complexity with current contact information and phone number.

B. The installer shall be a member of the National Plasterer's Council in good standing.

C. The installer shall provide documentation/certification that the laborer's performing the work on site have been factory trained by the pool finish manufacturer.

D. The installer shall provide a letter of reference from the pool finish manufacturer.

1.05 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Submit product literature and sample colors for Quartz Aggregate Finish and manufacturer approved bond coat forty (40) days prior to use. Quartz Aggregate material shall be listed in the material submitted.

C. Submit all documents required above for experience and qualification.

D. Provide three (3) 3'x3' onsite mock-ups of varying grades of coarseness for Owner's approval. The pool contractor is responsible to coordinate approval of mock ups prior to the quartz aggregate pool finish installation.

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1.06 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

1.07 DELIVERY, STORAGE, AND HANDLING

A. If material is stored, it must be in a cool, dry area, protected from the elements.

1.08 WARRANTIES

A. It shall be noted that the pools may be subject to be drained for prolonged periods of time for normal maintenance and cleaning.

B. Provide Manufacturer's Product Warranty on the Quartz Aggregate Pool Finish Product. The pool finish manufacturer shall acknowledge that the pool(s) are subject to be drained completely for winterization and periods during normal maintenance and shall guarantee the pool finish for five (5) years covering any defects caused by product failure.

C. Provide Special Project Application Warranty on the Quartz Aggregate Finish Application. The pool finish installer shall acknowledge that the pool(s) are subject to be drained completely for winterization and periods during normal maintenance and shall guarantee the pool finish application for two (2) years covering any defects caused by the application of the product not limited to: abnormal cracks (other than closed shrinkage cracks that may appear), discoloration, hollow spots and de-lamination.

D. Special Project Warranty on Concrete Structure and Special Aggregate Finish: The Pool Contractor shall guarantee for two (2) years repair of the special aggregate finish covering any defects, cracks and/or leaking in the pool shell.

2. PRODUCTS

2.01 ACCEPTABLE PRODUCTS AND MANUFACTURERS

A. Sun Stone by:
CLI Industries, Inc.
P.O. Box 593704
Orlando, FL 32859,
(407) 851-2660.
www.clindustries.com

B. Approved Equal

2.02 INSPECTION/MEETINGS AND PREPARATION

A. Schedule a pool finish pre-installation conference before applying the pool finish.
1. Attendees: Manufacturer's representative, Pool Finish Installer, Contractor and its superintendent and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the work.
2. Agenda: Review the manufacturer's application instructions and discuss items of significance that could affect progress and installation, including but not limited to the following:
   a. Construction schedule
   b. Critical work sequencing
   c. Accessibility
   d. Designation of responsible personnel qualified to do the work

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e. Concrete surface preparation requirements
f. Bond coat curing and application
g. Pool Finish application and surface preparation
h. Finishing methods as recommended by the manufacturer to include exposing the aggregate
i. Verify and discuss proposed work force is adequate to complete the installation as recommended by the manufacturer
j. Verify pool mechanical and chemical system is prepared for immediate start up after filling the pool

3. Record significant discussions and agreements and disagreements of the conference, and the approved schedule. Promptly publish and distribute any issues or discrepancies to the Architect/Engineer prior to installing the pool finish.

3. EXECUTION

3.01 PREPARATION

A. All pool finish work must strictly follow manufacturer installation guidelines, references and recommendations.

B. Environmental conditions must comply with manufacturer's requirements, and finish may not be applied to frozen or frost laden surfaces or when the temperature is 40 degrees F or due to fall to 40 degrees within 24 hours.

C. The filtration and chemical system must be ready for startup and operating immediately after the pool is filled for pool finish curing per manufacture instruction.

D. The pool finish applicator shall coordinate with the pool shell concrete contractor, specific concrete finish requirements for the pool finish application.

E. It is the applicator's responsibility to ensure that the concrete substrate is adequate for proper bonding of pool finish in accordance with manufacturer recommendations.

F. Prepare all pool surfaces to receive the quartz aggregate finish per manufacturer recommendation.

G. A brush or roll on bonding coat produced and approved by the pool finish manufacturer is required to be applied to the entire pool structure where the pool finish is to be applied. The manufacturer's approved bond coat must be installed and cured in accordance with manufacturer instructions prior to applying the quartz aggregate finish. No exceptions.

H. Adding any supplements to the manufacturer's pre-bag mix is strictly prohibited unless manufacturer's approved written documentation is submitted and is pre-approved by the pool Architect/Engineer.

3.02 APPLICATION

A. All pool finish work must strictly follow manufacturer installation guidelines, references and recommendations.

B. Apply the quartz aggregate finish so that it is flush with the pool gutter, tiles and other embedded items as detailed in the plans and specifications.

C. The pool finish must be installed to a thickness and tolerance between 3/8" to 1/2" or as recommended by the manufacturer.

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D. Finish quartz aggregate in a workmanlike fashion. Trowel surface smooth. Proceed with application to natural breaks.

E. No hollow areas, discolored or delaminated areas will be acceptable, any and all hollow areas must be chipped out and repaired, patching shall be done in a quality workmen's like fashion. If hollow spots are detected where individual patching required will reduce the overall aesthetic value, it will be the Architect/Engineers discretion to have an entire area between breaks removed and replaced.

F. All pool floors and horizontal surfaces shall have a slip resistant finish. Slip resistance shall meet Dynamic Coefficient of Friction (DCOF) value of WET:> 0.42. Abrasive resistance shall meet a DCOF value of WET:>0.60.

G. The contractor is responsible for all brushing/cleaning, chemical monitoring and other requirements set forth by the manufacturer installation and curing instructions. This shall not be the responsibility of the owner.

H. The installing contractor shall guaranty the finish to be free of sharp edges and splatter that may cause cuts on swimmers' feet.

END OF SECTION

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SECTION 13 11 61

POOL CERAMIC TILE

1. GENERAL

1.01 SECTION INCLUDES

A. Porcelain Ceramic Pool Tile

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 REFERENCES

A. The following latest edition reference specifications, guides and standards shall become part of this Section as if herein written. If provisions conflict, the more stringent provisions shall apply.
   1. ANSI A108 – Specifications for Installation of Ceramic Tile
   2. ANSI A137.1 – Tile Grade Requirements
   3. ASTM C-150, Type 1 – Portland Cement
   4. ASTM C-206, 7 Type S – Hydrated Lime
   5. ASTM C-144 - Sand
   6. ANSI A118.1 – Dry Set Mortar
   7. TCA 759 – Dry Set Mortar
   8. ANSI A118.3 – Epoxy Adhesive
   9. TCNA – Tile Council of North America, Handbook for Ceramic, Glass, and Stone Tile Installation, latest edition
   10. ISO 13007 – International Standards Organization; Classification for Grouts and Adhesives.

1.04 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Submit product data and samples for each tile product indicated.

C. Submit shop drawings for approval before ordering tile. Include the following:
   1. Plan, elevations, and sections of pool tank and deck.
   2. Indicate tile layout, patterns, color, expansion joints, junctions with dissimilar materials and setting details.

D. Plans of all tile marking showing exact locations and positions of individual tiles.

E. Maintenance data: Include routine maintenance and stain removal methods.

F. Provide five copies of submittals.

1.05 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

1.06 DELIVERY, STORAGE AND HANDLING

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A. Refer to General Requirements and Division 01.

B. Deliver all products to job in manufacturer's unopened containers with grade seals unbroken and labels intact.

C. Keep tile cartons dry.

1.07 QUALITY ASSURANCE

A. Single source responsibility:
   1. Obtain each type and color tile material from single source.
   2. Obtain setting and grouting materials from one manufacture to ensure compatibility.
   3. Obtain membrane from same manufacturer as setting material or from manufacturer approved by setting material manufacturer to ensure compatibility.
   4. Furnish fifteen (15) year guarantee from installation material manufacturer. This guarantee is inclusive of installation materials, finish product, and labor.

B. Manufacturer Qualifications:
   1. Tile: Minimum five (5) years' experience in manufacture of tile products.
   2. Setting Materials: Minimum ten (10) years' experience in manufacture of setting and grout materials specified.

C. Installer Qualifications: Specializing in tile work having a minimum of 5 years successful documented experience with finish work comparable to that required for this project.

D. Certifications:
   1. Submit "Master Grade Certificate" for each shipment, type, and composition of tile, signed by tile manufacturer and installer with requirements of ANSI A137.1.
   2. Submit manufacturers certifications that tile, setting materials, adhesives, and grouts are suitable for intended use in submerged, swimming pool environment.

E. Field Samples:
   1. Sample Installation:
      a. For final review of each type of installation, construct sample panel of approximately 100 square feet.
      b. Install in location as directed by Architect and approved by Owner's Representative.
      c. Show workmanship of finished work and construction techniques including installation and incorporation of waterproofing membrane. Where a particularly difficult detail or technique is required, or where special sizes or shapes of product are needed, they shall be included in sample panel.
      d. Approved field samples will serve as project standard and may remain as part of the work.

F. Pre-Installation Conference:
   1. Require attendance of General Contractor, Pool Contractor, Tile Installer and Installers of related work. Review installation procedures and coordination required with related and adjacent work. Hold meeting at least one week prior to commencing work of this section. Publish meeting minutes within 5 days of meeting, distribute minutes to participants, copy Architect.
   2. Meeting agenda shall include, but is not limited to:
      a. Surface preparation
      b. Tile and installation material compatibility
      c. Edge protection, transition and pre-fabricated movement joint profiles
      d. Waterproofing techniques
      e. Crack Isolation techniques

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f. Environmental requirements
g. Finish protection

1.08 DELIVERY, STORAGE AND HANDLING

A. Deliver materials in manufacturer's unopened containers, fully identified with brand, name, type and grade. Comply with requirements in ANSI A137.1 for labeling sealed tile packages.

B. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location. Protect materials from contamination, dampness, freezing or overheating in accordance with manufacturer's instructions.

C. Broken, chipped, warped, stained or damaged tile will be rejected.

D. Store liquid latexes in unopened containers and protect from freezing.

1.09 ENVIRONMENTAL REQUIREMENTS

A. Comply with requirements of referenced standards and recommendations of material manufacturers for environmental conditions before, during, and after installation.

B. Do not begin installation until construction in spaces is complete and ambient temperature and humidity conditions are consistent with standards and manufacturers written instructions.

C. Ventilate spaces receiving tile in accordance with manufacturer's instructions.

1.10 WARRANTIES

A. Contractor shall provide written materials and installation warranty, executed by the contractor, Installer and Manufacturer, agreeing to repair or replace tile that fails in material or workmanship within the specified warranty period to Architect/Engineer prior to filling pool with water.
1. Warranty Period: Two (2) years after Substantial Completion, or manufacturer's system warranty, if longer.
2. 1. Warranty Period: Fifteen (15) years after Substantial Completion, or manufacturer's system warranty, if longer

2. MATERIALS

2.01 GENERAL

A. ANSI Standard for Ceramic Tile: Provide tile that complies with ANSI 137.1 for types, compositions, and grades of tile indicated.

B. ANISI Standard for Tile Installation Materials: Provide materials that comply with ANSI standards referenced in "American Standard Specifications for the Installation of Ceramic Tile" with products and materials indicated for setting and grouting.

C. Furnish ceramic tile required as follows. Colors shall be as selected by Owner and Architect.

D. Furnish all tiles required for special markings and lettering in conformance with the drawings and applicable Codes, including depth markings and no diving markers.

E. Racing lane tile edges shall be installed flush with finish pool floor.

F. Target tile shall be installed flush with finish pool wall.

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G. Use surface bullnose on pool edge where required for proper trim and as directed on the drawings.

2.02 POOL CERAMIC TILE

A. Indoor Pool Ceramic Tile
   1. Agrob Bucthtal, Dal-Tile - Keystone or equal as scheduled.
      a. Provide impervious tile with water absorption rate of less than .5% per ASTM C373. Sizes, types, and slip resistance as scheduled, see end of this section [PL101].
      b. Color as selected by Owner/Architect (see Architect's tile selection schedule).
      c. Increase the slip resistance of all endwall target tile with the addition of 7.5% by weight abrasive grains.
      d. Provide special shapes, bullnose and other tile as required.

2.03 MORTAR, GROUT AND ADHESIVE MANUFACTURERS

A. Acceptable Manufacturers: Subject to compliance with requirements herein, provide products from one of the following manufacturers or an approved equal:
   1. Custom Building Products, Huntington Beach, CA.
   2. Laticrete International, Inc., Bethany, CT.
   3. MAPEI Corporation, Deerfield Beach, FL.

2.04 MORTAR MATERIALS: THICK SET

A. Latex – Portland Cement Mortar: Thick Set (ANSI A118.4)

B. Description: Two component system; latex additive water emulsion added to Portland cement mortar in place of water or replacing part of the water. The dry-set mortar must be pre-blended and must be specified by the latex manufacturer for use with the particular latex additive. Use amount of liquid latex recommended by latex additive manufacturer.

C. Acceptable Products:
   1. Thick Bed Mortar mixed with Patching & Leveling Latex Additive, by Custom Building Products
   2. Laticrete 226 thick bed mortar mixed with Laticrete 3701 Mortar Admix, by Laticrete International.
   3. MAPEI, 4 to 1 Mud Bed Mix mixed with MAPEI, Planicrete AC, by MAPEI Corporation.

2.05 MORTAR MATERIALS: THIN SET AND SLURRY BOND COAT

A. Improved Modified Dry-Set Cement Mortar: Thin Set (ANSI A118.15)

B. Description: Two component system; latex additive water emulsion added to Portland cement mortar in place of water or replacing part of the water. The dry-set mortar must be pre-blended and must be specified by the latex manufacturer for use with the particular latex additive. Use amount of liquid latex recommended by latex additive manufacturer.

C. Acceptable Products:
   1. Laticrete 254 Platinum thin set mortar by Laticrete International.
   2. Keralastic System consisting of Keralastic polymer additive and Kerabond dry-set mortar by MAPEI Corporation.

2.06 EPOXY GROUT

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A. Multi-component, factory prepared, 100 percent epoxy resin and hardener with sand or mineral filler material. (ANSI A118.3)

B. Acceptable Products:
1. CEG-Lite by Custom Building Products
2. Laticrete SpectraLock Pro Grout by Laticrete International.
3. Kerapoxy CQ by MAPEI Corporation.

2.07 Elastomeric Joint Sealant

A. Provide as required by TCNA guidelines, and as indicated on drawings, conforming to ASTM 920 and ASTM C 794

B. Acceptable products:
1. Commercial 100% Silicone Sealant by Custom Building Products
2. Latasil by Laticrete International
3. Mapesil by MAPEI Corporation

2.07 ANTI-FRACTURE/ WATERPROOFING MEMBRANE

A. Multi-component, factory prepared, anti-fracture/ waterproofing membrane system comprised of a self-curing liquid rubber polymer

B. Acceptable Products:
1. RedGard by Custom Building Products
2. Laticrete Hydroban by Laticrete International.
3. Mapelastic AquaDefense by MAPEI Corporation.

2.08 WALL PATCH & RENDER MORTAR

A. Quick-Setting, Fiber-Reinforced, Cementitious Patch and Render Mortar.

B. Acceptable Products:

C. 1. Custom Float Bedding Mortar by Custom Building Products
2. Laticrete 3701 Fortified Mortar Bed by Laticrete International
3. Planitop 330 Fast by MAPEI Corporation.

2.09 MISCELLANEOUS MATERIALS

A. Temporary protective coating: Provide product that is formulated to protect exposed surfaces of tile against adherence of mortar and grout, is compatible with tile and mortar/grout products, and is easily removable after grouting is completed without damaging grout or tile.
1. Grout release in form of manufacturers standard propriety liquid coating that is specially formulated and recommended for use as a temporary protective coating for tile.

B. Acceptable Products:
1. 1. Aqua Mix Grout Release by Custom Building Products

2. Stonetech Grout Release by Laticrete International.
3. . UltraCare Grout Release by MAPEI Corporation.

C. Epoxy Grout Haze Remover.

1. 1. Aqua Mix Non-cement Grout Haze Remover
2. Stontech Epoxy Grout Haze & Coating Stripper by Laticrete International

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3. UltraCare Epoxy Grout Haze Remover by MAPEI Corporation

2.10 MIXING MORTAR AND GROUT

A. Mix mortars and grouts in accordance with manufacturer's instructions.

2.11 EXTRA MATERIALS

B. Supply extra 5% of each color of flat and trim in clean marked cartons for Owner's use.

3. EXECUTION

3.01 ACCEPTABILITY OF SURFACES

A. Before tiling, check area to be tiled for acceptability as follows:
1. Surface medium-rough texture.
2. All surfaces to be tiled shall be free of dust, rust, paint, from oil or other release coatings.
3. Provision for ladders and other embedments at proper locations.
4. Concrete true to line, level, plumb and curvature.
5. Width, depth and length will permit finished accuracy of markings and dimensions.
6. Verify surfaces for compatibility with tile setting material manufacturer's requirements prior to installation.

3.02 ENVIRONMENTAL CONDITIONS

A. Protect all newly tiled areas.

B. Maintain temperature at 50 degrees F minimum during tile work and for seven days after completion or furnish protection as approved by the Architect/Engineer.

3.03 PREPARATION

A. Clean substrates.

B. Wet down or wash dry, dusty surfaces and remove excess water immediately prior to tile applications.

C. Install waterproofing membrane at pools A & B.

D. Install slurry bond coat.

E. Do not seal substrate unless required by manufacturer.

F. Prime substrate if required by manufacturer.

3.04 INSTALLATION

A. Tile installation, General
1. Install tile materials in accordance with ANSI A137.1, other reference ANSI or TCNA specifications, and TCNA "Handbook For Ceramic, Glass, and Stone Tile Installation", except for more stringent requirements of manufacturer or these specifications.
2. Cut and fit tight to protrusions and vertical interruptions.
3. Work tile joints uniform in width, subject to variance in tolerance in tile size. Make joints watertight, without voids, cracks, excess mortar or grout.

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4. Prepare surface, fit, set, bond, grout and clean in accordance with applicable requirements of ANSI standards and Tile Council of North America.
5. Floors and walls: dry set: TCNA F113, F115, and W202E.
6. Comply with tile setting material manufacturer's installation requirements.

B. Thin set method
1. Apply mortar or adhesive with notched trowel using scraping motion to work material into good contact with surface to be covered. Back bed tiles with mortar. Maintain 95 percent coverage on back of tile and fully bed all corners.
2. Apply only as much mortar or adhesive as can be covered within allowable windows as recommended by mortar or adhesive manufacturer or while surface is still tacky.
3. Set tile in place and rub or beat with small beating block.
4. Beat or rap tile to ensure proper bond and also to level surface of tile.
5. Align tile to show uniform joints and allow to set until firm.
6. Clean excess mortar or adhesive from surface of tile with wet cheesecloth while mortar is fresh.
7. Sound tile after setting. Replace hollow sounding tiles.

C. Thick Set Method
1. Apply slurry bond coat.
2. While the slurry bond coat is wet, spread the mortar and compact well.
3. While slurry bond coat is wet and sticky, set tile in place and beat in well.
4. Beat or rap tile to ensure proper bond and also to level surface of tile.
5. Align tile to show uniform joints and allow to set until firm.
6. Clean excess mortar or adhesive from surface of tile with wet cheesecloth while mortar is fresh.
7. Sound tile after setting. Replace hollow sounding tiles.
8. Maintain ambient temperature above 50 F and below 100F for 72 hours after installation.

D. Grouting
1. Allow tile to set a minimum of 72 hours before grouting.
2. If bonding materials are rapid setting, follow manufacturer's recommendations.
3. Install in accordance with grout manufacturer's recommendations and ANSI A108.10.
4. Pack joints full and free before mortar takes initial set.
5. Clean excess grout from surfaces per manufacturer recommendations, as work progresses.

3.05 LAYOUT

A. Align all joints to give straight uniform grout lines.

B. Observe exact minimum length per dimensions shown on Contract Drawings.

C. Observe exact minimum width per dimensions shown in Contract Drawings.

D. Observe +/- 1/16" maximum finish elevation tolerance on all gutter edges.

E. Provide expansion joints per TCNA EJ171.

3.06 WORKMANSHIP

A. Supply first-class workmanship in all tile work.

B. Use all products in strict accordance with recommendations and directions of manufacturer.

C. Proportion all mixes in accordance with latest ANSI Standard Specifications.

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D. Smooth all exposed cut edges.

E. Gutter edges shall not vary from level or true plane more than 1/8" of pool static water level.

3.07 CLEANING

A. Clean excess mortar from surface with water as work progresses.

B. Clean tile surface as thoroughly as possible on completion of grouting, preform cleaning while mortar is fresh and before it hardens on surfaces.

C. Before acid cleaning, saturate with clean water all grout joints in areas to be cleaned.

D. Use manufacturers suggested products for cleaning off grout film.

E. Remove temporary protective coating by method recommended by coating manufacturer. Trap and removing coating to prevent it from clogging drains.

3.08 PROTECTION

A. Prohibit traffic from tile finish for 72 hours after installation.

B. Protect work so that it will be without any evidence of damage or use at time of acceptance.

C. Allow tile finish to set for 14 days prior to submerging tile.

3.09 TILE SCHEDULE

A. See Tile schedule, following [PL101], for tile information.

END OF SECTION

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SECTION 13 11 65

WATER FLUME RIDES

1. GENERAL

1.01 DESCRIPTION:

A. Scope of Work: Slide Contractor shall include the furnishing of all labor, materials, equipment, engineering expertise and other incidentals to the construction of:
   1. One (1) outdoor body flume rides all to include but not be limited to:
      a. Fiberglass flume components.
      b. Flume support system.
      c. Starting platform with shade structure, all stairways and railings and steps as necessary to enter ride.
      d. Concrete footings and foundations.

B. Work Provided Elsewhere by General/Pool Contractor in the Specifications or on the Drawings:
   1. Furnish and install pumps for water supply to the slide and all necessary piping as specified by the successful water flume ride bidder.
   2. Cut-outs in pool wall to accept slides.
   3. Patch in and waterproofing of entry sections into the pool after installation of the slide.
   4. Pool and deck structure around slide foundation and columns.
   5. Refer to Division:
      a. Earthwork - 31.
      b. Concrete - 03.
      c. Pool - 13.
      d. Electrical - 26.
   6. Refer to General & Supplementary Conditions - This contractor shall be bound by the General and Supplementary Conditions.

1.02 REGULATIONS

A. The Water Flume Ride starting platform, stairways and railings shall be designed and installed to conform to all requirements of:
   1. The Department of Public Health, and all other state and local health and building codes.
   2. WWA Considerations for Operating Safety, published by World Waterpark Association.
   3. ASTM-F2376-08 “Standard Practice for Classification, Design, Manufacture, Construction, and Operation of Water Slide Systems”.
   4. Suggested Health and Safety Guidelines for recreational water slide flumes, published by U.S. Department of Health and Human Services.
   5. Applicable local, provincial or state building codes.

1.03 SITE CONDITIONS

A. Topography - The drawings indicate the location and building information pertaining to the site for Water Flume.

B. Soils - Refer to Division 02.

1.04 USE OF SITE

A. General
   1. All contractors will restrict their construction to their general area shown on the drawings.

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2. Access and egress shall be coordinated with the general contractor and controlled so as not to conflict with the normal operations of the project.

B. Design
   1. The design, shown on the drawings show the intended use and desired locations of the elements in relation to the adjacent deck uses.
   2. The slide manufacturer, in providing its bid, warrants that it is licensed to do work in the project's state and municipality and holds appropriate professional registrations, permits and/or meets other requirements by authorities having jurisdiction.
   3. The slide manufacturer shall indemnify and hold harmless the architect and the owner from any and all actions caused by or related to the design, fabrication and installation of the work of this specification section.

1.05 PERMITS & FEES

A. The manufacturer and/or the contractor shall provide sufficiently detailed information on all items furnished to secure all necessary permits, including but not limited to:
   1. Building permit.
   2. State Department of Public Health construction and operating permits.

B. All applicable fees and permits for construction will be paid for by the contractor(s) and shall be included in the bid price. The Department of Public Health construction permit for the swimming pools will be paid for by owner.

1.06 JOB CONDITIONS

A. Protection:
   1. Use all means necessary to protect existing work and, in the event of damage, immediately make all repairs and replacements necessary, subject to approval of the architect/engineer and at no additional cost to the owner.

B. Store Products:
   1. Contractor shall assume full responsibility for the protection and safe keeping of products under this contract stored on the site.

C. Lines, Levels and Layout of Work:
   1. The contractor shall establish and guarantee all lines, levels, etc. called for on the drawings.
   2. The contractor shall be responsible for the lines, levels, etc. of all his subcontractors.

1.07 SUBMITTALS

A. Submit in accordance with Division 0.

B. Construction Schedule:
   1. The contractor will cooperate with scheduling determined for the complete job so as not to create any delays or slowdown of other contractors.

C. Shop Drawings:
   1. Promptly after award of the contract, the Slide Contractor shall submit complete shop drawings to include, but not be limited to:
      a. Course layout with dimensions.
      b. Flume detail.
      c. Flume support details, including footings and foundations.
      d. Tower and stair details, including foundations, structural support, bracing, and starting chute as indicated on the plans.

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e. Modifications to plunge area, if any, required for the safety of the contractor's slide path design.
f. Modifications to the slide pumps, if any, required for the contractor's slide path design.

2. All shop drawings shall be certified and sealed by a structural engineer, registered, and licensed in the project state.

1.08 GUARANTEE/WARRANTY

A. Labor and Material Payments Bonds: The contractor may be required to furnish bonds equal to the total contract amount guaranteeing the payment of all labor and materials. See General Project Requirements.

B. Special Project Requirements: Manufacturer agrees to provide evidence of product liability insurance naming the owner, architect and Water Technology, Inc. as additional insured. This insurance will be maintained for a minimum of five (5) years or as required by statue, whichever is greater. In addition, the manufacturer agrees to indemnify, hold harmless, and defend the owner, the architect and Water Technology, Inc. including their agents and employees for any and all claims, damages, losses and expenses of whatsoever nature, including but not limited to claims for property damage, personal injury (including death), attorneys fees, litigation expenses, court costs and all other damages arising out of or incidental to, resulting from or in connection with performance of this manufacturer's work.

C. Qualification of Workmen: At least one (1) person who is thoroughly familiar with the materials, methods and equipment being utilized shall be present at all times during the construction to direct the work where required.

D. Approved Manufacturers - The following manufacturers have submitted sufficient information to be pre-qualified as sources of water flume equipment:
1. PROSLIDE TECHNOLOGY, INC., 2650 Queensview Dr. Suite 150, Ottawa, Ontario, CANADA K2B 8H6, (613) 526-5522.
2. SPLASHTACULAR Operations Facility Kansas: 102 W. Kaskaskia, Suite 201 Paola, KS 66071 (800) 844-5334; Corporate Office – California 78-670 Hwy 111, PMB 225 La Quinita, CA 99253.
3. WHITEWATER, 6700 McMillan Way, Richmond, BC V6W 1J7, (604) 273-1068.

2. PRODUCTS

2.01 FIBERGLASS FLUME COMPONENTS

A. General: The fiberglass flume components are those various elements that compose the water flume and include:
1. Starting Section.
2. Curved Sections.
3. Straight Sections.
4. Drop or Accelerating Sections and Deceleration Sections.
5. Built-up Sections Including Lead-ins and Lead-outs.
6. Exit Section or End Section.
7. All other incidental fiberglass components necessary for a complete system.
8. All sections shall be bolted and caulked. No fiberglass joints allowed.

B. Fiberglass Laminate Materials:
1. Gelcoat: Interior gel coat shall be "crystal clear" high quality isophtalic polyester with U.V. inhibitors. 20 mils thickness. Exterior coat 18 mils wet clear gloss U.V. protective coating.
2. Resins: Thixotopic promoted low profile polyester resin with alternate layers of continuous roving chop and 18 oz. woven roving.

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3. Structure: Fiberglass lamination with sandwich panel center line reinforcement. Standard flume section shall be 3/16" thick, minimum weight 14 oz. per square foot. Flanges shall be minimum 1/4" thick and extend at least 4-3/4" from the slide surface, "L" type.

C. Joints, Connections and Seams:
1. Flume to flume joints shall be fastened with 3/8" stainless steel bolts, washers (2 per bolt), and self-locking nuts.
2. Flume to support system connections shall be made with stainless steel hardware and shall be connected separately form water slide section connections.
3. Fiberglass joint connections shall be made using waterproof non-shrink caulking with suitable adhesion to fiberglass. Silicone sealants will not be permitted.
4. Fiberglassing over seams within the riding surface is not permitted. Sanding within the slide surface should be minimized to maintain adequate gel coat thickness and gloss. Any sanded areas shall be polished to a high gloss until undetectable.

D. Color:
1. Shall be as standard to the manufacturer, and approved by architect/engineer, integral to the fiberglass and the same top and bottom (inside and outside). Verify color selection with architect and owner.

E. Ride Configuration:
1. The body slide length and configuration shall be as indicated in the drawings.
2. Alternate configurations will be considered if rides commence and terminate at the same location/elevation, are of the same length and configuration, and all other features of the specifications are met.

F. Required Components: All slides shall be furnished with the following components:
1. Entry tray shall be pre-plumbed for water injection down-stream of the rider entry point. Rider entry area shall be a non-skid surface, no steps are permitted.
2. Factory pre-drilling of all sections.
3. Waterproof joint sealant as specified in Article 2.01.C.
4. Stainless steel assembly hardware as specified in Article 2.01.C

2.02 FLUME SUPPORT, TOWER, AND STAIR SYSTEM

A. General: The flume support tower and stair system shall consist of all elements necessary to safely and securely support the fiberglass water flume from the starting platform to the plunge pool and consists of:
1. Concrete footings and foundations, including excavation, backfill and compaction.
2. Concrete supports.
3. Factory painted galvanized steel tower and stair system. Follow paint manufacturer's specifications for surface preparation of galvanized steel.
4. All connecting hardware.
5. Shade structure over tower.

B. Design: The supports and footings shall be certified by a licensed structural engineer in the project state for the soil conditions as indicated, and the stresses generated by the water flume ride during use.

C. Concrete
1. Cast-in-place: Minimum compressive strength shall be 3,000 psi at 28 days. Maximum size aggregate shall be 3/4 inch. Slump shall not be more than 3 inches. Concrete shall be vibrated but not to excess so as to cause segregation of materials. Check all applicable drawings for locations of blockouts, anchors, inserts, etc. before concrete is placed.
2. Reinforcing Steel:
a. Fy = 60,000 psi min., for: ASTM A615 (deformed bar) or equivalent. ASTM A82 (welded wire fabric) or equivalent.

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3. Unless otherwise noted, concrete cover of reinforcing shall be as follows: Footing 3 inches and walls, pedestals, and columns 1 ½ inch minimums.
4. All concrete procedures to conform to latest ACI Building Code.
5. Steel reinforcing lap splices for concrete slab shall be a minimum of 36 bar diameter.

D. Structural Steel
1. Shall consist of radial arms with end yoke type fastening assembly for each support point. (NOTE: A central column support with radial arms may be used to support circular sections of 180 degrees or greater.)
2. Structural steel shall be new material of sizes and shapes listed in current AISC handbooks and as indicated on drawings.
3. Shapes and plates: ASTM A36 or equivalent minimum Fy = 36,000 psi (248.2 MpA).
4. Square structural section: ASTM A500 minimum Fy = 46,000 psi (317 MpA).
5. Round steel pipes: ASTM A53 grade B minimum Fy = 35,000 psi (241.3 MpA).
6. Cast steel: ASTM A27 minimum Fy = 36,000 psi or equivalent.
7. Tension rods, bolts, and anchor bolts: ASTM A36 minimum allowable tensile stress Ft =19,100 psi (131.7 MpA).
8. Structural bolts: ASTM A325, friction type or equivalent minimum allowable shear stress, Fv = 21,000 psi (144.8 MpA). Minimum allowable tensile stress, Ft = 44,000 psi (303.4 MpA).
9. Welding electrodes: E480XX electrode (E70XX). Minimum allowable shear stress, Fv=21,000 psi (144.8 MpA).
10. Grout: Masterflow 713 or approved equal non-shirk, non-metallic grout. Use as recommended by manufacturer.
11. All plates, shapes and tubes in contact are to be welded with ¼-inch minimum fillet welds all around unless otherwise indicated.
12. Unless otherwise noted all steel structure shall be galvanized.
13. Contractor shall supply temporary bracing to take care of all loads on the structure during erection to ensure the safety of the structure, leave as long as is required, remove when safety is assured.
14. All flumes and support arms shall be properly set and installed prior to installation of permanent column bracing. Additional column bracing as required by engineer, in addition to those noted on the drawing, shall be provided upon site inspection.
15. All hollow structural sections shall be closed airtight with end plates sealed with welds.
16. All steel shall be thoroughly cleaned of all loose mill scale, loose rust, oil and dirt.
17. Surface to be welded shall be free from loose scale, rust, paint or other foreign matter. Care shall be taken to minimize stresses due to heat expansion, contraction and distortion by using proper sequence in welding and by other approved methods.
18. Fabrication and erection shall conform to the latest editions of the ASTM Specifications and Code of Practice: Welding shall be done by welders certified with AWS D-1.1.
19. Equivalent structural steel sizes listed in current AISC or CISC Handbook may be used upon approval of the architect/engineer.
20. Definitions:
    a. ASTM - American Society of Testing Materials.
    b. AISC - American Institute of Steel Construction
    c. CISC - Canadian Institute of Steel Construction

E. Column System
1. A single or multiple concrete post system shall be used.

F. Starting Tower/Stairway/Railing
1. General -The starting tower/stairway shall consist of:
    a. A factory painted galvanized tower and stair support system with Duradek I-1800 or fiberglass grating. Risers shall be closed.
    b. All stair treads shall have a step edge of a contrasting color.
    c. Powder Coated Type 304 Stainless Steel. Color Selection by Owner/Architect.
    d. Bracing and structural support (non-corrosive).
    e. Hand rails on both sides of entire stair tower.

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2. Design
   a. The structured design shall be certified by an engineer licensed in the project state. Structure shall be sized to handle the user volumes, the height required by the flume length, and the location on the existing topography.
   b. Stair design shall follow current State building codes.
   c. Coordinate with slide manufacturer.
3. Concrete Footings & Piers
   a. Shall be designed and constructed to support the design loads.
   b. All concrete shall have a minimum twenty-eight (28) day compressive strength of 4,000 psi.
   c. All footings shall be on undisturbed soil.
   d. Vertical members shall be on concrete footings, above grade and be secured with flange plates and anchor bolts.
4. Hardware
   a. Steel Hardware, ASTM A-7 or A-36 (hot dipped galvanized).
   b. Bolts, Federal Specification FF-B-SC1.
5. Starting Tower
   a. Shall be factory painted hot dipped galvanized steel structure and shall be supported by their own hot dipped galvanized steel columns. Coordinate design with building structural engineer and slide manufacturer.
   b. Shall have Duradek T-1800 or Fibredek fiberglass grate, decking, treads, and closed risers.
6. Stairs and Railings
   a. Stairs shall have factory painted hot dipped galvanized steel stringers with fiberglass grating treads and closed panels. Stairs shall have four foot minimum width.
   b. Rail system shall be a minimum of 42" high at any point, non-climbable and designed to prevent accidental exit. Handrails shall be located at 34” above stair riser. Color selection by architect and owner.
   c. The stair entry shall be provided with a 42” high lockable gate of similar construction as the rail system.
7. Finish
   a. All galvanized metal:
      1) Wash all galvanized to be painted with a simple green soap, rinse thoroughly.
      2) Clean galvanized surfaces with Xylene, which will leave a whitish film - do not remove film.
      3) Prime galvanized with Devoe Tru-Glaze Epoxy Primer # 12735/12702, following manufacturer’s instructions.
      4) Finish coat to be Devoe Deythane 369 Aliphatic Urethane Gloss Enamel #369-K-XXXX, following manufacturer’s instructions - color by owner.
      5) Second coat may be necessary, depending on appearance of first finish coat; second coat to be Devoe Deythane 369 Aliphatic Urethane Gloss Enamel #369-K-XXXX.
   b. All ferrous metal parts:
      1) Surface Preparation: Blast all surfaces to be coated to the extent of an SSPC-SP6 commercial-grade level of cleanliness. Create a 1.5 - 2.0 mil profile and prime before any rust bloom forms on the surface.
      2) Primer: Spray apply, in the shop, one full coat of Tnemec Series 90-97 Aromatic Urethane Zinc-Rich or Amercoat 68 HS primer to a DFT of 4.0 mils. Allow to cure as per data sheet (4 hours @ 75°F) before applying topcoat.
      3) Topcoat: Spray apply in the shop one even finish coat of Tnemec Series 74 Color Endura-Shield. Acrylic Polyurethane or Ameron PSX-700 finish to a minimum DFT of 5.0 mils. Allow to cure as per data sheet (6 hours @ 75°F) before handling/loading in the shop.
      4) Field Touchup: If the broken area of the shop applied film is rough from scaring, disc-abrade that area smooth and then solvent clean it as per an SSPC-SP1, level of cleanliness. Brush or roller apply one coat of Tnemec Series 135 Chembuild or Ameron epoxy primer. Allow to cure as per data sheet. Brush or roller apply one

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coat of Tnemec Series 74 or Ameron PSX-700 shop applied color to bring the film up to specification thickness.

c. Fiberglass handrail posts:
   1) Finish: Tnemec Series 74 or Ameron PSX-700 shop applied at 5.0 mils DFT.
   2) Field Touch-up: Tnemec Series 74 or Ameron PSX-700 shop applied at 5.0 mils DFT.
   3) Manufacturer: Tnemec 816/483-3400 or Amercoat 800/244-0025 or pre-approved equal.
d. Top deck and landing shall have a non-slip finish.
e. Treads non-slip shall have a non-slip finish.
f. All exposed concrete vertical surface shall have a sack rubbed finish.
g. Seal all concrete with a minimum of two (2) coats of slip resistant Concrete Sealer.
h. Colors shall be as selected by the architect and owner.

3. EXECUTION

3.01 GENERAL

A. The installation of this work shall comply with the following governing and regulatory authorities.
   1. Department of Labor (OSHA).
   2. State Department of Public Health.
   3. All State and Local Building Codes.
   4. Any other agency that has legal jurisdiction.

3.02 FLUME CONSTRUCTION

A. All construction shall conform to the recommendations of the approved manufacturer selected through this bidding process.

B. The manufacturer shall be responsible for the quality of the flume material and equipment.

C. The slide manufacturer shall be responsible for the layout, assembly and erection of the flume products in a workmanlike manner.

D. Flume joints shall be properly connected so as to avoid abrupt edges that may cause irritation.

E. Flume flanges shall be bolted together with 3/8 inch diameter bolts. All connectors shall be stainless steel.

F. Polyurethane sealant or any other approved sealant shall be provided on each flange connection.

G. All flumes shall be properly cleaned and surfaces smooth finished, and complete with all the necessary sections prior to use of the slide.

H. All flumes underground shall be carefully backfilled to prevent the flumes from getting damaged. All fill in contact with flume shall be of good quality and free of boulders.

I. Flumes shall be inspected by the representative of the slide manufacturer to ensure a smooth finish prior to acceptance of work.

3.03 OWNER INSTRUCTION

A. In addition to Section 13150 requirements for operation/maintenance instructions, the slide manufacturer shall deliver four complete sets of operating and maintenance instructions bound together in a complete manual for the slide(s) to the Architect/Engineer. Including, but not limited to the following:

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1. Narrative on the slide operation including recommended loading procedures and operation through all sequences.
2. Recommended user requirements including recommended signage and height and weight restrictions.
3. Written slide warranty and contact information.
4. Maintenance information and recommended maintenance program.

END OF SECTION

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SECTION 26 05 00

GENERAL PROVISIONS

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

A. The provisions of this section apply to all work specified in all sections of Division 26.

B. The General Conditions, Supplementary Conditions, Special Requirements, and applicable portions of Division 1 of the Specification are a part of this Division and the requirements contained herein are supplementary to them.

1.02 PRINCIPAL WORK IN THIS SECTION

A. Division 26 includes all in materials, equipment, fabrication, installation and tests required for fully operational and safe systems, including, but not limited to, all appurtenances and features, whether specified or shown on drawings, required for conformance with applicable Codes and approval by the Authorities Having Jurisdiction.

B. Special Conditions

1. All existing electrical, telephone, CATV and street/parking lot lighting systems shall remain fully operational until new systems are completely installed, tested and ready for final connection. Demolition work shall not start until new systems are completely installed, tested and approved and fully operational. See specification for "Sequence of Work".

2. All existing materials and equipment which are required to be removed or disconnected (but are not indicated for use in the new work) shall be offered to the Architect/Owner's Representative for salvage. If declined by the Architect/Owner's Representative, the Contractor shall dispose of the existing materials and equipment off campus at a bonafide disposal area. Items indicated to be salvaged shall remain the property of the Owner and, if not indicated to be reused in the new work, shall be transported and delivered to an on-campus storage area as directed by the Architect/Owner's Representative.

1.03 RELATED WORK AND REQUIREMENTS

A. Related Work Specified Elsewhere:

B. Coordination: Refer to Architectural, Civil, Structural and Mechanical Drawings for the construction details and coordinate the work of this Division with that of other Divisions. Order the work of this Division so that progress will harmonize with that of other Divisions and all work will proceed expeditiously. The work of this Division shall include direct responsibility for the correct placing and connection of electrical work in relation to the work of other Divisions.

C. Examine other Divisions for work related to the work of this Division especially Division 15 / 25 - MECHANICAL.

1.04 REFERENCE STANDARDS

A. By submitting a Bid, Contractor is deemed to represent himself as competent to

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accomplish the work of this Division in conformance with applicable Codes. In case of conflict between the Contract Documents and Code requirements, the Codes shall take precedence. Should such conflicts appear, cease work on the parts of the contract affected and immediately notify the Architect in writing. It shall be the Contractor's responsibility to correct, at no cost to the Owner, any work he executes in violation of Code requirements. Specific references to Codes elsewhere in this Division are either to aid the Contractor in locating applicable information or to deny him permission to use options which are permitted by Codes.

B. Applicable Codes: (Current adopted editions unless otherwise noted):

1. National Electrical Code.

2. California Building Code

3. California Fire Code

4. CCR Titles (as applicable)

5. Fire Marshal Regulations

6. Regulations of all other authorities having jurisdiction.

C. Where conflict or variation exists among Codes, the most stringent shall govern.

1.05 QUALITY ASSURANCE

A. All equipment and accessories shall be the product of a manufacturer regularly engaged in its manufacture.

B. All equipment and accessories shall be new, free from defects and listed by Underwriters' Laboratories, Inc. or bearing its label unless otherwise noted.

C. All equipment and accessories shall be in compliance with the applicable standards and with all applicable National, State and local Codes.

D. All items of a given type shall be the products of the same manufacturer. Contractor shall provide same manufacturer's product throughout the project.

1.06 SUBMITTALS

A. Submittal requirements for Division 26 shall be in accordance with Division 1 except as modified herein. All time requirements shall be based on the notice to proceed date of the General Contract. All materials and equipment furnished under Division 26 shall be submitted to the Architect/ Owner's Representative for approval. Such approval shall be in writing from the Architect/ Owner's Representative including that which is exactly as specified. Any materials or equipment installed without written approval shall be subject to immediate removal.

B. Submittals shall be packaged separately for each system or major piece of equipment and reviewed by the Contractor for verification of compliance with the contract documents prior to submitting. Separate, bound submittals shall be provided for each specification section to the. All interface between specification sections shall be indicated in each submittal. Any deviations from the specific materials or substitutions for items specified shall be itemized in the front of each submittal.

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C. Equipment submittal shall include manufacturer's name, model, type, number, finish, size and capacity of the equipment at the given conditions. This information shall be provided in bound submittals, each containing an index and all submittals. [The number of copies shall be as indicated in Division 1. The title shall provide the project name, system identity, the specification number and the Contractor's name and address. This submittal shall be in addition to the shop drawings hereinafter specified. Partial submittals of material submitted from time to time are not acceptable and may be returned without review.

D. Equipment Layout Drawings: "Equipment Layout Drawings" shall be provided for each equipment room, yard or area containing equipment items furnished under Division 26. Layout drawings shall consist of a plan view of the room or area (to a 1/4"=1'-0" minimum scale) showing projected outlines of all equipment, complete with dotted lines indicating all required clearances, including all clearances needed for removal or service. Location of all conduit and pull boxes shall be indicated. Drawings shall indicate any and all conflicts with other trades.

E. General

1. Architect's review of the submittal is only for general conformance with design concept of the project and general compliance with the information given in the contract documents. The submittal procedure is required in an effort to minimize the problems which occur due to the discovery of Contractor non-compliance at the construction site. The Contractor is responsible for confirmation and correlation of the dimensions, quantities and sizes, for information that pertains to fabrication methods or construction techniques and for coordination of work of all Divisions of the work. Deviations, if any, from Contract Documents shall be clearly and completely indicated (by a separate letter if deviations are extensive) in the submittals, and the lack of such is deemed complete compliance with Contract Documents without any deviations. Submittals favorably processed will not relieve the Contractor of responsibility for deviations not so reported nor for errors in the submittal.

2. Contractor Stamp: All submittals shall be stamped with the following text or equivalent and signed by the Contractor's representative.

> "IT IS HEREBY CERTIFIED THAT THE PRODUCTS SHOWN AND MARKED IN THIS SUBMITTAL ARE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS AND CAN BE INSTALLED IN THE ALLOCATED SPACES EXCEPT WHERE DEVIATIONS ARE NOTED.
>
> CERTIFIED BY: _____ DATE:_____"

3. All submittals shall be complete and with catalog data and information properly marked to show, among other things, equivalency of product (where substitution is requested) adequacy in capacity and performance to meet minimum capacities of performance as specified or indicated. Arrange the submittals in the same sequence as these specifications and reference (at the upper right-hand corner) the particular specification provision for which each submittal is intended. Incomplete submittals will be rejected.

4. Refer to the other sections of this Division for specific requirements.

B. Material List

Within 15 days after award of Contract, submit for approval a complete list of materials proposed for use. Furnish names and addresses of manufacturers, catalog numbers (where applicable) types and trade names. For purposes of uniformity, only one manufacturer will be accepted for each class or type of material. This list is in addition to Shop Drawings.

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C. Shop Drawings:

Submit shop drawings with such promptness as to cause no delay in the work. Do not commence fabrication of the equipment until the approved drawings are received from the Owner's representative.

D. Other Submittals: As required by other sections of this Division.

1.07 SUBSTITUTIONS:

1. A sample of each item submitted for substitution shall be accompanying the submittal for review.

2. A unit price quotation shall be provided with each item intended for substitution. This quote shall include a unit price for the specified item and a unit price for the intended substitute item. The Contractor shall also provide a total (per item) of the differential payback to the Owner should the intended substitute item be approved as equivalent to that which is specified.

1.08 OPERATION AND MAINTENANCE MANUALS:

A. The Contractor shall furnish operation and maintenance manuals for each electrical system and for each piece of equipment. The complete manual, bound in hardback binders or an approved equivalent, shall be provided to the [Architect/Owner's Representative.] [The number of copies shall be as indicated in Division 1.] One (1) manual shall be furnished prior to the time that system or equipment tests are performed and the remaining manuals shall be furnished before the contract is completed. The following identification shall be inscribed on the cover the words "OPERATING AND MAINTENANCE MANUAL," the name and location of the building, the name of the Contractor and the contract number.

B. The manual shall include the names, addresses and telephone numbers of each Subcontractor installing equipment and systems and of the local manufacturer's representatives for each item of equipment and each system. The manual shall have a table of contents and be assembled to conform to the table of contents with tab sheets placed before instructions covering each subject. The instruction sheets shall be legible with large sheets of drawings folded in. The manual shall include, but not be limited to, the following:

1. System layout showing components.

2. Devices and controls.

3. Wiring and control diagrams showing operation and control of each component.

4. Sequence of operation describing start-up, operation and shutdown.

5. Functional description of the principal system components.

6. Installation instructions.

7. Maintenance and overhaul instructions.

8. Lubrication schedule including type, grade, temperature range and frequency.

9. Safety precautions, diagrams and illustrations.

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10. Test procedures.

11. Performance data.

12. Parts list.

C. The parts list for equipment shall indicate the sources of supply, recommended spare parts and the service organization which is reasonably convenient to the building site. The manual shall be complete in all respects for all equipment, controls and accessories provided.

D. The manual shall include the following:

1. Final panelboard schedules (8-1/2”x11”).

2. Final motor control center schedules (8-1/2”x11”).

3. Coordination studies and short circuit calculations.

4. Final test reports (including infrared scans).

1.09 RECORD DRAWINGS:

A. On one (1) set of contract drawings, kept at the site during construction, mark all work that is installed differently from that shown on plans, including revised circuitry, material or equipment. Sufficient dimensions shall be provided to locate all materials installed beneath and outside the building including, but not limited to, underground conduits, cabling, ground rods and stubouts.

B. All changes or revisions to the contract drawings including, but not limited to, those indicated by amendment, change order, field order, written response to RFI/RFC or other contractual means shall be kept current as the work progresses and shall be incorporated onto the final record drawings.

C. Accurately locate and dimension all underground and embedded conduit runs on the record drawings.

D. The marked drawings shall be kept current as the work progresses and shall be available for inspection upon request.

E. At the close of construction, prepare a set of accurate reproducible record drawings and turn them over to the Architect. The correct and completed record drawings are a prerequisite to final contract payment.

1. As part of the reproducible record drawings, the Contractor shall include:

a. Final motor control schedules as modified during construction.

b. Final panelboard schedules as modified during construction.

F. Drawings and specifications are intended to complement each other. Where a conflict exists between the requirements of the drawings and/or the specifications, request clarification.

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G. The Architect shall interpret the drawings and the specifications, and his decision as to the true intent and meaning thereof and the quality, quantity, and sufficiency of the materials and workmanship furnished thereunder shall be accepted as final and conclusive.

H. In case of conflicts not clarified prior to Bidding deadline, use the most costly alternative (better quality, greater quantity, or larger size) in preparing the Bid. A clarification will be issued to the successful Bidder as soon as feasible after the Award and if appropriate a deductive change order will be issued.

All provisions shall be deemed mandatory except as expressly indicated as optional by the word "may" or "option".

Accumulate the following and deliver to the Architect's representative prior to final acceptance of the work.

I. Record (as-built) Drawings:

1. Maintain in good order in the field office a complete set of electrical prints. Update the drawings daily with neat and legible annotations in red ink showing the work as actually installed.

2. The actual size, location and elevation of all buried lines, boxes, monuments, and stubouts shall be accurately located and diminished from building walls or other permanent landmarks.

3. Furnish the originals.

J. O&M Manuals: Furnish copies of an operating and maintenance manual as indicated in Division 1. Each manual shall be bound and indexed and shall include the following:

1. Operating and service instructions for systems and equipment as required by other sections of this Division. A spare parts list recommended for purchase by Owner shall be included.

2. Updated approved materials list, shop drawings, and catalog information as required by SUBMITTALS subsections.

3. List of material and equipment manufacturers (with names, addresses and phone numbers of local suppliers) in order to expedite ordering of replacement parts by the Owner. This list may be integrated with the material list.

K. Permits and Certificates of Inspection: Furnish the originals.

L. Testing procedures and test results required in this and other sections: Furnish two copies.

M. Other data required by other sections of this Division: Furnish two copies.

1.10 MATERIALS

A. Materials shall be new, in accordance with the specifications of the Institute of Electrical and Electronic Engineers (IEEE), National Electrical Manufacturer's Association (NEMA), National Fire Production Association (NFPA), and the National Electrical Code (NEC), and shall have an Underwriter's Laboratories (UL) listing and bear their label where such services is available.

B. Materials for the same purpose shall be of the same make and shall be the manufacturer's latest

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standard design that complies with the specification requirements.

1.11 SUBSTITUTIONS

A. Substitutions will be allowed only in strict conformance with the General Conditions of the Contract and Division 1.

B. Whenever in specifications any materials, process, or article is indicated or specified by grade, patent, or proprietary name or by name of manufacturer such specification shall be deemed to be used for the purpose of facilitating description of material, process, or article desired and shall be substantially equal or better in every respect to that so indicated or specified. If material, process, or article offered by Contractor is not, in opinion of architect, substantially equal or better in every respect to that specified, then Contractor shall furnish material, process, or article specified. Burden of proof as to equality of any material, process, or article shall rest with Contractor. Contractor shall submit request together with substantiating data for substitution of an "or equal" item within thirty-five (35) days after award of contract. Provision authorizing submission of "or-equal" justification data shall not in any way authorize an extension of time for performance of this contract.

C. When no specific make of material, apparatus or equipment is mentioned, a first-class specification grade product made by a well established manufacturer shall be used that conforms to the requirements of the contract documents and is acceptable to the Architect.

D. The Contractor shall assume any extra costs to other work or trades resulting from the use of substitutions. All substitutions accepted shall be provided at no extra charge.

1.12 WORKMANSHIP AND INSTALLATION METHODS

A. Workmanship shall be in conformance with the "NECA (National Electrical Contractors Association) Standards of Installation" and the best standard practice of the trade except where indicated otherwise.

B. Execute the work so as to contribute to ease of operation and maintenance, maximum accessibility and best appearance. Execute it so that the installation will conform and adjust itself to the building structure, its equipment and its usage. The work shall be symmetrical, plumb, uniform, properly aligned and firmly secured in place.

C. Install equipment in accordance with the manufacturer's instructions and recommendations unless otherwise noted or specified.

1.13 LOCATIONS, SIZES, ROUTINGS AND CLEARANCES

A. For the purpose of clearness and legibility, the drawings are essentially diagrammatic. The size and location of equipment is shown to scale wherever possible, but the Contractor shall make use of all the data in the Contract Documents, and shall verify such information. Contractor is responsible for the equipment provided by him fitting in the spaces available while maintaining required working, ventilation, and equipment maintenance access space. Exercise particular care that such space is not infringed by the work of other Divisions.

B. Conduit Routing: The drawings show the points of termination of the conduits, and may suggest a route for the conduit. However, it shall be the responsibility of the Contractor to install the conduits with a minimum number of bends in such a manner as to conform to the structure, avoid obstructions, preserve headroom, keep openings and passageways clear, and meet all Code requirements with such offsets and special fittings as may be required. Conduit shall be run concealed in building structure unless otherwise indicated.

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1.14 TESTS

A. General

1. Demonstrate that all components of the work of this Division have been provided and that they operate in accordance with the Contract Documents.

2. Provide instruments and personnel for tests and demonstrations. Submit signed test results.

3. Notify the Architect in writing, seven days in advance of tests to allow presence of his representative.

B. Specific: Refer to the other sections of this Division for test requirements.

Cleaning shall be done as the work proceeds. Remove waste and debris weekly to keep the site as clean as is practical.
Vacuum clean dirt and debris from interiors of switch-boards, panelboards, transformers, and similar items. Leave exposed parts of the electrical work in a neat, clean and usable condition, with painted surfaces unblemished and plated metal surfaces polished. Clean lighting fixtures and wipe lamps clean.

1.15 CLEANUP AND HOUSEKEEPING

A. Cleaning shall be done as the work proceeds. Remove waste and debris weekly to keep the site as clean as is practical.

Vacuum clean dirt and debris from interiors of switch-boards, panelboards, transformers, and similar items. Leave exposed parts of the electrical work in a neat, clean and usable condition, with painted surfaces unblemished and plated metal surfaces polished. Clean lighting fixtures and wipe lamps clean.

1.16 DESCRIPTION OF BID DOCUMENTS

A. Contract Documents, the Contractor shall notify and secure directions from the Architect.

B. Drawings and specifications are intended to complement each other. Where a conflict or ambiguity exists between the requirements of the drawings and the specifications, request clarification. Do not proceed with work without direction.

C. The [Architect] [Owner's Representative] shall interpret the drawings and the specifications. The interpretation by the [Architect] [Owner's Representative] as to the true intent and meaning thereof and the quality, quantity and sufficiency of the materials and workmanship furnished thereunder shall be accepted as final and conclusive.

D. In the case of conflicts or ambiguities not clarified prior to the bidding deadline, use the most costly alternative (better quality, greater quantity and larger size) in preparing the bid. A clarification will be issued to the successful bidder as soon as feasible after the award and, if appropriate, a deductive change order will be issued.

E. Where items are specified in the singular, this division shall provide the quantity as shown on drawings plus any spares or extras indicated on the drawings or in the specifications.

1.17 DEFINITIONS:

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A. "Provide" means furnish, install and connect unless otherwise described in specific instances.

B. "Extend", "Submit", "Repair" and similar words mean that the Contractor shall accomplish the action described.

C. "Codes" or "Code" means all codes, laws, statutes, rules, regulations, ordinances, orders, decrees, and other requirements of all legally constituted authorities and public utility franchise holders having jurisdiction.

D. "Verify Location" when noted for an item, means that the locations of the item within the room is tentative and not necessarily as shown on the drawings. Contractor shall request the exact location of the item from the Architect's Representative during construction. The item may be located anywhere in the room at no additional cost to the Owner.

E. "Products", "materials" and "equipment" are used interchangeably and mean materials, fixtures, equipment, accessories, etc.

F. "Utility areas" are defined as mechanical, electrical, telephone, janitorial, and similar rooms or spaces which are normally used or occupied only by custodial or maintenance personnel. "Public areas" are defined as the rooms or spaces which are not included in the utility areas definition.

1.18 EXAMINATION OF SITE:

1.19 PERMITS, FEES AND INSPECTIONS:

A. Obtain, schedule and pay for permits, licenses, approvals, tests, and inspections required by legally constituted authorities and public utility franchise holders having jurisdiction over the work.

1.20 ELECTRO-MECHANICAL REQUIREMENTS:

1.21 GUARANTEES:

A. Guaranty requirements for Division 26 shall be in accordance with Division 1 except as modified herein.

B. All materials and equipment provided shall be warranted for a minimum period of one (1) year from the official date of completion.

C. Refer to Division 1 for guaranty format.

TEMPORARY ELECTRICAL SERVICE:

D. The Contractor shall provide labor and materials required for the installation and maintenance of temporary lighting and required power sources for the Contractor's equipment inside the building or construction site and for pedestrian walkways during the period of construction.

E. The building or construction site shall be sufficiently illuminated so that construction work can be safely performed. Special attention shall be given to adequately lighting stairs, ladders, pedestrian walkways, floor openings, etc. Walkway lights shall be controlled by a switch within the building or construction site.

F. Power shall be on and all lighting shall be in operation before painting work commences.

1.22 PROGRESS OF UNDERGROUND CONSTRUCTION:

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1.23 ELECTRICAL PHASING AND PHASE ROTATION:

1.24 ELECTRICAL SERVICE OUTAGES:

Written notice of proposed utility outages shall be delivered to the [Architect/ Owner's Representative] at least fourteen (14) days prior to the start of the proposed outage. Contractor shall be responsible for all the related work that may be required to provide continued electrical service. The Contractor shall be responsible for the sequencing of all work including, but not limited to, installation of new electrical lines, abandonment of existing electrical lines and interfacing between new and existing lines to ensure uninterrupted service.

B. Describe outages.

1.25 SEQUENCING OF ELECTRICAL WORK:

1.26 POSTED OPERATING INSTRUCTIONS:

1.27 TRAINING:

A. User staff and maintenance personnel shall be thoroughly trained in the use of each system or major piece of equipment installed. This training shall be provided as part of the Contractors bid to supply the system or equipment. Additional training requirements shall be as specified in the subsequent sections of Division 26.

1.28 DELIVERY AND STORAGE:

A. Equipment and materials shall be properly stored, adequately protected and carefully handled to prevent damage before and during installation. Equipment and materials shall be handled, stored and protected in accordance with the manufacturer's recommendations. Electrical conduit shall be stored to provide protection from the weather and accidental damage. Plastic conduit shall be stored on even supports and in locations not subject to direct sunrays or excessive heat. Cables shall be sealed, stored and handled carefully to avoid damage to the outer covering or insulation and damage from moisture and weather. Damaged or defective items shall be replaced with new items at no cost to the Owner. The [Architect/ Owner's Representative] shall determine if a damaged or defective item is to be replaced with a new item. The decisions by the [Architect/ Owner's Representative] in these matters shall be final.

END OF SECTION

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SECTION 26 05 19

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Building and Exterior wires and cables rated 600 V and less.
2. Connectors, splices, and terminations rated 600 V and less.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

1.3 INFORMATIONAL SUBMITTALS

A. Field quality-control test reports.

1.4 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 CONDUCTORS AND CABLES

A. Copper Conductors: Comply with NEMA WC 70.

B. Conductor Insulation: Comply with NEMA WC 70 for specified types herein.

C. Multiconductor Cable: Not allowed.

2.2 CONNECTORS AND SPLICES

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

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B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. AFC Cable Systems, Inc.
2. Hubbell Power Systems, Inc.
3. O-Z/Gedney; EGS Electrical Group LLC.
4. 3M; Electrical Products Division.
5. Tyco Electronics Corp.
6. Or equal.

C. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

D. All cables shall arrive on the job site in un-broken packages.

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

A. Copper conductors: Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

A. Insulation: Thermoplastic type THWN or THHN. Use conductors with 150 degrees C insulation in abnormally high ambient temperatures as applicable. Type THHN may be used in dry locations.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

A. All conductors are to be installed in conduit/raceways.

B. Conceal cables in finished walls, ceilings, and floors, unless otherwise indicated.

C. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.

E. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.

F. Identify and color-code conductors and cables according to Division 26 Section "Identification for Electrical Systems."

G. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

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H. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.

1. Use oxide inhibitor in each splice and tap conductor for aluminum conductors.

3.4 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS & FIRESTOPPING

A. Provide sleeves for conduits passing through poured concrete walls and concrete or concrete fireproofed steel beams. Provide 18 gauge galvanized steel and place in correct position in forms before concrete is poured. Sleeve shall be at least ½" above finished floor all around. Pack void between sleeve and conduit as follows:
1. Where conduit is run between floors in a fireproof shaft, pack with Duxseal
2. Where conduit penetrates a fire separation, any of the following packing methods may be used to restore integrity of the separation if code approved: cement, mineral fiber sprayed with flame retardant coating or Dow Corning 3—6548 RTV silicon foam, 3M caulk #CP25, 3M putty #303 or equal. Seal shall be water tight and shall be accomplished prior to wire pulling.

3.5 FIELD QUALITY CONTROL

A. Perform tests and inspections and prepare test reports.

B. Tests and Inspections:
1. After installing conductors and cables and before electrical circuitry has been energized, test for compliance with requirements.
2. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.

C. Test Reports: Prepare a written report to record the following:

1. Test procedures used.
2. Test results that comply with requirements.
3. Test results that do not comply with requirements and corrective action taken to achieve compliance with requirements.

D. Remove and replace malfunctioning units and retest as specified above.

END OF SECTION

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SECTION 26 05 33

RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.

B. See Division 26 Section "Underground Ducts and Raceways for Electrical Systems" for exterior ductbanks and manholes, and underground handholes, boxes, and utility construction.

1.2 SUBMITTALS

A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.

B. Shop Drawings: For custom enclosures and cabinets. Include plans, elevations, sections, details, and attachments to other work.

1.3 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 METAL CONDUIT AND TUBING

A. Rigid Steel Conduit: ANSI C80.1.

B. IMC: ANSI C80.6.

C. EMT: ANSI C80.3.

D. FMC: Zinc-coated steel.

E. LFMC: Flexible steel conduit with PVC jacket.

F. Fittings for Conduit (Including all Types and Flexible and Liquid tight), EMT, and Cable: NEMA FB 1; listed for type and size raceway with which used, and for application and environment in which installed.

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1. Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 886.
2. Fittings for EMT: **compression** type.

2.2 NONMETALLIC CONDUIT AND TUBING

A. ENT: NEMA TC 13.

B. RNC: NEMA TC 2, **Type EPC-40-PVC,** unless otherwise indicated.

C. LFNC: UL 1660.

D. Fittings for ENT and RNC: NEMA TC 3; match to conduit or tubing type and material.

E. Fittings for LFNC: UL 514B.

2.3 METAL WIREWAYS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Cooper B-Line, Inc.
2. Hoffman.
3. Square D; Schneider Electric.
4. Or equal

C. Description: Sheet metal sized and shaped as indicated, NEMA 250, Type **1, 12 or 3R**, as indicated.

D. Fittings and Accessories: Include couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.

E. Wireway Covers: **As indicated**.

F. Finish: Manufacturer's standard enamel finish.

2.4 NONMETALLIC WIREWAYS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Hoffman.
2. Lamson & Sessions; Carlon Electrical Products.
3. Or equal

C. Description: PVC plastic, extruded and fabricated to size and shape indicated, with snap-on cover and mechanically coupled connections with plastic fasteners.

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D. Fittings and Accessories: Include couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.

2.5 SURFACE RACEWAYS

A. Surface Metal Raceways: Galvanized steel. **Manufacturer's standard enamel finish or in color selected by Architect per drawings**.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Thomas & Betts Corporation.
b. Walker Systems, Inc.; Wiremold Company (The).
c. Wiremold Company (The); Electrical Sales Division.
d. Or equal.

B. Surface Nonmetallic Raceways: Two-piece construction, manufactured of rigid PVC with texture and color selected by Architect.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Butler Manufacturing Company; Walker Division.
b. Enduro Systems, Inc.; Composite Products Division.
c. Hubbell Incorporated; Wiring Device-Kellems Division.
d. Lamson & Sessions; Carlon Electrical Products.
e. Panduit Corp.
f. Walker Systems, Inc.; Wiremold Company (The).
g. Wiremold Company (The); Electrical Sales Division.
h. Or equal.

2.6 BOXES, ENCLOSURES, AND CABINETS

A. Sheet Metal Outlet and Device Boxes: NEMA OS 1.

B. Cast-Metal Outlet and Device Boxes: NEMA FB 1, **ferrous alloy**, Type FD, with gasketed cover.

C. Nonmetallic Outlet and Device Boxes: NEMA OS 2.

D. Metal Floor Boxes: **Cast metal**, **fully adjustable**.

E. Nonmetallic Floor Boxes: Nonadjustable, round.

F. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.

G. Cast-Metal Access, Pull, and Junction Boxes: NEMA FB 1, **cast aluminum**, with gasketed cover.

H. Hinged-Cover Enclosures: NEMA 250, Type 1, with continuous-hinge cover with flush latch, unless otherwise indicated.

1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.

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2. Nonmetallic Enclosures: PVC.

I. Cabinets:

1. NEMA 250, Type 1, galvanized-steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel.
2. Hinged door in front cover with flush latch and concealed hinge.
3. Key latch to match panelboards.
4. Metal barriers to separate wiring of different systems and voltage.
5. Accessory feet where required for freestanding equipment.

PART 3 - EXECUTION

3.1 RACEWAY APPLICATION

A. Outdoors: Apply raceway products as specified below, unless otherwise indicated:

1. Exposed Conduit: **Rigid steel conduit, EMT, RNC, Type EPC-40-PVC, RNC, Type EPC-80-PVC**.
2. Concealed Conduit, Aboveground: **Rigid steel conduit**, **EMT**, **RNC**
3. Underground Conduit: Type EPC-**40 or 80**-PVC, direct buried.
4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): **LFMC or LFNC**.
5. Boxes and Enclosures, Aboveground: NEMA 250, Type **3R or 4**X as noted.

B. Comply with the following indoor applications, unless otherwise indicated:

1. Exposed, Not Subject to Physical Damage: **EMT or rigid steel conduit**.
2. Exposed and Subject to Severe Physical Damage: **Rigid steel conduit**. Includes raceways in the following locations:

   a. Loading dock.
   b. Corridors used for traffic of mechanized carts, forklifts, and pallet-handling units.
   c. Mechanical rooms.

3. Concealed in Ceilings and Interior Walls and Partitions: **EMT**.
4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.
5. Damp or Wet Locations: **Rigid steel conduit**.
6. Raceways for Optical Fiber or Communications Cable: **EMT**.
7. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4X in damp or wet locations.

C. Minimum Raceway Size: **1/2-inch** trade size.

D. Raceway Fittings: Compatible with raceways and suitable for use and location.

1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.

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3.2 INSTALLATION

A. Conduit passing through roof: flash and counter flash. Method shall be compatible with roofing system and acceptable to the owner's representative.

B. Comply with NECA 1 for installation requirements applicable to products specified in Part 2 except where requirements on Drawings or in this Article are stricter.

C. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.

D. Complete raceway installation before starting conductor installation.

E. Arrange stub-ups so curved portions of bends are not visible above the finished slab.

F. Install no more than the equivalent of three 90-degree bends in any conduit run except for communications conduits, for which fewer bends are allowed.

G. Conceal conduit and EMT within finished walls, ceilings, and floors, unless otherwise indicated.
   1. Conduit shall not be imbedded in slabs on grade.

H. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating sealing bushings to protect conductors, including conductors smaller than No. 4 AWG.

I. All conduit stubs shall have insulated bushings.

J. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull rope.

K. Raceways for Optical Fiber and Communications Cable: Install as follows:

   1. 3/4-Inch Trade Size: Install raceways in maximum lengths of 50 feet .
   2. 1-Inch Trade Size and Larger: Install raceways in maximum lengths of 75 feet.
   3. Install with a maximum of two 90-degree bends or equivalent for each length of raceway unless Drawings show stricter requirements. Separate lengths with pull or junction boxes or terminations at distribution frames or cabinets where necessary to comply with these requirements.

L. Install raceway sealing fittings at suitable, approved, and accessible locations and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points:

   1. Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
   2. Where otherwise required by NFPA 70.

M. Expansion-Joint Fittings for RNC: Install in each run of aboveground conduit that is located where environmental temperature change may exceed 30 deg F, and that has straight-run length that exceeds 25 feet.

   1. Install expansion-joint fittings for each of the following locations, and provide type and quantity of fittings that accommodate temperature change listed for location:

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a. Outdoor Locations Not Exposed to Direct Sunlight: **125 deg F** temperature change.
b. Outdoor Locations Exposed to Direct Sunlight: **155 deg F** temperature change.
c. Indoor Spaces Connected with the Outdoors without Physical Separation: **125 deg F** temperature change.
d. Attics: **135 deg F** temperature change.

2. Install fitting(s) that provide expansion and contraction for at least 0.00041 inch per foot of length of straight run per deg F of temperature change.
3. Install each expansion-joint fitting with position, mounting, and piston setting selected according to manufacturer's written instructions for conditions at specific location at the time of installation.

N. Flexible Conduit Connections: Use maximum of 72 inches of flexible conduit for **recessed and semirecessed lighting fixtures,** equipment subject to vibration, noise transmission, or movement; and for transformers and motors.

1. Use LFMC in damp or wet locations subject to severe physical damage.
2. Use LFMC or LFNC in damp or wet locations not subject to severe physical damage.

O. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall.

P. Set metal floor boxes level and flush with finished floor surface.

Q. Set nonmetallic floor boxes level. Trim after installation to fit flush with finished floor surface.

3.3 INSTALLATION OF UNDERGROUND CONDUIT

A. Direct-Buried Conduit:

1. Excavate trench bottom to provide firm and uniform support for conduit. Prepare trench bottom as specified in Division 31 Section "Earth Moving" for pipe less than 6 inches in nominal diameter.
2. Install backfill as specified in Division 31 Section "Earth Moving."
3. After installing conduit, backfill and compact. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process. Firmly hand tamp backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction as specified in Division 31 Section "Earth Moving."
4. Install manufactured duct elbows for stub-ups at poles and equipment and at building entrances through the floor, unless otherwise indicated. Encase elbows for stub-up ducts throughout the length of the elbow.
5. Install manufactured rigid steel conduit elbows for stub-ups at poles and equipment and at building entrances through the floor.

a. Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with 3 inches of concrete.
b. For stub-ups at equipment mounted on outdoor concrete bases, extend steel conduit horizontally a minimum of 60 inches from edge of equipment pad or foundation. Install insulated grounding bushings on terminations at equipment.

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6. Warning Planks: Bury warning tape approximately 12 inches above direct-buried conduits, placing them 24 inches o.c. Align tape along the width and along the centerline of conduit.

B. Bury underground conduit (except under building) to a 24” minimum depth below finished grade to top of conduit or concrete envelope (when encased)except that for conduit below a road or driveway to dimension shall me a 30” minimum.

1. All conduit risers from below grade shall be PVC schedule 80 with the exception of risers to lighting pole may be PVC schedule 40.

3.4 FIRESTOPPING

A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly.

END OF SECTION

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SECTION 26 05 53

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Identification for raceways.
2. Identification of power and control cables.
3. Identification for conductors.
4. Underground-line warning tape.
5. Warning labels and signs.
6. Instruction signs.
7. Equipment identification labels.
8. Miscellaneous identification products.

1.2 SUBMITTALS

A. Product Data: For each electrical identification product indicated.

1.3 QUALITY ASSURANCE

A. Comply with ANSI A13.1.

B. Comply with NFPA 70.

C. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.

D. Comply with ANSI Z535.4 for safety signs and labels.

E. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

PART 2 - PRODUCTS

2.1 POWER RACEWAY IDENTIFICATION MATERIALS

A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway size.

B. Colors for Raceways Carrying Circuits at 600 V or Less:

1. White letters on a black field.
2. Legend: Indicate voltage and system or service type.

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C. Self-Adhesive Vinyl Labels for Raceways Carrying Circuits at 600 V or Less: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

D. Snap-Around Labels for Raceways Carrying Circuits at 600 V or Less: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeve, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

E. Snap-Around, Color-Coding Bands for Raceways Carrying Circuits at 600 V or Less: Slit, pretensioned, flexible, solid-colored acrylic sleeve, 2 inches long, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

F. Write-On Tags: Polyester tag, 0.015 inch thick, with corrosion-resistant grommet and cable tie for attachment to conductor or cable.

1. Marker for Tags: Permanent, waterproof, black ink marker recommended by tag manufacturer.
2. Marker for Tags: Machine-printed, permanent, waterproof, black ink marker recommended by printer manufacturer.

2.2 POWER AND CONTROL CABLE IDENTIFICATION MATERIALS

A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway and cable size.

B. Self-Adhesive Vinyl Labels: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

C. Write-On Tags: Polyester tag, 0.015 inch thick, with corrosion-resistant grommet and cable tie for attachment to conductor or cable.

1. Marker for Tags: Permanent, waterproof, black ink marker recommended by tag manufacturer.
2. Marker for Tags: Machine-printed, permanent, waterproof, black ink marker recommended by printer manufacturer.

D. Snap-Around Labels: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeve, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

E. Snap-Around, Color-Coding Bands: Slit, pretensioned, flexible, solid-colored acrylic sleeve, 2 inches (50 mm) long, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

2.3 CONDUCTOR IDENTIFICATION MATERIALS

A. Color-Coding Conductor Tape: Colored, self-adhesive vinyl tape not less than 3 mils thick by 1 to 2 inches wide.

B. Self-Adhesive Vinyl Labels: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

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C. Marker Tapes: Vinyl or vinyl-cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.

D. Write-On Tags: Polyester tag, 0.015 inch thick, with corrosion-resistant grommet and cable tie for attachment to conductor or cable.

1. Marker for Tags: Permanent, waterproof, black ink marker recommended by tag manufacturer.
2. Marker for Tags: Machine-printed, permanent, waterproof, black ink marker recommended by printer manufacturer.

2.4 FLOOR MARKING TAPE

A. 2-inch- wide, 5-mil pressure-sensitive vinyl tape, with black and white stripes and clear vinyl overlay.

2.5 UNDERGROUND-LINE WARNING TAPE

A. Tape:

1. Recommended by manufacturer for the method of installation and suitable to identify and locate underground electrical **and communications** utility lines.
2. Printing on tape shall be permanent and shall not be damaged by burial operations.
3. Tape material and ink shall be chemically inert, and not subject to degrading when exposed to acids, alkalis, and other destructive substances commonly found in soils.

B. Color and Printing:

1. Comply with ANSI Z535.1 through ANSI Z535.5.
2. Inscriptions for Red-Colored Tapes: ELECTRIC LINE, HIGH VOLTAGE.
3. Inscriptions for Orange-Colored Tapes: TELEPHONE CABLE, CATV CABLE, COMMUNICATIONS CABLE, OPTICAL FIBER CABLE.

C. Tag: Type I:

1. Pigmented polyolefin, bright-colored, continuous-printed on one side with the inscription of the utility, compounded for direct-burial service.
2. Thickness: 4 mils.
3. Weight: 18.5 lb/1000 sq. ft..
4. 3-Inch Tensile According to ASTM D 882: 30 lbf , and 2500 psi.

D. Tag: Type ID:

1. Detectable three-layer laminate, consisting of a printed pigmented polyolefin film, a solid aluminum-foil core, and a clear protective film that allows inspection of the continuity of the conductive core, bright-colored, [**continuous-printed on one side** with the inscription of the utility,]compounded for direct-burial service.
2. Overall Thickness: 5 mils.
3. Foil Core Thickness: 0.35 mil.
4. Weight: 28 lb/1000 sq. ft.
5. 3-Inch Tensile According to ASTM D 882: 70 lbf, and 4600 psi.

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2.6 WARNING LABELS AND SIGNS

A. Comply with NFPA 70 and 29 CFR 1910.145.

B. Self-Adhesive Warning Labels: Factory-printed, multicolor, pressure-sensitive adhesive labels, configured for display on front cover, door, or other access to equipment unless otherwise indicated.

C. Baked-Enamel Warning Signs:

1. Preprinted aluminum signs, punched or drilled for fasteners, with colors, legend, and size required for application.
2. 1/4-inch grommets in corners for mounting.
3. Nominal size, 7 by 10 inches.

D. Metal-Backed, Butyrate Warning Signs:

1. Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs with 0.0396-inch galvanized-steel backing; and with colors, legend, and size required for application.
2. 1/4-inch grommets in corners for mounting.
3. Nominal size, 10 by 14 inches.

E. Warning label and sign shall include, but are not limited to, the following legends:

1. Multiple Power Source Warning: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES."
2. Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES."

2.7 INSTRUCTION SIGNS

A. Engraved, laminated acrylic or melamine plastic, minimum 1/16 inch thick for signs up to 20 sq. inches and 1/8 inch thick for larger sizes.

1. Engraved legend with White letters on black face.
2. Punched or drilled for mechanical fasteners.
3. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.

B. Adhesive Film Label: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch.

C. Adhesive Film Label with Clear Protective Overlay: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch. Overlay shall provide a weatherproof and UV-resistant seal for label.

2.8 EQUIPMENT IDENTIFICATION LABELS

A. Adhesive Film Label with Clear Protective Overlay: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch. Overlay shall provide a weatherproof and UV-resistant seal for label.

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B. Self-tapping, stainless-steel machine screws (no rivets or glue), Engraved, Laminated Acrylic or Melamine Label: Adhesive backed, with white letters on a dark-gray background. Minimum letter height shall be 3/8 inch.

2.9 MISCELLANEOUS IDENTIFICATION PRODUCTS

A. Paint: Comply with requirements in Division 09 painting Sections for paint materials and application requirements. Select paint system applicable for surface material and location (exterior or interior).

B. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.

B. Apply identification devices to surfaces that require finish after completing finish work.

C. Self-Adhesive Identification Products: Clean surfaces before application, using materials and methods recommended by manufacturer of identification device.

D. Attach signs and plastic labels that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.

E. System Identification Color-Coding Bands for Raceways and Cables: Each color-coding band shall completely encircle cable or conduit. Place adjacent bands of two-color markings in contact, side by side. Locate bands at changes in direction, at penetrations of walls and floors, at 50-foot maximum intervals in straight runs, and at 25-foot maximum intervals in congested areas.

F. Underground-Line Warning Tape: During backfilling of trenches install continuous underground-line warning tape directly above line at 6 to 8 inches below finished grade. Use multiple tapes where width of multiple lines installed in a common trench [or concrete envelope exceeds 16 inches overall.

G. Painted Identification: Comply with requirements in Division 09 painting Sections for surface preparation and paint application.

3.2 IDENTIFICATION SCHEDULE

A. Accessible Raceways and Metal-Clad Cables, 600 V or Less, for Service, Feeder, and Branch Circuits More Than 2**0**A, and 120 V to ground: Install labels at 10-foot maximum intervals.

B. Accessible Raceways and Cables within Buildings: Identify the covers of each junction and pull box of the following systems with self-adhesive vinyl labels with the wiring system legend and system voltage. System legends shall be as follows:

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1. Emergency Power.
2. Power.
3. UPS.

C. Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use color-coding conductor tape to identify the phase.

1. Color-Coding for Phase and Voltage Level Identification, 600 V or Less: Use colors listed below for ungrounded feeder and branch-circuit conductors.

a. Color shall be factory applied.
b. Colors for 208/120-V Circuits:

1) Phase A: Black.
2) Phase B: Red.
3) Phase C: Blue.

c. Colors for 480/277-V Circuits:

1) Phase A: Brown.
2) Phase B: Orange.
3) Phase C: Yellow.

d. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches from terminal points and in boxes where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding. Locate bands to avoid obscuring factory cable markings.

D. Install instructional sign including the color-code for grounded and ungrounded conductors using adhesive-film-type labels.

E. Conductors to Be Extended in the Future: Attach marker tape to conductors and list source.

F. Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.

1. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, and pull points. Identify by system and circuit designation.
2. Use system of marker tape designations that is uniform and consistent with system used by manufacturer for factory-installed connections.
3. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual.

G. Locations of Underground Lines: Identify with underground-line warning tape for power, lighting, communication, and control wiring and optical fiber cable.

1. Limit use of underground-line warning tape to direct-buried cables.
2. Install underground-line warning tape for both direct-buried cables and cables in raceway.

H. Workspace Indication: Install floor marking tape to show working clearances in the direction of access to live parts. Workspace shall be as required by NFPA 70 and

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29 CFR 1926.403 unless otherwise indicated. Do not install at flush-mounted panelboards and similar equipment in finished spaces.

I. Warning Labels for Indoor Cabinets, Boxes, and Enclosures for Power and Lighting: Baked-enamel warning signs.

1. Comply with 29 CFR 1910.145.
2. Identify system voltage with black letters on an orange background.
3. Apply to exterior of door, cover, or other access.
4. For equipment with multiple power or control sources, apply to door or cover of equipment including, but not limited to, the following:

    a. Power transfer switches.
    b. Controls with external control power connections.

J. Operating Instruction Signs: Install instruction signs to facilitate proper operation and maintenance of electrical systems and items to which they connect. Install instruction signs with approved legend where instructions are needed for system or equipment operation.

K. Emergency Operating Instruction Signs: Install instruction signs with white legend on a red background with minimum 3/8-inch- high letters for emergency instructions at equipment used for power transfer.

L. Equipment Identification Labels: Unless otherwise noted, equipment identified in place shall be affixed in self tapping machine screws. On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and the Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems include power, lighting, control, communication, signal, monitoring, and alarm systems unless equipment is provided with its own identification.

1. Labeling Instructions:

    a. Indoor Equipment: Engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with 1/2-inch- high letters on 1-1/2-inch- high label; where two lines of text are required, use labels 2 inches high.
    b. Outdoor Equipment: Engraved, laminated acrylic or melamine label.
    c. Elevated Components: Increase sizes of labels and letters to those appropriate for viewing from the floor.
    d. Fasten all equipment labels that do not

END OF SECTION

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SECTION 31 00 00

EARTHWORK

PART 1 - GENERAL

1.1 SECTION INCLUDES:

A. Removal, stockpile and placement of topsoil and subsoil.

B. Excavation, including as required for foundations, slabs-on-grade, paving, and landscaping.

C. Fill and backfilling to required elevations.

D. Consolidation and compaction.

E. Site Contouring.

1.2 RELATED SECTIONS:

A. Section 31 20 00: Earthwork

1.3 REFERENCES

A. Geotechnical Report: As provided with Bid Documents

B. ASTM C136 - Method for Sieve Analysis of Fine and Course Aggregates.

C. ASTM D1556 - Test Method for Density of Soil in Place by the Sand - Cone Method.

D. ASTM D1557 - Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3).

E. ASTM D 2922 - Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

F. ASTM D 3017 - Moisture Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

1.4 QUALITY ASSURANCE:

A. Contractor Qualifications

1. Installing Company: Company specializing in grading and excavation work, with minimum 5 years documented experience in projects of similar scale and scope.

2. Installing Foreman: Individual specializing in grading and excavation work, with minimum 5 years documented experience in projects of similar scale and scope.

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1.5 PROJECT RECORD DOCUMENTS

A. Submit documents under provisions of Section 01300.

B. Accurately record location of utilities remaining, rerouted utilities, new utilities by horizontal dimensions, elevations or inverts, and slope gradients.

1.6 PROTECTION

A. Protect trees, shrubs, lawns, rock outcropping, and other features remaining as portion of final landscaping.

B. Protect benchmarks, existing structures, fences, roads, sidewalks, paving and curbs.

C. Protect above or below grade utilities, which are to remain.

1.7 PUBLIC AGENCY STANDARDS

A. Perform all earthwork and related structures and devices indicated as public agency standards in accordance with the Regional Standards Drawings as indicated on the plans and these specifications.

PART 2 - PRODUCTS

2.1 STRUCTURAL FILL MATERIAL

A. On-Site Fill Materials:

1. On-site soils may be approved for use in structural and non-structural areas (i.e., landscaping and below the 3-foot pavement capping material). Residual fill soils should not be used in required fills. Excavated on-site materials shall be removed from the site at the contractors' expense.

2. Limit maximum dimension of rock to 3 inches in any dimension.

3. Limit maximum dimension of rock to 1 inch in any dimension at all fills located in landscaped areas within 12 inches of surface.

4. Provide soil fill with no more than 30 percent passing the #200 sieve, or otherwise approved by Geotechnical Engineer.

5. Provide soil fill with minimum 40 percent by weight material smaller than 3/4 inch, or otherwise approved by Geotechnical Engineer.

6. Soils that have an expansion index greater than 20 should not be used within the upper 5 feet of finish building pad subgrade, within the upper 2 feet of finish hardscape subgrade, or as retaining wall backfill.

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7. During grading operations, soil types other than those evaluated in the geotechnical report may be encountered. The Geotechnical Engineer should be notified to evaluate the suitability of these soils for use.

8. Oversized materials should be broken down to no greater than 3 inches in largest dimension for use in fill, used as landscape material, or disposed off-site.

B. Import Soils

1. Comply with criteria specified in 2.1.A above, and the following additional requirements.

   a. ASTM D 2487 soil classification groups GC, GW, GP, GM, SW, SP and SM or a combination of these symbols; free of debris waste, frozen materials, vegetation, and other deleterious matter.

   b. Expansion Index: very low to low with a maximum value of 20, as measured by ASTM D 4829.

   c. A minimum resistivity value greater than 1,000 ohm-centimeters, chloride content of less than 500 ppm and sulfate content of less than 1,000 ppm and pH greater than 5.5

2. Agricultural Suitability: Obtain approval of Engineer of all fill materials used in landscaped areas prior to placing, including providing soil test/analysis results.

3. Use of clay or adobe soil is not acceptable.

4. Obtain approval of Geotechnical Engineer of all imported fill materials prior to delivery on site and prior to placement.

C. Aggregate Base Course Material: Provide “Crushed Aggregate Base” as per SSPWC Section 200-2.2

D. Controlled Low-Strength Material (CLSM)

1. CLSM shall be used as fill from bottom of building footings to formational in accordance with 3.2.D. Formational materials shall be undisturbed.

   a. CLSM sand-cement shall comply with Section 201-6 of the Greenbook Specifications, with minimum compressive strength of 150-psi.

   b. Aggregates (sand) shall conform to Section 201-6 and 200-1.5 of the Greenbook Specifications.

   c. CLSM shall have a maximum slump of 5-inches.

   d. A set of test cylinders shall be sampled for each 150-cubic yards or fraction thereof of CLSM placed per ASTM D 5971. Compressive strength testing of CLSM shall be performed in accordance with ASTM D 4832. CLSM shall also be tested for plastic unti weight in accordance with ASTM C 138. The plastic unit weight shall not deviate more and +/-10% of theoretical unit weight shown on approved mix design.

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2.2 PERMEABLE FILL MATERIAL

A. Permeable Backfill at Retaining Walls:

1. Characteristics: Natural river or bank sand; free of silt, clay, loam, friable or soluble materials, or organic matter.

2. Graded within the following limits:

SIEVE SIZE	PERCENT PASSING
1 inch	100
3/4 inch	90 to 100
3/8 inch	40 to 100
No. 4	25 to 40
No. 8	18 to 33
No. 30	5 to 15
No. 50	0 to 7
No. 200	0 to 3

3. Provide material with sand equivalent exceeding 75.

B. Base Material at Interior Building Slabs

1. Characteristics: Clean, fine graded, granular base material, not contaminated with clay, silt, or organic material

2. Graded within the following limits:

SIEVE SIZE PERCENT PASSING No. 100 10 to 30

3. The granular material should be compacted and proof-rolled prior to placement of the vapor barrier. The vapor barrier should be protected from puncture and if damaged be repaired per the manufacturer's recommendations.

2.3 DESIGN CRITERIA

A. General

1. All improvements shall be constructed per the referenced standards, the improvement drawings, and as specified in this section.

2. Where criteria shown on drawings or specified in this specification exceed that of the referenced standards, the more stringent criteria shall apply.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Inspection

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1. Prior to work of this section, carefully inspect previously installed work. Verify all such work is complete to the point where this installation may properly commence.

2. Verify that work of this section may be installed in strict accordance with the original design, all pertinent codes and regulations, and all pertinent portions of the referenced standards.

    a. Verify that survey benchmark and intended elevations for the Work are as indicated.

    b. Identify required lines, levels, contours, and datum.

    c. Identify known utilities. Stake and flag locations.

    d. Maintain and protect existing utilities remaining which pass through work area.

    e. Verify fill materials to be used are acceptable to Geotechnical engineer.

    f. Prior to placement of fill material in areas where formation is not exposed at the bottom of the excavation, verify scarification and compaction of excavated surface is complete. Formational materials should not be scarified or compacted.

3. In the event of discrepancy, immediately notify the Engineer.

4. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

B. Preparation

1. Provide all staking and field engineering required to implement the work as shown on the drawings. The layout of all work shall be performed by a California State licensed land surveyor provided by the Contractor.

2. Protect all stakes and benchmarks. Replace all stakes and benchmarks damaged during the course of construction at no cost to Owner.

3. Set grade stakes using instrument technology, at 25 foot grid interval at areas with gradients greater than 2 percent.

4. Set grade stakes, using instrument technology, at 10 foot grid interval at areas with gradients less than 2 percent.

5. Provide all equipment of such type, function and design as required to achieve specified values. Where necessary, provide rubber tired and vibratory sheepsfoot compaction equipment.

C. When the Geotechnical Engineer determines existing soils in excavated areas do not provide sufficient bearing capacity or are otherwise unacceptable, remove such soils as necessary to expose soils with adequate capacity and characteristics, as approved by the Geotechnical Engineer.

D. Clearing and Grubbing

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1. Where surficial grasses, weeds and other vegetation has grown in areas of work previously cleared under Section 311200, remove such vegetation to a minimum depth of two inches below existing grade under this contract.

2. Discing and mixing of vegetation, trash, debris, and other deleterious materials with surface soils prior to grading is not permitted.

3. Remove all buried debris, rubble, trash, or other material not deemed suitable by the Geotechnical Engineer.

3.2 SUBSOIL EXCAVATION

A. Excavate soil in work areas under this contract as specified in this Section.

1. Stockpile excavated material for reuse. Segregate material complying with specified criteria as suitable for re-use as compacted structural fill.

2. Where approved by Geotechnical Engineer, on-site material that does not comply with structural fill criteria may be used for earthwork that does not support structures or paving.

3. After completion of grading, remove unsuitable and excess soils from site in conformance with the regulations of jurisdictional authority.

B. Excavate subsoil required to accommodate building foundation, slabs-on-grade, paving, landscaped areas, site contouring and site structures.

1. Excavate to sub-grade elevation as required to accommodate spreading of previously removed topsoil in upper 12 inches.

2. Grade top perimeter of excavation to prevent surface water from draining into, or eroding excavation.

C. Grade surfaces to provide positive drainage and prevent water ponding, prevent drainage onto adjoining properties and to implement the work.

1. Provide all field engineering and layout to construct work as shown on drawings, including establishing final grades, slope transitions, drainage paths and swales, and related engineering work.

2. Construct all drainage courses, swales, toes and tops of slopes, and related earthwork operations necessary to maintaining drainage and access as shown on drawings or required by jurisdictional authority.

D. Excavate areas as follows:

1. Structures, including all buildings and isolated footings

a. Excavate and remove existing soils at least 12-inches below existing grade for all areas that will support structures, improvements, or fill. Excavate laterally a minimum of 5 feet beyond the foundation footprint which includes perimeter spread

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footings for canopy or covered walkway structures, and at least 2 feet beyond exterior flatwork areas.

b. Soils having an expansion index (EI) greater than 20 are not allowed within the upper 5-feet of finish building pad subgrade or within the upper 2 feet of finish flatwork subgrade. Removals should extend at least 5 feet beyond the perimieter of building foundations and at least 2 fee beyond exterior flatwork areas.

2. All landscaped areas.

a. Contour site as shown on landscaped drawings and rip existing soils to a minimum depth of 2 feet below existing grade or finished soil grade, whichever is lower.

b. Excavate a minimum of 12” below finish landscape grade and 2 feet beyond landscape edge.

3. Asphalt and Concrete Paving Areas.

a. Exposed pavement subgrade shall be scarified to a depth of 12-inches, brought to approximately optimum moisture content, and compacted to at least 95 percent of the maximum dry density, as determined in general accordance with ASTM D1557.

b. Excavate a minimum of two feet beyond paving edge.

4. Utilize excavation methods adjacent to existing structures that prevent the loss of material from beneath foundations, including concrete underpinning where required.

5. Rock Considerations:

a. Remove all rock of any kind, including material requiring removal by use of heavy earthwork equipment, or hydro-hammers within limits of excavation and within 12inches of all trenching. Blasting is not acceptable.

b. There is no “rock clause”, and no additional compensation for the removal of rock, if encountered.

6. Prior to scarification and compaction, obtain Geotechnical Engineer review and acceptance of excavated surface, and remove additional materials as required.

3.3 COMPACTION OF EXCAVATED SURFACES

A. Prepare areas designated to receive subsequent fill and backfill materials, Portland cement or asphaltic concrete paving as follows:

1. Subsequent to removal of the fill soil layer per 3.2.D, areas to receive fill and/or surface improvements should be scarified to a minimum depth of 8 inches.

2. Water, mix and aerate as necessary to moisture condition to slightly above optimum moisture content.

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3. Compact to a relative compaction of 90 percent minimum based on ASTM D 1557, except as noted in 3.3.A.

4. Compact the upper 12 inches to a relative compaction of 95 percent at paving areas based on ASTM D 1557, except as noted in 3.3.A.

B. Prepare areas designated to receive landscaping as follows:

1. Subsequent to removal of the upper 2 feet of unsuitable fill soil layer, areas to receive fill and/or surface improvements should be scarified to a minimum depth of 8 inches.

2. Water, mix and aerate as necessary to moisture condition to slightly above optimum moisture content.

3. Compact to a relative compaction of 90 percent based on ASTM D 1557.

C. Fill Placement

1. Place fill with specified materials at locations as scheduled below.

a. Provide all cribbing, shoring, and sheathing required to perform work. Comply with all applicable regulations for design, installation, maintenance and removal of such construction products, including obtaining any required permits.

2. Do not place fill over porous, wet, or spongy subgrade.

3. Use equipment and procedures as specified.

a. Place and compact materials in continuous layers not exceeding 8 inches in loose thickness using methods which do not disturb or damage foundations, perimeter drainage and waterproofing systems, or utilities in trenches.

b. Compact all fill material as scheduled in this Section per ASTM D 1557.

c. Overfill all slope banks and compact. After compaction, trim to grade and contour as shown on drawings.

4. Where occurs, place fill concurrently on both sides of foundation elements in maximum 8 inch loose layers. Compact to 90 percent of maximum density per ASTM D 1557 with mechanical tampers per Article 3.3.A above.

5. Compaction by flooding or jetting is prohibited.

6. Maintain moisture content of fill materials at slightly above optimum moisture content and as required to attain required compaction density.

7. Slope grade as shown on drawings.

8. Make grade changes gradual, blending slope into level areas. After completion of grading operation, proof roll earthwork areas. Repair low or spongy spots developed during rolling operation.

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9. Extend compacted fill to design surfaces of slopes and compact surface.

10. Remove all excess soils and dispose off site in a legal manner.

11. Provide all fill material required to achieve grades, slopes and contours as shown on drawings at no additional expense to Owner.

12. The upper 1 foot of pavement subgrade should be compacted to at least 95 percent of maximum dry density just prior to constructing the pavement section. Fills below building slabs may be compacted to 95 percent of maximum dry density to reduce differential settlement between the slab and foundations supported on formational materials. The Geotechnical Engineer shall observe and test subgrade prior to acceptance.

D. Provide dust control as required per this section.

3.4 FIELD QUALITY CONTROL

A. Field inspection will be performed under provisions of Section 014529.

B. Geotechnical Engineer shall verify the suitability of soil materials.

C. Field inspection and testing will be performed under provisions of Section 014529, and conducted by the Owners Geotechnical Engineer.

D. Perform earthwork under the continuous observation of the Owner's Geotechnical Engineer. Earthwork fill operations shall comply with the requirements of Part 2, Title 24, CCR.

E. Tests and analysis of fill material will be performed in accordance with ASTM D1557.

1. The Geotechnical Engineer will review and approve all fill materials, including imported materials.

F. Compaction testing will be performed in accordance with ASTM D1556 and D6938 or other referenced methods.

G. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to Owner.

3.5 TOLERANCES

A. Final elevations shall comply with grades as shown on drawings.

B. Lawn or unimproved areas: Plus or minus 1 inch.

C. Walks: Plus or minus 1/2 inch.

D. Pavement: Plus or minus 1/2 inch.

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E. Not more than one point within any 10 x 10 foot area shall exceed required elevations, measured to a tolerance of plus or minus 0.1 feet.

3.6 PROTECTION

A. Protect excavations by methods required to prevent cave-in or loose soil from falling into excavation.

B. Protect finished Work under provisions of Section 015000.

C. Re-compact fills subjected to vehicular traffic.

3.7 DUST CONTROL

A. Adjacent Streets: Adjacent street frontages shall be swept at least once a day to remove silt and other dirt which is evident from construction activities.

B. Construction Vehicles: The Contractor is responsible for cleaning construction vehicles leaving the site on a daily basis to prevent dust, silt, mud and dirt from being released or tracked offsite. Adjacent streets shall be swept clean daily.

C. Grading Spoils: Dry stockpiles of soil shall be watered to prevent the generation of airborne dust. Trucks transporting dry soil shall be covered with tarpaulins.

D. Water: Water shall be sprayed on all exposed earth surfaces during clearing, grading, earth moving and other site preparation activities. The exposed earth shall be watered throughout the day to minimize dust. The Contractor shall obtain a hydrant permit from the Environmental Utilities Department.

E. Wind Allowances: Grading activities shall be restricted or halted when winds exceed 15 miles per hour as deemed necessary by the Public Works Inspector.

3.8 FILL SCHEDULE

A. Structures

1. Place approved import fill material conforming to Section 2.1- Structural Fill, placed to depth as necessary to achieve required subgrade elevations.

B. Site Contouring areas:

1. Place fill materials as required to achieve site grades and profiles as shown on drawings and as required for drainage.

2. In landscaped areas, place stockpiled topsoil as final 12 inches of fill.

3. Compact the upper 12 inches to a relative compaction of 85 percent and 90 percent for the remainder.

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C. Paving and Deck Areas.

1. Place approved imported fill material, placed to depth as necessary to achieve required subgrade elevations.

D. Fill to Correct Over-excavation:

1. Concrete as specified or fill material as directed by, and at the discretion of, the Geotechnical Engineer.

END OF SECTION

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SECTION 31 10 00

SITE CLEARING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Removal of existing trees and vegetation

B. Clearing vegetation, debris, trash and other materials within limits indicated

C. Grubbing of vegetation within limits indicated

D. Stripping of topsoil within limits indicated

E. Removing above-grade site improvements within limits indicated

F. Disconnecting, capping or sealing, and abandoning site utilities in place

G. Disconnecting, capping or sealing, and removing site utilities

H. Disposing of objectionable material

1.2 RELATED SECTIONS

A. Section 31 20 00, Earth Moving

B. Section 32 13 18, Cement and Concrete for Exterior

1.3 RELATED DOCUMENTS

A. Geotechnical Report: As provided with bid documents.

B. ANSI A300: Industry Standards for Tree Care Practices

C. Applicable Publications
   1. "Trees and Building Sites," official publication of the International Society of Arboriculture.
   2. "Arboriculture," the care of trees and shrubs by Dr. Richard Harris.

1.4 DEFINITIONS

A. ANSI: American National Standards Institute

B. CAL-OSHA: California Occupational Safety and Health Administration.

C. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of weeds, roots, and other deleterious materials.

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1.5 SUBMITTALS

A. Follow submittal procedures outlined in Section 26 05 33 – General Provisions.

B. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.

1.6 QUALITY ASSURANCE

A. Do not remove or prune trees without first securing a permit from the appropriate agency.

B. Prune to the standards of the International Society of Arborists and to ANSI A300.

1.7 PROJECT CONDITIONS

A. Except for materials indicated to be stockpiled or to remain the Owner's property, cleared materials are the Contractor's property. Remove cleared materials from site and dispose of in lawful manner.

B. Salvageable Improvements: Carefully remove items indicated to be salvaged and store where indicated on plans or where designated by the Owner's Representative. Avoid damaging materials designated for salvage.

C. Unidentified Materials;

1. If unidentified materials are discovered, including hazardous materials that will require additional removal other than is required by the Contract Documents, immediately report the discovery to the Owner's Representative.
2. If necessary, the Owner's Representative will arrange for any testing or analysis of the discovered materials and will provide instructions regarding the removal and disposal of the unidentified materials.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. Backfill excavations resulting from demolition operations with on-site or import materials conforming to engineered fill defined in Section 31 20 00, Earth Moving.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect and maintain benchmarks and survey control points during construction.

B. Locate and clearly flag trees and vegetation to remain or to be relocated.

C. Protect existing site improvements to remain during construction.

3.2 TREE REMOVAL

A. Remove trees designated for removal prior to the construction of new improvements in the vicinity:

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1. When demolishing trees indicated to be removed within areas for new pavement or hardscape, remove tree, stump to a depth of two (2) feet below finish grade, and all roots located in the top twelve (12) inches of soil. Remove wood chips created from grinding process down to remaining stump then refill void and re-compact to 80% relative compaction. Use import soil as indicated in specifications for this purpose. Import soil and compaction in future paved areas shall be in accordance with Section 32 12 16, Asphalt Paving and Section 32 13 13, Concrete Pavement.

2. When demolishing trees indicated to be removed within new landscaped areas, removal shall be done in one of the following ways:
   a. For trees located in accessible areas, remove tree and grind stump to four (4) inches below finish grade. Backfill the void and re-compact to 80% relative compaction. Use import soil as indicated in specifications for this purpose. Do not remove existing roots.
   b. For trees located in inaccessible areas, cut stump flush with finish grade, and cover with 3 inches of bark mulch. Do not grind the stump and do not remove existing roots.

B. Perform tree removal work in a safe and proper manner, adhering to CAL-OSHA tree work protection standards and ANSI A300 Standards.

C. All trees to be demolished shall be removed in such a way as to not damage branches, trunks, or root systems of adjacent trees.

3.3 RESTORATION

A. Restore damaged improvements to their original condition, as acceptable to the Owner's Representative.

B. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, as directed by the Owner's Representative.
   1. Employ a qualified arborist, licensed in jurisdiction where the Project is located, to submit details of proposed repairs and to repair damage to trees and shrubs.
   2. Replace trees that cannot be repaired and restored to full-growth status, as determined by the Owner's Representative.

3.4 UTILITIES

A. Contact USA Alert (800) 642-2444 prior to commencement of any demolition or excavation work. Provide a minimum of 48 hours' notice. Verify all utilities entering into and their locations within the project site.

B. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed or abandoned.

C. Arrange to shut off indicated utilities with utility companies or verify that utilities have been shut off.

D. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner's Representative or others unless authorized in writing by the Owner's representative, and then only after arranging to provide temporary utility services according to requirements indicated.

E. Coordinate utility interruptions with utility company affected.

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F. Do not proceed with utility interruptions without the permission of the Owner's Representative and utility company affected. Notify Owner's Representative and utility company affected two working days prior to utility interruptions.

G. Excavate and remove underground utilities that are indicated to be removed.

H. Fill abandoned piping with cement slurry.

I. Securely close ends of abandoned piping with tight fitting plug or cement slurry minimum 6 inches thick.

3.5 CLEARING AND GRUBBING

A. Areas to be graded shall be cleared of existing vegetation, rubbish, existing structures, and debris.

B. Remove obstructions, shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.

C. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.

D. Use only hand methods for grubbing within drip line of remaining trees.

3.6 SITE STRIPPING

A. Strippings and spoils shall be disposed at an off-site location, per geotechnical recommendations.

B. Remove vegetation before stripping soil.

C. Surface soils that contain organic matter should be stripped. In general, the depth of required stripping will be relatively shallow (i.e. less than 2 inches); deeper stripping and grubbing may be required to remove isolated concentrations of organic matter or roots.

D. Remove trash, debris, weeds, roots, and other waste materials.

E. Stockpile soil materials designated to remain on site at a location approved by the Owner's Representative at a location away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.

F. Do not stockpile soil within drip line of remaining trees.

3.7 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.

3.8 BACKFILL

A. Place and compact material in excavations and depressions remaining after site clearing in accordance with Section 31 20 00, Earth Moving.

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3.9 DISPOSAL

A. Remove surplus soil material, unsuitable soil, obstructions, demolished materials, and waste materials, including trash and debris, and legally dispose of them off the Owner's property.

END OF SECTION

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SECTION 31 20 00

EARTH MOVING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Excavation and/or embankment from existing ground to subgrade, including soil sterilant, for roadways, driveways, parking areas, building pads, walks, paths, or trails and any other site improvements called for on the Plans.

1.2 SECTION EXCLUDES

A. Earthwork related to underground utility installation shall be performed in accordance with Sections 31 21 00, Utility Trenching and Backfill.

1.3 RELATED SECTIONS

A. Section 31 10 00, Site Clearing

1.4 RELATED DOCUMENTS

A. Geotechnical Report: As provided with bid documents.

B. ASTM
1. D1557, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort
2. D1586, Method for Penetration Tests and Split-Barrel Sampling of Soils
3. D2487, Classification of Soils for Engineering Purposes
4. D3740, Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
5. D4318. Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils
6. E329, Specification for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction
7. E548, Guide for General Criteria Used for Evaluating Laboratory Competence

C. California Building Code, California Code of Regulations, Title 24, Part 2, Chapter 18, Soils and Foundations, and Chapter 33, Safeguards During Construction

D. Caltrans Standard Specifications, 2015
1. Section 17, General
2. Section 19, Earthwork

E. CAL/OSHA, Title 8.

1.5 DEFINITIONS

A. Borrow: Approved soil material imported from off-site for use as Structural Fill or Backfill.

B. Excavation: Removal of material encountered above subgrade elevations.

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1. Authorized Over-Excavation: Excavation below subgrade elevations or beyond indicated horizontal dimensions as shown on plans or authorized by the Geotechnical Engineer.
2. Unauthorized Over-Excavation: Excavation below subgrade elevations or beyond indicated horizontal dimensions without authorization by the Geotechnical Engineer. Unauthorized excavation shall be without additional compensation.

C. Geotechnical Testing Agency: An independent testing agency qualified according to ASTM E329 to conduct soil materials and rock definition testing, as documented according to ASTM D3740 and ASTM E548.

D. Structural Backfill: Soil materials approved by the Geotechnical Engineer and used to fill excavations resulting from removal of existing below grade facilities, including trees.

E. Structural Fill: Soil materials approved by the Geotechnical Engineer and used to raise existing grades.

F. Rock: Rock material in beds, ledges, unstratified masses, and conglomerate deposits and boulders of rock material ¾ cubic yards or more in volume that when tested by an independent geotechnical testing agency, according to ASTM D1586, exceeds a standard penetration resistance of 100 blows/2 inches.

G. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man made stationary features constructed above or below grade.

H. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, base or topsoil materials.

I. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of weeds, roots, and other deleterious materials.

J. Unsuitable Material: Any soil material that is not suitable for a specific use on the Project. The Geotechnical Engineer will determine if a soil material is unsuitable.

K. Relative Compaction: In-place dry density of soil expressed as percentage of maximum dry density of same materials, as determined by laboratory test procedure ASTM D1557.

L. Utilities: onsite underground pipes, conduits, ducts and cables.

1.6 SUBMITTALS

A. Follow submittal procedure outlined in Section 01 10 00, Supplemental General Requirements.

B. Samples:
1. If required by the Geotechnical Engineer, provide 20-pound samples, sealed in airtight containers, tagged with source locations and suppliers of each proposed soil material from on-site or borrow sources, 72 hours prior to use. Do not import materials to the Project without written approval of the Geotechnical Engineer.

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2. Provide materials from same source throughout work. Change of source requires approval of the Geotechnical Engineer.

C. Classification according to ASTM D2487 of each onsite or borrow soil material proposed for fill and backfill.
1. Laboratory compaction curve in conformance with ASTM D1557 for each onsite or borrow soil material proposed for fill and backfill.

1.7 QUALITY ASSURANCE

A. Provide an independent testing agency qualified according to ASTM E329 to conduct soil materials and rock definition testing, as documented according to ASTM D3740 and ASTM E548.

B. Conform all work and materials to the recommendations or requirements of the Geotechnical Report and meet the approval of the Geotechnical Engineer.

C. Conform all work in accordance with Caltrans Standard Specification Section 17, General and Section 19, Earthwork.

D. Percentage of compaction specified shall be the minimum acceptable. The percentage represents the ratio of the dry density of the compacted material to the maximum dry density of the material as determined by the procedure set forth in ASTM D1557.

E. Perform excavation, filling, compaction and related earthwork under the observation of the Geotechnical Engineer. Materials placed without approval of the Geotechnical Engineer will be presumed to be defective and, at the discretion of the Geotechnical Engineer, shall be removed and replaced at no cost to the Owner. Notify the Geotechnical Engineer at least 24 hours prior to commencement of earthwork and at least 48 hours prior to testing.

F. The Geotechnical Engineer will perform observations and tests required to enable him to form an opinion of the acceptability of the Project earthwork. Correct earthwork that, in the opinion of the Geotechnical Engineer, does not meet the requirements of these Technical Specifications and the Geotechnical Report.

G. Upon completion of the construction work, certify that all compacted fills and foundations are in place at the correct locations, and have been constructed in accordance with sound construction practice. In addition, certify that the materials used are of the types, quality and quantity required by these Technical Specifications and the Geotechnical Report. The Contractor shall be responsible for the stability of all fills and backfills constructed by his forces and shall replace portions that in the opinion of the Geotechnical Engineer have been displaced or are otherwise unsatisfactory due to the Contractor's operations.

H. Finish subgrade tolerance at completion of grading:
1. Building and paved areas: ±0.05 feet
2. Other areas: ±0.10 feet

1.8 PROJECT CONDITIONS

A. Promptly notify the Owner's Representative of surface or subsurface conditions differing from those disclosed in the Geotechnical Report. First notify the Owner's Representative verbally to permit verification and extent of condition and then in writing. No claim for conditions differing from those anticipated in the Contract Documents and disclosed in the Geotechnical Report will be allowed unless the

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Contractor has notified the Owner's Representative in writing of differing conditions prior to the Contractor starting work on affected items.

B. Protect open excavations, trenches, and the like with fences, covers and railings to maintain safe pedestrian and vehicular traffic passage.

C. Prevent erosion of freshly-graded areas during construction and until such time as permanent drainage and erosion control measures have been installed in accordance with the Erosion Control Plan.

D. Temporarily stock-pile fill material in an orderly and safe manner and in a location approved by the Owner's Representative.

E. Environmental Requirements: When unfavorable weather conditions necessitate interrupting earthwork operation, areas shall be prepared by compaction of surface and grading to avoid collection of water. Provide adequate temporary drainage to prevent erosion. After interruption, compaction specified in last layer shall be re-established before resuming work.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: On-site soils are considered suitable for use as fill provided the materials are placed in accordance with Geotechnical Recommendations. Highly expansive soils shall not be used as select structural fill, or used as backfill for trenches located within hardscape areas.

B. Imported fill soils, if required, should be predominantly granular in nature, and should be free of organics, debris, or rocks over 3 inches in size, and shall be approved by the Geotechnical Engineer before importing to the site. Imported non-expansive soils shall have a Plasticity Index less than 15 as determined by ASTM D4318, an R-value of at least 20, and fines content between 15 and 65 percent. Import fill shall be considered non-hazardous per Department of Toxic Substances Control guidelines (DTSC, 2017) and non-corrosive per Caltrans Corrosion Guidelines (Caltrans, 2015).

2.2 SOIL STERILANT

A. Commercial chemical for weed control, registered by EPA. Provide granular, liquid or wet-able powder form.

PART 3 - EXECUTION

3.1 GENERAL

A. Perform work in accordance with Caltrans Standard Specification Section 19, Earthwork.

B. Placement and compaction of material by flooding, ponding, or jetting will not be permitted.

C. The use of explosives will not be permitted.

D. Grading and earthwork operations shall be observed and tested by a representative of the Geotechnical Engineer for conformance with the project plans/specifications and the geotechnical recommendations. This work includes site preparation, selection of

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satisfactory materials, and placement and compaction of the subgrades and fills. Sufficient notification prior to commencement of earthwork is essential to make certain that the work will be properly observed.

3.2 CONTROL OF WATER AND DEWATERING

A. Comply with Section 31 23 19, Dewatering, if dewatering is necessary.

B. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding the site and surrounding area. Provide dewatering equipment necessary to drain and keep excavations and site free from water.

C. Dewater during backfilling operation so that groundwater is maintained a least 1 foot below level of compaction effort.

D. Obtain the Geotechnical Engineer's approval for proposed control of water and dewatering methods.

E. Protect subgrades from softening, undermining, washout and damage by rain or water accumulation.

F. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations.

G. Maintain dewatering system in place until dewatering is no longer required.

3.3 WET WEATHER CONDITIONS

A. Do not prepare subgrade, place or compact soil materials if subgrade or materials are above optimum moisture content.

B. If the Geotechnical Engineer allows work to continue during wet weather conditions, conform to supplemental recommendations provided by the Geotechnical Engineer.

3.4 BRACING AND SHORING

A. Conform to California and Federal OSHA requirements.

B. Place and maintain such bracing and shoring as may be required to support the sides of the excavations for the proper protection of workmen; to facilitate the work; to prevent damage to the facility being constructed; and to prevent damage to adjacent structures or facilities. Remove all bracing and shoring upon completion of the work.

C. Be solely responsible for all bracing and shoring and, if requested by the Owner's Representative, submit details and calculations to the Owner's Representative. The Owner's Representative may forward the submittal to the Geotechnical Engineer, the Consulting Engineer and/or the California Division of Industrial Safety for their review. The Contractor's submittal shall include the basic design, assumed soils conditions and estimation of forces to be resisted, together with plans and specifications of the materials and methods to be used, and shall be prepared by a civil engineer or structural engineer registered in California. No excavations related to the proposed facility shall precede a response to the submittal by the Owner's Representative.

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D. Be solely responsible for installing and extracting the sheathing in a manner which will not disturb the position or operation of the facility being constructed or adjacent utilities and facilities.

3.5 TOPSOIL STRIPPING

A. Remove topsoil in accordance with Section 31 10 00, Site Clearing.

3.6 EXCAVATION

A. Excavate earth and rock to lines and grades shown on plans and to the neat dimensions indicated on the plans, required herein or as required to satisfactorily compact backfill.

B. Remove and dispose of large rocks, pieces of concrete and other obstructions encountered during excavation.

C. Excavation through buried concrete and other unknown obstructions will require specialized techniques for demolition and removal.

D. Where forming is required, excavate only as much material as necessary to permit placing and removing forms.

E. Provide supports, shoring and sheet piles required to support the sides of excavations or for protection of adjacent existing improvements.

3.7 GRADING

A. Uniformly grade the Project to the elevations shown on plans

B. Finish ditches, gutters and swales to the sections, lines and grades indicated and to permit proper surface drainage.

C. Round tops and bottoms of slopes as indicated or to blend with existing contours.

3.8 SUBGRADE PREPARATION

A. Subgrade Preparation: Prior to backfilling depressions created by the removal of old foundations and utility lines, scarify the bottom of the excavation to an approximate depth of 8 inches and uniformly moisture condition the scarified surfaces to a moisture content that is at least 2 percent over optimum. Compact the scarified surfaces to a minimum of 90 percent relative compaction at above optimum moisture content.

B. Over-excavate any remaining soft (pumping) areas down to firm soil and backfill the area.

C. Subgrade shall be maintained in a moist, but not wet, condition by periodically sprinkling water prior to the placement of additional fill or installation of roads. Subgrade that has been permitted to dry out and loosen or develop desiccation cracking should be scarified, moisture conditioned, and re-compacted as recommended above.

D. Install underground utilities and service connections prior to final preparation of subgrade and placement of base materials for final surface facilities. Extend services so that final surface facilities are not disturbed when service connections are made.

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E. Prepare subgrades under the structural section of paved areas, curbs, gutters, walks, structures, other surface facilities and areas to receive structural fill.

F. Protect utilities from damage during compaction of subgrades and until placement of final pavements or other surface facilities.

3.9 LOT FINISH GRADING

A. Blade finish lots to lines and grades indicated.

3.10 FILL PLACEMENT AND COMPACTION

A. Place fill in uniformly moisture conditioned and compacted lifts not exceeding 8 inches in loose thickness. Each lift should be thoroughly moisture conditioned and compacted to 90 percent before successive fill layers are placed.

B. In order to achieve satisfactory compaction in the subgrade and fill soils, it may be necessary to adjust the soil moisture content at the time of soil compaction per geotechnical recommendations. This may require that water be added and thoroughly mixed into any soils which are too dry or that scarification and aeration be performed in any soils which are too wet.

C. Obtain the Geotechnical Engineer's approval of surface to receive structural fill prior to placement of structural fill material.

D. Place structural fill on prepared subgrade.

E. Do not drop fill on structures. Do not backfill around, against or upon concrete or masonry structures until structure has attained sufficient strength to withstand loads imposed and the horizontal structural system had been installed.

F. Do not compact by ponding, flooding or jetting.

G. Perform compaction using rollers, pneumatic or vibratory compactors or other equipment and mechanical methods approved by the Geotechnical Engineer.

H. Compaction requirements (unless specified otherwise by the Geotechnical Engineer):
1. Compact structural fills less than 5 feet thick to 90 percent compaction.
2. Compact structural fill 5 feet thick or greater to 95 percent compaction.
3. Compact the upper 6 inches of subgrade soils beneath pavements, curbs and gutters to 95 percent compaction. Extend compaction 5 feet beyond pavement edges unless specified otherwise by the Geotechnical Engineer.
4. Compact the upper 6 inches of subgrade soils under walks, structures and areas to receive structural fill to 90 percent compaction.

3.11 SOIL STERILIZATION

A. Apply soil sterilant to areas indicated, such as beneath asphalt concrete pavement, brick pavement, concrete pavement and at grade concrete slabs, including sidewalks, curbs and gutters. Also where indicated apply soil sterilant below expansion and control joints and at areas where pipes, ducts or other features penetrate slabs.

B. Apply soil sterilant uniformly and at the rates recommended by the manufacturer.

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C. Apply soil sterilant to prepared subgrade, or after installation of aggregate base as recommended by the manufacturer.

3.12 DISPOSAL

A. Lawfully dispose of all unsuitable and excess or surplus material off-site at no cost to the Owner.

END OF SECTION

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SECTION 31 21 00

UTILITY TRENCHING AND BACKFILL

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Excavation, bedding, and backfill for underground storm drain, sanitary sewer, and water piping, and associated structures.

B. Provide labor, material, equipment, and services necessary to complete the backfilling and compacting as necessary for this project. Section includes, but is not limited to:
   1. Select Backfill Material
   2. Aggregate Base
   3. Detectable Tape
   4. Trench Excavation
   5. Pipe Bedding
   6. Trench Backfill
   7. Trench Surfacing

1.2 SECTION EXCLUDES

A. Underground HVAC piping, electrical conduit, telephone conduit, gas piping, cable TV conduit, etc. and associated structures.

B. Mechanical and plumbing piping associated with pool, pool slide, spray pad, and associated pool equipment.

C. Drainage fill material and placement around subdrains.

1.3 RELATED SECTIONS

A. Section 31 10 00 – Site Clearing

B. Section 31 20 00 – Earth Moving

C. Section 33 41 00 – Storm Utility Drainage Piping

1.4 RELATED DOCUMENTS

A. Geotechnical Report: As provided with bid documents.

B. ASTM
   1. D1557, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort.
   2. D2321, Standard Practice for Underground Installation of Thermoplastic Pipe for Sewer and Other Gravity-Flow Applications.

C. California Administrative Code, Title 24, Part 2 - Basic Building Regulations, Chapter 24, Excavations, Foundations, and Retaining Walls.

D. Caltrans Standard Specifications, 2015
   1. Section 19, Earthwork
   2. Section 26, Aggregate Bases
   3. Section 68, Subsurface Drains

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4. Section 96, Geosynthetics

E. CAL/OSHA, Title 8

1.5 DEFINITIONS

A. AC: Asphalt Concrete

B. ASTM: American Society for Testing and Materials

C. Base: The layer placed between the subgrade and surface pavement in a paving system.

D. Bedding: Material from bottom of trench to bottom of pipe

E. CDF: Controlled Density Fill

F. DIP: Ductile Iron Pipe

G. Engineered Fill:
1. Soil or soil-rock material approved by the Owner and transported to the site by the Contractor in order to raise grades or to backfill excavations.
2. Contractor shall provide sufficient tests, and a written statement that all materials brought onto the project site comply with specification requirements.

H. Excavation: Consists of the removal of material encountered to subgrade elevations

I. Initial Backfill: Material from bottom of pipe to 12 inches above top of pipe

J. PCC: Portland Cement Concrete

K. RCP: Reinforced Concrete Pipe

L. Relative Compaction: In-place dry density of soil expressed as percentage of maximum dry density of same materials, as determined by laboratory test procedure ASTM D1557.

M. Springline of Pipe: Imaginary line on surface of pipe at a vertical distance of ½ the outside diameter measured from the top or bottom of the pipe.

N. Subgrade: The uppermost surface of an excavation or the top surface of a fill or backfill immediately below base.

O. Subsequent Backfill: Material from 12 inches above top of pipe to subgrade of surface material or subgrade of surface facility or to finish grade.

P. Trench Excavation: Removal of material encountered above subgrade elevations and within horizontal trench dimensions.
1. Authorized Trench Over-Excavation: Excavation below trench subgrade elevations or beyond indicated horizontal trench dimensions as shown on plans or authorized by the Geotechnical Engineer.
2. Unauthorized Trench Over-Excavation: Excavation below trench subgrade elevations or beyond indicated horizontal trench dimensions without authorization by the Geotechnical Engineer. Unauthorized excavation shall be without additional compensation.

Q. Utility Structures:
1. Storm drainage manholes, catch basins, drop inlets, curb inlets, vaults, etc.

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2. Sanitary sewer manholes, vaults, etc.
3. Water vaults, etc.

1.6 SUBMITTALS

A. Follow submittal procedures outlined in Section 26 05 33 – General Provisions.

B. Test Reports: Submit the following report for import material directly to the Owner from the Contractor's testing services:
1. Compaction test reports for aggregate base.

C. Samples:
1. If required by the Geotechnical Engineer, provide 20-pound samples of all imported trench bedding and backfill material sealed in airtight containers, tagged with source locations and suppliers of each proposed material. Do not import materials to Project without written approval of the Geotechnical Engineer and the Owner.
2. Provide materials from same source throughout work. Change of source requires approval of the Geotechnical Engineer and the Owner.

1.7 QUALITY ASSURANCE

A. Conform all work and materials to the recommendations or requirements of the Geotechnical Report and meet the approval of the Geotechnical Engineer.

B. Conform all work to the appropriate portion(s) of the Caltrans Standard Specifications, Section 19, Earthwork.

C. Percentage of compaction specified shall be the minimum acceptable. The percentage represents the ratio of the dry density of the compacted material to the maximum dry density of the material as determined by the procedure set forth in ASTM D 1557.

D. The Geotechnical Engineer will perform observations and tests required to enable him to form an opinion of the acceptability of the trench backfill. Correct the trench backfill that, in the opinion of the Geotechnical Engineer, does not meet the requirements of these Technical Specifications and the Geotechnical Report.

E. Soil Testing:
1. Contractor to engage a geotechnical testing agency, to include compaction testing and for quality control testing during fill operations.
2. Test results will be submitted to the Owner.

1.8 PROJECT CONDITIONS

A. Promptly notify the Owner of surface or subsurface conditions differing from those disclosed in the Geotechnical Report. First notify the Owner verbally to permit verification and extent of condition and then in writing. No claim for conditions differing from those anticipated in the Contract Documents and disclosed in the Geotechnical Report will be allowed unless Contractor has notified the Owner in writing of differing conditions prior to contractor starting work on affected items.

B. Barricade open excavations and post with warning lights.
1. Operate warning lights and barricades as required.
2. Protect structures, utilities, sidewalks, pavements, and other facilities immediately adjacent to excavations, from damages caused by settlement, lateral movement, undermining, washout, and other hazards.

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3. Protect open, trenches, and utility structure excavations with fences, covers and railings to maintain safe pedestrian and vehicular traffic passage.

C. Stockpile on-site and imported backfill material temporarily in an orderly and safe manner.

D. Provide dust and noise control in conformance with Section 01 10 00 Supplemental General Requirements.

E. Environmental Requirements:
1. Protect existing storm drainage system from silt and debris resulting from construction activities. If contamination occurs, remove contamination at no cost to the District.
2. Protect existing streams, ditches and storm drain inlets during work on this project.

F. Protection of Subgrade: Do not allow equipment to pump or rut subgrade, stripped areas, footing excavations, or other areas prepared for project.

G. Transport all excess soils materials by legally approved methods to disposal areas.
1. Coordinate with the Engineer.
2. Any additional fill requirements shall be the responsibility of the Contractor.

1.9 EXISTING UTILITIES

A. Prior to excavation or trenching, the Contractor shall contact USA Alert (800) 227-2600 to locate all known utilities a minimum of 48 hours prior to start of work. During the course of construction, the Contractor shall take every precaution to maintain and protect utilities noted to remain. Said utilities shall remain operational at all times, unless otherwise noted on the plans.

B. The existing utilities are shown on the Plans based on the information available at the time of contract document development. The City shall not assume responsibility for any inaccuracies or incompleteness of the Plans based on such information. The Contractor shall immediately notify, upon damage of any pipeline or facility, the Owner and/or its agents and take every action necessary to repair or replace damaged facilities to the satisfaction of the Inspector, and at no additional cost to the City.

C. Locate existing underground utilities in the areas of work. For utilities that are to remain in place, provide adequate means of protection during excavation operations.
1. Locating of existing underground utilities shall include but not be limited to pot-holing prior to the start of construction.

D. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult Owner and/or utility agency immediately for directions.
1. Cooperate with the Owner and public and private utility companies in keeping their respective services and facilities in operation.
2. Repair damaged utilities to the satisfaction of the agency with jurisdiction.

E. Do not interrupt existing utilities serving facilities occupied and used by the Owner or others, except when permitted in writing by the Owner and then only after acceptable temporary utility services have been provided.

PART 2 - PRODUCTS

2.1 GENERAL

A. Import materials will be subject to approval of the Geotechnical Engineer.

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B. For approval of imported fill material, notify the Owner at least 7 days in advance of intention to import material.

2.2 PIPE BEDDING AND INITIAL BACKFILL

A. ASTM D2321, Class IA, IB or II.
   1. Clean and free of clay, silt or organic matter.

B. Permeable Material: In accordance with Section 68-2.02F of Caltrans Standard Specifications, Class 1, Type A or Class 2.

C. Class 2 Aggregate Base: In accordance with Section 26 of Caltrans Standard Specifications, ¾ inch maximum.

D. Sand: In accordance with Section 19-3.02F of Caltrans Standard Specifications.

2.3 SELECT BACKFILL

A. Select backfill material shall be gravel, free of clay or organic matter and shall conform to the following gradation:

Sieve Size	Percentage Passing
1 inch	100
¾ inch	90 – 100
No. 4	35 – 60
No. 200	2 - 9

2.4 WARNING TAPE

A. Polyethylene plastic and metallic core or metallic-faced, acid- and alkali-resistant, polyethylene plastic warning tape manufactured specifically for warning and identification of buried utility lines. Provide tape on rolls, 3 inch minimum width, color coded as specified below for the intended utility with warning and identification imprinted in bold black letters continuously over the entire tape length. Warning and identification to read, "CAUTION, BURIED (intended service) LINE BELOW" or similar wording. Color and printing shall be permanent, unaffected by moisture or soil.
   1. Warning Tape Color Codes
      a. Red: Electric
      b. Yellow: Gas, Oil; Dangerous Materials
      c. Orange: Telephone and Other Communications
      d. Blue: Water Systems
      e. Green: Sewer Systems
      f. White: Steam Systems
      g. Gray: Compressed Air
   2. Warning Tape for Metallic Piping: Acid and alkali-resistant polyethylene plastic tape conforming to the width, color, and printing requirements specified above. Minimum thickness of tape shall be 0.003 inch. Tape shall have a minimum strength of 1500 psi lengthwise, and 1250 psi crosswise, with a maximum 350 percent elongation.
   3. Detectable Warning Tape for Non-Metallic Piping: Polyethylene plastic tape conforming to the width, color, and printing requirements specified above. Minimum thickness of the tape shall be 0.004 inch. Tape shall have a minimum strength of 1500 psi lengthwise and 1250 psi crosswise. Tape shall be manufactured with integral wires, foil backing, or other means of enabling detection by a metal detector when tape is buried up to 3 feet deep. Encase metallic element of the tape in a protective jacket or provide with other means of corrosion protection.

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2.5 DETECTION WIRE FOR NON-METALLIC PIPING

A. Detection wire shall be insulated single strand, solid copper with a minimum of 12 AWG.

2.6 SUBSEQUENT BACKFILL

A. Conform to on-site or imported structural backfill in Section 31 20 00, Earth Moving.

2.7 CONTROLLED DENSITY FILL (CDF) (IN TRENCHES)

A. Provide non-structural CDF, from bottom of trench to finish subgrade of subbase or base material, that can be excavated by hand and produce unconfined compressive 28-day strengths from 50-psi to a maximum of 150-psi. Provide aggregate no larger than 3/8 inch top size. The 3/8 inch aggregate shall not comprise more than 30% of the total aggregate content.

B. Cement: Conform to the standards as set forth in ASTM C150, Type II Cement.

C. Fly Ash: Conform to the standards as set forth in ASTM C618, for Class F pozzolan. Do not inhibit the entrainment of air with the fly ash.

D. Air Entraining Agent: Conform to the standards as set forth in ASTM C260.

E. Aggregates need not meet the standards as set forth in ASTM C33. Any aggregate, producing performances characteristics described herein will be accepted for consideration. The amount of material passing a #200 sieve shall not exceed 12% and no plastic fines shall be present.

F. Provide CDF that is a mixture of cement, Class F pozzolan, aggregate, air entraining agent and water. CDF shall be batched by a ready mixed concrete plant and delivered to the job site by means of transit mixing trucks.

G. The Contractor shall determine the actual mix proportions of the controlled density fill to meet job site conditions, minimum and maximum strengths, and unit weight. Entrained air content shall be a minimum of 4.0%. The actual entrained air content shall be established for each job with the materials and aggregates to be used to meet the placing and unit weight requirements. Entrained air content may be as high as 20% for fluidity requirements.

H. Mix design shall meet the Geotechnical Engineer's approval.

2.8 GEOSYNTHETICS

A. Filter Fabric:
   1. Filter Fabric: Section 96-1.02 of Caltrans Standard Specifications.
   2. Mirafi 140N, Mirafi Inc., or approved equal.

PART 3 - EXECUTION

3.1 GENERAL

A. Comply with the recommendations of the Geotechnical Engineer.

B. Protect existing trees to remain. No grading is permitted under the drip line of protected trees.

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C. Excavations for appurtenant structures, such as, but not limited to, manholes, transition structures, junction structure, vaults, valve boxes, catch basins, thrust blocks, and boring pits, shall be deemed to be in the category of trench excavation.

D. Unless otherwise indicated in the Plans, all excavation for pipelines shall be open cut.

E. Prior to commencement of work, become thoroughly familiar with site conditions.

F. In the event discrepancies are found, immediately notify the Owner in writing, indicating the nature and extent of differing conditions.

G. Backfill excavations as promptly as work permits.

H. Do not place engineered fill or backfill until rubbish and deleterious materials have been removed and areas have been approved by the Owner.

I. Place acceptable soil material in layers to required subgrade elevations, for each area classification listed below.

J. In excavations, use satisfactory excavated or borrow material.

K. Under grassed areas, use satisfactory excavated or borrow material.

3.2 SITE PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities, which are to remain, from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

B. Protect existing storm drainage system from silt and debris resulting from construction activities. If contamination occurs, remove contamination at no cost to the Owner.

3.3 EXISTING UTILITIES

A. Identity the location of existing utilities.
   1. Prior to trenching, the Contractor shall excavate at locations specifically indicated on the Plans, if any, and where new lines cross other utilities of uncertain depth and determine the elevation of the utility in question to ensure that the new line will clear the potential obstruction.
   2. The Contractor shall contact Underground Service Alert (USA) at 1-800-227-2600 for assistance in locating existing utilities.
   3. If, after the excavation, a crossing utility does present an obstruction, then the line and grade of the new line will be adjusted as directed by the Owner to clear the utility.

B. Protect all existing utilities to remain in operation.

C. Movement of construction machinery and equipment over existing pipes and utilities during construction shall be at Contractor's risk.

D. Excavation made with power-driven equipment is not permitted within 2 feet of any known utility or subsurface structure.
   1. Use hand or light equipment for excavating immediately adjacent to known utilities or for excavations exposing a utility or buried structure.
   2. Start hand or light equipment excavation on each side of the indicated obstruction and continue until the obstruction is uncovered or until clearance for the new grade is assured.

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3. Support uncovered lines or other existing work affected by excavation until approval for backfill is obtained.
4. Report damage of utility line or subsurface structures immediately to the Owner.

E. Backfill trenches resulting from utility removal in lifts of 8 inches maximum.

3.4 TRENCH EXCAVATION

A. General
1. Excavation shall include removal of all water and materials that interfere with construction. The Contractor shall remove any water which may be encountered in the trench by pumping or other methods during the pipe laying, bedding and backfill operations. Material shall be sufficiently dry to permit approved jointing.
2. Excavation shall include the construction and maintenance of bridges required for vehicular and pedestrian traffic, support for adjoining utilities.
3. The Contractor shall be responsible to safely direct vehicular and pedestrian traffic through or around his/her work area at all times.
4. The Contractor shall relocate, reconstruct, replace or repair, at his/her own expense, all improvements which are in the line of construction or which may be damaged, removed, disrupted or otherwise disturbed by the Contractor.

B. Existing Paving and Concrete:
1. Existing pavement over trench shall be sawcut, removed, and hauled away from the job. Existing pavement shall be neatly sawcut along the limits of excavations.
2. Existing concrete over the trench shall be sawcut to a full depth in straight lines, at a minimum distance of 12 inches beyond the edge of the trench, either parallel to the curb or a right angles to the alignment of the sidewalk.
3. Boards or other suitable material shall be placed under equipment outrigging to prevent damage to paved surfaces.

C. Trench Width:
1. The maximum allowable trench widths at the top of the all pipe materials outside diameter of barrel pipe plus 18 inches. shall be as follows:
   a. The maximum trench width shall be inclusive of all shoring.
   b. If the maximum trench width is exceeded, the State's representative may direct the Contractor to encase or cradle the pipe in concrete at no additional charge.
2. For pipes 3 inch diameter and larger, the free working space on each side of the pipe barrel shall not be less than 6 inches.

D. Excavation Width at Springline of Pipe:
1. Up to a nominal pipe diameter of 24 inches: Minimum of twice the outside pipe diameter, or as otherwise allowed or required by the Geotechnical Engineer.
2. Nominal pipe diameter of 30 inches through 36 inches: Minimum of the outside pipe diameter plus 2 feet, or as otherwise allowed or required by the Geotechnical Engineer.
3. Nominal pipe diameter of 42 inches through 60 inches: Minimum of the outside pipe diameter plus 3 feet, or as otherwise allowed or required by the Geotechnical Engineer.

E. Open Trench:
1. The maximum length of open trench shall be 300 feet or the distance necessary to accommodate the amount of pipe installed in a single day, whichever is greater. No trench shall be left open at the end of the day.

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2. Provisions for trench crossings and free access shall be made at all street crossings, driveways, water gate valves, and fire hydrants.
3. Excavate by hand or machine. For gravity systems begin excavation at the outlet end and proceed upstream. Excavate sides of the trench parallel and equal distant from the centerline of the pipe. Hand trim excavation. Remove loose matter.
4. Excavation Depth for Bedding: Minimum of 6 inches below bottom of pipe or as otherwise allowed or required by the Geotechnical Engineer, except that bedding is not required for nominal pipe diameters of 2 inches or less.
5. Over-Excavations: Backfill trenches that have been excavated below bedding design subgrade, with approved bedding material.
6. Where forming is required, excavate only as much material as necessary to permit placing and removal of forms.
7. Grade bottom of trench to provide uniform thickness of bedding material and to provide uniform bearing and support for pipe along entire length. Remove stones to avoid point bearing.

F. Excavated Material:
1. All excavated material not required for backfill shall be immediately removed and properly disposed of in a legal manner by the Contractor.
2. Material excavated in streets and roadways shall be laid alongside the trench no closer than 2 feet from the trench edge and kept trimmed to minimize inconvenience to public traffic.
3. Provisions shall be made whereby all storm and wastewater can flow uninterrupted in gutters or drainage channels.

3.5 CONTROL OF WATER AND DEWATERING

A. Contractor attention is directed to Section 31 23 19, Dewatering.

B. Be solely responsible for dewatering trenches and excavations and subsequent control of ground and surface water. Provide and maintain such pumps or other equipment as may be necessary to control ground water and seepage to the satisfaction of the Geotechnical Engineer and the Owner until backfilling is completed.

C. Dewater during backfilling operation so that groundwater is maintained a least one foot below level of compaction effort.

D. Obtain the Geotechnical Engineer's approval for proposed control of water and dewatering methods.

E. Reroute surface water runoff away from open trenches and excavations. Do not allow water to accumulate in trenches and excavations.

F. Maintain dewatering system in place until dewatering is no longer required.

3.6 BRACING AND SHORING

A. Conform to California and Federal OSHA requirements.

B. Place and maintain such bracing and shoring as may be required to support the sides of the excavations for the proper protection of workmen; to facilitate the work; to prevent damage to the pipes and appurtenances being constructed; and to prevent damage to adjacent structures or facilities. Remove all bracing and shoring upon completion of the work.

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C. Be solely responsible for all bracing and shoring and, if requested by the Owner, submit details and calculations to the Owner. The Owner may forward the submittal to the Geotechnical Engineer, the Consulting Engineer and/or the California Division of Industrial Safety for their review. The Contractor's submittal shall include the basic design, assumed soils conditions and estimation of forces to be resisted, together with plans and specifications of the materials and methods to be used, and shall be prepared by a civil engineer or structural engineer registered in California. No excavations in trench section or around structures shall precede a response to the submittal by the Owner.

D. Be solely responsible for installing and extracting the sheathing in a manner which will not disturb the line, grade, or backfill compaction or operation of the utility being installed or adjacent utilities and facilities.

3.7 PIPE BEDDING

A. Obtain approval of bedding material from the Geotechnical Engineer.

B. Accurately shape bedding material to the line and grade called for on the Plans. Carefully place and compact bedding material to the elevation of the bottom of the pipe in layers not exceeding 8 inches in loose thickness. Compact bedding material at optimum water content to 90% relative compaction unless specified otherwise on the Plans or by the Geotechnical Engineer. Compact by pneumatic tampers or other mechanical means approved by the Geotechnical Engineer. Jetting or ponding of bedding material will not be permitted.

C. Stabilization of Trench Bottom: When the trench bottom is unstable due to wet or spongy foundation, trench bottom shall be stabilized with gravel or crushed rock. The State's inspector will determine the suitability of the trench bottom and the amount of gravel or crushed rock needed to stabilize a soft foundation. Soft material shall be removed and replaced with gravel or crushed rock as necessary.

D. Placement of Bedding Material: The trench bottom shall be cleaned to remove all loose native material prior to placing select backfill material. Sufficient select backfill material shall be placed in trench and tamped to bring trench bottom up to grade of the bottom of pipe. The relative compaction of tamped material shall be not less than 90 percent. It is the intention of these requirements to provide uniform bearing under the full length of pipe to a minimum width of 60 percent of the external diameter.

3.8 BACKFILLING

A. Initial Backfill:

1. Obtain approval of backfill material from Geotechnical Engineer.
2. Bring initial backfill up simultaneously on both sides of the pipe, so as to prevent any displacement of the pipe from its true alignment. Carefully place and compact initial backfill material to an elevation of 12 inches above the top of the pipe in layers not exceeding 8 inches in loose thickness. Compact bedding material at optimum water content to 90% relative compaction unless specified otherwise on the Plans or by the Geotechnical Engineer. Compact by pneumatic tampers or other mechanical means approved by the Geotechnical Engineer. Jetting or ponding of initial backfill material will not be permitted.

B. Pipe Detection: In trenches containing pressurized plastic pipes, tracer wire shall be placed directly above the pipe and shall be connected to all valves, existing exposed tracer wires, and other appurtenances as appropriate.

C. Installation of Tracer Wire:

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1. Install a continuous length of tracer wire for the full length of each run of nonmetallic pipe.
2. Attach wire to top of pipe in such manner that it will not be displaced during construction operations.
3. Form a mechanically and electrically continuous line throughout the pipeline, extending to the nearest valve or other pipeline appurtenance. Extend the wire up the outside of the valve box/riser and cut a hole that is 8 inches from the top, extend a 12 inch wire lead to the inside of the box. At other pipeline appurtenances, terminate the 12 inch wire lead inside the enclosure.
4. Splice wire with a splicing device consisting of and electro-tin plated seamless copper sleeve conductor. Install as recommended by the manufacturer. Wrap splices and damaged insulation with electrician's tape.

D. Installation of Warning Tape
1. Install tape approximately 1 foot above and along the centerline of the pipe.
2. Where tape is not continuous lap tape ends a minimum of 2 feet.

E. Subsequent Backfill:
1. Above the level of initial backfill, the trench shall be backfilled with non-expansive native material from trench excavation or with imported select backfill material (Contractor's option). Subsequent backfill shall be free of vegetable matter, stones or lumps exceeding 3 inches in greatest dimension, and other unsatisfactory material.
2. Bring subsequent backfill to subgrade or finish grade as indicated. Carefully place and compact subsequent backfill material to the proper elevation in layers not exceeding 8 inches in loose thickness. Compact bedding material at optimum water content to 90% relative compaction, except that the upper 36 inches in areas subject to vehicular traffic shall be compacted to at least 95% relative compaction, unless specified otherwise on the Plans or by the Geotechnical Engineer. Compact by pneumatic tampers or other mechanical means approved by the Geotechnical Engineer. Jetting or ponding of subsequent backfill material will not be permitted.

F. Do not use compaction equipment or methods that produce horizontal or vertical earth pressures that may cause excessive pipe displacement or damage the pipe. Jetting of trench backfill is not permitted.

G. Utility backfill shall be inspected and tested by the Geotechnical Engineer during placement. Cooperate with the Geotechnical Engineer and provide working space for such tests in operations. Backfill not compacted in accordance with these specifications shall be re-compacted or removed as necessary and replaced to meet the specified requirements, to the satisfaction of the Geotechnical Engineer and the Owner prior to proceeding with the Project.

H. Compaction testing shall be in accordance with California Test Method ASTM D1556 or D1557.

3.9 CLEANUP

A. Upon completion of utility earthwork all lines, manholes catch basins, inlets, water meter boxes and other structures shall be thoroughly cleaned of dirt, rubbish, debris and obstructions of any kind to the satisfaction of the Owner.

END OF SECTION

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SECTION 32 13 13

CONCRETE PAVING

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Forming for cast-in-place concrete associated with swimming pool decks.

B. Reinforcement for cast-in-place concrete associated with swimming pool decks.

C. Cast-in-place concrete for swimming pool decks with Xypex C-500 crystalline waterproofing admixture. Waterproofing admixture for swimming pool decks only.

D. Provide labor, materials and equipment as required to install sealant for all pool deck expansion joints, or any other caulking, as indicated on the aquatic Drawings and herein specified.

1.2 RELATED WORK

A. Section 03 30 00: Site Concrete

1.3 REFERENCES

A. Geotechnical Report: If none available, Contractor to utilize standard specifications where applicable and assume most conservative values.

1.4 SUBMITTALS

A. Product Data: For each type of concrete type indicated.

B. Mock-up

1. Contractor shall provide three mock-up deck samples, minimum 3'x 3', with a wedge anchor installed in one sample. These (3) samples shall be constructed; one with a light broom finish, one (1) with a medium broom finish and one (1) with a heavy broom finish for determination and selection of an appropriate deck finish. Each sample shall be edged on all four sides to demonstrate a 3/4" radius edge. Anchor installation shall demonstrate acceptable interface between anchor and the top of deck. Deck samples shall remain on job site through final inspection for reference.

C. Mix Design

1. Prior to installing concrete paving, and after completion and acceptance of mock-up, provide complete mix design for each approved mock-up, including batch plant source.

2. Mix design shall be prepared by batch plant supplying concrete.

3. Changes in batch plant will require complete resubmittal process.

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4. The Contractor shall submit a separate mix design stamped and signed by a licensed engineer for the swimming pool decks which contains the specified Xypex C-500 crystalline waterproofing admixture for approval by the Owner's Representative prior to any placement of concrete.

D. Quality Assurance

1. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

2. ACI Publications: Comply with ACI 301 (ACI 301M) unless otherwise indicated.

PART 2 - PRODUCTS

2.1 DESIGN CRITERIA

A. All improvements shall be constructed per the referenced standards, the improvement drawings, and as specified in this Section.

2.2 CAST-IN-PLACE CONCRETE

A. General

1. All concrete shall be transit mixed, complying with ASTM C94.

2. All concrete shall be supplied from a single source, using a single cement supplier.

3. All cement shall be Portland cement, Type II, low alkali per ASTM C150, or Type V, and produced within the United States.

B. Product Characteristics: Paving/Flatwork: Integral Color

1. Quality: All concrete shall have the following minimum compressive strengths at twenty-eight (28) days and shall be proportioned within the following limits:

a. 4,000 psi minimum compressive strength.

b. 1" maximum size aggregate.

c. 6.0 minimum sacks of cement per cubic yard.*

d. Maximum water to cement ratio of 0.55.

e. 4" maximum slump.

f. Xypex Admix C-500 2% - 2.5% by weight of cement content. Contact Xypex Technical Services to confirm dosage. (To be used for swimming pool decks only.)

* For estimate only: to be determined by mix design.

2. Cement: All cement shall be Portland Cement conforming to ASTM C 150, Type II or V and shall be the product of one manufacturer.

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3. Aggregates:

a. Shall conform to “Standard Specifications for Concrete Aggregates,” ASTM C33, except as modified herein.

b. Coarse Aggregate: Clean sound washed gravel or crushed rock. Crushing may constitute not more than 30% of the total coarse aggregate volume. Not more than 5% flat, thin, elongated or laminated material nor more than 1% deleterious material shall be present. 1" aggregate graded from 1/4” to 1”, fineness modulus 6.90 to 7.40. 1 1/2” graded from ½” to 1 1/2”, fineness modulus 7.80 to 8.20.

c. Fine Aggregate: Washed natural sand of hard, strong particles and shall contain not more than 1% of deleterious material, fineness modulus 2.65 to 3.05.

d. Aggregate must be certified, non-expansive from a “known” good source.

4. Water: Clean, fresh, free from acid, alkali, organic matter or other impurities liable to be detrimental to the concrete (potable).

5. Admixtures: Admixtures shall be used upon approval of the Owner's Representative.

a. Air-entraining admixture: Conform to ASTM C260.

b. Water-reducing admixture: Conform to ASTM C494.

c. Waterproofing admixture for swimming pool decks only: Xypex Admix C-500, No substitutions permitted. Conform to ASTM C494.

6. Xypex Admix C-500 Dosage: To be used for swimming pool decks only.

a. General: Xypex Admix must be added to concrete mix at time of batching. It is important to obtain a homogeneous mixture of Xypex Admix with the concrete. Do not add dry Admix powder directly to wet mixed concrete as this could cause clumping and thorough dispersion may not occur.

b. Dosage Rate: Under normal conditions, the crystalline waterproofing powder shall be added to the concrete mix at the following rates:

1.) Xypex Admix C-500 2% – 2.5% by weight of cement content

c. Weather Conditions: For mixing, transporting and placing concrete under conditions of high temperature or low temperature, follow concrete practices such as those referred to in ACI 305R (Hot Weather Concreting) and ACI 306R (Cold Weather Concreting) or other applicable standards.

d. Concrete Batching & Mixing Procedures: Procedures for the addition of Xypex admixture will vary according to type of batch plant operation and equipment. Prior to the placement of any concrete, the concrete batch plant and the contractor shall be responsible to consult with the local Xypex representative concerning additional procedures for the addition, mixing and to confirm dosage.

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Note: For enhanced chemical protection or for meeting specific project requirements or where the concrete mix design contains higher than 25% type F fly ash content or includes a Portland cement/slag cement/type C fly ash blend, consult with manufacturer or its authorized representative to determine appropriate dosage rates.

D. Cement Grout and Drypack:

1. Cement Grout: Mix 1 part by volume of Portland Cement, 1/2 part by volume of water and fine aggregate enough to make mixture flow under its' own weight.

2. Drypack: Mix 1 part by volume of Portland Cement, 1/2 part by volume of water and fine aggregate enough to make a stiff mix that will mold into a ball. Mix no more than can be used in 30 minutes.

2.3 PAVING BASE

A. All aggregate base material shall conform to Class 2 aggregate base as defined in Section 26-1.02A of the latest edition of the Caltrans Standard Specifications.

2.4 REINFORCING STEEL

A. All deformed bar shall comply with Standard Specifications and per Drawings. Size per plan.

B. Expansion joint dowels shall be smooth, per ASTM A615.

2.5 EXPANSION JOINT MATERIAL

B. Product Description

1. Series: Flexible foam expansion joint filler.

3. Material: Synthetic foam

4. Thickness: 1/4" minimum thickness.

2.6 JOINT SEALANT MATERIALS

A. Caulking: Multipart, non-sag gun grade polyurethane based sealant meeting the requirements of ASTM C920-02, Type S or M, Mamemco International, Pecora, Sika Corp., Sonneborn Building Products, Tremco or approved equal. Self leveling caulking materials are not allowed.

B. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

C. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

D. Sealant Backer Rod: Provide compressible polyethylene or polyurethane backer rod as recommended by the sealant manufacturer.

E. Bond Breaker Tape: Provide polyethylene tape or other plastic tape as recommended by sealant manufacturer, to be applied to sealant-contact surfaces where bond to substrate or joint filler must be avoided for proper performance of sealant.

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F. Sand: Cover the surface of the caulking with #30 silica sand.

2.7 CONSTRUCTION JOINTS

A. Use keyform for slab pour joints. Either preformed galvanized or PVC construction joint forms of a standard manufacturer may be used. Install per manufacturer's recommendations and tool edges of slabs.

2.8 CURING MATERIALS

A. Liquid Membrane (covered slab): Chlorinated rubber membrane forming, curing-sealing compound conforming to ASTM C309.

B. Liquid Membrane (exposed slab): Clear methyl and butyl methacrylate non-staining, membrane forming, curing-sealing compound conforming to ASTM C309.

2.9 OTHER MATERIALS

A. All other materials not specifically described but required for complete and proper installation of this work, shall be selected by the contractor and subject to the approval of the College's Representative.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Inspection

1. Prior to all work of this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.

2. Verify that concrete pavement may be installed in strict accordance with the original design, all pertinent codes and regulations, and all pertinent portions of the referenced standards.

3. Prior to paving the site, the exposed pavement subgrade should be scarified to a depth of 12 inches, brought to approximately optimum moisture content, and compacted to at least 95 percent of the maximum dry density, as determined in general accordance with ASTM D1557.

B. Discrepancies

1. In the event of discrepancy, immediately notify the Project Manager.

2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.2 FORMWORK

A. General

1. Construct forms accurately to dimensions, plumb and true to line and grade. Use forms that are substantial, mortar tight, braced and tied so as to maintain position and shape during placing of reinforcing and concrete.

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2. Wavy surfaces and bulged walls or slab surfaces resulting from settlement or springing of formwork will be rejected.

3. Carefully verify and check all forms for alignment and level as the work proceeds. Promptly make all needed adjustments or additional bracing.

B. Construction Joints: Construct and assemble forms in such a manner that joints occur at accepted locations. Thoroughly clean forms before pouring concrete.

C. Details: Take extreme care in all details of forming, setting and reinforcing. Except where tooled or radiused corners are indicated, provide all exposed concrete finish work with smooth, even surfaces of dense concrete with clean sharp arises and outside corners.

D. Prior to Pouring Concrete

1. Thoroughly clean out all forms to be used.

2. Thoroughly wet wood forms as required where form coatings are not used.

E. Removal of Forms:

1. Do not remove supporting forms or shoring until concrete has sufficient strength to carry its own weight and other loads upon it.

2. Remove forms only after concrete has properly set and without damaging concrete.

3.3 CAST-IN-PLACE CONCRETE

A. Conveying and Placing Concrete:

1. Before placing concrete, mixing and conveying equipment shall be well cleaned, and the forms and space to be occupied by concrete shall be thoroughly cleaned and wetted. Ground water shall be removed until the completion of the work.

2. No concrete shall be placed in any unit of work until all formwork has been completely constructed, all reinforcement has been secured in place, all items to be built into concrete are in place, and form ties at construction joints tightened.

3. Concrete shall be conveyed from mixer to place of final deposit in such a way to prevent the separation or loss of ingredients. It shall be placed as nearly as practicable in its' final position to avoid rehandling or flowing. Concrete shall not be dropped freely where reinforcing bars will cause segregation, nor shall it be dropped freely more than six (6) feet. Use tremies, spouts and dump boxes in deep sections. Vibrators are not acceptable for facilitating concrete transport.

4. Concrete shall be tamped and spaded to insure proper compaction into all parts of forms and around reinforcement. A mechanical vibrator shall be used to thoroughly compact the concrete. Vibration must be by direct action in the concrete and not against forms or reinforcement.

5. Mixing and transport time as indicated in ASTM C94 is required. If air temperatures are between 85° and 90° F the delivery time is to be reduced to 75 minutes. When air temperatures is in excess of 90° F the delivery time should be reduced to 60 minutes.

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6. Truck mixes without batch certificates will be rejected.

B. Construction Joints / Expansion Joints: Construction joints and expansion joints shall be provided at locations and in the manner shown on the Drawings. With exception of existing concrete / new shotcrete joints, use PVC bulb-type waterstops appropriate for design condition between all concrete pours / lifts to avoid cold joints. Waterstops shall be placed in such a way to protect reinforcing steel from rust and oxidation. All expansion joints must be the full depth of the concrete section in which they are located.

C. Slab Finishes: Concrete slabs shall be compacted and screeded uniformly to grades shown. Push large aggregates below the surface with a screen tamper, screed and bull float. As soon as the surface becomes workable, it shall be wood floated, then finished as indicated on the Drawings to a uniform smooth, true surface in a neat and workmanlike manner. Carefully coordinate slab finish requirements with other trades (ceramic tile, pool plaster) to ensure concrete finish is appropriate substrate for final finish material.

1. Pool Deck Finish: Heavy Wire Broom Finish or to match selected mock up finish

D. Protection and Curing:

1. Concrete shall be protected from injurious action of the elements and defacement of any nature during construction.

2. All forms must be kept wet to prevent drying out of the concrete.

3. All concrete surfaces including footings must be kept wet for at least seven (7) days after concrete is placed.

4. Apply the appropriate curing materials, as specified in 2.03 of this Section, immediately after finishing slabs. Application shall be as specified by the manufacturer.

E. Form Removal:

1. Take care in removing forms so that surfaces are not marred or gouged and that corners are true, sharp and unbroken.

2. No steel spreaders, ties or other metal shall project from or be visible on any concrete surfaces.

F. Defective Work:

1. Should the strength of any concrete for any portion of the work indicated by tests of molded cylinders and core tests fall below minimum 28 days strength specified or indicated, concrete will be deemed defective work and shall be replaced.

2. Concrete work that is not formed as indicated, is not true to intended alignment, not plumb or level where so intended, not true to intended grades or elevations, not true to specified or selected finish, contains sawdust shavings, wood, or embedded debris, which exhibits cracks or contains fine or coarse sulfide particles, or expansive aggregates detrimental to performance or appearance of the concrete shall be deemed defective.

3. Promptly perform work required to replace and properly clean (by sandblasting if necessary) any defective concrete panels (control joint or expansion joint to control joint or expansion joint),

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at Contractor's expense, including all expense of additional inspection, tests, or supervision made necessary as a result of defective concrete.

3.06 EXPANSION JOINTS

A. Temperatures: Do not install sealants when air temperature is less than 40°F.

B. Tooling: Tool exposed joints to a slightly concave surface using slicking materials recommended by the manufacturer. The tooling procedure shall press sealant against the sides of the joint. No materials shall be left “feathered” out or smeared on the abutting materials. Completed joints shall have a uniform professional appearance.

C. Joint Construction: Sealant joint width, thickness and cross-sectional profile to be constructed in strict accordance with the sealant manufacturer’s recommendations.

D. Sand: At the appropriate time cover the sealant with sand to provide a sanded finish.

3.5 FIELD QUALITY CONTROL

A. Inspection and Testing

1. Coordinate taking of concrete cylinders for testing of concrete paving per Divisions 1 and 3.

2. Evaluate surfaces for grade and drainage. Correct all non-conforming surfaces, ponds, and other irregularities to the satisfaction of the Client’s Representative.

3.6 TOLERANCES

A. General: Variations below list the maximum permissible deviations from established lines, grades and dimensions for all exposed concrete paving.

B. Variation from Plumb:

1. In the lines and surfaces of walls and pavements: In 10 feet, maximum 1/4 inch.

2. For exposed corners, control-joint grooves and other conspicuous lines:

a. In any 10 feet, maximum 1/4 inch

b. In any 20 feet or more, 1/2 inch

C. Variation from the Level or from the Grades shown per Drawings:

1. In pavements, walls and tops of curbing: In any 10 feet, 1/4 inch

2. For exposed joints and other conspicuous lines: In any 10 feet, maximum 1/4 inch

D. Variation in Cross-Sectional Thickness of Slabs and Walls, without reducing tolerances established for line, plumb, and level: Minus 1/4 inch; Plus 1/2 inch

E. Variation in Radii

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1. In radii of less than 10 feet:

    a. In any 5 feet, 1/8 inch

    b. In any 10 feet, 1/4 inch

2. In radii of 20 feet:

    a. In any 10 feet, 1/4 inch

    b. In any 20 feet, 3/8 inch

3. In radii of 30 feet or more:

    a. In any 20 feet, 1/2 inch

    b. In any 30 feet, 1 inch

3.07 CLEAN-UP

A. Upon completion of the Work of this Section, immediately remove all swimming pool concrete materials, debris and rubbish occasioned by this Work to the approval of the Project Manager.

END OF SECTION

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SECTION 32 13 18

CEMENT AND CONCRETE FOR EXTERIOR IMPROVEMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Materials for portland cement concrete

B. Aggregate and aggregate grading for portland cement concrete

C. Water for portland cement concrete

D. Admixtures for portland cement concrete

E. Proportioning for portland cement concrete

F. Mixing and transporting portland cement concrete

G. Formwork for cast in place portland cement concrete

H. Embedded materials for portland cement concrete

I. Steel reinforcement for portland cement concrete

J. Placing and finishing portland cement concrete

K. Curing portland cement concrete

L. Protecting portland cement concrete

1.2 RELATED SECTIONS

A. Section 32 13 13, Concrete Pavement

1.3 RELATED DOCUMENTS

A. ASTM Standards
   1. A615, Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
   2. A1064, Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
   3. C94, Standard Specification for Ready-mixed Concrete
   4. C150, Standard Specification for Portland Cement
   5. C260, Standard Specification for Air-Entraining Admixtures for Concrete
   6. C309, Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
   7. C494, Standard Specification for Chemical Admixtures for Concrete
   8. C618, Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for use in Portland Cement
   9. C1017, Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
   10. D1557, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort

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11. D1751, Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)

B. Caltrans Standard Specifications 2018 or current edition
   1. Section 51: Concrete Structures
   2. Section 73: Concrete Curbs and Sidewalks
   3. Section 90: Concrete

1.4 DEFINITIONS

A. ASTM: American Society for Testing and Materials

1.5 SUBMITTALS

A. Concrete Mix Design: Have all concrete mixes designed by a testing laboratory and approved by the Consulting Engineer. Conform all mixes to the applicable building code requirement, regardless of other minimum requirements listed herein or on the Plans. Submit mix designs for review before use. Show proportions and specific gravities of cement, fine and coarse aggregate, and water and gradation of combined aggregates.

B. Reinforcing Steel Shop-Drawings

1.6 QUALITY ASSURANCE

A. Concrete shall be subject to quality assurance in accordance with Section 90 of the Caltrans Standard Specifications.
   1. Slump tests: Have available, at job site, equipment required to perform slump tests. Make one slump test for each cylinder sample, from same concrete batch. Allowable maximum slump shall be 4 inches for walls and 3 inches for slabs on grade and other work.

B. Certifications:
   1. Provide Owner's Representative at the time of delivery with certificates of compliance signed by both Contractor and Supplier containing the following statements:
      a. Materials contained comply with the requirements of the Contract Documents in all respects.
      b. Proportions and mixing comply with the design mix approved by the Consulting Engineer. Design mix shall have been field tested in accordance with the herein requirements of the Caltrans Standard Specifications and produces the required compressive strength under like conditions.
      c. Statement of type and amount of any admixtures.
   2. Provide Owner's Representative, at time of delivery, with certified delivery ticket stating volume of concrete delivered and time of mixing, or time of load-out in case of transit mixers.

1.7 DESIGNATION

A. General: Whenever the 28 day compressive strength is designated herein or on the Plans is 3,600 psi or greater, the concrete shall considered to be designated by compressive strength. The 28 day compressive strength shown herein or on the plans which are less than 3,600 psi are shown for design information only and are not considered a requirement for acceptance of the concrete. Whenever the concrete is designated by class or as minor concrete herein or on the Plans, the concrete shall

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contain the cement per cubic yard shown in Section 90-2 of the Caltrans Standard Specifications.

B. Unless specified otherwise herein or on the Plans, portland cement concrete for curbs, gutters, sidewalks and their appurtenances such as island paving, curb ramps and driveways, shall be minor concrete as specified in Section 90-2 of the Caltrans Standard Specifications.

PART 2 - PRODUCTS

2.1 PORTLAND CEMENT

A. General: Type II or Type V cement conforming to the requirements of ASTM C150. Contractor may substitute pozzolan for portland cement in amounts up to 15% of the required mix unless high early strength concrete is specified. Pozzolan shall consist of Class F Fly Ash meeting the requirements of ASTM C618.

2.2 AGGREGATE AND AGGREGATE GRADATION

A. General: Fine and coarse aggregates shall be ¾ inch maximum size; clean and crushed aggregate free of materials which may cause staining. Aggregates shall conform to the requirements of section 90-1.02C of the Caltrans Standard Specifications.

B. Aggregate Size and Gradation: Conform to the requirements of section 90-1.02C(4)(d) of the Caltrans Standard Specifications for 1 inch maximum combined aggregate.

2.3 WATER

A. General: Water shall be clean, free from injurious amounts of oil, alkali, organic matter, or other deleterious material, and not detrimental to concrete per ASTM C94. Water shall conform to the requirements of section 90-1.02D of the Caltrans Standard Specifications, for mixing and curing portland cement concrete and for washing aggregates.

2.4 CHEMICAL ADMIXTURES

A. Provide admixtures certified by manufacturer to be compatible with other admixtures and to contain no more than 0.1 percent water-soluble chloride ions by mass of cementitious material. Admixtures shall conform to the requirements of section 90-1.02E of the Caltrans Standard Specifications and as noted herein or on the Plans.

1. Air-Entraining Admixture: ASTM C260/C260M
2. Water-Reducing Admixture: ASTM C494/C494M, Type A
3. Retarding Admixture: ASTM C494/C494M, Type B
4. Water-Reducing and Retarding Admixture: ASTM C494/C494M, Type D
5. High-Range, Water-Reducing Admixture: ASTM C494/C494M, Type F
6. High-Range, Water-Reducing and Retarding Admixture: ASTM C494/C494M Type G
7. Plasticizing and Retarding Admixture: ASTM C1017/C1017M, Type II

2.5 CLASSIFICATION OF PORTLAND CEMENT CONCRETE

A. Unless specified otherwise herein or on the Plans, portland cement concrete for the following items shall be designated as follows:

1. Curbs, Gutters, and Sidewalks: Minor concrete.
2. Cast in Place Concrete Pipe: The concrete shall consist of a minimum of 564 pounds of portland cement per cubic yard of concrete.

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3. Thrust Blocks: The concrete shall have a minimum compressive strength of 3,000 psi.
4. Sign and Fence Footings: The concrete shall consist of a minimum of 376 pounds of portland cement per cubic yard of concrete.
5. Water, Storm, and Sanitary Structures: The concrete shall consist of a minimum of 564 pounds of portland cement per cubic yard of concrete.

2.6 EXPANSION JOINT MATERIAL

A. Material for expansion joints in portland cement concrete improvements shall be premolded expansion joint fillers conforming to the requirements of ASTM D1751. Expansion joint material shall be shaped to fit the cross section of the concrete prior to being placed. Suppliers certificates showing conformance with this specification shall be delivered with each shipment of materials delivered to the job site. Unless specified otherwise herein or on the Plans, expansion joint thickness shall be as follows:
1. Concrete Slope Protection, Gutter Lining, Ditch Lining and Channel Lining: ½ inch
2. Structures: As indicated

2.7 REINFORCEMENT AND DOWELS

A. Bar reinforcement for concrete improvements shall be deformed steel bars of the size or sizes called for on the plans conforming to the requirements of ASTM A615 for Grade 60 bars. Size and shape for bar reinforcement shall conform to the details shown or called for on the Plans. Substitution of wire mesh reinforcement for reinforcing bars will not be allowed.

B. Slip dowels, where noted or called for on the Plans or detail drawings shall be smooth billet-steel bars as designated and conforming to the requirements of ASTM A615 for Grade 60 bars. Ends of bars inserted in new work shall be covered with a cardboard tube sealed with cork; no grease or oil shall be used.

C. Mesh for reinforcement for concrete improvements shall be cold drawn steel wire mesh of the size and spacing called for on the plans conforming to the requirements of ASTM A1064. Size and extent of mesh reinforcement shall conform to the details shown or called for on the plans.

D. Tie wire for reinforcement shall be eighteen (18) gauge or heavier, black, annealed conforming to the requirements of ASTM A1064.

E. Suppliers certificates showing conformance with this specification shall be delivered with each shipment of materials delivered to the job site.

2.8 CURING AND SEALING MATERIALS

A. Curing Compounds:
1. Concrete surface repellent-vertical and/or flatwork: Repello surface treatment, invisible chemical treatment barrier system.

2.9 FORMS

A. Conform to the requirements of Section 73-1.03C and Section 90-1.03B(1) of the Caltrans Standard Specifications.

B. Tolerance: Not to deviate more than ¼ inch in 10 feet in grade and alignment.

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2.10 PRECAST CONCRETE STRUCTURES

A. Conform to the following Sections of Caltrans Standard Specifications:
   1. 51-7, Minor Structures
   2. 70-5.02, Flared End Sections

PART 3 - EXECUTION

3.1 STRUCTURAL EXCAVATION

A. Structural excavation may be either by hand, or by machine and shall be neat to the line and dimension shown or called for on the plans. Excavation shall be sufficient width to provide adequate space for working therein, and comply with CAL-OSHA requirements.

B. Where an excavation has been constructed below the design grade, refill the excavation to the bottom of the excavation grade with approved material and compact in place to 95% of the maximum dry density as determined by ASTM D1557.

C. Remove surplus excavation material remaining upon completion of the work from the job site, or condition it to optimum moisture content and compact it as fill or backfill on the site.

3.2 BRACING AND SHORING

A. Conform to California and Federal OSHA requirements.

B. Place and maintain such bracing and shoring as may be required to support the sides of the excavations for the proper protection of workmen; to facilitate the work; to prevent damage to the facility being constructed; and to prevent damage to adjacent structures or facilities. Remove all bracing and shoring upon completion of the work.

C. Be solely responsible for all bracing and shoring and, if requested by the Owner's Representative, submit details and calculations to the Owner's Representative. The Owner's Representative may forward the submittal to the Consulting Engineer for their review. The Contractor's submittal shall include the basic design, assumed soils conditions and estimation of forces to be resisted, together with plans and specifications of the materials and methods to be used, and shall be prepared by a civil engineer or structural engineer registered in California. No excavations related to the proposed facility shall precede a response to the submittal by the Owner's Representative.

D. Be solely responsible for installing and extracting the sheathing in a manner which will not disturb the position or operation of the facility being constructed or adjacent utilities and facilities.

3.3 PLACING CONCRETE FORMS

A. Form concrete improvements with a smooth and true upper edge. Side of the form with a smooth finish shall be placed next to concrete. Construct forms rigid enough to withstand the pressure of the fresh concrete to be placed without any distortion.

B. Thoroughly clean all forms prior to placement and coat forms with an approved form oil in sufficient quantity to prevent adherence of concrete prior to placing concrete.

C. Carefully set forms to the alignment and grade established and conform to the required dimensions. Rigidly hold forms in place by stakes set at satisfactory intervals. Provide sufficient clamps, spreaders and braces to insure the rigidity of the forms.

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D. Provide forms for back and face of curbs, lip of gutters and edge of walks, valley gutters or other surface slabs that are equal to the full depth of the concrete as shown, noted or called for on the Plans. On curves and curb returns provide composite forms made from benders or thin planks of sufficient ply to ensure rigidity of the form.

3.4 PLACING STEEL REINFORCEMENT

A. Bars shall be free of mortar, oil, dirt, excessive mill scale and scabby rust and other coatings of any character that would destroy or reduce the bond. All bending shall be done cold, to the shapes shown on the plans. The length of lapped splices shall be as follows:

1. Reinforcing bars No. 8, or smaller, shall be lapped at least 45 bar diameters of the smaller bar joined, and reinforced bars Nos. 9, 10, and 11 shall be lapped at least 60 bar diameters of the smaller bars joined, except when otherwise shown on the plans.
2. Splice locations shall be made as indicated on the plans.

B. Accurately place reinforcement as shown on the plans and hold firmly and securely in position by wiring at intersections and splices, and by providing precast mortar blocks or ferrous metal chairs, spacers, metal hangers, supporting wires, and other approved devices of sufficient strength to resist crushing under applied loads. Provide supports and ties of such strength and density to permit walking on reinforcing without undue displacement.

C. Place reinforcing to provide the following minimum concrete cover:

1. Surfaces exposed to water: 4 inches.
2. Surfaces poured against earth: 3 inches.
3. Formed surfaces exposed to earth or weather: 2 inches.
4. Slabs, walls, not exposed to weather or earth: 1 inch.

D. Minimum spacing, center of parallel bars shall be two and one half (2 ½) times the diameter of the larger sized bar. Accurately tie reinforcing securely in place prior to pouring concrete. Placing of dowels or other reinforcing in the wet concrete is not permitted.

3.5 MIXING AND TRANSPORTING PORTLAND CEMENT CONCRETE

A. Transit mix concrete in accordance with the requirements of ASTM Designation C94. Transit mix for not less than ten (10) minutes total, not less than three (3) minutes of which shall be on the site just prior to pouring. Mix continuous with no interruptions from the time the truck is filled until the time it is emptied. Place concrete within one hour of the time water is first added unless authorized otherwise by the Owner's Representative.

B. Do not hand mix concrete for use in concrete structures.

3.6 PLACING PORTLAND CEMENT CONCRETE

A. Thoroughly wet subgrade when concrete is placed directly on soil. Remove all standing water prior to placing concrete.

B. Do not place concrete until the subgrade and the forms have been approved.

C. Convey concrete from mixer to final location as rapidly as possible by methods that prevent separation of the ingredients. Deposit concrete as nearly as possible in final position to avoid re-handling.

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D. Place and solidify concrete in forms without segregation by means of mechanical vibration or by other means as approved by the Owner's Representative. Continue vibration until the material is sufficiently consolidated and absent of all voids without causing segregation of material. The use of vibrators for extensive shifting of fresh concrete will not be permitted.

E. Concrete in certain locations may be pumped into place upon prior approval by the Owner's Representative. When this procedure requires redesign of the mix, such redesign shall be submitted for approval in the same manner as herein specified for approval of design mixes.

3.7 PLACING ACCESSORY MATERIALS

A. Place water stops and other items required to be embedded in of portland cement concrete structures at locations shown or required in accordance with Section 51-2.04 of the Caltrans Standard Specifications unless otherwise specifically noted or called for on the Plans.

B. Curing Compounds:

1. Regular Portland Cement Concrete: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

3.8 FORM REMOVAL

A. Remove forms without damage to the concrete. Remove all shores and braces below the ground surface, before backfilling.

B. Do not backfill against concrete until the concrete has developed sufficient strength to prevent damage.

C. Leave forms for cast-in-place walls in place at least 72 hours after pouring.

D. Leave edge forms in place at least 24 hours after pouring.

3.9 FIELD QUALITY CONTROL

A. Finish subgrade for concrete improvements shall be subject to approval prior to placement of forms.

B. No concrete shall be placed prior to approval of forms.

C. Concrete improvements constructed shall not contain "bird baths" or pond water and shall be smooth and ridge free.

D. Conform the finish grade and cross section of concrete improvements to the design grades and cross sections.

E. Variation of concrete improvements from design grade and cross section as shown or called for on the plans shall not exceed the tolerances ACI 117 and as follows:

1. Elevation: ¼ inch.
2. Thickness: Plus 3/8 inch, minus 1/4 inch.
3. Surface: Gap below 10 foot long, unleveled straightedge not to exceed 1/4 inch.
4. Lateral Alignment and Spacing of Tie Bars and Dowels: 1 inch.
5. Vertical Alignment of Tie Bars and Dowels: 1/4 inch.

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6. Alignment of Tie-Bar End Relative to Line Perpendicular to Pavement Edge: 1/2 inch.
7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Pavement Edge: Length of dowel 1/4 inch per 12 inches.
8. Joint Spacing: 3 inches, unless otherwise indicated.
9. Contraction Joint Depth: Plus 1/4 inch, no minus.
10. Joint Width: Plus 1/8 inch, no minus.

3.10 RESTORATION OF EXISTING IMPROVEMENTS

A. Replace in kind all pavement or other improvements removed or damaged due to the installation of concrete improvements.

B. Remove, landscaping or plantings damaged or disturbed due to the installation of concrete improvements. Replace in kind.

END OF SECTION

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SECTION 32 31 19

ORNAMENTAL METAL FENCES AND GATES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Ornamental metal fence system and associated gates.

1.2 REFERENCES

A. ASTM International (ASTM):

1. A239 Practice for Locating the Thinnest Spot in a Zinc(Galvanized) Coating on Iron or Steel Articles.

2. A653/A653M Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy- Coated (Galvannealed) by the Hot-Dip Process.

3. A1008/A1008M Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High- Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable.

4. A1011/A1011M Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low- Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.

5. B117 Practice for Operating Salt Spray (Fog) Apparatus.

6. D523 Test Method for Specular Gloss.

7. D714 Test Method for Evaluating Degree of Blistering of Paints

8. D1654 Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments.

9. D2244 Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates.

10. D2794 Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).

11. D3359 Test Methods for Measuring Adhesion by Tape Test.

12. E4 Practices for Force Verification of Testing Machines.

13. F2814 Guide for Design and Construction of Ornamental Steel Picket Fence Systems for Security Purposes.

14. F2408 Standard Specification for Ornamental Fences Employing Galvanized Steel Tubular Pickets.

1.3 SUBMITTALS

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A. Product Data: Manufactures information for each type of product indicated.

B. Shop Drawings: Product elevations, sections, and details as necessary.

C. Product Warranty: Pickets, Posts, and Rails standard limited warranty that ornamental fence system is free from defects in material and workmanship including cracking, peeling, blistering and corroding as specified in subsection 1.7.B. Warranty.

1.4 QUALITY ASSURANCE

A. The contractor shall provide laborers and supervisors who are thoroughly familiar with the type of construction involved and the materials and techniques specified.

B. Provide complete fence system and gates, with all components provided by a single manufacturer, including all panels, posts, gates, fittings and hardware.

C. Manufacturer Qualifications: Company specializing in manufacturing of steel ornamental picket fence systems with a minimum of 5 years documented experience.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Panels, gates, posts, and accessories to be delivered to the project site assembled and coated. Upon receipt at the job site, all materials shall be checked to ensure that no damages occurred during shipping.

B. Materials shall be handled and stored properly to protect against damage, weather, vandalism and theft.

1.6 PROJECT CONDITIONS

A. Field Measurements: Take field measurements prior to fabrication of the work and preparation of shop drawings, to ensure proper fitting of the work. Show recorded measurements on final shop drawings. Notify the Project Manager, in writing, of any dimensions found which are not within specified dimensions and tolerances in the Contract Documents, prior to proceeding with the fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the work.

1.7 WARRANTY

A. Warranty: Submit a written warranty, signed by manufacturer, covering failure of the material and/or the factory-applied exterior finish within the specified warranty period and agreeing to repair finish or replace work that shows evidence of finish deterioration. Deterioration of finish includes cracking, checking, or peeling.

1. Warranty Period: 15 years.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Basis-of-Design Product: Subject to compliance with requirements, provide Merchants Metals 'Guardsman Monroe' ornamental metal fencing, or a comparable product by one of the following:

1. Ameristar Fence Products.

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2. Or approved equal.

B. Substitutions: Requests for substitutions will be considered in accordance with provisions of General Conditions.

2.2 MATERIALS

A. Pickets: Galvanized steel tubular members manufactured per ASTM F2408, with a minimum yield strength of 45,000 psi. Minimum picket size: 3/4” square, 16 gauge with pickets spaced 4-5/8” on-center and 3-7/8” face to face of picket.

B. Rails: 1-3/8” x 1-1/2”, 11 gauge galvanized steel “U” channel, shall conform to the requirements F2408 Sect 5.1.2 galvanized prior to forming, with a minimum yield strength of 50,000 psi., the steel shall be hot-dip galvanized to meet A653/A653M with a minimum zinc coating weight of 0.9 oz/ft2, Coating Designation G-90. Punched rails to receive pickets. Attach pickets to rails with industrial rivets. Attach rails to posts with brackets.

C. Posts: Galvanized square steel tubular members manufactured per ASTM F2408, having minimum yield strength of 45,000 psi.

D. Finish: Manufactured in compliance with ASTM F2408 - Corrosion Resistance Salt Spray Test per ASTM B117, Impact Resistance per ASTM D2794, and Adhesion per ASTM D3359 Method B. All primary components shall receive a thorough cleaning and pre-treatment with a 10-step process: Hot alkaline cleaner, clear water rinse, hot iron phosphate application, clear water rinse, reverse Osmosis rinse, dry off oven heat, zinc enriched powder primer coat at 2-4 mils., gel oven heat, Ultra polyester finish T.G.I.C. powder coat at 2-4 mils., and final curing oven.

1. Color: Black

2.3 ACCESSORIES

A. Industrial drive rivets hold pickets to rails and rails to brackets. Rivets must have a sheer strength of 1,500 lbs. and a holding power of 1,100 lbs.

B. Rail/Post Brackets: Universal Bracket - biasable up and down.

C. Post Caps: Cast aluminum or malleable iron or formed steel manufactured to form a weather-tight closure. Choose Cap style: Ball or flat tops - on all posts.

D. Rings: Cast aluminum rings attached to rails by insertion of mounting block into upper rail. Rivet ring to rail. Ring to be secure and un-removable.

E. Finial Tops for Pickets: Cast aluminum, attached to pickets by 1/4" rivet. All Finials extend 6" above rail. Choose one: Fleur-de-lis, Quad Flair with Ball, Triad Spear, or approved equal. Provide for Architect review and approval.

2.4 GATES

A. Gates shall be fabricated using the same components as for the complete fencing system. Walkway gates shall have adjustable self-closing hinges and shall be self-latching. Maintenance access gates shall have drop rod.

1. Model: Double Gate – Basic Flat.

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2. Width: As noted on plans.

3. Height: Match existing adjacent height, verify in field.

4. Finish: Same as fencing.

2.5 SETTING MATERIALS

A. Concrete: Minimum 28 day compressive strength of 3,000 psi.

B. Flanged Post: Provide flanged base plates with 4 holes for surface mounting where indicated. (For wall mount or pad mount situations).

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify areas to receive fencing are completed to final grades and elevations.

B. Property lines and legal boundaries of work to be clearly established by the general contractor or property owner.

3.2 PREPARATION

A. Prepare the grade and remove surface irregularities, if any, which may cause interference with the installation of the fence.

3.3 INSTALLATION

A. Install fence in accordance with site conditions and codes.

B. Space posts uniformly at manufactures standard face to face of post dimension unless instructed otherwise.

C. Set posts in concrete. Dig holes having a diameter 4 times the diameter of the post, and 6" deeper than the bottom of the post. Crown concrete at top to shed water.

D. Attach brackets using 1/4" bolts with lock nuts. Attach panels and place tops on bracket. Rivet top to bracket in 2 places to assure security.

3.4 ADJUSTING AND CLEANING

A. Touch-up, repair, or replace damaged products before Substantial Completion.

B. Clean the work according to manufacturer's written instructions. The Contractor shall clean the job site of excess materials. Post hole excavations shall be scattered uniformly away from the posts. Clean fence with mild household detergent and rinse well with clean water. Mortar shall be removed from exposed posts using a 10 percent solution of muriatic acid followed immediately by several rinses with clean water.

3.5 PROTECTION

A. Provide final protection and maintain conditions in a manner acceptable to the Installer which will ensure that the work shall be without damage at time of Substantial Completion.

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END OF SECTION

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SECTION 33 41 00

STORM UTILITY DRAINAGE PIPING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Site storm drainage system up to five feet of any on-site building

1.2 RELATED SECTIONS

A. Section 31 21 00, Utility Trenching and Backfill

B. Section 32 13 18, Cement and Concrete for Exterior Improvements

1.3 RELATED DOCUMENTS

A. AASHTO
1. M199: Precast Reinforced Concrete Manhole Sections
2. M252: Corrugated Polyethylene Drainage Pipe
3. M294: Corrugated Polyethylene Pipe, 12 to 604 inch Diameter

B. ASTM
1. A74: Cast Iron Soil Pipe and Fittings
2. A615: Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
3. C143: Standard Test Method for Slump of Hydraulic-Cement Concrete
4. C443: Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
5. C478: Circular Precast Reinforced Concrete Manhole Sections
6. C564: Rubber Gaskets for Cast Iron Soil Pipe and Fittings
7. C923: Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals
8. C1173: Flexible Transition Couplings for Underground Piping Systems
9. D1785: Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
10. D2321: Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications
11. D2564: Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems
12. D3034: Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings
13. D4101: Propylene Injection and Extrusion Materials
14. F477: Elastomeric Seals (Gaskets) for Joining Plastic Pipe
15. F656: Primers for Use in Solvent Cement Joints of Poly(Vinyl Chloride) (PVC) Plastic Pipe and Fittings
16. F679: Poly(Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings
17. F1336: Poly(Vinyl Chloride) (PVC) Gasket Sewer Fittings

C. AWWA
1. C104: Cement-Mortar Lining for Ductile-Iron Pipe and Fittings
2. C105: Polyethylene Encasement for Ductile-Iron Pipe Systems
3. C110: Ductile-Iron and Gray-Iron Fittings, 3-In. Through 48-In. for Water
4. C111: Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
5. C115: Flanged Ductile-Iron Pipe With Ductile-Iron or Gray-Iron Threaded Flanges

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6. C116: Protective Fusion-Bonded Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings
7. C150: Thickness design of Ductile Iron Pipe
8. C151: Ductile-Iron Pipe, Centrifugally Cast
9. C153: Ductile-Iron Compact Fittings
10. C219: Bolted, Sleeve-type Couplings for Plain-End Pipe
11. M41: Ductile Iron Pipe and Fittings

D. Caltrans Standard Specifications, 2015
1. Section 51, Concrete Structures
2. Section 52, Reinforcement
3. Section 65, Concrete Pipe
4. Section 66, Corrugated Metal Pipe
5. Section 70, Miscellaneous Drainage Facilities
6. Section 72, Slope Protection
7. Section 75, Miscellaneous Metal
8. Section 90, Concrete

E. Caltrans Standard Plans, 2015
1. Plan D94A: Metal and Plastic Flared End Sections
2. Plan D94B: Concrete Flared End Sections
3. Plan D97A: Corrugated Metal Pipe Coupling Details No. 1, Annular Coupling Band Bar and Strap and Angle Connection
4. Plan D97C: Corrugated Metal Pipe Coupling Details No. 3, Helical and Universal Couplers
5. Plan D97D: Corrugated Metal Pipe Coupling Details No. 4, Hugger Coupling Bands
6. Plan D97E: Corrugated Metal Pipe Coupling Details No. 5, Standard Joint
7. Plan D97F: Corrugated Metal Pipe Coupling Details No. 6, Positive Joint
8. Plan D97G: Corrugated Metal Pipe Coupling Details No. 7, Downdrain
9. Plan D98A: Slotted Corrugated Steel Pipe Drain Details
10. Plan D98B: Slotted Corrugated Steel Pipe Drain Details

1.4 DEFINITIONS

A. AASHTO: American Association of State Highway and Transportation Officials

B. ASTM: American Society for Testing Materials

C. AWWA: American Water Works Association

D. CMP: Corrugated metal pipe

E. DIP: Ductile iron pipe

F. HDPE: High-density polyethylene

G. NPS: Nominal pipe size

H. PE: Polyethylene

I. PVC: Polyvinyl Chloride

J. RCP: Reinforced concrete pipe

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1.5 SUBMITTALS

A. Follow submittal procedures outlined in Section 26 05 33 – General Provisions.

B. Product data for the following:
1. Piping materials and fittings
2. Special pipe couplings
3. Polymer-concrete, channel drainage systems (trench drains)
4. Joint sealants
5. Plastic area drains
6. Cleanout plugs or caps
7. Precast concrete catch basins, inlets, curb inlets, junction structures and area drains, including frames and grates
8. Precast clean out boxes and box covers
9. Concrete, metal and plastic flared end sections

C. Shop drawings: Include plans, elevations, details and attachments for the following:
1. Precast concrete manholes, frames and covers

D. Design Mix Reports and Calculations: For each class of cast in place concrete

E. Field Test Reports: Indicate and interpret test results for compliance with performance.

1.6 DELIVERY, STORAGE AND HANDLING

A. Delivery and Storage
1. Piping: Inspect materials delivered to site for damage; store with minimum of handling. Store materials on site in enclosures or under protective coverings. Store plastic piping and jointing materials and rubber gaskets under cover out of direct sunlight. Do not store materials directly on the ground. Keep inside of pipes and fittings free of dirt and debris.
2. Metal Items: Check upon arrival; identify and segregate as to types, functions, and sizes. Store off the ground in a manner affording easy accessibility and not causing excessive rusting or coating with grease or other objectionable materials.

B. Handling
1. Handle pipe, fittings, and other accessories in such manner as to ensure delivery to the trench in sound undamaged condition. When handling lined pipe, take special care not to damage linings of pipe and fittings; if lining is damaged, make satisfactory repairs. Carry, do not drag, pipe to trench.
2. Handle precast concrete pipe, manholes and other precast structures according to manufacturer's written instructions.
3. Protect imported bedding and backfill material from contamination by other materials.

PART 2 - PRODUCTS

2.1 PVC PIPE AND FITTINGS-SMALLER THAN 4 INCH

A. Pipe shall be in accordance to ASTM D1785, Schedule 40. [Check external load and laying condition, schedule 80 and 120 are also available if stronger pipe is required.]

B. Joints: Solvent Cement, ASTM D2564

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C. Include primer according to ASTM F656

D. Special Pipe Coupling: ASTM C1173. Rubber or elastomeric sleeve and band assembly fabricated to match outside diameters of pipes to be joined.

E. General: Location, configuration bearing area, etc. as indicated

F. Portland Cement Concrete: Section 32 13 18, Cement and Concrete for Exterior Improvements

2.2 AREA DRAINS

A. Grate and Riser: Area drain shall be as manufactured by Nyloplast or approved equal. Riser shall be constructed of 6 inch PVC SDR 35 piping per paragraph 2.1(A) of this section and connected to area drain by a gasket joint. Riser shall be vertical except as otherwise noted in the plans. Riser may include a reducer if necessary to make connection to the storm drain line.

B. Elevation and Grading: Area Drain rim elevation shall be set and area around area drain shall be graded to drain away from any adjacent structures, walks, or roadways and towards area drain.

2.3 METAL, CONCRETE OR PLASTIC FLARED END SECTIONS

A. General: Caltrans Standard Specification Section 70-5.02 and Caltrans Standard Plan D94A and D94B

PART 3 - EXECUTION

3.1 PIPE INSTALLATION

A. General: Install pipe, fittings, and appurtenances utilizing best practices, manufacturer's instructions, and in accordance with Section 6 and 7 of ASTM D 2321 for plastic pipe, Caltrans Standard Specification Section 65-2.03 for reinforced concrete pipe, Caltrans Standard Specification Section 66-1.03 for corrugated metal pipe, and chapter 11.3.3 of AWWA M41 for cast iron and ductile iron pipe.

B. Pipe Depth and Trench Configuration: Conform to typical trench section(s) indicated.

C. Excavation, Bedding, Backfill, and Compaction: Section 31 21 00, Utility Trenching and Backfill

D. Handling: Carefully handle during loading, hauling, unloading and placing operations to avoid breakage or damage. Use strap type slings for lifting and placing; no chains or hooks will be permitted. Comply with the manufacturer's recommendations.

E. Laying: Before lowering pipe into the trench, remove all stakes, debris, loose rock and other hard materials from the bottom of the trench. Lay accurately in conformance with lines and grades indicated. Start laying the pipeline at the low end and proceed upstream. Lay bell and spigot pipe with the bell end facing upstream. Lay pipe on a bed prepared by handwork, dug true to grade. Furnish firm bearing for pipe throughout its entire length with bell holes provided at the ends of each pipe length of sufficient size to permit making up the particular type of joint being used. Adjust pipe to line and grade by scraping away or filling and tamping material under the body of the pipe for the entire pipe length and not by blocking or wedging. After final positioning, hold pipe in place in trench with backfill material placed equally on both sides of the pipe at as many locations as required to hold the pipe section in place.

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F. Curved Alignment: When necessary to conform to the alignment specifically indicated, lay pipe on a curved alignment by means of asymmetrical closure of joints or bending of the pipe barrel. Use shorter lengths of pipe than the standard length if necessary to achieve curvature specified. Do not exceed the recommendations of the pipe manufacture for deflections at the joints or pipe bending.

G. Closure: Close open ends of pipes and appurtenance at the end of each day's work or when work is not in progress.

3.2 POURED-IN-PLACE CONCRETE

A. Concrete shall be mixed in accordance with applicable provisions of Section 90 of Caltrans Standard Specifications.

B. Construction of concrete structures shall conform to applicable provisions of Section 51 of the Caltrans Standards Specifications. Unless otherwise noted herein or in the Plans, exposed surfaces of structures shall be Class 1 surface finish.

C. Curing shall conform to applicable portions in Section 90 of Caltrans Standard Specifications. No pigment shall be used in curing compounds. All work shall be subject to inspection. No concrete shall be placed until the Project Manager has approved the forms and reinforcement.

D. Concrete shall not be cropped freely where reinforcing bars will cause segregation, nor shall it be dropped freely more than six feet. Spouts, elephant trunks, or other approved means shall be used to prevent segregation.

3.3 PIPELINE FLUSHING

A. Newly constructed storm drain pipes shall be flushed with water to clean. A metal screen shall be used to collect and remove any rock, silt and other debris that is flushed out during cleaning.

3.4 DEFLECTION TESTING

A. Upon completion of work, perform a deflection test on entire length of installed plastic pipeline. Completed work includes superimposed loads adjacent to and over the pipeline, such as compacted backfill and earthwork, and does not include paving, concrete curbs and gutters, sidewalks, walkways, and landscaping.

B. Under external loads, deflection of pipe in the installed pipeline shall not exceed 4.5 percent of the average inside diameter of pipe.

C. Determine whether the allowable deflection has been exceeded by use of a pull-through device or a deflection-measuring device.

D. Pull-Through Device:

1. Provide a spherical, spheroidal, or elliptical ball, a cylinder, or circular sections fused to a common shaft.

   a. Circular sections shall be so spaced on the shaft that distance from external faces of front and back sections will equal or exceed diameter of the circular section.

   b. Pull-through device may also be of a design approved by the Uni-Bell Plastic Pipe Association, provided that the device meets the applicable requirements specified in this paragraph, including those for diameter of the device.

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2. Ball, cylinder, or circular sections shall conform to the following:

   a. A diameter, or minor diameter as applicable, of 95 percent of the average inside diameter of the pipe; tolerance of plus 0.5 percent will be permitted.

   b. A homogeneous material throughout, with a density greater than 1.0 as related to water at 39.2 degrees F, and a surface Brinell hardness of not less than 150.

   c. Center bored and through bolted with a ¼ inch minimum diameter steel shaft having a yield strength of not less than 70,000 pounds per square inch, with eyes or loops at each end for attaching pulling cables.

   d. Each eye or loop shall be suitably backed with a flange or heavy washer such that a pull exerted on opposite end of shaft will produce compression throughout remote end.

3. Pull-Through Device:

   a. Pass the pull-through device through each run of pipe, either by pulling it through or flushing it through with water.

   b. If the device fails to pass freely through a pipe run, replace pipe which has the excessive deflection and completely retest in same manner and under same conditions as specified.

E. Deflection measuring Device:

1. Sensitive to 1.0 percent of the diameter of the pipe being tested and accurate to 1.0 percent of the indicated dimension.

2. Obtain approval of deflection measuring device prior to use.

F. Deflection Measuring Device Procedure:

1. Measure deflections through each run of installed pipe.

2. If deflection readings in excess of 4.5 percent of average inside diameter of pipe are obtained, retest pipe by a run from the opposite direction.

3. If retest continues to show a deflection in excess of 4.5 percent of average inside diameter of pipe, remove pipe which has excessive deflections, replace with new pipe, and completely retest in same manner and under same conditions.

G. Warranty Period Test: Pipe found to have a deflection of greater than 5 percent of average inside diameter when deflection test is performed just prior to end of 1 year warranty period shall be replaced with new pipe and tested as specified for leakage and deflection.

3.5 CLEANING

A. Thoroughly clean storm drain lines, manholes, catch basins, field inlets, culverts, and similar structures, of dirt, debris, and obstructions of any kind.

3.6 TELEVISION INSPECTION

A. After completion of the pipe installation, service connections, flushing and cleaning, and prior to placement of pavement, the drain line shall be televised with a color closed-circuit television with tilt-head camera recorded in DVD format. The original disc and log sheets shall be provided to the Owner for review.

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B. The following observations from television inspections will be considered defects in the construction of sewer pipelines and will require correction prior to placement of pavement:

1. Low spot (1 inch or greater - mainlines only)
2. Joint separations (3/4 inch or greater opening between pipe sections)
3. Cocked joints present in straight runs or on the wrong side of pipe curves.
4. Chips in pipe ends
5. Cracked or damaged pipe
6. Dropped joints
7. Infiltration
8. Debris or other foreign objects
9. Other obvious deficiencies
10. Irregular condition without logical explanation

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DRAWINGS

Project: _____

Project drawings are issued as a separate plan set titled, "Roseville Aquatics Complex Slide & Sprayground Replacement", dated 08/20/21, as prepared by Jeff Katz Architecture.

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TEXT OF AB 626

Assembly Bill No. 626

CHAPTER 810

An act to add and repeal Section 9204 of the Public Contract Code, relating to public contracts.

[Approved by Governor September 29, 2016. Filed with Secretary of State September 29, 2016.]

LEGISLATIVE COUNSEL'S DIGEST

AB 626, Chiu. Public contracts: claim resolution.

Existing law prescribes various requirements regarding the formation, content, and enforcement of state and local public contracts. Existing law applicable to state public contracts generally requires that the resolution of claims related to those contracts be subject to arbitration. Existing law applicable to local agency contracts prescribes a process for the resolution of claims related to those contracts of $375,000 or less.

This bill would establish, for contracts entered into on or after January 1, 2017, a claim resolution process applicable to any claim by a contractor in connection with a public works project. The bill would define a claim as a separate demand by the contractor for one or more of the following: a time extension for relief from damages or penalties for delay, payment of money or damages arising from work done pursuant to the contract for a public work, or payment of an amount disputed by the public entity, as specified.

This bill would require a public entity, defined to exclude certain state entities, upon receipt of a claim sent by registered or certified mail, to review it and, within 45 days, provide a written statement identifying the disputed and undisputed portions of the claim. The bill would authorize the 45-day period to be extended by mutual agreement. The bill would require any payment due on an undisputed portion of the claim to be processed within 60 days, as specified. The bill would require that the claim be deemed rejected in its entirety if the public entity fails to issue the written statement.

This bill would authorize, if the claimant disputes the public entity's written response or if the public entity fails to respond to a claim within the time prescribed, the claimant to demand to meet and confer for settlement of the issues in dispute. The bill would require any disputed portion of the claim that remains in dispute after the meet and confer conference to be subject to nonbinding mediation, as specified. The bill would provide that unpaid claim amounts accrue interest at 7% per annum. The bill would prescribe a procedure by which a subcontractor or lower tier contractor may make a claim through the contractor.

This bill would require the text of these provisions, or a summary, to be set forth in the plans or specifications for any public work which may give rise to a claim. The bill would specify that a waiver of these rights is void and contrary to public policy, except as specified. The bill would also specify that it does not impose liability on a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

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By increasing the duties of local agencies and officials, this bill would impose a state-mandated local program.

This bill would, on January 1, 2020, repeal the provision establishing the claim resolution process.

This bill would specify that these provisions constitute a matter of statewide concern.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that, if the Commission on State Mandates determines that the bill contains costs mandated by the state, reimbursement for those costs shall be made pursuant to these statutory provisions.

The people of the State of California do enact as follows:

SECTION 1. Section 9204 is added to the Public Contract Code, to read:

9204. (a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.

(b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.

(c) For purposes of this section:

(1) ”Claim” means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

(A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.

(B) Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.

(C) Payment of an amount that is disputed by the public entity.

(2) ”Contractor” means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.

(3) (A) ”Public entity” means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.

(B) ”Public entity” shall not include the following:

(i) The Department of Water Resources as to any project under the jurisdiction of that department.

(ii) The Department of Transportation as to any project under the jurisdiction of that department.

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(iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.

(iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.

(v) The Military Department as to any project under the jurisdiction of that department.

(vi) The Department of General Services as to all other projects.

(vii) The High-Speed Rail Authority.

(4) "Public works project" means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.

(5) "Subcontractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.

(d) (1) (A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.

(B) The claimant shall furnish reasonable documentation to support the claim.

(C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.

(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.

(2) (A) If the claimant disputes the public entity's written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each

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party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

(C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

(E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

(3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

(4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

(5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

(e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.

(f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

(g) This section applies to contracts entered into on or after January 1, 2017.

(h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

(i) This section shall remain in effect only until January 1, 2020, and as of that date is

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repealed, unless a later enacted statute, that is enacted before January 1, 2020, deletes or extends that date.

SECTION 2.
The Legislature finds and declares that it is of statewide concern to require a charter city, charter county, or charter city and county to follow a prescribed claims resolution process to ensure there are uniform and equitable procurement practices.

SECTION 3.
If the Commission on State Mandates determines that this act contains costs mandated by the state, reimbursement to local agencies and school districts for those costs shall be made pursuant to Part 7 (commencing with Section 17500) of Division 4 of Title 2 of the Government Code.

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Project Manual for the

Roseville Aquatics Complex Slide Procurement and Installation Project

July 2021

The latest edition of the City of Roseville Parks Construction Standards are incorporated by reference as a part of this Project Manual. The Parks Construction Standards can be purchased at the address listed below.

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Parks, Recreation & Libraries
316 Vernon Street, Suite 400
Roseville, California 95678
www.roseville.ca.us

CITY OF ROSEVILLE CALIFORNIA

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Parks, Recreation & Libraries
Park Development
316 Vernon Street, Suite 400
Roseville, California 95678

Notice to Bidders

DATE: September 2, 2021

TO: Prospective Bidders

FROM: Heather Buck, Park Development Project Manager

RE: Roseville Aquatics Complex Slide Procurement and Installation Project

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Project Description: The City of Roseville is now accepting bid proposals for the Roseville Aquatics Complex (RAC) Slide Procurement and Installation Project. The scope of work for the base bid includes: labor, materials, equipment, and engineering to furnish and install one outdoor body flume ride inclusive of fiberglass flume components, flume support system, starting platform with shade structure, stair, railing, and steps, and concrete footings and foundations. Removal of existing pool slide and associated piping, removal and replacement of water play structure and associated piping, pool deck modifications, removal and replacement of existing pool and water play structure equipment, and replaster of existing recreation pool shall be by separate contract.

Contract Documents: A Project Manual, including all Contract Documents and the Proposal forms for bidding this project, may be obtained online from the City of Roseville's website at www.roseville.ca.us/business/bids_rfps_rfqs_andrfis.asp. All communications relative to this project shall be conducted through Public Purchase.

Potential bidders are advised to obtain all documents and specifications related to this project directly from the City of Roseville. The City of Roseville does not guarantee the accuracy of any forms, plans, or project manuals obtained through outside sources other than the City of Roseville. Furthermore, the City does not guarantee the distribution of any addendums or the accuracy of their content if obtained from a third party.

Bidders expressly assume the risk that their bid will be rejected from the use of project manuals or project plans obtained from third parties other than the City of Roseville.

Engineer's Estimate: The engineer's estimate for construction of the base bid items is $270,000.

Pre-Bid Meeting: A job walk will be held at 9:00 a.m. on September 14, 2021, at the Roseville Aquatics Complex located at 3051 Woodcreek Oaks Boulevard, Roseville, CA 95747.

Questions: All questions prior to the deadline for bid submissions shall be directed to the attention of Heather Buck via Public Purchase at https://roseville.ca.us/rfp. The deadline for submission of questions and clarifications regarding the Contract Documents is September 21, 2021 at 3:00 p.m. Only Addenda issued by the City are binding.

Bid Deadline: Proposals will be received at the Office of the City Clerk, 311 Vernon Street, Roseville, California, until 3:00 p.m. on September 28, 2021. The proposals will be publicly opened and read by the City Clerk or designee of the City of Roseville in the City Clerk's Office at 3:05 p.m. on that same day.

The July 2021 edition of the City of Roseville Parks Construction Standards will be applicable to this project. The successful bidder will be required to use the standards contained in the book for the construction of this project.

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Parks, Recreation & Libraries
Park Development
316 Vernon Street, Suite 400
Roseville CA 95678

Notice to the apparent low bidder for the Roseville Aquatics Complex Slide Procurement and Installation Project

In order to move forward with the award of this project, the City of Roseville requests that you submit the following documents:

1. Agreement (two sets of originals) with either:
   - wet signatures from two corporate officers, or
   - wet signature from one corporate office plus the corporate seal

2. Public Works Faithful Performance Bond – fully executed and notarized.

3. Public Works Labor and Materials Payment Bond – fully executed and notarized.

4. Insurance - fully executed and notarized.

The Agreement, bond forms and insurance requirements are contained in this Project Manual.

We request that all documents be received by October 8, 2021.

Please contact us if you are unable to meet this deadline.

Send completed forms to:

City of Roseville - Parks, Recreation & Libraries Department
Attn: Heather Buck
316 Vernon Street, Suite 400
Roseville CA 95678

The Parks, Recreation & Libraries Department requires submittal of all of the above executed documents prior to City Council bid award.

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916.774.5505 phone
916.774.5251 fax
www.roseville.ca.us

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CITY OF ROSEVILLE

DEPARTMENT OF _____

Name of Project:_____

NOTICE TO CONTRACTORS

NOTICE IS HEREBY GIVEN THAT sealed Proposals will be received at the Office of the City Clerk, 311 Vernon Street, Roseville, California, until _____ at 3:00 p.m. Late Proposals will be rejected. No exceptions.

The Proposals will be publicly opened and read by the City Clerk or designee of the City of Roseville at 3:05 p.m. on _____, 20__ at the Office of the City Clerk located at 311 Vernon Street, Roseville California for the following project:

_____.

A pre-bid meeting will be held at _____

~~Woodcreek Oaks, Blvd, Roseville, CA.~~_____.

A Project Manual, including all Contract Documents and the Proposal forms for bidding this project, may be obtained on-line from the City of Roseville's website at www.roseville.ca.us/business/bids_rfps_rfqs_and_rfis.asp. All communications relative to this project shall be conducted through Public Purchase.

Bids shall be submitted on the City's Proposal Forms included in the Project Manual, plainly endorsed with the Bidder's name together with signed acknowledgement of any and all addenda. Proposal Forms shall be securely sealed in a suitable envelope marked with the name and address of the Bidder, and marked in capital letters on the front and back of the envelope as

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follows:

[NAME OF PROJECT]

(Name of Bidder)

(Address of Bidder)

Whether mailed or personally delivered, all bids shall be addressed to the City of Roseville, Office of the City Clerk, 311 Vernon Street, Roseville, California, 95678.

Each bid must be accompanied by a Bid Guaranty in the form of a Certificate of Deposit, Certified or Cashier's Check, Bidder's Bond or Irrevocable Standby Letter of Credit in an amount equal to at least ten percent (10%) of the Bidder's Grand Total Price. The Bid Guaranty will be retained by the City and applied to any and all damages sustained by the City in the event that the successful Bidder fails or refuses to enter into the Contract awarded to it and to furnish all required bonds and Certificates of Insurance. The City intends to award the Contract to the lowest responsible Bidder based on the Grand Total Bid Price for all components of the Project. To the extent allowed by law, the City reserves the right to reject any and all bids and/or to waive any irregularities or informalities in any bid or in the bidding procedure. The City specifically reserves the right to not award the Contract after the opening of bids.

Any bid may be withdrawn at any time prior to the time fixed in the public notice for the deadline submission of bids only by written request for the withdrawal of the bid filed with the City Clerk. The request shall be executed by the Bidder or his or her duly authorized representative. The withdrawal of a bid does not prejudice the right of the Bidder to file a new bid by the submission deadline. Whether or not bids are opened exactly at the time fixed in the public notice for opening bids, a bid will not be received after the deadline submission of bids

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nor may any bid be withdrawn after the time fixed in the public notice for deadline for submission of bids. Immediately following the deadline for submission of bids all bids shall become the property of the City of Roseville and the City is under no obligation to return bids.

Bids will be examined and reported to the City Council within sixty (60) business days after the bid opening. Except as permitted by applicable law, no Bidder may withdraw its bid for a period of sixty (60) business days after the date of bid opening. Each Bidder will be notified of any award of the Contract by the City.

The City will affirmatively ensure non-discrimination on the basis of one or more of the following: race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, age, sexual orientation, or military and veteran status in the award and administration of contracts that it awards.

Pursuant to Public Contract Code Section 22300, the successful Bidder may submit certain securities in lieu of the City withholding retention of payments during the Project.

The City has determined that the Contractor shall possess a valid Class ___, _____ Contractor's license at the time that the bid is submitted, as well as any other license classification as may be required by the laws of the California for the performance of the work specified in the Contract Documents. Said license shall be maintained during the Contract period. Failure to possess the specified license shall render the bid nonresponsive and will act as a bar to the award of the Contract to any Bidder not possessing such a license at the time of bid submittal. The Contractor shall provide certification of the license, its number and the expiration date on the proposal form.

The work is to be done in Placer County. Pursuant to California Labor Code Section 1773, the City has ascertained the General Prevailing Rate of Wages in the County in which the

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work is to be done to be as determined by the Director of Industrial Relations of the State of California. The Contractor is hereby made aware that information regarding prevailing wage rates may be obtained from the State Department of Industrial Relations and/or the following website address: http://www.dir.ca.gov/dlsr/DPreWageDetermination.htm. The Contractor is required to post a copy of the applicable wage rates at the job site. Attention is directed to Section 5 "Legal Relations and Responsibility" of the General Conditions.

Pursuant to Labor Code Section 1771.1(b), notice is hereby given that a contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in Labor Code Sections 1720, et seq., unless currently registered and qualified to perform public work pursuant to Labor Code Section 1725.5 or exempt from registration requirements pursuant to Labor Code Section 1725.5(f). It is not a violation of Labor Code Section 1771.1 for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform work pursuant to Labor Code Section 1725.5 at the time the contract is awarded or is exempt from registration requirements pursuant to Labor Code Section 1725.5(f). The Contractor is hereby notified that this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

All questions prior to the deadline for bid submissions shall be directed to the attention of _____ via _____ at _____. The deadline for submissions of questions and clarifications regarding the Contract Documents is _____ calendar days before the deadline for

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bid submissions. Only Addenda issued by the City are binding.

_____
City Clerk, City of Roseville

Dated: _____

Published: _____

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INSTRUCTIONS TO BIDDERS

SECTION 1. GENERAL

1-1.01 **GENERAL.** These Instructions to Bidders form a part of the Contract Documents. Capitalized terms are defined in the General Conditions Section 1.

1-1.02 **EXAMINATION OF PLANS, CONTRACT DOCUMENTS AND SITE OF THE WORK.** The Bidder shall examine carefully the site of the Work and all the Contract Documents, including these Instructions to Bidders, and shall inform itself of the conditions relating to the execution of the Work. Failure to do so will not relieve the successful Bidder of its obligation to enter into an Agreement and complete the Work in strict accordance with the Contract Documents. Conditions relating to the execution of the Work include the requirements of federal, state, and local laws, statutes and ordinances relative to the execution of Work, including, but not limited to, applicable regulations concerning prevailing wage rates, non-discrimination in the employment of labor, protection of the public, employee health and safety, and environmental protection.

The submission of a bid shall be conclusive evidence that the Bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of Work to be performed, the quantities of materials to be furnished, and as to the requirements of all the Contract Documents.

1-1.03 **EXISTING INFORMATION.** Where the Department has made investigations of site conditions, including subsurface conditions in areas where Work is to be performed under the Contract, such investigations are made only for the purpose of study and design. City does not represent that such conditions as found in these investigations or inferences or conclusions drawn as a result of these investigations will represent actual site

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conditions and hereby disclaims any liability as a result of Contractor's or Bidder's reliance on such investigations. City will presume that all Bidders have conducted their own site investigations, including investigations of subsurface conditions. Where such investigations have been made, Bidders or Contractors may, upon written request, inspect the records of the Department as to such investigations subject to the conditions set forth in these Instructions to Bidders. Such inspection of records may be made only at the location noted above. The records of such investigations are not a part of the Contract Documents and are shown solely for the convenience of the Bidder or Contractor. The City assumes no responsibility whatsoever with respect to the sufficiency or accuracy of the investigations made, the records thereof, or of the interpretations set forth therein or made by the City in its use thereof. The City makes no warranty or guarantee, either express or implied, that the conditions indicated by such investigations or records are representative of those existing throughout such areas, or any part thereof, or that unforeseen developments may not occur, or that materials other than, or in proportions different from those indicated, may not be encountered.

No information derived from such inspection of records of investigations or compilation thereof made by the City, the Department or from the Engineer, or his or her assistants, will in any way relieve the Bidder or Contractor from properly examining the site and making such additional investigations as it may elect, or from properly fulfilling the terms of the Contract.

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SECTION 2: BID REQUIREMENTS

2-1.01 **PROPOSAL FORMS.** The Department will furnish to each Bidder standard Proposal Forms, which, when filled out and executed may be submitted as the bid. Proposals shall include all pages in the Project Manual with page numbers marked "PROP" plus the Addendum acknowledgment form (front sheet) from all Addenda received by the Bidder. Proposals shall be removed from the Project Manual. The full Project Manual shall not be submitted with the proposal. Bids not presented on forms so furnished will be disregarded.

The Proposal and one (1) copy thereof shall be submitted as directed in the "Notice to Contractors" under sealed cover plainly marked as a Proposal, and identifying the project to which the Proposal relates and the date of the bid opening therefor. Proposals which are not properly marked may be disregarded.

All blank spaces in the Proposal must be completed, as required, in ink. All price information shall be shown, clearly legible, in figures where required.

The Bidder shall sign the Proposal in the blank space provided therefor. If the Bidder is the sole owner, the Proposal shall be signed by the owner. If the Bidder is a corporation, the legal name of the corporation and its State of incorporation shall be set forth and the Proposal shall be signed by at least two officers authorized to sign contracts on behalf of the corporation. If the Bidder is a partnership, the true name of the firm shall be set forth, the names and addresses of all partners shall be given and the Proposal shall be signed by a partner in the firm authorized to sign contracts on behalf of the partnership. If the Bidder is a joint venture, the Proposal shall be signed on behalf of each participating company by officers or other individuals who have the full and proper authorization to do so. If the Proposal is signed by an agent of the Bidder other than an officer of a corporation or a member of a partnership, a notarized Power of

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Attorney must be on file with the City prior to opening of bids or must be submitted with the Proposal. If requested by the City, the Bidder shall promptly submit evidence satisfactory to the City of the authority of the person signing the Proposal.

2-1.02 **SUBMISSION OF BIDS.** Bids must be submitted at the prescribed time and location specified in the Notice to Contractors. Any submission received after the prescribed time shall be rejected, regardless of whether or not bids are opened exactly at the prescribed time.

Any unauthorized conditions or qualifications entered on, or changes made to, the Proposal may render it invalid and may cause its rejection.

No telegraphic, telephonic, or facsimile or other electronically transmitted bids will be considered.

2-1.03 **REQUIRED LISTING OF PROPOSED SUBCONTRACTORS.** Each Proposal shall list the name, address and Contractor license number of each Subcontractor to whom the Bidder proposes to subcontract portions of the Work in an amount in excess of one-half of one percent (0.5%) of its total bid, in accordance with Section 4100 to 4114, inclusive, of the Public Contract Code for the State of California. The Bidder shall list the Subcontractor's license number and the portion of the Work that will be done by each Subcontractor. If the Bidder fails to specify a Subcontractor for any portion of the Work, the Bidder agrees to perform that portion of the Work itself, and represents that it is qualified to perform that portion of the Work itself. The Bidder's attention is invited to other provisions of the Public Contract Code related to the imposition of penalties for a failure to observe its provisions by using unauthorized Subcontractors or by making unauthorized substitutions.

2-1.04 **CONTRACTOR'S LICENSING LAWS.** Attention is directed to the

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provisions of Business and Professions Code Chapter 9 of Division 3 concerning the licensing of Contractors.

All Bidders at the time of bid submittal shall be licensed as Contractors in accordance with the laws of this State. Any Bidder or Contractor not so licensed is subject to the penalties imposed by such laws. The form of Contractor's license required is stated in the Notice to Contractors, provided that the City makes no representation as to whether the State may require other or additional licenses. It is the Bidder's and Contractor's responsibility to obtain the correct Contractor's licenses. Bidders shall be skilled and regularly engaged in the general class or type of Work called for under this Contract.

All Bidders and Contractors, including Subcontractors, shall have a current City business license before undertaking any Work.

2-1.05 **NONCOLLUSION DECLARATION.** By submitting a bid, the Bidder represents and warrants that such bid is genuine and not a sham or collusive or made in the interest or on the behalf of any person therein named, and that the Bidder has not, directly or indirectly, included or solicited any other Bidder to put in a sham bid, or any other person, firm, or corporation to refrain from bidding, and that the Bidder has not in any manner sought collusion to secure the Bidder an advantage over any other Bidder.

Bidders shall submit a properly completed and executed "Noncollusion Declaration" in the form required by Public Contract Code Section 7106 and provided with the Proposal (PROP-11).

2-1.06 **DISQUALIFICATION, REMOVAL OR OTHER PREVENTION OF BIDDING.** A bid may be rejected on the basis of a Bidder, any officer of such Bidder, or any employee of such Bidder who has a proprietary interest in such Bidder, having been disqualified,

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removed, or otherwise prevented from bidding on, or completing a federal, state, or local project because of a violation of law or a safety regulation.

2-1.07 **PROPOSAL GUARANTY.** All bids shall be accompanied by one of the following forms of Bidder's security: Cash, a cashier's check, a certified check, or a Bidder's bond executed by an admitted California surety insurer, made payable to the City of Roseville, or any other form of security deemed acceptable by the City Attorney. The security shall be in an amount equal to at least ten percent (10%) of the amount bid. A bid will not be considered unless one of the form of Bidder's security is enclosed with it.

A Bidder's bond shall conform to the City's bond form in the Proposal and shall be properly filled out and executed.

2-1.08 **SCHEDULE OF BID PRICES.** Bidders are directed to submit unit and lump sum prices for all Work set forth in the Contract Documents on the Proposal Form entitled "Schedule of Bid Prices."

Unit prices and lump sum prices, as indicated, must be entered in the appropriate spaces provided in the Schedule of Bid Prices. If applicable, unit prices shall be multiplied by the quantities shown, and the total shall be inserted in the Amount column. In the event of any error or discrepancy between the unit price and the calculated amount, the unit prices shall govern. The City may correct any mathematical errors apparent on the face of the bid.

The amounts shown in the Amount column must be added together in arriving at the Grand Total Bid Price.

Amounts for Allowance bid items must be entered in the exact amount in the Amount column.

The prices included within the Schedule of Bid Prices shall include all costs for labor,

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materials, tools, equipment, services, Subcontractors, suppliers, taxes, insurance, shipment, delivery, overhead, profit, and all other costs necessary to perform the Work in accordance with the Contract Documents.

The Grand Total Bid Price shall be indicated in the Summary table form included with the Schedule of Bid Prices. The Grand Total Bid Price shall be the sum of the amounts bid for each of the designated portions of the Work, as more specifically described on the Schedule of Bid Prices form itself.

Full compensation for complying with the Contract Documents, including requirements of the Standard Specifications, the General Conditions, Supplemental Conditions, and all warranties, shall be considered included in the bid items and no additional compensation shall be allowed therefor.

Full compensation for completion of all work as shown on the plans, as specified in the Specifications, and as directed by the City, shall be considered included in the bid items and no additional compensation shall be allowed.

Bidders are strongly discouraged from submitting unbalanced bids. As used herein, the term "unbalanced bid" is defined as any bid that does not include a reasonable proportionate allocation of indirect costs and profit of each bid item indicated in the Schedule of Bid Prices. The City reserves the right to reject any unbalanced bid if the City determines that there is a reasonable doubt that an acceptance of the bid will not result in the lowest ultimate cost to the City with regard to the work or a disproportionate distribution of contract funds.

The City reserves the right to delete any bid item in its entirety and/or significantly reduce the quantity of Work under a bid item. The City makes no representation that any Work under a bid item will be performed during the course of the Project or that the Work will be

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performed at the quantities included in the Schedule of Bid Prices. As provided in the General Conditions, for any deleted Work, Contractor shall not be entitled to payment of the indirect costs and profit included for said bid item. All bid items shall be considered distinct and severable from the remaining bid items, and each Bidder acts at its peril if its bid is unbalanced.

The City shall compare bids on the basis of the Grand Total Bid Price, which includes the base bid and any alternates designated on the Schedule of Bid Prices. Alternates may or may not be awarded, or may be awarded in any combination, at the City's discretion.

2-1.09 **WITHDRAWAL OF PROPOSALS.** Any bid may be withdrawn at any time prior to the time fixed in the Notice to Contractors for the opening of bids, provided that a request in writing, executed by the Bidder or its duly authorized representative, for the withdrawal of such bid is filed with the City Clerk. Facsimile and electronic mail requests are not acceptable. The withdrawal of a bid shall not prejudice the right of a Bidder to file a new bid. The withdrawal of any bid after the time fixed in the Notice to Contractors for the opening of bids will not be permitted.

2-1.10 **ADDENDUM.** Proposals shall include all costs and account for all Addenda issued prior to opening of bids. The Bidder is responsible for verifying that all issued Addenda have been received. An Addendum acknowledgment form for each Addendum shall be included as part of the Proposal submittal.

2-1.11 **PUBLIC OPENING OF PROPOSALS.** Proposals will be publicly opened and read at the time and place indicated in the Notice to Contractors. Bidders or their authorized agents are invited to be present.

2-1.12 **TRENCHING AND EXCAVATION WORK.** In accordance with the provisions of California Labor Code Section 6707, if the Work involves construction of a

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pipeline, sewer, sewage disposal system, boring or jacking pits, or similar trenches or open excavations, which are five feet (5') or deeper, each bid submitted shall contain, as a bid item, adequate sheeting, shoring, and bracing, or equivalent method, for the protection of life or limb, which shall conform to all applicable safety orders.

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SECTION 3: EVALUATION OF BIDS

3-1.01 **BID EVALUATION PROCESS.** Bids will be evaluated to determine the apparent low Bidder. The apparent low Bidder will be determined on the basis of the Grand Total Bid Price, as shown in the Schedule of Bid Prices. If additive or deductive alternates are used in the Schedule of Bid Prices, the apparent low Bidder will be the Bidder with the lowest total of the bid prices for base contract items plus the alternates designated by the City as those that will be used for determining the lowest bid price. However, the City reserves the right to (1) not award any alternates or (2) award any combination of alternates.

In case of discrepancy between the total of the base contract items and any specified alternates and the stated Grand Total Bid Price, the total of the base contract items plus specified alternates shall prevail. Any mathematical errors that appear on the face of the bid will be corrected by the City and the City will use the mathematically corrected addition. For example, if the mathematical total of Bidder's base contract items plus specified alternates equals $1,000,000, but the Bidder has written $1,250,000 as the Grand Total Bid Price, the City will consider $1,000,000 to be the Bidder's Grand Total Bid Price for purposes of comparison to other Bidders and actual bid award. The City reserves its rights to reject or accept bids based on discrepancies between the stated Grand Total Bid Price and the actual mathematical total of the base contract bid items, plus specified alternates.

3-1.02 **REJECTION OF IRREGULAR PROPOSALS.** Proposals may be rejected in the City's sole discretion if they show any alterations of form, additions not called for, conditional bids, incomplete bids, erasures, or irregularities of any kind. However, the City reserves the right to waive any minor irregularities and informalities in any bid or in the bid procedure for any reason.

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3-1.03 **COMPETITIVE BIDDING.** If more than one proposal is offered by any individual, firm, partnership, corporation, association, or any combination thereof, under the same or different names, all such proposals may be rejected. A party who has quoted prices on materials or Work to a Bidder is not thereby disqualified from quoting prices to other Bidders, or from submitting a bid directly for the materials or Work.

All Bidders are put on notice that any collusive agreement to control or affect the awarding of this Contract is in violation of the competitive bidding requirements of the City Charter, State Contract Act and the Business and Professions Code and may render void any Contract let under such circumstances.

3-1.04 **RELIEF OF BIDDERS.** If the Bidder claims a mistake was made in its bid, the Bidder shall give the Department written notice within five (5) Days after the opening of the bids of the alleged mistake, specifying in the notice in detail how the mistake occurred. No relief from a claimed mistaken bid shall be granted unless such mistake clearly appears on the face of the bid submitted to the City. Claimed mistakes on backup worksheets, spreadsheets, computerized bidding programs, or any other similar calculative bidding mistake which is not apparent on the face of the bid shall not under any circumstance be considered as a basis for relief. The burden of proving the occurrence of a mistake entitling a Bidder to relief from its bid rests entirely on the Bidder. Relief from bids shall be in the City's sole discretion.

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SECTION 4: AWARD AND EXECUTION OF CONTRACT

4-1.01 **AWARD OF CONTRACT.** The City reserves the right to reject any and all proposals and to award (or not award) any combination of bid items at its option. Any such award will be to the lowest responsible Bidder whose proposal complies with the requirements prescribed for the bid items awarded. Such award, if made, will be made within sixty (60) business days after the opening of the proposals. If the lowest responsible Bidder refuses or fails to execute the Contract, or provide an acceptable Performance Bond, Payment Bond, and insurance certificate(s), the City may award the Contract to the second lowest responsible Bidder. Such award, if made, will be made within eighty-two (82) business days after the opening of proposals. If the second lowest responsible Bidder refuses or fails to execute the Contract, or provide an acceptable Performance Bond, Payment Bond, and insurance certificate(s), the City may award the Contract to the third lowest responsible Bidder. Such award, if made, will be made within one hundred four (104) business days after the opening of the proposals. The above time periods within which the award of Contract may be made are subject to extension for such further period as may be agreed upon in writing between the City and the Bidder concerned.

4-1.02 **RETURN OF BIDDER'S SECURITIES.** Within ten (10) Days after the award of the Contract, the City Clerk will return all Bidders' securities, other than Bidders' bonds, accompanying the proposals that are not to be further considered in making the award. Retained Bidders' securities will be held until the Contract has been fully executed, after which all Bidders' securities, except Bidders' bonds and any Bidders' securities that have been forfeited, will be returned.

4-1.03 **CONTRACT BONDS.** The successful Bidder shall furnish two (2)

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bonds in the form contained in the section entitled Insurance Broker Information Packet and Bonds. One (1) bond shall secure the payment of the claims of laborers, mechanics or materialmen employed on the Work under the Contract, and the other bond shall guarantee the faithful performance of the Contract.

Each of the two (2) bonds shall be in a sum equal to one hundred percent (100%) of the Contract Price. If the Contract Price increases by the issuance of Change Orders, the penal amounts of the bonds required shall increase accordingly. Sureties on each of said bonds shall be satisfactory to the City.

All alterations, extensions of time, extra and additional Work, and other changes authorized by the Standard Specifications, the General Conditions, the Supplemental Conditions or any part of the Contract may be made without securing the consent of the surety or sureties on the Contract bonds.

Furthermore, the successful Bidder shall furnish a certificate from the County Clerk as required by California Civil Code of Procedure Section 995.660(a)(3).

4-1.04 **INSURANCE.** At the time of the execution of the Contract, the Contractor shall, at its own expense, procure, and at all times during the prosecution of the Work maintain in full force and effect Worker's Compensation Insurance, and Liability Insurance as specified in the General Conditions. The Contractor shall provide a Certificate of Insurance in the form contained in the section entitled Insurance Broker Information Packet.

4-1.05 **EXECUTION OF CONTRACT.** The Contract shall be signed by the successful Bidder and returned, together with all the required Contract bonds and insurance certificates, within fifteen (15) Days after the Contract has been awarded, or as otherwise directed, in writing, by the City.

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If the Bidder is an individual, the Contract shall be executed personally by the Bidder. If the Bidder is a partnership, it is desirable that the Contract be executed by all of the partners, but it may be executed by one of them. If the Bidder is a corporation, it must be executed by two officers of the corporation consisting of (1) the chairman of the board, president or vice president; and (2) the secretary, assistant secretary, chief financial officer, treasurer or assistant treasurer, or by a person authorized by the corporation to execute written contracts on its behalf, and the corporate seal affixed thereto. In the alternative, a person other than an officer may sign the Contract, provided evidence satisfactory to the City is provided indicating the individual's authority to bind the corporation. If the corporate seal is not affixed to the Contract, or if it is executed by a person other than officers, or only by one officer, there must be attached to the Contract a certified copy of a resolution of the corporation authorizing such officer or person to execute written contracts for and on behalf of the corporation. If the Bidder is a joint venture, the Contract must be executed on behalf of each participating firm by officers or other individuals who have the full and proper authorization to do so.

4-1.06 **FAILURE TO EXECUTE CONTRACT.** Failure of the lowest responsible Bidder, the second lowest responsible Bidder, or the third lowest responsible Bidder to execute the Contract and file acceptable bonds and insurance as provided within fifteen (15) Days after the Contract has been awarded, or as otherwise directed, in writing, by the City, shall be just cause for annulment of the award and forfeiture of the Bidder's security. The successful Bidder may file with the City Clerk a written notice, signed by the Bidder or Bidder's authorized representative, specifying that the Bidder will refuse to execute the Contract if presented to Bidder. The filing of such notice shall have the same force and effect as the failure of the Bidder to execute the Contract and furnish acceptable bonds within the time prescribed.

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SECTION 5: BID PROTEST PROCEDURES

5-1.01 **POLICY/PROCEDURES.** It is the policy of the City to consider fully and adjudicate promptly protests filed by prospective Bidders relating to the City's bidding procedure or award of the Contract. Protests shall be filed and processed in accordance with Section 4.12.150 of the Roseville Municipal Code. A Bidder's failure to follow the bid protest procedures may result in rejection of the protest by the City.

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PROPOSAL TO THE DEPARTMENT OF _____

Project:_____

Name of Bidder _____ Business Phone _____

Business Address _____

Place of Business _____

Contractor's License No. _____

License Expiration Date_____

License Classification Type _____

DIR Registration No. _____

Type of business organization: _____

*If a Corporation, incorporated under the laws of the State of: _____

City of Roseville Business License No._____

The undersigned Bidder herewith submits this Proposal and binds itself on award by the City of Roseville under this bid to execute a Contract in accordance with its bid and the Contract Documents.

The Notice to Contractors, Instructions to Bidders, Form of Agreement, Specifications, General Conditions, Supplemental Conditions, Contract Drawings, and Addenda, if any, are made part of this bid and all provisions thereof are hereby accepted, and all representations and warranties are required thereby are hereby affirmed.

The work to be done is described in the Bidding Documents entitled _____

_____, City of Roseville, California.

This offer shall be irrevocable for a period of sixty (60) Days after the date on which bids are opened.

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The undersigned Bidder understands that any clarification made to the above or any new and different conditions or information submitted on or with its Proposal, other than that requested, may render the bid non-responsive.

The undersigned, as Bidder, declares that the only persons or parties interested in this Proposal as principals are those named herein; that this Proposal is made without collusion with any other person, firm, or corporation; that the Bidder has carefully examined the location of the proposed Work, the attached Form of Agreement, and the plans, Specifications, and other Contract Documents; and agrees if this Proposal is accepted, that it will contract with the City of Roseville, in the form of a copy of the Agreement contained in the Project Manual, to provide all necessary machinery, tools, apparatus and other means of construction, and to do all the work and furnish all the materials specified in the Contract Documents, in the manner and time therein prescribed, and according to the requirements of the Director, as therein set forth, and that the Bidder will take in full payment therefore prices indicated in the Schedule of Bid Items, including all work modified by addendum numbers _____. (IF NONE, STATE NONE).

Bids are required for all Bid Items. The amount of the Bid for comparison purposes will be the total of all items awarded.

The Bidder shall set forth for each item of work, in clearly legible figures, an item ("unit") price and a total for the item in the respective spaces provided for this purpose in the Schedule of Bid Items.

The prices included within the Schedule of Bid Items include all costs for labor, materials, tools, equipment, services, Subcontractors, suppliers, taxes, insurance, shipment, delivery, overhead, profit, and for all other costs necessary to perform the Work in accordance

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with the Contract Documents.

Accompanying this Proposal is _____.

(Notice: Insert the words "Cash $_____," "Cashier's Check," "Certified Check," or "Bidder's Bond," as the case may be, in an amount equal to at least ten percent (10%) of the total of the Bid.)

The names of all persons interested in the foregoing Proposal as Principals, are as follows: _____

_____

_____

_____

If SOLE OWNER, execute here:

I sign as sole owner of the business named above:

_____

If PARTNERSHIP, one or more partners sign here:

The undersigned certify that we are partners in the business named above and that we sign this bid with the full authority to do so:

_____

_____

If CORPORATION, execute here:

Corporate Name: _____

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Incorporated under the laws of the State of _____

The undersigned certify that they sign this bid with the full and proper authorization so to do:

By_____	By_____
*Signature of Authorized Official**	*Signature of Authorized Official**
_____	_____
Title	*Title*
_____	_____
Typewritten or Printed Name	*Typewritten or Printed Name*

If JOINT VENTURE, execute here:

Joint Venture name composed of: _____

The undersigned certify that they sign this bid with the full and proper authorization so to do:

_____	_____
*Signature of Authorized Official**	*Signature of Authorized Official**
_____	_____
Title	*Title*
_____	_____
Typewritten or Printed Name	*Typewritten or Printed Name*

*If Bidder is a partnership or Joint Venture, give the full names of all partners and/or Joint Ventures in the space provided (use additional sheet if required). If Bidder is a corporation, two signatures are required as follows: (1) the Chairman, President, or Vice-President and (2) the Secretary, Assistant Secretary, Chief Financial Officer, Treasurer, or Assistant Treasurer. In the alternative, this Agreement may be executed by a single officer or a person other than an officer provided that evidence satisfactory to City is provided demonstrating that such individual is authorized to bind the corporation (example, a copy of a certified resolution from the corporation's board or a copy of the corporation's bylaws).

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[LIST OF SUBCONTRACTORS FOLLOWS ON NEXT PAGE.]

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LIST OF SUBCONTRACTORS

Contractor's Name: _____

The Bidder is required to furnish the following information in accordance with the provisions of Section 4100 and 4114, inclusive, of the Public Contract Code of the State of California. This list and information shall include all Subcontractors that perform work, provide labor or render services to the Bidder in connection with the Project in an amount in excess of one-half of one percent (0.5%) of the total amount of the Bidder Grand Total Price.

PORTION/ TYPE OF WORK	% OF CONTRACT	SUB-CONTRACTOR'S NAME	CONTRACTOR LICENSE NO.	DIR REG NO.	BUSINESS ADDRESS (CITY, STATE)

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SECURITY FOR COMPENSATION CERTIFICATE

(Required by California Labor Code Section 1861)

TO: City Council
City of Roseville

I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Contract.

_____

_____
(Signature of Bidder)

_____

_____
Business Address

_____
Telephone

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BIDDER'S BOND

City Council of the City of Roseville

KNOW ALL MEN BY THESE PRESENTS:

That we _____

_____, as PRINCIPAL, and

_____

a, _____ and duly authorized to transact business under the laws of the State of California, as SURETY, are held and firmly bound unto the City of Roseville in the penal sum of _____ dollars ($_____), being at least TEN PERCENT (10%) OF THE TOTAL AMOUNT OF THE BID of the Principal above named, submitted by said Principal to the City of Roseville, acting by and through the Public Works Director, for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, to the Director of the Department to which said Bid was submitted, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH,

That whereas the Principal has submitted the above-mentioned Bid to the City Council of the City of Roseville, as aforesaid, for certain construction specifically described as follows, for which Bids are to be opened at the Office of the City Clerk located at 311 Vernon Street, Roseville, California, on _____, 20__ FOR

_____

(Copy here the exact title of work as it appears on the Proposal.)

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NOW, THEREFORE, IF THE AFORESAID PRINCIPAL is awarded the Contract and, within the time and manner required under the Contract Documents, after the prescribed forms are presented for signature, enters into a written Contract, in the prescribed form, in accordance with the Bid, and files all insurance and two (2) Bonds with the Department, one (1) to guarantee Faithful Performance and the other to guarantee Payment for Labor and Materials, as required by law, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on this _____ day of _____, 20___.

_____(Seal)

_____(Seal)

_____(Seal)
Principal

_____(Seal)

_____(Seal)

_____(Seal)
Surety

_____

_____
Business Address

NOTE: To be considered complete, both the Principal and the Surety must sign this Bidder's Bond. In addition, signatures of those executing for the Surety must be properly acknowledged.

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SCHEDULE OF BID ITEMS

ROSEVILLE AQUATICS COMPLEX SLIDE PROCUREMENT AND INSTALLATION PROJECT

The bidder, in compliance with the published Notice to Contractors for the furnish, install and engineering of one outdoor body flume ride inclusive of fiberglass flume components, flume support system, starting platform with shade structure, stair, railing, and steps, and concrete footings and foundations, and any other items necessary as shown on the Plans and Specifications; having examined the Plans and Specifications, any and all addenda, any related documents, and all of the sites of the proposed work, and being familiar with all the conditions surrounding the construction of the proposed project, including the availability of material, hereby proposes to furnish all labor, materials, and supplies, and to construct the project in accordance with the Contract Documents, within the time period set forth therein, and at the prices stated. This is a "Lump Sum Bid" project. These prices are to include all labor, materials, supplies, and all other expenditures incidental to complete compliance to the Contract Documents.

The work to be included in the Contract shall be determined by the City prior to award of Contract. The amount of the bid for comparison and award purposes shall be the total amount set forth in the "Lump Sum Base Bid". The City reserves the right to award none, all or selected add alternates as the budget permits.

TOTAL LUMP SUM BASE BID for:

Roseville Aquatics Complex Slide Procurement and Installation Project according to the plans and specifications.

Numerical Total **Base** Bid: $_____

Written Total **Base** Bid: _____dollars and_____

Contractor Name (print or type): _____

Signature (by authorized representative): _____

Date: _____ License No.: _____ Class: _____

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PROJECT QUALIFICATIONS/EXPERIENCE SHEET

Project Name: _____Company Name: _____ License Type: _____

The following shall be fully completed by the Contractor detailing previous experience which satisfies the project prerequisite. This prerequisite includes aquatics projects of similar size and scope to that of the current project and which has been completed by your company within the last three (3) years. This form shall be fully completed and submitted as a part of the Proposal/Bid Schedule. Failure to do so could be interpreted as an incomplete/non-responsive bid.

1. Project Name: _____ Acres _____ Location:_____
Owner: _____ Contact Person: _____
Phone: (_____) _____ Contract Amount: $_____ Year Completed _____
Landscape Architect/Architect: _____ Phone: (_____) _____

Scope of Work (check all those that apply):

___ Grading	___ Drainage	___ Irrigation	___ Asphalt Concrete Work	___ Concrete Forming
___ Concrete Flatwork	___ Special Concrete Finishing	___ Decomposed Granite Paving	___ Parking Lots	___ Tennis Courts
___ Basketball Court	___ Play Equipment Installation	___ Benches	___ Picnic Tables	___ Lighting
___ Drinking Fountains	___ Masonry Block Work	___ Backstops	___ Restroom Facilities	___ Landscaping

___ Other (specify) _____

2. Project Name: _____ Acres _____ Location:_____
Owner: _____ Contact Person: _____
Phone: (_____) _____ Contract Amount: $_____ Year Completed _____
Landscape Architect/Architect: _____ Phone: (_____) _____

Scope of Work (check all those that apply):

___ Grading	___ Drainage	___ Irrigation	___ Asphalt Concrete Work	___ Concrete Forming
___ Concrete Flatwork	___ Special Concrete Finishing	___ Decomposed Granite Paving	___ Parking Lots	___ Tennis Courts
___ Basketball Court	___ Play Equipment Installation	___ Benches	___ Picnic Tables	___ Lighting
___ Drinking Fountains	___ Masonry Block Work	___ Backstops	___ Restroom Facilities	___ Landscaping

___ Other (specify) _____

3. Project Name: _____ Acres _____ Location:_____
Owner: _____ Contact Person: _____
Phone: (_____) _____ Contract Amount: $_____ Year Completed _____
Landscape Architect/Architect: _____ Phone: (_____) _____

Scope of Work (check all those that apply):

___ Grading	___ Drainage	___ Irrigation	___ Asphalt Concrete Work	___ Concrete Forming
___ Concrete Flatwork	___ Special Concrete Finishing	___ Decomposed Granite Paving	___ Parking Lots	___ Tennis Courts
___ Basketball Court	___ Play Equipment Installation	___ Benches	___ Picnic Tables	___ Lighting
___ Drinking Fountains	___ Masonry Block Work	___ Backstops	___ Restroom Facilities	___ Landscaping

___ Other (specify) _____

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NONCOLLUSION DECLARATION TO BE EXECUTED BY
BIDDER AND SUBMITTED WITH BID

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham bid. The Bidder has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham bid, or to refrain from bidding. The Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other Bidder. All statements contained in the bid are true. The Bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a Bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the Bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____ [date], at _____ [city], _____ [state].

_____
(Signature of Declarant)

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DISQUALIFICATION QUESTIONNAIRE

The Bidder shall complete, under the penalty of perjury, the following questionnaire:

Has the Bidder, any officer of the Bidder, or any employee of the Bidder who has proprietary interest in the Bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

Yes_____ No_____

If the answer is yes, explain the circumstances in the following space.

_____

_____

_____

_____

_____

_____

NAME OF BIDDER: _____

SIGNATURE OF BIDDER: _____

TITLE OF BIDDER: _____

DATE: _____

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ACKNOWLEDGEMENT OF INSURANCE AND BOND REQUIREMENTS

Included in the Bid Price is full compensation for the requirements set forth in the INSURANCE BROKER INFORMATION PACKET of the Project Manual.

NAME OF BIDDER: _____

SIGNATURE OF BIDDER: _____

TITLE OF BIDDER: _____

DATE: _____

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DISCLAIMER OF WARRANTIES AND ACCURACY OF DATA

Although soil and site investigation reports have been obtained from sources believed to be reliable, no warranty expressed or implied is made regarding accuracy, adequacy, completeness, legality, reliability or usefulness of any information contained therein. These reports are subject to change at any time, may be incomplete, and/or may contain errors. This information is provided for informational purposes only. The City of Roseville provides this information on an "as is" basis. Warranties of any kind, express or implied, or statutory, including but not limited to the implied warranties of merchantability, and fitness for a particular purpose ARE DISCLAIMED to any party viewing these documents or to any third party.

The City of Roseville does not accept and expressly disclaims liability to any party viewing such information, or to any third party whatsoever, for any loss, damage, or injury (including incidental or consequential damages) whether such loss, damage, or injury is the result of negligence, willful or intentional misconduct, or any other cause.

I have read and acknowledged the above disclaimer and agree to hold harmless the City of Roseville on any theory of liability for any loss, damage or injury whether in contract, strict liability or tort arising in any way out of the use or contents of the released information or documents described above or the performance of the work called for herein.

Print Name	Signature
Name of Business/Company/Corporation	Date
Address	Phone

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END OF PROPOSAL

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A G R E E M E N T

THIS AGREEMENT, is made and entered into this _____ day of _____, 20_____, by and between the City of Roseville, a municipal corporation, ("CITY"), and _____, a _____, ("CONTRACTOR"); and

W I T N E S E T H:

WHEREAS, the City Council of the CITY, at a meeting held on the ____day of _____, 20_____, approved plans and specifications for the _____

and directed the City Clerk to advertise for sealed proposals for doing said work and providing that bids be submitted on the _____ day of _____, 20_____; and

WHEREAS, the City Clerk, thereafter duly and regularly caused a notice to be published in the manner and for the time prescribed by law; and

WHEREAS, CONTRACTOR, pursuant to the provisions of said notice duly filed a bid with the City Clerk, a true copy of which bid is now on file in the office of the City Clerk, and is hereby referred to and by this reference made a part hereof as fully as if set forth at length herein; and

WHEREAS, all bids received pursuant to said notice were opened and examined and publicly declared at the time specified in said advertisement for bids and at a meeting of the City Council held on the _____ day of _____, 20_____, the Council found and

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declared the bid of CONTRACTOR to be the lowest responsible bid and thereupon awarded a contract to CONTRACTOR to do the work referred to in the aforementioned specifications.

NOW, THEREFORE, the parties agree as follows:

1. THE WORK. CONTRACTOR agrees:

a. To do the work and furnish all the labor, materials, tools, supplies, equipment, superintendence, insurance, and bonds required for the _____ _____ in accordance with the Contract Documents (the Work).

b. To do and perform the Work contemplated hereby in a good and workmanlike manner under the direction of and to the satisfaction of the Director of Public Works of the City of Roseville.

2. PAYMENT. CITY shall pay CONTRACTOR _____ _____ dollars ($_____) for the Work to be done under this Agreement in accordance with the Contract Documents.

3. CONTRACT DOCUMENTS. The complete Agreement between the parties hereto consists of the following documents:

a. The advertisement for bids (including the notice to bidders, instructions to bidders and proposals);

b. The accepted bid;

c. Plans and specifications (including general conditions, supplemental conditions, special provisions and construction details);

d. Bonds and insurance required by the specifications; and

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e. This contract.

All documents specified above are intended to operate so that any work called for in any one and not mentioned in the other, or vice versa, is to be executed the same as if mentioned in all said documents.

4. LIQUIDATED DAMAGES. In the event CONTRACTOR does not complete the Work within the time specified, CONTRACTOR agrees that CITY will suffer damages. Inasmuch as the actual damages which would result from such breach by CONTRACTOR under this Agreement are uncertain, and would be impractical or extremely difficult to fix, CONTRACTOR agrees that it shall pay, or CITY shall deduct from CONTRACTOR's fee, the amount of $_____ per day as liquidated damages, in the event of such delay.

5. TIME OF COMPLETION. Time is of the essence of this Agreement. CONTRACTOR shall complete all Work under the Contract Documents within _____ Days of the date of this Contract. CONTRACTOR shall begin work by the date specified in the "Notice to Proceed" letter and shall diligently prosecute all of the Work under this Contract in all parts and requirements as defined in the Contract Documents.

6. SERVICE OF NOTICE. Any notice required or permitted to be given under this Agreement shall be deemed given when (a) personally delivered to the recipient identified below; (b) mailed by registered or certified mail, return receipt requested, postage pre-paid, to the address specified below; or (c) sent by facsimile, with confirmation of receipt, to the facsimile number identified below.

CITY OF ROSEVILLE	CONTRACTOR
_____	_____
_____	_____
_____	_____
_____	_____

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CITY may also act through either its architect or construction manager if CITY expressly gives notice to CONTRACTOR, in writing, that CITY's designee has authority to act for CITY in a specific capacity.

7. DISPUTES. Disputes arising from this Agreement will be determined in accordance with the Contract Documents and Public Contract Code Sections 10240-10240.13.

8. GOVERNING LAW. This Agreement shall be governed by and construed in accordance with the laws of the State of California.

9. INDEPENDENT CONTRACTOR. CONTRACTOR shall act as an independent contractor, and covenants and agrees that it will conduct itself consistent with such status, that it will neither hold itself out as, nor claim to be, an officer or employee of CITY by reason of this Agreement.

10. SUCCESSORS IN INTEREST. This Agreement shall be binding upon the heirs, successors, executors, administrators and assigns of the respective parties hereto.

11. MODIFICATION. This Agreement and each provision contained herein may be waived, amended, supplemented or eliminated only by mutual written agreement of the parties.

12. SEVERABILITY. If any of the provisions contained in this Agreement are for any reason held invalid or unenforceable, such holding shall not affect the remaining provisions or the validity and enforceability of the Agreement as a whole.

13. INTEGRATED AGREEMENT. This is an integrated agreement and contains all of the terms, considerations, understanding and promises of the parties. It shall be read as a whole.

14. CONTRACTORS LICENSE LAW. CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTORS' STATE LICENSE

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BOARD WHICH HAS JURISDICTION TO INVESTIGATE COMPLAINTS AGAINST CONTRACTORS IF A COMPLAINT REGARDING A PATENT ACT OR OMISSION IS FILED WITHIN FOUR (4) YEARS OF THE DATE OF THE ALLEGED VIOLATION. A COMPLAINT REGARDING A LATENT ACT OR OMISISON PERTAINING TO STRUCUTRAL DEFECTS MUST BE FILED WITHIN TEN (10) YEARS OF THE DATE OF THE ALLEGED VIOLATION. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS' STATE LICENSE BOARD, P.O. BOX 26000, SACRAMENTO, CALIFORNIA 95826.

IN WITNESS WHEREOF, the City of Roseville, a municipal corporation, has authorized the execution of this Agreement in duplicate by its City Manager and attestation by its City Clerk under authority of Resolution No. _____, adopted by the Council of the City of Roseville on the ____day of _____, 20_____, and CONTRACTOR has caused this Agreement to be duly executed.

CITY OF ROSEVILLE, a municipal corporation

BY:_____
DOMINICK CASEY
City Manager

ATTEST:

BY:_____
SONIA OROZCO
City Clerk

_____, a
_____

BY: _____
its: _____

and

BY: _____
its: _____

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APPROVED AS TO FORM:

BY: _____
MICHELLE SHEIDENBERGER
City Attorney

APPROVED AS TO SUBSTANCE:

BY: _____

Print Name:_____

Title:_____

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INSURANCE BROKER INFORMATION PACKET

Project:_____

NOTICE TO CONTRACTOR:

For your convenience, this package contains the Requirements for Insurance and Bonds for this project, including the necessary City forms. You are required to return these forms in addition to the executed Contract within fifteen (15) calendar days after the award of the Bid, unless otherwise directed by City in writing. (See the Instructions to Bidders.)

Please insert the dollar amount of your accepted Bid into the blank on page INS-1 and present this entire package to your insurance broker if you are awarded the Bid.

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NOTICE TO INSURANCE BROKER

Your client has been awarded a bid by the City Council of the City of Roseville to perform a public works project known as _____. The Contract Conditions for that project require your client ("the Contractor") to return certain evidence of insurance and bonds to the City Attorney of the City within fifteen (15) days after the Bid award, unless otherwise directed by the City in writing, or else the Bid award may be terminated and awarded to another company.

This package contains the information you will need as an insurance broker to provide the appropriate insurance and bonds to the City. The insurance coverages the Contractor needs are specified in the section entitled "Insurance Requirements." Please note that, in addition to the insurance certificate itself, copies of several endorsements must be actually furnished.

Please refer to the Supplemental Conditions for modifications of the General Conditions, if any, and the requirements of this insurance packet.

Please use the standard City of Roseville Bond Forms provided in this package.

The Bonds required must each be in the penal amount of: $_____.

Bonds must be sent to the following staff person:

_____

_____

_____

Insurance documents must be provided using one of the following methods:

a. By email to roseville@ebix.com and riskmanagement@roseville.ca.us

b. By fax to (770) 335-5727 and (916) 774-5461

After using one of these methods, please **DO NOT** send the insurance certificate(s) by mail.

When forwarding the documents, please refer to the project name so that the documents can be matched with the Contract for which they are submitted.

Thank you.

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INSURANCE REQUIREMENTS

The following sections are quoted from the General Conditions:

5-1.23 **INSURANCE COVERAGE.**

A. Evidence of Maintenance Required. The Contractor shall, at its expense, procure and at all times maintain in full force and effect at a minimum the insurance required by this section on all of its operations; and the Contractor shall not allow any Subcontractor to commence work until similar insurance required of the Subcontractor has been obtained and filed. An original Certificate of Insurance, and copies of all required endorsements, all in a form approved by the Risk Manager, evidencing all required coverage or policies shall be filed after the award of the bid and prior to approval of the Contract by the City Council. Contractor shall provide ten (10) days prior written notice to the City of any reduction of coverage limits or cancellation of the coverage or policies shall be given to the City of Roseville as Certificate holder.

B. Qualifying Insurers. With the exception of the State Compensation Insurance Fund, all required insurance policies shall be issued by companies acceptable to the City and licensed to do business in the State of California and who hold a current policy holders alphabetic and financial size category rating of not less than AVII according to the most recent issue of Best's Insurance Reports.

C. Insurance Required.

1. **Commercial General Liability (CGL):** Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations with limits of no less than Two Million Dollars ($2,000,000) per occurrence for bodily injury, personal injury and property damage for projects under One Million Dollars ($1,000,000) and

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limits of no less than Five Million Dollars ($5,000,000) per occurrence for bodily injury, personal injury and property damage for projects over One Million Dollars ($1,000,000). If a general aggregate limit applies, either the aggregate limit shall apply separately to this project or the general aggregate limit shall be twice the required occurrence limit.

The Commercial General Liability insurance shall include the following, copies of which shall be provided:

a. Inclusion of the City of Roseville, and its officers, agents, employees, and volunteers, as additional insureds (except for workers' compensation) as respects services or operations under the Contract. The additional insured endorsement for the general liability policy shall be at least as broad as the ISO CG 2010 10 01 combined with ISO CGL Endorsement CG 2037 10 01. Any other endorsement must be approved in writing by the City. Endorsements must include coverage for on-going and completed operations, which coverage shall be maintained for four (4) years following completion of the Project. Endorsements shall cover the City of Roseville, its officers, agents, employees, and volunteers.

b. The insurance shall provide coverage for claims by one insured against another insured and the policies shall not contain any cross-suits exclusions, cross-liability exclusions, or insured versus insured exclusions. The policies shall not contain any classification exclusions purporting to deny coverage for any work to be performed by Contractor or any of its Subcontractors.

c. Stipulation that the insurance is primary and noncontributory, as evidenced by a separate endorsement (CG 20 01 04 13 or an equivalent) or section of the policy, and that neither the City nor its insurers will be called upon to contribute to a loss.

d. Such insurance shall specifically cover the contractual liability of

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the Contractor.

e. Any available insurance proceeds in excess of the specified minimum insurance coverage requirements and limits shall be available to the additional insureds. Furthermore, the requirements for coverage and limits shall be: (1) the minimum coverage and limits specified in this Agreement; or (2) the full coverage and maximum limits of any insurance proceeds available to the named insureds, whichever is greater.

f. Waiver of subrogation endorsement.

g. The Contractor shall furnish a certificate for the period covered.

2. **Automobile Liability:** Insurance Services Office Form Number CA 0001 covering Code 1 (any auto), or if Contractor has no owned autos, Code 8 (hired) and Code 9 (non-owned), with limits of no less than One Million Dollars ($1,000,000) per accident for bodily injury and property damage.

3. **Workers' Compensation:** In accordance with the provisions of the California Labor Code, Contractor is required to be insured against liability for Workers' Compensation or to undertake self-insurance. Statutory Workers' Compensation and Employers' Liability of at least One Million Dollars ($1,000,000) shall cover all Contractors staff while performing any work incidental to the performance or this Agreement.

4. **Professional Liability:** Professional Liability (Errors and Omission) Insurance appropriate to Contractor's profession, with a limit of liability not less than One Million Dollars ($1,000,000) per occurrence or claim and Two Million Dollars ($2,000,000) aggregate to cover all design and engineering services rendered by Contractor pursuant to the Agreement. Coverage must commence from the first day that Contractor or any of its Subcontractors provided any design or engineering services in connection with the Project.

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5. **Builder's Risk/Course of Construction Insurance Is ____ OR Is Not ____ Required by Risk Management:** The Contractor shall be responsible for all loss, damage or destruction whatsoever to the work called for by this Contract until the approval of a Notice of Completion or acceptance of the Work if no Notice of Completion is to be recorded.

The Contractor shall secure "All Risk" type of builder's Risk Insurance of the type covering one hundred percent (100%) of the value of the work performed under this Contract (the value is presumed to be the Contract amount unless otherwise stated in Supplemental Conditions) and all materials, equipment, or other items to be incorporated therein while the same are located at the construction site, a bonded warehouse, or its place of manufacture. At any time, the policy shall cover the value of the work completed. The policy shall cover hazards including the losses due to fire, explosion, hail, rain, lightning, flood (separate insurance as needed), vandalism, malicious mischief, wind, collapse, aircraft, and smoke.

The policies providing such insurance shall name the City as a loss payee as its respective interests may appear, and certified copies of such policies shall be filed with the City. The maximum deductible allowable under the Builder's All Risk policy shall be five percent (5%) of the Contract amount.

Builder's Risk Insurance is not required for coverage of losses in excess of five percent (5%) of the Contract amount for damages resulting from earthquake in excess of a magnitude of 3.5 on the Richter scale, or tidal waves. Coverage in the amount of five percent (5%) of the Contract amount for such losses is required.

6. **Pollution Coverage:** Contractor shall procure pollution liability coverage

[redacted]

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[redacted]

7. **Higher Coverage Limits:** If Contractor maintains higher coverage limits than the amounts shown above, then the City requires and shall be entitled to coverage for the higher coverage limits maintained by Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the City.

8. **Claims Made Coverage:** Liability insurance coverage may not be written on a "claims made" or modified occurrence basis. The Certificate of Insurance must clearly provide that the coverage is on an "occurrence" basis.

5-1.24 **OTHER INSURANCE PROVISIONS.**

A. The requirements of the Standard Specifications as to types and limits of insurance coverage to be maintained by the Contractor, and any approval of insurance by the City, are not intended to, and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to the Contract, including, but not limited to, the provisions concerning indemnification, nor preclude the City from taking any other action available to it under any other provision of the Contract or law.

B. The City acknowledges that some insurance requirements contained in these Standard Specifications may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by Contractor under the Contract. Any self-insurance must be approved in writing by the City, in its sole discretion and shall not reduce the limits of liability. Any deductibles or self-insured retentions ("SIR") must be declared on the certificate of insurance and approved by City in writing. Policies containing any

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SIR provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named insured or City. City reserves the right to obtain a full certified copy of any insurance policy and endorsements. The failure to exercise this right shall not constitute a waiver of such right.

C. The Contractor agrees to include in its contracts with all subcontractors the same requirements and provisions of this Contract, including the indemnity and insurance requirements, to the extent they apply to the scope of the subcontractor's work. Furthermore, the Contractor shall require its subcontractors to agree to be bound to the Contractor and the City in the same manner and to the same extent as the Contractor is bound to the City under this Contract. Additionally, the Contractor shall obligate its subcontractors to comply with these same provisions with respect to any tertiary subcontractor, regardless of tier. A copy of the City's indemnity and insurance provisions will be furnished to the subcontractor or tertiary subcontractor upon request. Alternatively, the Contractor may insure subcontractor(s) under its own policy.

D. The City, its officers, agents, employees, and volunteers are to be covered as insureds with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the Contractor; and with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts or equipment furnished in connection with such work or operations. Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under California Insurance Code Section 11580.04.

E. The limits of insurance required in this Contract may be satisfied by a combination of primary and excess insurance. Any excess insurance shall contain or be

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endorsed to contain a provision that such coverage shall also apply on a primary and noncontributory basis for the benefit of the City (if agreed to in a written contract) before the City's own insurance shall be called upon to protect it as a named insured.

F. The insurance procured by Contractor shall be subject to the approval of the City, but any acceptance of insurance certificates by the City shall in no way limit or relieve Contractor of its duties and responsibilities under the Agreement.

G. Contractor shall be responsible for all premiums, deductibles, and self-insured retention applicable to the insurance it is required to procure under the Contract. All deductibles or self-insured retentions over five hundred thousand dollars ($500,000) must be approved by the City, in writing. Contractor shall be responsible for all deductibles, self-insured retention payments, and/or increased premiums incurred if the City's policies of insurance are forced to cover damages or respond to claims for which Contractor or its Subcontractors were obligated to provide insurance under the Contract.

H. Failure of the City to enforce in a timely manner any of the requirements of these insurance provisions shall not act as a waiver to enforcement of any of these provisions at a later date.

I. Contractor's indemnity obligations shall not be limited by these insurance provisions and shall survive the expiration of the Contract and the insurance provisions of the Contract shall likewise not be limited by the indemnity provisions of the Contract.

J. THE CITY RESERVES THE RIGHT TO WITHHOLD ANY PROGRESS PAYMENTS TO THE CONTRACTOR IN THE EVENT OF NONCOMPLIANCE WITH ANY INSURANCE REQUIREMENTS.

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Bond No. _____
Premium $_____

PUBLIC WORKS
FAITHFUL PERFORMANCE BOND

(Project: _____)

WHEREAS, the City of Roseville ("CITY") has awarded a bid and contract to _____ as contractor ("PRINCIPAL") for the public work described as _____ _____ (the "WORK"). The contract ("AGREEMENT"), for the public work described above, and all of its terms and conditions are incorporated by reference and made a part hereof; and

WHEREAS, the PRINCIPAL is required to furnish a bond in connection with the AGREEMENT guaranteeing its faithful performance; and

NOW, THEREFORE, we the undersigned PRINCIPAL and _____ _____, a _____, admitted and duly authorized to transact business under the laws of the State of California, as SURETY ("SURETY"), are held and firmly bound unto the CITY or its successors and assigns in the sum of _____ dollars ($_____) (which amount is not less than 100% of the AGREEMENT price) to be paid to the CITY or its successors and assigns; and for which payment, well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors or assigns jointly and severally, firmly by these presents.

The condition of this obligation is such that if the PRINCIPAL, or its heirs, executors, administrators, successors or assigns, shall abide by, and in all respects promptly and faithfully perform the covenants, conditions and provisions in said AGREEMENT and any alteration thereof made as therein provided, notice of which alterations to Surety being hereby waived, on its part to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless CITY, its officers, agents, employees, volunteers as therein stipulated, then this obligation shall be null and void; otherwise, this obligation shall be and remain in full force and effect.

As condition precedent to the satisfactory completion of the contract, the obligation of the PRINCIPAL and SURETY under this Bond shall remain in effect for a period of one (1) year after the completion and acceptance of the WORK. During that time, if the PRINCIPAL, its heirs, executors, administrators, successors or assigns fails to make full, complete and satisfactory repair and replacement or totally protect the CITY from any loss or damage made evident during that year which results from or is caused by either defective materials or faulty workmanship in the prosecution of the WORK, then the obligation shall remain in full force and effect. However, anything in

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this paragraph to the contrary notwithstanding, the obligation of the SURETY shall continue so long as any obligation of the PRINCIPAL remains.

No prepayment or delay in payments, and no change, extension, addition or alteration of any provision of the AGREEMENT or in the specifications agreed to between the PRINCIPAL and the CITY, or any forbearance on the part of the CITY shall operate to relieve the SURETY. The SURETY hereby waives the provisions of Section 2819 of the California Civil Code. The SURETY waives all rights of subrogation against the CITY or any person employed by the CITY. If the contract price increases by the issuance of change orders, the amount specified in this bond shall increase by the same amount.

Whenever PRINCIPAL shall be and declared by CITY to be in default under the AGREEMENT, SURETY shall promptly remedy the default, or shall promptly do one of the follow at CITY's election:

1. Undertake through its agents or independent contractors, reasonably acceptable to CITY, to complete the AGREEMENT in accordance with its terms and conditions and to pay and perform all obligations of PRINCIPAL under the AGREEMENT, including without limitation, all obligations with respect to warranties, guarantees, and the payment of liquidated damages.

2. Reimburse CITY for all costs CITY incurs in completing the AGREEMENT, and in correcting, repairing or replacing defects in materials or workmanship and/or materials and workmanship which do not conform to the specifications in the AGREEMENT.

SURETY's obligations hereunder are independent of the obligations of any other surety for the performance of the AGREEMENT, and suit may be brought against SURETY and such other sureties, jointly and severally, or against any one or more of them, or against less than all of them without impairing CITY's rights against the others.

No right of action shall accrue on this bond to or for the use of any person or corporation other than CITY or its successors or assigns.

As part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by CITY in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

[SIGNATURES NEXT PAGE]

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IN WITNESS WHEREOF, this instrument has been duly executed by the PRINCIPAL and SURETY above-named, on the ____ day of _____, 20___.

PRINCIPAL:

BY:_____

PRINT NAME: _____

PRINT TITLE: _____

AND

BY: _____

PRINT NAME: _____

PRINT TITLE:_____

SURETY:

BY:_____

PRINT NAME: _____

PRINT TITLE:_____

MAILING ADDRESS:

_____

_____

_____

(Notarization by Surety and copy of Power of Attorney required.)

APPROVED AS TO FORM:

BY: _____
City Attorney

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Bond No. _____
Premium $_____

PUBLIC WORKS
LABOR AND MATERIALS PAYMENT BOND
(Project: _____)

WHEREAS, the City of Roseville ("CITY"), has awarded a bid and contract to _____ as contractor ("PRINCIPAL"), for the public work described as _____ _____ (the "WORK"). The contract ("AGREEMENT"), for the public work described above, and all of its terms and conditions are incorporated by reference and made a part hereof; and

WHEREAS, the PRINCIPAL is required to furnish a bond in connection with the AGREEMENT guaranteeing payment of persons who provide labor and material; and

NOW, THEREFORE, we the undersigned PRINCIPAL and _____ _____, a _____, admitted and duly authorized to transact business under the laws of the State of California, as SURETY ("SURETY"), are held and firmly bound unto the CITY or its successors and assigns in the sum of _____ dollars ($_____) (which amount is not less than 100% of the AGREEMENT price) to be paid to the CITY or its successors and assigns; and for which payment, well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors or assigns jointly and severally, firmly by these presents.

The condition of the obligation is such that if the PRINCIPAL, its subcontractors, heirs, executors, administrators, successors or assigns fails to pay any of the persons named in Section 8004 or 9100 of the Civil Code of the State of California, or the amounts due under the Unemployment Insurance Code of the State of California, or any amounts required to be deducted, withheld and paid over to the Employment Development Department from the wages of employees of the PRINCIPAL and its subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to work or labor performed by any such claimant, that the SURETY will pay for the same, in an amount not exceeding the sum specified in this bond, and also, in case suit is brought upon the bond, shall pay reasonable attorneys' fees, to be fixed by the Court.

This bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file a Stop Payment Notice pursuant to the provisions of Section 9350 et seq. of the Civil Code of the State of California, so as to give a right of action to them or their assigns in any suit brought upon this bond.

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No prepayment or delay in payments, and no change, extension, addition or alteration of any provision of the AGREEMENT or in the specifications agreed to between the PRINCIPAL and the CITY, or any forbearance on the part of the CITY shall operate to relieve the SURETY. The SURETY hereby waives the provisions of Section 2819 of the California Civil Code. The SURETY waives all rights of subrogation against the CITY or any person employed by the CITY. If the contract price increases by the issuance of change orders, the amount specified in this bond shall increase by the same amount.

As part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by CITY in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

IN WITNESS WHEREOF, this instrument has been duly executed by the PRINCIPAL and SURETY above-named, on the _____ day of _____, 20__.

PRINCIPAL:

BY:_____

PRINT NAME: _____

PRINT TITLE: _____

AND

BY: _____

PRINT NAME: _____

PRINT TITLE:_____

SURETY:

BY:_____

PRINT NAME: _____

PRINT TITLE:_____

MAILING ADDRESS:

_____

_____

_____

(Notarization by Surety and copy of Power of Attorney required.)

APPROVED AS TO FORM:

BY: _____
City Attorney

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CITY OF ROSEVILLE

GENERAL CONDITIONS

FOR

BUILDINGS AND GROUNDS

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CITY OF ROSEVILLE
GENERAL CONDITIONS
FOR
BUILDINGS AND GROUNDS

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SECTION 1

DEFINITIONS AND TERMS

1-1.01 **GENERAL.** When the following abbreviations and terms or pronouns in place of them appear in the Contract Documents, the intent and meaning shall be interpreted as provided in this Section 1.

1-1.02 **ACCEPTANCE.** Formal Acceptance by resolution by the Roseville City Council of the Contract when completed in all respects in accordance with the Contract Documents and any modifications previously approved.

1-1.03 **ADDENDUM.** Written interpretation or revision to any of the Contract Documents issued by the City before the bid opening.

1-1.04 **AS-BUILT DOCUMENTS, AS-BUILT DRAWINGS AND RECORD DOCUMENTS.** As-Built Documents, As-Built Drawings and Record Documents are all contract documents modified to reflect changes during the construction phase. Specifically, As-Built Documents/Drawings are a revised set of drawings submitted by the Contractor upon Final Completion of a project. They reflect changes made in the Specifications and Working Drawings during the construction process, and show the exact dimensions, geometry, and location of all elements of the work completed under the Contract. Record Documents, on the other hand, are compiled by the Engineer or Architect based on the As-Built Documents/Drawings submitted by the Contractor. They reflect the Engineer or Architect's concurring review of what changes were denoted, why they were made and where they occurred and create a record set of drawings.

1-1.05 **ASSESSMENT.** A cost imposed on the Contractor for non-compliance

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with certain contractual requirements.

1-1.06 **BENEFICIAL OCCUPANCY.** The taking possession of a portion of the Work by the City for its use and/or occupancy on other than a temporary or emergency basis.

1-1.07 **BID GUARANTY.** The cashier's, certified check, irrevocable standby letter of credit, deposit of securities, or Bidder's Bond, accompanying the bid submitted by the Bidder, as a guaranty that the Bidder will enter into an agreement with the City for the performance of the Work, if the Agreement is awarded to Bidder, and the Bidder will submit the required Contract Bonds and Certificate of Insurance. Also referred to as the Bidder's Security.

1-1.08 **BIDDER.** Individual, firm, partnership, limited liability company, corporation, joint venture, or any combination thereof, submitting a Proposal for the Work, acting directly, or through a duly authorized representative.

1-1.09 **BIDDING DOCUMENTS.** Includes the Notice to Bidders, Bidding Requirements, Contract Conditions, Drawings, and Addenda.

1-1.10 **CHANGE ORDER.** Any written order to the Contractor directing an addition, deletion, or modification of the Work, or an adjustment in the Contract Price or Contract Time provided in the Contract Documents and issued after the Agreement has been signed.

1-1.11 **CITY.** The City of Roseville.

1-1.12 **CITY ATTORNEY.** The City Attorney of the City.

1-1.13 **CITY CLERK.** The City Clerk of the City.

1-1.14 **CLAIM.** A separate demand by Contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following: (a) a time extension, including, without limitation, for relief for damages or penalties for delay assessed by

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the City; (b) payment by the City of money or damages arising from work done by, or on behalf of, Contractor pursuant to the Contract Documents and payment for which is not otherwise expressly provided or to which Contractor is not otherwise entitled; and (c) payment of an amount that is disputed by the City.

1-1.15 **CONSTRUCTION SCHEDULE.** A list or graphic display of construction activities required for completing the Work, in a format required by the Contract Documents. The duration, start and finish date, and sequence of significant activities, critical path, float and milestones must be indicated in the Construction Schedule.

1-1.16 **CONTRACT OR AGREEMENT.** The written agreement relating to the Work to be performed, the labor, materials, and equipment to be furnished, and the payment to be made therefor. The Agreement/Contract is part of and incorporates all of the Contract Documents.

1-1.17 **CONTRACT CONDITIONS.** Includes the General Conditions, Supplemental Conditions, and Specifications.

1-1.18 **CONTRACT DOCUMENTS.** Includes those documents that form the basis of the Contract, including but not limited to, Bidding Documents, the Bid or Proposal, Contract Bonds, the Contract, all required insurance certificates or endorsements, all bonds, all required certifications or statements, Change Orders, any Contract Amendment, any City Standard which is incorporated by reference and these City of Roseville General Conditions for Buildings and Grounds.

1-1.19 **CONTRACT DRAWINGS.** The official drawings including plans, elevations, sections, detail drawings, diagrams, plated, General Notes, information and schedules thereon, or exact reproductions thereof, showing the location, character, dimension, and details

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of the Work. The Contract Drawings include any drawings or plates bound within the Supplemental Conditions.

1-1.20 **CONTRACT PRICE.** The total compensation to be paid to the Contractor in accordance with the terms of the Agreement.

1-1.21 **CONTRACT TIME.** The number of Days, or portion thereof, allowed for completion of the Work, including all authorized time extensions. The effective date for commencement of the Work specified in the Notice to Proceed shall define the beginning of the Contract Time.

1-1.22 **CONTRACTOR.** Individual, firm, partnership, limited liability company, corporation, joint venture, or any combination thereof, who has entered into the Agreement with City.

1-1.23 **DAY OR DAYS.** Unless otherwise designated, Day or Days as used in the Contract Documents will be understood to mean calendar Day or Days.

1-1.24 **DEPARTMENT.** The Department for Contract Administration, as identified in the Supplemental Conditions.

1-1.25 **DIRECT COSTS.** Those cost items (including labor, materials, equipment and any subcontractor's work) that are used in the actual performance of, and are specifically and uniquely attributable to the Work or changed Work. Direct Costs do not include Overhead. Direct Costs only include the following:

A. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by City and Contractor. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include salaries and

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wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' compensation, health and retirement benefits, sick leave, vacation and holiday pay applicable thereto. Such employees may include superintendents and foremen at the site. The expenses of performing work after regular working hours, on Saturday, Sunday or legal holidays shall be included in the above only to the extent authorized by City in writing.

B. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and suppliers' field services required in connection therewith. All trade discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to City, and Contractor shall make provisions so that they may be obtained.

C. Payments made by Contractor to the subcontractors for work performed by subcontractors. If required by City, Contractor shall obtain competitive bids from subcontractors acceptable to Contractor and shall deliver such bids to City who will then determine which bids will be accepted. If a subcontract provides that the subcontractor is to be paid on the basis of cost of the work plus a fee, the subcontractor's cost of the work shall be determined in the same manner as Contractor's cost of the work. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

D. Costs of special consultants (including engineers, architects, testing laboratories, surveyors, and accountants) employed for services specifically, and only, related to the Work.

E. Supplemental costs including the following:

1. The proportion of necessary transportation, travel and subsistence

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expenses of Contractor's employees incurred in discharge of duties connected with the Work.

2. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value of such items used but not consumed which remain the property of Contractor.

3. Rentals of all construction equipment and machinery and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by City, and the costs of transportation, loading, unloading, installation, dismantling and removal thereof, all in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.

4. Sales, consumer, use or similar taxes related to the Work, and for which Contractor is liable, imposed by laws and regulations.

5. The cost of utilities (including the meter and all associated installation costs), fuel and sanitary facilities at the site.

6. Cost of premiums for additional bonds and insurance required because of changes in the Work.

1-1-26 **DIRECTOR.** Director of the Department for Contract Administration or his or her designee.

1-1.27 **EMERGENCY.** Any sudden generally unforeseen occurrence (such as a fire, flood, storm, earthquake, civil disorder, or other natural and/or man-made disaster) that has the potential to adversely affect the safety of life, the Work, and/or adjacent property; to interrupt contracts essential to the performance of the Work; and/or to cause catastrophic failure of City

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equipment and/or facilities.

1-1.28 **ENGINEER OR ARCHITECT.** Professional Engineer or Architect designated for a particular project responsible for signing and sealing the permit drawings, interpretation of the drawings where ambiguities exist, review of requests for information, design Change requests and Shop Drawings, resolution of errors and omissions, and finalization of Record Documents.

1-1.29 **FINAL COMPLETION.** When the project has been completed according to the terms and conditions set forth in the Contract Documents. Final Completion is not the same as Acceptance.

1-1.30 **FORCE ACCOUNT.** Payment by force account shall mean payment on the basis of the Contractor's time and materials.

1-1.31 **GENERAL NOTES.** The written instructions, provisions, conditions or other requirements appearing on the Contract Drawings and so identified thereon, which pertain to the performance of the Work.

1-1.32 **INSTALLATION, INSTALL.** Completely assembling, erecting, and/or connecting materials, parts, components, supplies, and related equipment specified or required for the completion of the Work.

1-1.33 **LABORATORY.** Established professional laboratories authorized by the City to test materials and Work involved in the Contract.

1-1.34 **LEGAL HOLIDAYS.** Those days designated as Federal holidays or declared by the City, or otherwise specified in the Contract Documents.

1-1.35 **LIQUIDATED DAMAGES.** The amount prescribed in the Contract Documents to be paid to the City or to be deducted from any payments due or to become due the

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Contractor for each day's delay in completing the whole or any specified portion of the Work beyond the time allowed in the Supplemental Conditions.

1-1.36 **NOTICE OF COMPLETION.** A legal notice filed by the City with the Placer County Recorder's Office stating that construction has been completed and accepted by the City.

1-1.37 **NOTICE TO PROCEED.** A written notice given by the City to the Contractor fixing the date on which the Contract Time will commence to run.

1-1.38 **NOTICE OF TERMINATION.** Written notice from the City to the Contractor and/or its Surety terminating the Agreement, or a portion thereof, either for convenience of the City or for default due to the Contractor's failure to perform its contractual obligations.

1-1.39 **OVERHEAD.** Business or administrative expenses (including but not limited to office expenses, administrative staff, rent, insurance, utilities) not chargeable to a particular part of the Work. The term "Overhead" shall include all of the following:

A. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor whether at the Work Site or in Contractor's principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications, all of which are to be considered administrative costs covered by the Contractor's fee.

B. Expenses of Contractor's principal and branch offices other than Contractor's office at the site.

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C. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

D. Cost of premiums for all bonds and for all insurance whether or not Contractor is required by the Contract Documents to purchase and maintain the same, except as provided in section 1-1.25.

E. Other overhead or general expense costs of any kind.

1-1.40 **PREMISES.** Shall mean the area within construction easements, easements, rights of entry and City owned property which surrounds the Work Site, limited by the property lines thereof. In some cases Premises may coincide with the Work Site.

1-1.41 **PROFESSIONAL ENGINEER.** An engineer licensed by the Board of Registration for Professional Engineers, State of California.

1-1.42 **PROJECT MANUAL.** A book containing all Contract Documents.

1-1.43 **PROPOSAL FORMS.** The approved forms upon which the City requires that each Bidder submit its bid with regard to the Agreement.

1-1.44 **REQUEST FOR INFORMATION (RFI).** A document issued by the Contractor requesting information concerning the Contract Documents.

1-1.45 **SAFETY.** Includes the practice of identifying potential hazards, assessing their risk, taking corrective action where possible, including and providing control measures such as engineering design, written procedures, and the personal protective equipment for workers in order to eliminate or reduce the risk for exposure in the workplace.

1-1.46 **SCHEDULE OF VALUES.** The breakdown of the Contract Price that will serve as the basis for Contractor's Applications of Payment. Any lump sum bid item

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included within the Contract Price will be apportioned among values relating to specific components of the Work covered by said lump sum.

1-1.47 **SHOP DRAWINGS.** Drawings, plans, diagrams, schedules, and other data specifically prepared and submitted to the City by the Contractor, showing in detail: (a) the proposed fabrication and assembly of a special component of the Work; and (b) the Installation (form, fit and attachment details) of a special component of the Work. Shop Drawings shall be deemed to include Working Drawings, Product Data, literature, and applicable performance and test data.

1-1.48 **SPECIFICATIONS.** The technical Specifications for the Work prepared by the Director or an Engineer or Architect describing in detail the nature of the Work, its components, any performance standards, and how the Work is to be constructed.

1-1.49 **SUBCONTRACTOR.** Any individual, firm, partnership, limited liability company, corporation, joint venture, or combination thereof, other than employees of the Contractor, engaged by the Contractor to furnish services, labor, equipment and materials for a portion of the Work.

1-1.50 **SUBMITTALS.** Those documents required to be submitted by the Contractor for review by the City in accordance with the Contract Documents.

1-1.51 **SUPPLEMENTAL CONDITIONS.** The Supplemental Conditions are specific clauses modifying or supplementing these General Conditions.

1-1.52 **SUPPLIER.** Any individual, firm, partnership, limited liability company, corporation, joint venture, or combination thereof, other than employees of the Contractor, that supplies a tangible product as a portion of the Work, with services usually limited to delivery and/or required testing, and with manufacturing, fabrication, or production facilities located off

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the Work Site.

1-1.53 **WORK.** The furnishing of all labor, and the furnishing and Installing of all materials, articles, supplies and equipment as specified, designated, or required by the Contract Documents.

1-1.54 **WORK SITE.** All or portion of the Premises that the Work is limited to as shown on the Contract Drawings or designated by the Director. Public streets are not included unless Work is being done within the street right-of-way.

1-1.55 **WORKING DRAWINGS.** Original drawings prepared by the Contractor and/or its Subcontractors or Suppliers, of any tier, illustrating Work required for construction that will not become an integral part of the completed Work. This includes, but is not limited to, drawings for temporary structures such as decking, bulkheads, excavation supports, utility support, groundwater control, forming, falsework, access roads, staging areas, staging plans, and diversion plans. A Working Drawing is one type of a Shop Drawing.

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SECTION 2

CONTROL AND SCOPE OF THE WORK

2-1.01 **AUTHORITY OF DIRECTOR.** The Contract shall be performed in a manner satisfactory to the Director who shall decide all questions which may arise as to the quality or acceptability of materials furnished and Work performed and as to the manner of performance and rate of progress of the Work; all questions which may arise as to the interpretation of the Contract Documents; all questions as to the acceptable fulfillment of the Contract on the part of the Contractor; and all questions as to compensation. The Director shall have authority to enforce and make effective such decisions and orders in the event the Contractor fails to promptly carry out the same.

2-1.02 **INTENT OF CONTRACT DOCUMENTS.** The Contract Documents are complementary, and what is called for by one shall be as binding as if called for by all. The intent of the Contract Documents is to describe the details for the construction and completion of the Work. Where the Contract Documents describe portions of the Work in general terms, but not in complete detail, it is understood that only the best general practice shall be followed and that only materials and workmanship of the best quality are to be used. Any Work, materials, or equipment that are customarily provided, or that are reasonably inferable from the Contract Documents as being required to produce the intended result, shall be supplied, whether or not specifically called for. When words, which have a well-known technical or trade meaning are used to describe work, materials, or equipment, such words shall be interpreted in accordance with that meaning. Unless otherwise specified, the Contractor shall furnish all labor, materials, tools, equipment, and incidentals, and do all the Work involved in executing the Contract in a

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satisfactory and workmanlike manner.

Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, laws, or regulations in effect on the first published date of the Notice to Contractors, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of City or Contractor, or any of their consultants, agents, or employees from those set forth in the Contract Documents, nor shall it be effective to assign to City, or City's designated representative, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to other provisions of the Contract Documents.

The Contract Documents are divided into parts, divisions, sections and articles for convenience, organization and reference. Generally, there has been no attempt to divide the Specifications sections into work performed by the various building trades, work by separate Subcontractors, or work required for separate facilities in the project.

2-1.03 **EXAMINATION AND VERIFICATION OF CONTRACT DOCUMENTS.** The Contractor shall thoroughly examine and become familiar with all of the various parts of the Contract Documents and shall determine the nature and location of the Work, the general and local conditions (including applicable laws) and all other matters which can in any way affect the cost, progress or performance of the Work under this Agreement. Failure to make an examination necessary for this determination shall not release the Contractor from the obligations of the Agreement. No oral agreement or conversation with any officer, or employee

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of the City, or with the City's designated representative either before or after the execution of the Agreement, shall affect or modify any of the terms or obligations contained in the Contract Documents.

2-1.04 **CONTRACT DRAWINGS.** The Contract Drawings consist of general drawings and show such plans, elevations, sections, details and schedules as are necessary to give a graphic and pictorial description of the contemplated construction. All authorized alterations affecting the requirements and information given on the Contract Drawings shall be in writing.

2-1.05 **COORDINATION AND INTERPRETATION OF CONTRACT DOCUMENTS.** All Contract Documents are essential parts of the Contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary, and to describe and provide for a complete Work.

In the event of inconsistencies between requirements contained in different components of the Contract Documents, the precedence of the Contract Documents shall be as follows to resolve conflicts:

1. Change Orders
2. The Contract (including Addenda)
3. The Supplemental Conditions
4. Specifications
5. Contract Drawings
6. The General Conditions

Should it appear that the Work to be done or any of the matters relative thereto are not sufficiently detailed or explained in the Contract Documents, the Contractor shall submit a

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Request for Information ("RFI") to the Director for such further explanations as may be necessary and shall conform to the written explanation given as if part of the Contract Documents. The decisions of the Director shall be final.

Contractor shall anticipate that it will be necessary to prepare and submit RFIs regarding the Contract Documents. The City will respond to each RFI by no later than fourteen (14) Days after receipt of the RFI, unless the RFI is of significant complexity. Furthermore, in the event that there are numerous RFIs pending, Contractor shall cooperate with the City in establishing a priority for responding to the RFIs, and potentially some RFIs may be responded to beyond the fourteen (14) Day period.

Each RFI prepared by Contractor shall be full and complete. Contractor shall prepare RFIs so as to not cause any delay to the progress of the Work and to not cause any impact to Contractor's labor productivity in the field. Contractor shall not assert any Claims for delay or interference against the City if Contractor fails to timely submit any RFI to the City, after consideration of the response period allowed for by the City.

The response to an RFI shall not, by itself, constitute a writing that authorizes Contractor to perform any Work that causes an adjustment to either the Contract Price or the Contract Time. If Contractor believes that any response to any RFI should constitute a compensable change, Contractor shall provide a Notice of Potential Claim as provided in Section 7-1.03, below. Contractor's failure to provide the required written notice shall constitute a waiver of the Contractor's right to seek a compensable change based on the RFI response.

The Contractor shall examine all Contract Documents; shall verify all figures in the Contract Documents before laying out the Work; shall promptly notify the City of all errors, inconsistencies, and/or omissions that it discovers; and, in instances where such non-

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conformities are discovered, shall obtain specific instructions in writing from the City before proceeding with the Work. Contractor's performance of any Work affected by such non-conformities prior to the City's decision shall be at the Contractor's risk. Any Work that is customarily provided or that is reasonably inferable shall not relieve the Contractor from performing such work at no additional expense and/or delay, and such Work shall be performed as if fully set forth in the Contract Documents.

2-1.06 **INDEPENDENT CONTRACTOR STATUS.** The Contractor shall independently perform all Work required by the Contract Documents and shall not be considered as an agent or employee of the City, nor shall the Contractor's Subcontractors or employees be considered as subagents of the City.

The Contractor and Contractor's Subcontractors shall be licensed in accordance with the laws of the State of California and as more particularly described in the bidding documents or elsewhere in the Contract Documents.

2-1.07 **ORDER OF WORK.** When required by the Contract Documents, the Contractor shall follow the sequence of operations set forth therein. Full compensation for conforming to such requirements will be considered as included in the prices paid for the various Contract items of work, and no additional compensation will be allowed therefor.

2-1.08 **SUBMITTALS.** It shall be the Contractor's responsibility to timely submit, so as to cause no delay in the Work, all Shop Drawings, descriptive data, manuals, instructions, affidavits, samples for the various trades as required by the Supplemental Conditions and Specifications, and offers of alternatives, if any. Such Submittals shall be checked and coordinated by the Contractor with the Work of other trades involved before they are submitted to the Director for examination.

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The Contractor shall deliver at least one (1) electronic copy of the Submittals to the Director, and one (1) hard copy if requested. Work requiring the submittal of working drawings, descriptive data or samples shall not begin prior to approval of said Submittal by the Director.

The time allowed for review of each Submittal will be as indicated in the Supplemental Conditions. Review time will start upon receipt of the Submittal by the Director and will end upon the Director's mailing of the Submittals to the Contractor. Defective, incomplete or partial Submittals will be returned to the Contractor unreviewed.

Submittals shall be made by a letter of transmittal that shall contain a list of all matter submitted and identification of all variations from the Contract Documents contained in the Submittal. The letter and all items accompanying the same shall be fully identified as to project name and location, Contractor's name, district, county, and Contract number, with ample cross-references to the Contract Documents, to facilitate identification of items and their location in the Work.

All Shop Drawings and supporting data, catalogs, schedules, shall be submitted as the instruments of the Contractor, who shall be responsible for their accuracy and completeness. These Submittals may be prepared by the Contractor, Subcontractors, or Suppliers, but the Contractor shall ascertain that Submittals meet all of the requirements of the Contract Documents, while conforming to structural, space, and access conditions at the point of Installation. The Contractor shall check all Submittals before submitting them to the Director.

2-1.08A **SHOP DRAWINGS.** The Contractor shall submit an electronic copy (searchable PDF) of all Shop Drawings required by the Supplemental Conditions or Specifications, and one (1) hard copy, if requested by the Director. Shop Drawings shall also be provided separately in AutoCAD format using the latest version of AutoCAD. An electronic

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copy will be returned to the Contractor either approved for use, as demonstrated by a stamp, or returned for correction and resubmittal. Materials, colors and/or samples will not be returned to the Contractor. Shop Drawings include any drawing, which requires execution by a draftsman as distinguished from printed matter. The size of Shop Drawings shall not exceed twenty-four inches (24") by thirty-six inches (36").

2-1.08B **DESCRIPTIVE DATA.** The Contractor shall submit an electronic copy (searchable PDF) of each set of manufacturer's brochures or other data required by the Supplemental Conditions or Specifications, and one (1) hard copy, if requested by the Director. The City will examine such Submittals and return either an electronic copy or a hard copy approved for use or returned for correction and resubmittal.

2-1.08C **SAMPLES.** The Contractor shall submit samples of articles, materials or equipment as required by the Supplemental Conditions or Specifications. The Work shall be in accordance with the approved samples. Samples shall be removed from City property when directed or may be incorporated in the Work if approved by the Director. Samples not removed by the Contractor will become the property of the City or, at the City's option, will be removed or disposed of by the City at the Contractor's expense.

2-1.08D **MANUALS, INSTRUCTIONS AND AFFIDAVIT.**

A. Manuals and Instructions. Where operation and maintenance manuals are required by the Supplemental Conditions, the Contractor shall submit two (2) sets of manuals, suitably bound, along with two (2) electronic copies in an approved format, to the Director within forty-five (45) Days after favorable review of the equipment or facilities. If operation and maintenance manuals are approved to be provided in PDF format, text shall be provided in searchable PDF format, making proper use of PDF for headings and heading levels,

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paragraphs, tables, and lists. Submitted operation and maintenance manuals shall be a collected, organized, and indexed set of bookmarked PDF documents comprising each operation and maintenance manual that corresponds to a hardcopy binder. All manuals shall be marked to indicate the specific equipment furnished for this project and shall include at a minimum:

1. Equipment summary form
2. Cover/Title page
3. Table of contents
4. Operating procedures including start-up, shutdown, normal operation, all operating modes, emergency shutdown, and safety precautions
5. Lubrication instructions (if required)
6. Preventative maintenance procedures
7. Troubleshooting and corrective maintenance procedures
8. Reinstallation instructions
9. Overhaul instructions (if applicable)
10. Parts identification list with exploded view and associated cross references
11. Recommended spare parts list
12. Operator safety requirements
13. Electrical and control system wiring drawings including panel wiring control (ladder) diagrams, logic diagrams, loop diagrams, and interconnection diagrams
14. Panel layout and assembly drawings

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15. Mechanical drawings

16. Printouts of all software programs and configuration files

17. Factory and field test procedures and results

Operation and maintenance manuals for complex equipment shall also include:

18. Alternate specified operating modes

19. Emergency shutdown instructions

20. Normal shutdown instructions

21. Long term shutdown instructions

Operation and maintenance manuals for systems comprised of separate pieces of equipment shall include a system explanation of items 4, 7, 18, 19, 20, and 21 as well as the instructions for the separate pieces of equipment.

B. Affidavits. Where required in the Supplemental Conditions or Specifications, manufacturers of equipment shall provide field service as a part of this project. Equipment shall not be considered ready for full time operation until after the authorized factory-trained and qualified manufacturer's representative for the specific equipment has checked and adjusted the equipment and certified by written affidavit that the equipment has been properly Installed, tested, adjusted, lubricated, and calibrated, and is ready for full time operation. Acceptable affidavits shall be submitted prior to completion of the Work. Affidavits shall contain the following specific wording:

"The (Name of Equipment) has been properly installed, tested, adjusted, lubricated, and calibrated, and is ready for full time operation. The installation has been inspected and has been found to be in conformance with our (the manufacturer's) standards and requirements."

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No amplification, dilution, or modification of this specific wording will be permitted.

2-1.08E **ALTERNATIVES.** For convenience in designation in the Contract Documents, certain materials, articles, or equipment may be designated by a brand or a trade name or the name of the manufacturer together with catalog designation or other identifying information, hereinafter referred to generically as "designated by brand name." Except in those instances where the product is designated to match others in use in a particular improvement, either completed or in the course of completion, an alternative material, article, or equipment which is of equal quality and of the required characteristics for the purpose intended may be proposed for use provided the Contractor complies with the following requirements:

A. The Contractor shall submit its proposal for an alternative in writing. Such request shall be made in ample time to permit review and approval without delaying the Work. The Contractor shall not be entitled to an adjustment of the Contract Time or an increase in the Contract Price based on any Contractor-proposed substitution.

B. No such proposal will be considered unless accompanied by complete information and descriptive data, necessary to determine the equality of the offered materials. The Contractor shall satisfy the Director as to the comparative quality, suitability, or performance of the offered material, articles, or equipment. In the event that the Director rejects the use of such alternative materials, articles, or equipment, then one of the particular products designated by brand name shall be furnished.

C. The burden of proof as to the quality and suitability of alternatives shall be upon the Contractor and it shall furnish all information necessary as required by the Director. The Director shall be the sole judge as to the quality and suitability of alternative articles or materials and such decisions shall be final. Where use of an alternative material

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involves redesign of, or changes to, other parts of the Work, the cost and time required to effect such redesign or changes will be considered in evaluating the suitability of the alternative material. Cost of redesign by the City will be borne by the Contractor.

D. Whenever classification, rating or other certification by a body such as Underwriters Laboratories (UL) or the National Electrical Manufacturers Association (NEMA) is a part of the specification for any material, Contractor's request for use of alternative articles or materials shall be accompanied by reports from the listed or equivalent independent testing Laboratory indicating compliance with the Contract Documents. The cost of all testing required to prove equality of the material proposed shall be borne by the Contractor. Approval of an alternative shall be only for the characteristics or use named in such approval, and shall not be used to change or modify any requirement of the Contract Documents.

E. At its election, the City reserves the right to consider any Contractor proposed substitution as a Cost Reduction Proposal under Section 3-1.07 of these General Conditions in the event that there is a significant savings resulting from the substitution.

The Director will examine, with reasonable promptness, such Submittals, and return of Submittals to the Contractor shall not relieve the Contractor from responsibility for deviations and alternatives from the Contract Documents, nor shall it relieve the Contractor from responsibility for errors in the Submittals. A failure by the Contractor to identify in its letter of transmittal material deviations from the Contract Documents shall void the Submittal and any action taken thereon by the Director. When specifically requested by the Director, the Contractor shall resubmit such Shop Drawings, descriptive data and samples as may be required.

If any mechanical, electrical, structural, or other changes are required for the proper Installation and fit of alternative materials, articles, or equipment, or because of deviations from

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the Contract, such changes shall not be made without the approval of the Director and shall be made without additional cost to the City.

2-1.09 **DISPOSAL OF MATERIAL OUTSIDE THE WORK SITE.** Unless otherwise stated elsewhere in the Contract Documents, the Contractor shall, at its own cost and expense, make its own arrangements for disposing of materials outside the Work Site.

Except when material is to be disposed of at a landfill or recycling center, when any material is to be disposed of outside the Work Site, the Contractor shall first obtain written permission from the City to dispose of the material at the intended location. The City's approval will be contingent upon the Contractor obtaining a written permit from the property owner on whose property the disposal is to be made. Prior to the disposal of any material at the intended location, the Contractor shall submit such permit or a certified copy thereof to the City, together with a written release from the property owner absolving the City from any and all responsibility related to the disposal of material on said property.

Disposal of Hazardous Materials must be done in accordance with all laws and regulations. Copies of all required regulatory documentation including copies of final manifests shall be supplied to the City.

2-1.10 **ACCESS TO THE WORK.** The Contractor shall satisfy itself that the jurisdictions through which its operations and haul routes pass will permit such operations with respect to the type of vehicle, laden weights, frequency and dimensions of loads, hours of operation and required traffic control. All necessary permits, licenses or bonds shall be obtained and paid for by the Contractor.

2-1.11 **TEMPORARY UTILITIES.** The Contractor shall make its own arrangements with utility companies for any temporary services it may require in performance of

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the Work and shall pay all costs of these services directly to these utility organizations.

2-1.12 **UTILITY FACILITIES.** The Contractor shall protect from damage those utility facilities that are to remain in place, be Installed, relocated or otherwise arranged.

The Contractor's attention is directed to the possible existence of facilities not shown, and of facilities in a location different from that, which is indicated. The Contractor shall take steps to ascertain the exact location of all facilities prior to doing any Work, which may damage such facilities or interfere with their service. Where the location of a facility is indicated or inferred from the presence of visible facilities such as buildings, meters, and junction boxes, the Contractor shall make such excavations and explorations as are necessary to ascertain the correct location. Unless provided for elsewhere in the Contract Documents, the cost of such excavations and explorations will be considered as a part of the cost of other items of Work and no additional payment will be made. Such excavations and exploratory Work shall not entitle the Contractor to an extension of time.

If the Contractor discovers underground facilities not indicated or inferred from the Contract Documents, the Contractor shall immediately give the Director written notification of the existence of those facilities. The Contractor shall determine the exact location of the underground facilities and the cost of the work will be paid for in accordance with the Contract Documents. The underground facilities shall be protected from damage as directed by the Director and the cost of that work will be paid for as extra work. The Contractor shall, if directed by the Director, repair any damage, which may occur to the underground facilities. The cost of that repair work, not due to the failure of the Contractor to exercise reasonable care, will be paid for as extra work. Damage due to the Contractor's failure to exercise reasonable care shall be repaired at the Contractor's cost and expense.

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Where it is determined by the City that the rearrangement of an underground facility, the existence of which is not shown on the Contract Drawings, is essential in order to accommodate the Work, the City will provide for the rearrangement of such facility by other forces or, when so ordered by Change Order, such rearrangement shall be performed by the Contractor and will be paid for as provided under a Change Order.

The Contractor shall be responsible for the maintenance of all utility facilities placed by the Contractor in temporary locations, and all utilities within the construction area not required to be relocated but which are required to be shored or supported during the construction period. The cost of such maintenance shall be borne by the Contractor, and no other compensation shall be due the Contractor for this Work.

The cost of providing and maintaining all necessary or required temporary structures, of making any necessary repairs, replacements, or similar operations, or furnishing indemnity or other bonds, if required, and all costs required by this Section shall be paid by the Contractor and shall be included in the prices bid in the schedule for other items of work.

2-1.13 **PRESERVATION AND CLEANING.** The Contractor shall clean up the Work at frequent intervals and at other times when directed by the Director. While finish Work is being accomplished, floors, Work areas and finished areas shall be kept clean, free of dust, construction debris and trash. Upon completion of the Work, the Contractor shall remove from the Premises its construction equipment and any waste materials not previously disposed of, leaving the Premises thoroughly clean and ready for final inspection.

2-1.14 **LIMITATIONS ON WORK SITE AND PREMISES.** The Contractor shall limit its construction operations to the Work Site unless otherwise shown on the Contract Drawings or specified. The Contractor shall perform no operation of any nature over or on the

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Premises except such operations as are authorized by the Contract Documents or as authorized by the Director.

2-1.15 **DUST CONTROL.** During the performance of all Work under this Contract, the Contractor shall assume all responsibility for dust control and shall furnish all labor, equipment, and means required to carry out proper and efficient measures wherever and whenever dust control is necessary to prevent the operations from producing dust damage and nuisance to persons and property. Any claims resulting from dust damage or nuisance shall be borne solely by the Contractor. The Contractor shall comply with all applicable Air Quality Act requirements.

2-1.16 **SANITATION.** The Contractor shall provide sanitary facilities for all persons working on the Work.

2-1.17 **NIGHT WORK AND NORMAL WORKING HOURS.** Normal working hours at the construction site shall be between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday. Legal holidays are excluded. Certain utility connections and street operations are anticipated to require night Work by the Contractor during low usage periods. The Contractor may also be required to prosecute the Work at night if, at any time, the Director shall deem it necessary for the progress of the Work, or if emergencies arise. The Contractor shall promptly comply with any such requirements made in writing by the Director. The Contractor will also be permitted to Work at night if Contractor satisfies the Director of the need therefor, in order to maintain the required progress or protect the Work from the elements. Certain activities are required to be performed at night for nominal progress of the Work and/or are specified to be performed at night by other portions of the Supplemental Conditions. When required, ordered, or permitted to Work at night, the Contractor shall provide sufficient and

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satisfactory lighting and other facilities therefor. The Contractor shall receive no extra payment for night Work, if specified or if required to be performed during the normal progress of the Work, but compensation shall be considered as having been included in the price stipulated for the Work.

If Contractor performs work during weekends, holidays or any non-normal work hours, Contractor shall pay for required City Inspectors.

2-1.18 **LINES AND GRADES.** Unless otherwise provided in the Supplemental Conditions, the Contractor shall lay out all Work, including structures and pipelines, and shall be responsible for any errors resulting therefrom. In all questions arising as to proper location of lines and grades, the Director's decision will be final.

As part of the bid price for the construction of the improvements, the Contractor shall provide and be responsible for the layout of all Work on this project. The Contractor shall provide all necessary surveys, field staking, and positioning for the construction of all components at the proper alignment, elevations, grades, and positions, as indicated on the Contract Drawings and as required for the proper operation and function. The Contractor shall stake its Work area limits. Contractor shall perform all construction staking using a land surveyor licensed in the State of California. Contractor shall provide a staking plan prior to commencement of Work for the City's review and maintain monuments, stakes, and marks, and shall update the plan as necessary. Director, or Director's designated representative, may verify the field condition. Errors or inconsistencies in the Contract Documents discovered by the Contractor shall be reported to the Director within twenty-four (24) hours and prior to constructive forms or related improvements. Any work Installed with this requirement shall be subject to removal and replacement at the Contractor's expense.

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The Contractor's lay-out shall be based on existing structures, property lines, survey control, and bench marks established by the City. All structures and pipeline connections shall be Installed based on actual elevation of existing structures to which connections are made.

The Contractor shall supply such labor as required, at no extra charge, to aid and assist the Director in checking location and grades of the Work as set by the Contractor if the Director desires to perform this checking. This shall include moving materials and equipment located between monuments and the construction Work.

2-1.19 **ARCHEOLOGICAL DISCOVERIES.** Upon discovery of prehistoric or historic artifacts, or other indicators or examples of cultural resources discovered during the course of site preparation, grading, excavation, construction or other development activities, all operations within fifty feet (50') of the find shall cease until such time as the City provides the services of a qualified archeologist to evaluate the finds and recommend appropriate action.

Prehistoric materials can include flaked stone tools (e.g., projectile points, knives and choppers) or tool making debris of obsidian, chert, quartzite and other materials, culturally darkened soil (i.e., midden, which often contains heat affected rock, ash and charcoal, shellfish remains, and cultural materials), and stone milling equipment such as mortars, pestles and hand stones. Historic material may include wood, stone, concrete or adobe footings, walls and other structural remains; debris filled wells or privies; and deposits of wood, metal, glass, ceramics and other refuse.

2-1.20 **PRESERVATION OF MONUMENTS.** Any monuments or bench marks disturbed by construction operations shall be repaired per the City's standard and promptly re-established by a registered land surveyor or civil engineer. A plat for each monument shall be furnished to the Director after the plat has been recorded with the Placer

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County Recorder's Office at no additional cost to the City. The recorded plat shall serve as a record of the re-establishment of said existing survey points.

2-1.21 **CONFORMITY WITH CONTRACT DOCUMENTS.** Work and materials shall conform to the lines, grades, cross sections, dimensions and material requirements, including tolerances, required by the Contract Documents. Although measurement, sampling and testing may be considered evidence as to such conformity, the City shall be the sole judge as to whether the Work or materials deviate from the Contract Documents. At its option, the City may elect to accept deviations from the Contract Documents with appropriate backcharge Assessments against the Contractor, and, if such an election is made, the City will provide written notice to the Contractor of such acceptance.

2-1.22 **FINAL CLEANUP.** Prior to final Acceptance of the Work, the Contractor shall thoroughly clean the Premises, remove all temporary structures built by or for the Contractor, and remove all equipment and surplus construction material and debris from the area. The entire project, before Acceptance by the City, shall be left in a neat and clean condition. All Work areas and temporary construction areas shall be returned to essentially the same conditions existing before the commencing of project construction.

2-1.23 **AS-BUILT DOCUMENTS AND DRAWINGS.** The Contractor shall maintain one set of the full size prints furnished by the City and mark thereon in color any deviations from plan dimensions, elevations, or orientations. Also, the Contractor shall locate on said prints, all underground facilities, such as piping, conduits and tanks by accurate field measurement from structure walls, corners, etc. The Contractor shall submit the prints and an electronic CD (searchable PDF or source file format such as AutoCAD) in good condition to the Director upon completion of the job as a condition of Acceptance of the project. Marked prints

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shall be updated at least once each week and shall be available to the Director for review as to currency prior to developing partial payment estimates. After the completion of testing, but prior to Acceptance, the Contractor shall submit As-Built electrical drawings in color and an electronic CD showing all components and their wiring, and as specified in the Supplemental Conditions.

2-1.24 **SUPERINTENDENCE.** The Contractor shall supervise and direct the Work, which shall be performed in accordance with the requirements of the Contract Documents. The Contractor shall be solely responsible for implementation of all construction means, methods, techniques, sequences, and procedures and for coordination of all portions of the Work under the Agreement. The Contractor shall be solely responsible for the safety of its employees, Subcontractors of any tier, Suppliers, visitors to the Contractor, and other third parties associated with the Contractor.

The Contractor shall designate in writing before starting Work, an authorized representative who shall have the authority to represent and act for the Contractor.

When the Contractor is comprised of two (2) or more persons, firms, partnerships, or corporations functioning on a joint venture basis, said Contractor shall designate in writing before starting Work, the name of one authorized representative who shall have the authority to represent and act for the Contractor. Instances of misconduct, contract non-compliance, unsatisfactory performance, or incompetence by these personnel shall be grounds for the City to direct Contractor to dismiss them from the Project. Contractor shall immediately comply with the City's request for dismissal, at no cost to the City, and shall designate a replacement, which shall be subject to approval by the City.

Said authorized representative shall be present at the site of the Work at all times while Work is actually in progress on the Contract. When Work is not in progress and during periods

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when Work is suspended, arrangements acceptable to the Director shall be made for any Emergency Work that may be required.

Whenever the Contractor or its authorized representative is not present on any particular part of the Work where it may be desired to give direction, orders will be given by the Director, which shall be received and obeyed by the superintendent or foremen who may have charge of the particular Work in reference to which the orders are given.

Any order given by the Director, not otherwise required by the Supplemental Conditions to be in writing, will on request of the Contractor, be given or confirmed by the Director in writing.

2-1.25 **CHARACTER OF WORKER.** If any Subcontractor or person employed by the Contractor shall appear to the Director to be incompetent or to act in a disorderly or improper manner, he or she shall be removed immediately on the requisition of the Director, and such person shall not again be employed on the Work.

2-1.26 **INSPECTION.** The Contractor shall at all times permit the Director to inspect the Work or any part thereof. The Contractor shall maintain proper facilities and provide safe access for such inspection by the Director to all parts of the Work, and to the shops where the Work is in preparation. Work shall not be covered up until authorized by the Director and the Contractor shall be solely responsible for notifying the Director where and when such Work is in readiness for inspection and testing. Should any such Work be covered without authorization, it shall, if so ordered, be uncovered at the Contractor's expense.

Unless otherwise designated as normal working hours, whenever the Contractor intends to perform Work on Saturday, Sunday, or a Legal Holiday, the Contractor shall give notice to the Director of such intention forty-eight (48) hours prior to performing such Work, or such longer

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period as may be specified so that the Director may make necessary arrangements.

The observation and/or approval of the workmanship or materials by the City shall not relieve the Contractor of any obligations to fulfill the requirements of the Contract Documents. Workmanship and materials not meeting such requirements shall be corrected and unsuitable Work or material may be rejected, notwithstanding that such Work or materials have been previously observed and/or approved by the City, or payment therefor has been included in a progress estimate.

The City may order re-examination of questioned Work at any time before final Acceptance. If so ordered, the Contractor shall uncover the Work. If such work is found to be in accordance with the Contract Documents, the City will pay for the cost of uncovering, removing, recovering and replacing the parts removed; but if such Work so exposed or examined is not in accordance with the Contract Documents, the uncovering, removal, recovering and replacement shall be at the Contractor's expense. Work that has been covered prior to observation by the City does not qualify as re-examined work; the City may order such work uncovered for observation without payment of any costs.

2-1.27 **REMOVAL OF REJECTED AND UNAUTHORIZED WORK.** All Work which has been rejected shall be remedied, or removed and replaced by the Contractor in a manner acceptable to the Director and no compensation will be allowed the Contractor for such removal, replacement, or remedial Work.

Any Work done beyond the lines shown on the Contract Drawings or established by the Director, or any Work done without written authority will be considered as unauthorized Work and will not be paid for. Upon order of the Director, unauthorized Work shall be remedied, removed, or replaced at the Contractor's expense.

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Upon failure of the Contractor to comply promptly with any order of the Director made under this section, the Director may cause rejected or unauthorized Work to be remedied, removed, or replaced, and the costs thereof will be deducted from any moneys due or to become due the Contractor.

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SECTION 3

CHANGES IN THE WORK

3-1.01 **CHANGES.** The Director, without invalidating this Agreement and without notice to Contractor's surety, may order changes in the Work, consisting of additions or deletions, or other revisions. The Contract Price and the Contract Time shall be adjusted accordingly. All such changes in the Work, including in the Contract Price and the Contract Time, shall be authorized only by Contract Change Order, signed by the Director.

If Contractor claims that performance of any work entitles it to additional compensation or to an extension of time for performance of the Work, Contractor shall provide written notice to the City of any such claim prior to undertaking such work. Contractor shall provide written notice of any anticipated impacts to the Contract Price or Contract Time within three (3) Days of discovering such impact, by submitting a Notice of Potential Claim described in Section 7-1.03 below, or notice of delay as described in Section 6-1.09 below. If the Director refuses to issue a Change Order for such work, Contractor shall perform that work if directed or obligated to do so and shall submit a complete and specific Claim for additional compensation and/or extension of time for performance within fifteen (15) Days after such work is performed, as described in Section 7-1.03 below. Failure to provide written notice of claims prior to undertaking such work, failure to provide a timely Notice of Potential Claim, or failure to submit timely a complete and specific Claim for additional compensation and/or extension of the time for performance, shall be deemed a waiver and abandonment of any such Claim. No Claim, dispute or controversy shall interfere with the progress or performance of the Work and the Contractor shall proceed with the Work as directed by the Director. Failure to so proceed shall amount to a

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default under this Agreement.

3-1.02 **PROPOSED CHANGE ORDERS.** The Contractor will be notified in writing of a proposed Change Order describing the intended change. Within fifteen (15) Days after receipt of a written request, the Contractor shall submit its proposed price to be added or deducted from the Contract Price due to the change and its estimate of the extent of the adjustment in the Contract Time, if any. The Contractor's proposed price to be added to or deducted from the Contract Price shall be supported by a detailed estimate of cost prepared by the Contractor, vendor or Supplier. The Contractor's proposed price submittal shall be accompanied by a statement of the time necessary for the changed Work, together with a description of how this time will be incorporated into the current Construction Schedule. The Contractor shall upon request by the Director permit inspection of its original Contract estimate, subcontract agreements or purchase orders relating to the change.

If agreement is reached on the adjustment in compensation as provided in Section 3-1.05, "Contract Price Adjustment," of these General Conditions, the Contractor shall proceed with the Work as changed at the agreed price.

If the Contractor and the Director fail to agree as to the adjustment in compensation for the performance of the changed Work, the Contractor, upon written order from the Director, shall proceed immediately with the changed Work and the Contract Price shall be adjusted in accordance with Section 3-1.06, "Force Account Payment," of these General Conditions.

If the Contractor fails to submit its cost estimate within such fifteen (15) Day period, the Contractor shall commence the Work as changed immediately upon receipt of written order of the Director, and the Contract Price will be adjusted in accordance with the Director's cost estimate for the changed Work.

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3-1.03 **EMERGENCY AND INDETERMINATE TYPE CHANGE ORDERS.** Changes in the Work made necessary by an Emergency, as determined by the Director, or changes of a kind where the extent of the Work cannot be determined until completed, may be authorized by the Director in writing. The Change Order shall state that it is issued pursuant to this Section 3-1.03. Upon receipt of an authorized Change Order or other written order of the Director, the Contractor shall proceed with the ordered Work and the Director will maintain a daily job record containing a detailed summary of all labor, materials and equipment required for the changed Work.

Within fifteen (15) Days after receiving a written request, the Contractor shall submit a detailed estimate of cost for the change and any requested change in Contract Time in the same manner as required for proposed Change Orders in Section 3-1.02 of these General Conditions.

3-1.04 **EXECUTED CHANGE ORDER.** A Contract Change Order signed by both the Director and the Contractor is an "executed Contract Change Order." By signing the Contract Change Order, the Contractor agrees that the specified compensation constitutes full compensation for the changed Work, including payment for interruption, disruption, acceleration, extended Overhead, delay or any other "impact" claim or "ripple effect" claim. The Contractor specifically understands and agrees that its execution of the Contract Change Order shall constitute a waiver of any right for the Contractor to claim any additional compensation with respect to the subject matter of the Contract Change Order.

3-1.05 **CONTRACT PRICE ADJUSTMENT.** If a Contract Change Order provides for an adjustment to the Contract Price, the amount of such adjustment shall be determined by one of the following methods, or a combination thereof, as determined by the City and in its sole discretion:

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A. Lump sum. The Contractor and the City may agree on a lump sum amount for the Change Order. At the City's request, the Contractor will provide pricing for the work. Maximum markups for Contract Change Orders paid for using lump sum pricing shall be paid for in the same manner and in the same amounts as markups for Force Account work, as described in Section 3-1.06 below.

B. Unit Prices. The unit prices set forth in the Contractor's Schedule of Bid Prices will be utilized where they are applicable and acceptable to the City. The Contractor's unit prices shall remain firm and shall not be subject to adjustment unless and until the actual quantity of work is increased or decreased by Contract Change Order in an amount greater than twenty-five percent (25%) from the estimated quantity indicated for such item. No markups will be given for Contract Change Orders paid for using unit prices.

Unit prices for new items included in the Contract Change Order but not included in the original bid shall be as mutually agreed upon or, in the absence of agreement, as determined by the City in the same manner as if the work were to be paid for on a Force Account basis, as described in Section 3-1.06 below.

C. Force Account. Where the City and the Contractor are unable to agree on lump sum pricing and if the City does not elect to utilize the unit prices in Contractor's bid, or such unit prices are not applicable, the changed work will be performed and tracked by the Contractor as Force Account work, as described in Section 3-1.06 below. The City will pay for such work, including markups, properly attributable to the change in accordance with those Force Account provisions.

D. Eliminated Items. The City reserves the right to delete any bid item of Work in its entirety. The City makes no representation that any work under a bid item of Work

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will be performed, and all work may be subject to a Contract Change Order that deletes such work. Bid items are distinct and severable from the other bid items, and the Contractor shall not be entitled to any anticipated profit, unabsorbed Overhead, or other indirect expense attributable to the deleted item, except as provided immediately below with regard to Force Account mark-ups on the direct and verifiable costs incurred prior to the City's order that deletes the work.

Should any bid item of Work be eliminated in its entirety and not accounted for as described immediately above and, in the absence of an executed Contract Change Order covering such elimination, payment will be made to the Contractor for actual direct and verifiable costs incurred in connection with such eliminated bid item if incurred prior to the date of notification in writing by the City of such elimination. If acceptable material is ordered by the Contractor for the eliminated item prior to the date of notification of such elimination by the City, and if orders for such material cannot be canceled, it will be paid for at the actual direct and verifiable cost to the Contractor. Actual direct costs shall include documented vendor shipping fees, Supplier restocking fees, if applicable, and Contractor handling costs directly related to the eliminated item(s). In such case, the material paid for shall become the property of the City and the actual cost of any further handling will be paid for by the City. If the material is returnable to the vendor and if the City so directs, the material shall be returned and the Contractor will be paid for the actual direct cost of charges made by the vendor for returning the material. The actual direct cost of handling returned materials will also be paid for by the City. The actual direct and verifiable costs to be paid by the City as provided herein will be computed in the same manner as if the work were to be paid for on a Force Account basis, including the application of Force Account mark-ups to said costs.

3-1.06 **FORCE ACCOUNT PAYMENT.** When Work performed pursuant to a

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Change Order is to be paid for on a Force Account basis, the Contractor's labor, materials and equipment used in the performance of such Work shall be subject to the approval of the City, and the compensation will be determined as set forth below in this section.

3-1.06A **LABOR.** The Contractor will be paid an amount based on the actual cost for the workers (including foremen when authorized by the Director) used in the actual and direct performance of the Work. All labor costs associated with Overhead, whether field or home office, are specifically excluded herein, as those labor costs are covered by the below mark-ups. The cost of labor, whether the employer is the Contractor, Subcontractor or other forces, shall include employer payments; assessment of benefits required by lawful labor union collective bargaining agreements; compensation insurance payments; contributions made to the State pursuant to the Unemployment Insurance Code; and for taxes paid to the Federal Government pursuant to the Social Security Act of August 14, 1935, as amended. No labor cost will be recognized at a rate in excess of the wages prevailing in the locality at the time the Work is performed, nor will the use of a labor classification, which would increase the cost, be permitted unless the Contractor establishes to the complete satisfaction of the Director the necessity for payment at a higher rate.

3-1.06B **MATERIALS.** Only materials furnished by the Contractor and necessarily used in the performance of the Work will be paid for. Such cost of materials may include the costs of procurement, transportation and delivery if necessarily incurred. If a cash or trade discount by the actual supplier is available to the Contractor, it shall be credited to the City. If materials are procured by the purchaser by any method which is not a direct purchase from and a direct billing by the actual supplier to such purchaser, the cost of such materials shall be deemed to be the price paid to the actual supplier plus the actual costs, if any, incurred in the

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handling of such materials. If the materials are obtained from a supply or source owned wholly or in part by the purchaser, the cost of such materials shall not exceed the price paid by the purchaser for similar materials furnished from said source on Bid items or the current wholesale price for such materials delivered to the job site, less any discounts as provided herein, whichever is lower. If, in the opinion of the Director, the cost of materials is excessive, or if the Contractor fails to furnish satisfactory evidence of the cost to it from the actual supplier within sixty (60) Days after the date of delivery of the materials or within fifteen (15) Days after Acceptance of the Agreement, whichever occurs first, the cost of the materials shall be deemed to be the lowest current wholesale price at which similar materials are available in the quantities required, less any discounts provided herein. The Department reserves the right to furnish such materials required by the Change Order as it deems advisable, and the Contractor shall have no claim for cost or markups on material furnished by the Department.

3-1.06C **EQUIPMENT.** The Contractor will be paid an amount based on the actual cost for the use of equipment directly required and approved by the Director in the performance of the changed Work. No payment will be made for time while equipment is inoperative due to breakdowns or on Days when no Work is performed. In addition, the rental time shall include the time required to move the equipment to the Work from the nearest available source of such equipment, and to return it to the source. If such equipment is not moved by its own power, then loading and transportation costs will be paid. Moving time, loading and transportation costs will only be paid if the equipment is used exclusively on the changed Work during the time between move in and move out. Individual pieces of equipment having a replacement value of One Thousand Dollars ($1000) or less shall be considered to be tools or small equipment, and no payment will be made therefore. For equipment owned,

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furnished, or rented by the Contractor, no cost therefore shall be recognized in excess of the equipment rental rates published by Caltrans at the following website address: http://www.dot.ca.gov/hq/construc/equipmnt.html. Equipment located at a Work Site and utilized on non-Force Account work shall not eligible for standby payment, and shall be charged on a Force Account basis only when solely performing pre-approved Force Account work tasks.

3-1.06D **MARKUPS.** When a Change Order increases the cost of the Work, the Contractor may add the following maximum markups to its actual costs of labor, materials, or equipment rental:

15 percent for labor;

10 percent for materials; and

5 percent for equipment rental.

The above markups include full compensation, covering the costs of all supervision, bonds, profit, Overhead, and other general expenses not specifically designated as a direct cost in Sections 3-1.06A through 3-1.06C above. The total payment (i.e., direct cost plus applicable markups) shall be deemed to be the actual cost of such work and shall constitute full compensation therefor. The Contractor specifically understands and agrees that such payment shall include any Contractor costs for interruption, disruption, and acceleration, extended Overhead, Change Order management, delay or other "impact" claim or "ripple effect" claim.

When work paid for on a Force Account basis is performed by forces other than the Contractor's own forces, the maximum allowable mark-ups for the Subcontractors' costs shall be fifteen percent (15%) for the cost of labor, ten percent (10%) for the cost of materials, and five percent (5%) for the cost of rented equipment. In these situations where the work is being performed by Subcontractors, the Contractor will only be entitled to an additional five percent

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(5%) mark-up and will not be entitled to receive the additional mark-ups specified in this section.

When a Change Order decreases the cost of the Work, the reduction in cost shall include a five percent (5%) markup on the estimated cost for furnishing the labor, materials and equipment, which would have been used on such Work, had the Change Order not been issued.

When a Change Order involves both added Work and deleted Work, the markup or markups to be used shall be as follows:

The actual costs of labor, materials, and equipment rental for added and deleted Work shall be calculated separately without adding markups. If the difference between the calculated costs for labor results in an increased cost, a markup of fifteen percent (15%) shall be applied to the increased cost. If the difference between the calculated costs of materials or equipment rental results in an increased cost, a markup of ten percent (10%) and five percent (5%) respectively, shall be applied to the increased costs of materials or equipment rental, as the case may be. If the difference between the calculated costs for labor, materials or equipment rental results in a decreased cost, a markup of five percent (5%) shall be applied to the decreased costs of labor, materials or equipment rental, as the case may be.

Contractor shall not add mark-ups on work performed and billed by City staff nor add mark-ups to successive iterations of proposed Change Order cost proposals returned to Contractor by the City due to incomplete or inaccurate information being originally submitted by the Contractor. If the Contract Price increases by the issuance of Change Orders, the penal amounts of the bonds required shall increase accordingly.

3-1.06E **RECORDS.** The Contractor shall maintain its records in such a manner as to provide a clear distinction between the direct costs of extra work paid for on a Force Account basis and the costs of other operations.

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From the above records, the Contractor shall furnish the City completed daily extra work reports, on forms acceptable to the City, for each Day's extra work to be paid for on a Force Account basis. The daily extra work reports shall itemize the materials used, and shall cover the direct cost of labor and the charges for equipment rental, whether furnished by the Contractor, Subcontractor, or other forces. The daily extra work reports shall provide names and identifications and classifications of workers, the hourly rate of pay and hours worked, and also the size, type, and identification number of equipment, and hours operated. Daily extra work and Force Account reports (actual or claimed) shall be signed by both the City's and the Contractor's representatives within twenty-four (24) hours of the performance of the work.

Valid copies of vendor's invoices shall substantiate material charges. Such invoices shall be submitted with the daily extra work reports, or if not available, they shall be submitted with subsequent daily extra work reports. Should said vendor's invoices not be submitted within sixty (60) Days after the date of delivery of the material or within fifteen (15) Days after the Acceptance of the Agreement, whichever occurs first, the City reserves the right to establish the cost of such materials at the lowest current wholesale prices at which said materials were available in the quantities, less any discounts.

The City will compare its records with the completed daily extra work reports furnished by the Contractor and make any necessary adjustments. When these daily extra work reports are agreed upon and signed by both parties, said reports shall become the basis of payment for the work performed, but shall not preclude subsequent adjustment based on a later audit by the City.

The Contractor's cost records pertaining to Work paid for on a Force Account basis shall be open to inspection or audit by representatives of the City during the life of the Agreement and for a period of not less than three (3) years after the date of Agreement completion and the

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Contractor shall retain such records for that period. Where payment for materials or labor is based on the cost thereof to forces other than the Contractor, the Contractor shall make every reasonable effort to insure that the cost records of such other forces will be open to inspection and audit by representatives of the City on the same terms and conditions as the cost records of the Contractor. If an audit is to be commenced more than sixty (60) Days after the date of Acceptance of the Agreement, the Contractor will be given fifteen (15) Days' notice of the time when such audit is to begin.

3-1.07 **COST REDUCTION PROPOSALS.** The City encourages the Contractor to submit Cost Reduction Proposals whenever the Contractor identifies areas and/or instances in which there can be savings to the Work. Contractor may submit to the City, in writing, proposals for modifying the plans, Specifications or other requirements of the Agreement for the sole purpose of reducing the total cost of construction, including the time for completion of the Work. The City may consider such Cost Reduction Proposals and, if accepted, the Agreement will be equitably adjusted. The City has no obligation to consider or accept Cost Reduction Proposals.

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SECTION 4

CONTROL OF MATERIALS

4-1.01 **MATERIALS.** The Contractor shall furnish all materials required to complete the Work, except materials that are designated in the Supplemental Conditions to be furnished by the City and materials furnished by the City in accordance with Section 3, "Changes in the Work," of these General Conditions.

Unless otherwise specified in the Supplemental Conditions, materials furnished by the Contractor for incorporation into the Work shall be new. When the quality or kind of materials, articles, or equipment is not particularly indicated, then the quality or kind thereof shall be similar to those that are indicated.

Articles or materials to be incorporated in the Work shall be stored in such a manner as to insure the preservation of their quality and fitness for the Work, and to facilitate inspection.

All materials which do not conform to the requirements of the Contract Documents as determined by the Director, will be rejected whether in place or not. Rejected material shall be removed immediately from the site of the Work, unless otherwise permitted by the Director. No rejected material, the defects of which have been subsequently corrected, shall be used in the Work, unless approval in writing has been given by the Director. Upon failure of the Contractor to comply promptly with any order of the Director made under these provisions, the Director shall have the authority to cause the removal and replacement of rejected material and to deduct the cost thereof from any moneys due or to become due the Contractor.

Manufacturer's warranties, guaranties, instruction sheets and parts lists, which are furnished with certain materials incorporated in the Work, shall be delivered to the Director

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before Acceptance of the Contract.

Unless otherwise designated in the Supplemental Conditions or Specifications, materials furnished by the City will be delivered to the job site. Materials furnished by the City that are designated in the Supplemental Conditions as available at locations other than the job site shall be hauled to the site of the Work by the Contractor at its expense, including any necessary loading and unloading that may be involved.

The Contractor will be held responsible for all materials furnished to it, and shall pay all demurrage and storage charges. City-furnished materials lost or damaged from any cause whatsoever shall be replaced by the Contractor. The Contractor will be liable to the Department for the cost of replacing City-furnished material and such costs may be deducted from any moneys due or to become due the Contractor.

4-1.02 **PRODUCT AND REFERENCE STANDARDS.** When descriptive catalog designations, including manufacturer's name, product brand name, or model number are referred to in the Contract Documents, such designations shall be considered as being those found in industry publications in effect on the day the Notice to Contractors for the Work is dated, except as may be otherwise stated.

When standards or test designations of the Federal Government, trade societies, or trade associations are referred to in the Contract Documents by specific date of issue, these shall be considered as part of the Contract. When such references do not bear a date of issue, the edition in effect on the day the Notice to Contractors for the Work is dated shall be considered as part of the Contract.

4-1.03 **SAMPLING AND TESTING OF MATERIALS.** Unless otherwise specified, all tests shall be performed in accordance with the methods used by the State

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Department of Transportation (Caltrans) and shall be made by the Director or his or her designated representative.

The State Department of Transportation has developed test methods for testing the quality of materials and Work. These test methods are identified by a California Test followed by the serial number. Copies of individual tests are available at the State Department of Transportation Laboratory, Sacramento, California, and will be furnished to interested persons upon request.

Whenever a reference is made in the Supplemental Conditions to a California Test by number, it shall mean the California test in effect on the day the Notice to Contractors for the Work is dated.

Whenever the Supplemental Conditions provide an option between two (2) or more test methods, the Director will determine the test method to be used.

Whenever a Supplemental Condition, manual, or test designation provides for test reports (such as certified mill test reports) from the manufacturer, copies of such reports, identified as to the lot of material, shall be furnished to the Director. The manufacturer's test reports shall supplement the inspection, sampling and testing provisions of this Section 4-1.03 and shall not constitute a waiver of the City's right to inspect. When material which cannot be identified with specific test reports is proposed for use, the Director may at his or her discretion, select random samples from the lot for testing. Testing specimens from the random samples, including those required for retest, shall be prepared in accordance with the referenced Supplemental Conditions and furnished by the Contractor at its expense. The number of such samples and test specimens shall be entirely at the discretion of the Director.

When requested by the Director, the Contractor shall furnish, without charge, samples of

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all material entering into the Work, and no material shall be used prior to approval by the Director, except as provided in Section 4-1.04, "Certificates of Compliance," of these General Conditions.

A. Inspection and Access for Testing. The Contractor shall provide safe access for the Director and his or her inspectors to adequately inspect the quality of Work and conformance with the General and Supplemental Conditions. The Contractor shall provide adequate lighting, ventilation, ladders and other protective facilities as may be necessary for the safe performance of inspections.

The Contractor shall submit samples or specimens of such materials to be furnished or used in the Work as the Director may require. The Contractor shall furnish the Director all necessary labor and facilities for such things as excavation in the compacted fill to depths required to take samples.

Inspections, tests, or favorable review by the Director or others shall not relieve the Contractor from its obligations to perform the Work in accordance with the requirements of the Contract Documents.

Work covered without the favorable review or consent of the Director shall, if required by the Director, be uncovered for examination at the Contractor's expense.

If the Engineer, Architect, or Director considers it necessary or advisable that covered Work be inspected or tested by others, the Contractor, at the Director's request, will uncover, expose or otherwise make available for observation, inspection or testing as the Director may require, that portion of the Work in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such Work is defective, the Contractor will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of

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satisfactory reconstruction. If, however, such Work is not found to be defective and the Work was not covered without favorable review of the Director, the Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, to cover its costs directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction and an appropriate Change Order shall be issued.

Whenever the Contractor varies the period during which Work is carried on each Day, the Contractor shall give due notice to the Director so that proper inspection may be provided. Any Work done in the absence of the Director may be subject to rejection. Proper facilities for safe access for inspection to all parts of the Work shall at all times be maintained for the necessary use of the Director and other agents of the City. Authorized representatives and agents of the Director shall be permitted access to inspect all Work and materials wherever it is required for preparation of progress reports, and the Contractor shall provide proper facilities for such access and inspection.

It is the Contractor's responsibility to supervise the Work and complete the project in accordance with the Contract Documents. In the course of managing that effort, the Contractor shall generate its own punch lists as deemed necessary. The Director may prepare punch lists for the Director's own use in communicating with the Contractor; however, the Director shall be under no obligation to prepare punch lists for the Contractor. In general, the Director will prepare punch lists only after the Contractor has given the Director written notice that the subject Work is completed and tested in accordance with the Contract Documents and is ready for operation and/or use and/or occupancy. Failure of the Director to include an item in a punch list shall not relieve the Contractor of its duty to satisfactorily complete all Work required by the Contract Documents.

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Upon Final Completion of the construction Work and request by the Contractor, the Director will conduct a final inspection as a basis for recommending to the City that the Work be accepted.

B. Field and Materials Testing. Where the Supplemental Conditions require Work to be specially field tested or approved, it shall be tested only in the presence of the Director after timely notice of its readiness for inspection and test, and the Work after testing shall be covered up only upon the consent thereto of the Director.

The results of any tests made are for the information of the Director. Regardless of any test results, the Contractor is solely responsible for the quality of workmanship and materials and for compliance with the requirements of the Contract Drawings and Supplemental Conditions.

Except as specifically required under the Supplemental Conditions, all tests by the Director of materials furnished by the Contractor will be done in accordance with commonly recognized standards of national organizations. The Contractor shall furnish such samples of all materials as required by the Director without charge. No material shall be used unless it has been favorably reviewed by the Director.

Where such inspection and testing are to be conducted by an independent Laboratory or agency, the sample or samples of materials to be tested shall be selected by such Laboratory or agency, or the Director, and not by the Contractor.

C. Costs of Testing.

1. Initial Services: The City shall furnish and pay for all initial testing services required by the Contract Documents. When initial tests indicate non-compliance with the Contract Documents, the cost of initial tests associated with that non-compliance will be

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deducted by the City from the balance owed the Contractor. The Contractor shall furnish samples of materials for testing as may be required by the Director. Such samples shall be furnished without cost to the City.

2. Retesting: When initial tests indicate non-compliance with the Contract Documents, all subsequent retesting occasioned by the non-compliance shall be performed by the same testing Laboratory and the cost thereof will be deducted by the City from the balance owed the Contractor. Contractor shall be billed for each additional test.

3. Contractor Convenience Testing: Inspection or testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor.

4. Additional Tests and Inspections: When in the opinion of the Director additional tests or inspections are required because of the manner in which the Contractor executes its Work, such tests and inspections shall be paid for by the City, but will be deducted from the Contract Price. Examples of such tests and inspections are tests of materials substituted for previously accepted materials or substituted for specified materials, retests made necessary by failure of material to comply with the requirements of the Specifications, load tests made necessary because of portions of the structure not fully meeting Specifications or plan requirements, etc.

4-1.04 **CERTIFICATES OF COMPLIANCE.** A Certificate of Compliance shall be furnished prior to the use of any materials for which the Supplemental Conditions require that such a Certificate be furnished. In addition, the Director may permit the use of certain materials or assemblies prior to sampling and testing if accompanied by a Certificate of Compliance. The Certificate shall be signed by the manufacturer of the material or the manufacturer of assembled materials and shall state that the materials involved comply in all

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respects with the requirements of the Supplemental Conditions. A Certificate of Compliance shall be furnished with each lot of such materials delivered to the Work and the lot so certified shall be clearly identified in the Certificate.

All materials used on the basis of a Certificate of Compliance may be sampled and tested at any time. The fact that material is used on the basis of a Certificate of Compliance shall not relieve the Contractor of responsibility for incorporating material in the Work which conforms to the requirements of the Contract Documents and any such material not conforming to such requirements will be subject to rejection whether in place or not.

The Department reserves the right to refuse to permit the use of material on the basis of a Certificate of Compliance.

The form of the Certificate of Compliance and its disposition shall be as directed by the Director.

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SECTION 5

LEGAL RELATIONS AND RESPONSIBILITY

5-1.01 **LAWS TO BE OBSERVED.** The Contractor shall keep informed of and observe, and comply with and cause all of its agents and employees to observe and comply with, all prevailing Federal and State laws, and rules and regulations made pursuant to said Federal and State laws, and county and municipal ordinances, and regulations, which in any way affect the conduct of the Contract. If any conflict arises between provisions of the Contract and any such law above referred to, the Contractor shall notify the Director at once in writing. To the fullest extent allowed by law, the Contractor shall defend, indemnify, and save and hold harmless the City or any of its officers, agents, employees, and volunteers against any claim or liability arising from or based on the violation of any such law, rule, or regulation, whether by itself or its agents or employees.

5-1.02 **HOURS OF LABOR.** Eight (8) hours labor constitutes a legal Day's work. The Contractor or Subcontractor shall, as a penalty to City, forfeit Twenty-five Dollars ($25) for each worker employed in the execution of the contract by the respective Contractor or Subcontractor for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one (1) calendar day and forty (40) hours in any one (1) calendar week in violation of the provisions of the Labor Code, and in particular, Section 1810 to Section 1815, thereof, inclusive, except that Work performed by employees of Contractors in excess of eight (8) hours per day, and forty (40) hours during any one (1) week, shall be permitted upon public work upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half (1-1/2) times the basic rate of pay, as provided in said

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Section 1815. In addition, Contractor and/or its Subcontractors may be required to pay double the basic rate of pay for all hours worked in excess of twelve (12) hours in any workday and under other circumstances. (See California Code of Regulations, Title 8, Sections 16100(c)(6) and (16200(a)(3)(F) and applicable Department of Industrial Relations prevailing wage determinations.)

5-1.03 **NONDISCRIMINATION.**

A. Attention is directed to Labor Code Section 1735, which reads as follows:

"A contractor shall not discriminate in the employment of persons upon public works on any basis listed in subdivision (a) of Section 12940 of the Government Code, as those bases are defined in Sections 12926 and 12926.1 of the Government Code, except as otherwise provided in Section 12940 of the Government Code. Every Contractor for public works who violates this section is subject to all the penalties imposed for a violation of this chapter."

B. During the performance of this Contract, Contractor and its Subcontractors shall not unlawfully discriminate against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status. The Contractor and Subcontractors shall insure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination. The Contractor and Subcontractors shall comply with the provisions of the California Fair Employment and Housing Act (Government Code §12900, et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, §7285.0 et seq.) and other applicable State and Federal regulations and City

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policies pertaining to nondiscrimination and affirmative action which are incorporated into this Agreement by reference and made a part hereof as if set forth in full. The Contractor and its Subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

C. Contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform Work under the agreement.

5-1.04 **PREVAILING WAGE.** The Contractor and any Subcontractor shall comply with Labor Code Sections 1770 et seq. In accordance with said Section 1775 the Contractor and any Subcontractor under the Contractor shall, as a penalty, forfeit to the state or City not more than $200 for each calendar day or portion thereof, for each worker paid less than the prevailing rate as determined by the Director of Industrial Relations for the work or craft in which such worker is employed for under the Contract by the Contractor or by any Subcontractor under the Contractor.

The amount of the penalty shall be determined by the Labor Commissioner based on consideration of both of the following: (a) whether the failure to pay the correct rate of per diem wages was a good-faith mistake and, if so, whether the error was promptly and voluntarily corrected when brought to the attention of the Contractor or Subcontractor; and (b) whether the Contractor or Subcontractor has a prior record of failing to meet its prevailing wage obligations.

The penalty may not be less than forty dollars ($40) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, unless the failure of the Contractor or Subcontractor to pay the correct rate of per diem wages was a good faith mistake and, if so, the error was promptly and voluntarily corrected when brought to the attention of the Contractor or Subcontractor.

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The penalty may not be less than eighty dollars ($80) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, if the Contractor or Subcontractor has been assessed penalties within the previous three (3) years for failing to meet its prevailing wage obligations on a separate contract, unless those penalties were subsequently withdrawn or overturned.

The penalty may not be less than one hundred twenty dollars ($120) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate, if the Labor Commissioner determines that the violation was willful, as defined in subdivision (c) of Section 1777.1 of the Labor Code.

If the amount due under this section is collected from the Contractor or Subcontractor, any outstanding wage claim under Chapter 1 (commencing with Section 1720) of Part 7 of Division 2 of the Labor Code against the Contractor or Subcontractor shall be satisfied before applying that amount to the penalty imposed on that Contractor or Subcontractor pursuant to this section.

The determination of the Labor Commissioner as to the amount of the penalty shall be reviewable only for an abuse of discretion.

In addition to said penalty, the difference between such stipulated prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the stipulated prevailing wage shall be paid to each worker by the Contractor or Subcontractor.

If a worker employed by a Subcontractor on a public works project is not paid the general prevailing per diem wages by the Subcontractor, the Contractor is not liable for any penalties described above unless the Contractor had knowledge of that failure of the Subcontractor to pay

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the specified prevailing rate of wages to those workers or unless the Contractor fails to comply with all of the following requirements:

1. The contract executed between the Contractor and the Subcontractor for the performance of work on the public works project shall include a copy of the provisions of Sections 1771, 1776, 177.5, 1813, and 1815 of the Labor Code.
2. The Contractor shall monitor the payment of the specified general prevailing rate of per diem wages by the Subcontractor to the employees, by periodic review of the certified payroll records of the Subcontractor.
3. Upon become aware of the Subcontractor's failure to pay its workers the specified prevailing rate of wages, the Contractor shall diligently take corrective action to halt or rectify the failure, including, but not limited to, retaining sufficient funds due the Subcontractor for work performed on the public works project.
4. Prior to making final payment to the Subcontractor for work performed on the public works project, the Contractor shall obtain an affidavit signed under penalty of perjury from the Subcontractor that the Subcontractor has paid the specified general prevailing rate of per diem wages to its employees on the public works project and any amount due pursuant to 1813 of the Labor Code.

Pursuant to Section 1775 of the Labor Code, the Division of Labor Standards Enforcement shall notify the Contractor on a public works project within fifteen (15) Days of the receipt by the Division of Labor Standards Enforcement of a complaint of the failure of a Subcontractor on that public works project to pay workers the general prevailing rate per diem wages.

Pursuant to the provisions of California Labor Code Section 1773, the City has obtained

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the general prevailing rate of wages applicable to the categories of workers the City anticipates will be utilized for this project for straight time, overtime, Saturday, Sunday, and holiday Work. The holiday wage rate listed shall be applicable to all holidays recognized in the collective bargaining agreement of the particular craft, classification or type of worker concerned or, if no collective bargaining applies, those holidays identified in Government Code Section 6700. These wage rates may be obtained from the State Department of Industrial Relations and/or the following website address: http://www.dir.ca.gov/dlsr/DPreWageDetermination.htm, which is incorporated herein as a part of this Contract.

Pursuant to Labor Code Section 1773.2, the general prevailing wage rates set forth above, which forms a part of this Contract, shall be posted by the Contractor at a prominent place at the site of the Work.

Pursuant to Labor Code Section 1773.6 and California Code of Regulations Section 16204, Title 8, changes in general prevailing wage determinations shall apply to the project only if issued by the Director of Industrial Relations prior to the City's bid issuance date.

The City will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wage rate set forth in the Contract. The possibility of wage increases is one of the elements to be considered by the Contractor in determining its Bid, and will not under any circumstances be considered as the basis of a claim against the City or Contract.

When both California and Federal prevailing wage rates apply, the Contractor and any Subcontractors shall pay their workers the higher of the two rates. The Contractor and any Subcontractors shall insert this clause in any lower tier contract.

5-1.05 **REGISTRATION REQUIRED AS QUALIFICATION TO BID.**

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Pursuant to Labor Code Section 1771.1(b), notice is hereby given that a Contractor or Subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contractor for public work, as defined in Labor Code Sections 1720, et seq., unless currently registered and qualified to perform public work pursuant to Labor Code Section 1725.5. It is not a violation of Labor Code Section 1771.1 for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5.

5-1.06 **PAYROLL RECORDS.** The Contractor's attention is directed to the following provisions of Labor Code Section 1776. The Contractor shall be responsible for the compliance with these provisions by its Subcontractors.

A. The Contractor and each Subcontractor shall keep accurate and current payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by it in connection with the public work. Each payroll record shall contain or be verified by a written declaration that is made under penalty of perjury, stating both of the following:

1. The information contained in the payroll record is true and correct.

2. The employer has complied with the requirements of Section 1771, 1811, and 1815 for any work performed by his or her employees on the public works project.

B. The payroll records enumerated under subdivision (A) shall be available for inspection at all reasonable hours at the principal office of the Contractor on the following

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basis:

1. A certified copy of an employee's payroll record shall be made available for inspection or furnished to such employee or his or her authorized representative on request.

2. A certified copy of all payroll records enumerated in subdivision (A) shall be made available for inspection or furnished upon request to a representative of the City, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations. The City reserves the right to withhold any progress payments to the Contractor in the event of noncompliance with the subsection.

3. A certified copy of all payroll records enumerated in subdivision (A) shall be made available upon request by the public for inspection or for copies thereof. However, a request by the public shall be made through either the City, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. The public shall not be given access to such records at the principal office of the Contractor.

C. The certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the Division.

D. Each Contractor shall file a certified copy of the records enumerated in subdivision (A) with the entity that requested the records within ten (10) Days after receipt of a written request.

E. Any copy of the records made available for inspection as copies and furnished upon request to the public or any public agency by the City, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement shall be marked or

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obliterated to prevent disclosure of an individual's name, address and social security number. The name and address of the Contractor awarded the Contract or Subcontractor performing the Contract shall not be marked or obliterated. Any copy of records made available for inspection by, or furnished to, a joint labor-management committee established pursuant to the federal Labor Management Cooperation Act of 1978 (Section 175a of Title 29 of the United States Code) shall be marked or obliterated only to prevent the disclosure of an individual's name and social security number. A joint labor-management committee may maintain an action in a court of competent jurisdiction against an employer who fails to comply with Section 1774. The court may award restitution to an employee for unpaid wages and may award the joint labor-management committee reasonable attorneys' fees and costs incurred in maintaining the action. An action under this subdivision may not be based on the employer's misclassification of the craft of a worker on its certified payroll records. Nothing in this subdivision limits any other available remedies for a violation of this section.

F. The Contractor shall inform the City of the location of the records enumerated under subdivision (A), including the street address, city and county, and shall, within five (5) business days, provide a notice of a change of location and address.

G. The Contractor shall have ten (10) Days in which to comply subsequent to receipt of written notice requesting the records enumerated in subdivision (A). In the event that the Contractor or Subcontractor fails to comply within the ten (10) Day period, the Contractor shall, as a penalty to the State or City, forfeit twenty-five ($25) Dollars for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from any progress payment or final payment then due. A contractor

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is not subject to a penalty assessment pursuant to this section due to the failure of a Subcontractor to comply with this section.

5-1.07 **SAFETY REQUIREMENTS.** It is the intent of the parties that the City is not an exposing, creating, controlling, or correcting employer under California Labor Code Section 6400. In accordance with generally accepted construction practices and State law, the Contractor shall have the authority and be solely and completely responsible for conditions on the Work Site, including safety of all persons and property during performance of the Work. Moreover, the Contractor shall be the controlling employer and has the authority and responsibility to enforce Work Site safety. The Contractor shall be responsible for conducting daily safety inspections and assuring all hazards and violations are abated. The Contractor is responsible for assuring that all Subcontractors adhere to the minimum Cal/OSHA safety requirements and that each Subcontractor has an effective Cal/OSHA IIPP (Illness and Injury Prevention Program) in place that specifically addresses all potential exposures, such as, but not limited to, fall protection, confined space, and trenching/shoring. These requirements shall apply continuously and not be limited to normal working hours. The Contractor shall be responsible for any delay costs or damages in the event the progress of Work is slowed or stopped due to a safety violation.

The Contractor shall designate a safety officer and have in place a health and safety plan in accordance with the laws of State of California and conduct safety meetings and document them in accordance with the law. The Contractor shall have the safety record available for inspection during working hours and shall submit job site safety meeting reports with each Application for Payment.

Prior to Contractor commencing construction project work on City property, Contractor

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shall make available copies of its Health and Safety Plan (HASP) that meets or exceeds applicable Cal/OSHA regulations. The Contractor's HASP shall also meet or exceed the requirements of any applicable City-wide or departmental specific Injury and Illness Prevention Programs (IIPP) and other HASP programs, procedures, and plans. Potentially applicable HASP programs, procedures, and plans include, but are not limited to, the following:

1. Bloodborne Pathogens Exposure Control Plan;
2. Confined Space Entry Procedure;
3. Electrical Safety Program (Lockout/Tagout);
4. Emergency Action Plans (Site Specific);
5. Fire Prevention Plans (Site Specific);
6. Hazardous Waste Operations Emergency Response Plan (or Equivalent);
7. Hazard Communication Program (SDS's and Right-to-Know training);
8. Heat Illness & Prevention Plan;
9. Hearing Conservation Program;
10. Hot Work/Welding Procedure;
11. Job Hazard Analyses/Standard Operating Procedures;
12. Traffic Control & Flagging;
13. Excavation/Dig Safe Procedure;
14. Fall Protection Plan;
15. Personal Protective Equipment Plan;
16. Respirable Crystalline Silica Exposure Control Plan;
17. Respirator Program;
18. Soils Management Plan (for contaminated soils); and

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19. Transite (Asbestos) Pipe Work Procedure.

Additionally, Contractor shall be responsible for complying with all City-wide and departmental specific safety requirements as identified in the Supplemental Conditions or presented at a pre-construction meeting.

Contractor shall inform City in advance of the quantity of chemical(s) to be used for the project and the total quantity of chemical(s) that will be brought onto City property. In addition, Contractor shall provide City with one copy of the Safety Data Sheet (SDS) for each chemical expected to be used to complete the project and for each chemical brought to the Work Site, regardless of whether such chemicals are ultimately used for the project.

The services of the Director in conducting construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's Work methods, equipment, bracing or scaffolding, or safety measures, in, on, or near the construction site. If a City employee observes a safety violation, the City employee will report the violation to the Contractor who is then responsible for assuring the violation is abated.

The Contractor is hereby informed that Work on this project could be hazardous. The Contractor shall carefully instruct all personnel working in potentially hazardous Work areas as to potential dangers and shall provide such necessary safety equipment and instructions as are necessary to prevent injury to personnel and damage to property. Special care shall be exercised relative to Work underground.

All Work and materials shall be in strict accordance with all applicable State, City, County, and Federal Rules, Regulations, and Codes, and attention is drawn to the requirements of Cal/OSHA. The Contractor shall be solely responsible for compliance with all City, County and State blasting requirements and for any damages caused by its operations.

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To ensure compliance with California Labor Code Section 6705, the Contractor shall submit to the City, at least five (5) Days in advance of excavation of any trench five feet (5') or more in depth, Working Drawings to the Director showing the design of shoring, bracing, sloping and other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such Working Drawings vary from the shoring system standards established by the Cal/OSHA Construction Safety Orders of the Division of Industrial Safety, the plan shall be prepared and signed by a registered civil or structural engineer in the State of California. This in no way relieves the Contractor from the requirement of maintaining safety in all operations performed by the Contractor or the Contractor's Subcontractors and nothing in this section shall be deemed to allow the use of a shoring, sloping or protective system less effective than that required by the Cal/OSHA Construction Safety Orders of the Division of Industrial Safety Contractor's Working Drawings shall be subject to approval insofar as the details affect the character of the finished Work and for compliance with design requirements applicable to the construction when specified or called for, but details of the design will be left to Contractor who shall be responsible for the successful construction of the Work. The City shall approve Working Drawings before any Work involving such drawings is performed. Approval and/or acceptance by the City or its designated agent only constitutes acknowledgment of the submission and does not constitute review or approval of the designs, design assumptions or criteria, completeness of submissions, applicability to areas of intended use, nor implementation of the plans, which are solely the responsibility of the Contractor and its registered engineer.

The Contractor shall perform its Work as not to expose personnel to, or to discharge into the atmosphere from any source whatever, smoke, dust, asbestos, toxic chemicals or other air

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contaminants in violation of the laws, rules, and regulations of the governmental entities having jurisdiction and shall bear full and exclusive responsibility for any release of hazardous or non-hazardous chemicals or substances during the course of the Work. The Contractor shall immediately report any such release to the City. The Contractor shall be solely responsible for all claims and expenses associated with the response to, removal and remediation of the release, including, without limitation, payment of any fines or penalties levied against the City by any agency as a result of such release and shall defend, indemnify, and save and hold harmless the City, its officers, agents, employees, and volunteers from any claims arising from such release. For purposes of this section only, the term "claims" shall include:

1. All notices, orders, directives, administrative or judicial proceedings, fines, penalties, fees, or charges imposed by any governmental agency with jurisdiction; and

2. Any claim, cause of action, or administrative or judicial proceeding brought against the City, its officers, agents, employees, and volunteers for any loss, cost (including reasonable attorneys' fees), damage or liability, sustained or suffered by any person or entity, including the City.

If the performance of the Work creates any hazardous wastes, those wastes shall be properly disposed of according to federal, state, and local laws, at the expense of the Contractor. The Contractor shall dispose of the wastes under its own EPA Generator Number. In no event shall the City be identified as the generator. The Contractor shall notify the City of any such hazardous wastes and the City reserves the right to a copy of the results of any tests conducted on the wastes, and, at its cost, to perform additional tests or examine those wastes, prior to disposition. The Contractor shall defend, indemnify, and save and hold harmless the City, its

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officers, agents, employees, and volunteers from any claims arising from the disposal of the hazardous wastes, regardless of the absence of negligence or other malfeasance by the Contractor. Disposal of all Hazardous Materials must be done in accordance with all laws and regulations. Copies of required regulatory documentation including copies of final manifests shall be supplied to the City.

Contractors or Subcontractors removing one hundred or more square feet (100') of asbestos must be "Certified" in accordance with State law. All Work involving exposure to asbestos and all other hazardous materials shall be performed with protection of personnel in compliance with all applicable regulations and safety requirements including, but not limited to, California Code of Regulations Section 1529, Title 8.

Nothing in these General Conditions is to be construed to permit Work not conforming to governing codes. When Contract Documents differ from governing codes, the Contractor shall furnish and Install the higher standards called for without extra charge.

5-1.08 **SUBSURFACE EXCAVATIONS, NOTIFICATION.** The Contractor shall contact the regional notification center, "Underground Service Alert," and schedule its Work to allow ample time for the center to notify its members and, if necessary, for any member to field locate and mark its facilities. Without limiting the foregoing, the Contractor's attention is directed to Government Code Sections 4216 to 4216.9, and in particular Section 4216.2.

5-1.09 **PUBLIC SAFETY.** The Contractor shall assume all responsibility for public safety during the performance of its Work, and all costs arising therefrom shall be included in the Contract Price. Whenever the Contractor's operations create a condition hazardous to traffic or to the public, it shall furnish, erect and maintain, at its expense, such fences, barricades, lights, signs, and other devices and take such other protective measures as are

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necessary to prevent accidents or damage or injury to the public. The Contractor shall establish the pedestrian detours with comparable lighting to the original pedestrian areas. The Contractor shall arrange for such flaggers as are necessary to give adequate warning to traffic or to the public of any dangerous conditions affecting traffic. For Work in a public right-of-way, the Contractor shall comply with the rules and regulations of the State, County, or local agency that owns the right-of-way.

The Contractor shall promptly and fully comply with and carry out, and shall without separate charge therefor to the City, all safety and first aid requirements prescribed by all applicable Federal, State, and local laws and regulations, rules, and orders. The Work shall be done in a safe manner; and the Contractor shall safeguard the safety and health of its employees, Subcontractors, and the people of local communities. The Contractor shall also be reasonable for ensuring that its Subcontractors comply with the provisions of this section.

Upon the failure of the Contractor to comply with any of the requirements of this section, the City shall have the authority, but not the duty, to stop the Work until such failure is remedied. The Contractor shall not be entitled to an adjustment of the Contract Time or an increase in the Contract Price due to any such suspensions.

When required by the Contract Documents, the Contractor shall construct, maintain, and remove detours for use of public traffic, without additional cost to the City, unless separate payment is specified in the Special Provisions.

The failure or refusal of the Contractor to construct and maintain detours at the proper time shall be sufficient cause for closing down the work until such detours are in satisfactory condition for use by public traffic.

Due care shall be exercised to avoid injury to existing improvements or facilities, utility

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facilities, adjacent property and trees, shrubs, and other plants that are not to be removed.

Trees, shrubs and other plants that are not to be removed, and pole lines, fences, signs, survey markers and monuments, buildings and structures, conduits, pipe lines, sewer and waterlines, highway facilities, and any other improvements or facilities, under or above ground, that are within or adjacent to the work limit line shall be protected from injury or damage, and the Contractor shall provide and Install suitable safeguards to protect such objects from injury or damage. If such objects are injured or damaged by reason of the Contractor's operations, they shall be replaced or restored at the Contractor's expense. The facilities shall be replaced or restored to a condition as good as when the Contractor entered upon the Work Site, or as good as required by the Contract Documents if any such objects are part of the Work. The City may make or cause to be made such temporary repairs as are necessary to restore to service any damaged facility. The cost of such repairs shall be borne by the Contractor, and the costs may be deducted from any monies due or to become due to the Contractor under the Agreement.

The fact that any underground facilities is not shown on the Contract Drawings shall not relieve the Contractor of its responsibility pursuant to "Utility Facilities" in Section 2-1.12 elsewhere in the Contract Documents. It shall be the Contractor's responsibility, pursuant thereto, to ascertain the location of such underground improvements or facilities, which may be subject to damage by reason of its operations.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the Work involved in protecting or repairing property as specified in this section, shall be considered as included in the prices paid for the various Contract items of work and no additional compensation will be allowed therefor.

5-1.10 **EMERGENCIES.** In an Emergency affecting the safety of life, the

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Work, or adjoining property, the Contractor, without special instructions or authorization from the City, shall act at its discretion to prevent such threatened loss or injury. In such an Emergency, the Contractor may perform such additional work as is reasonably required. Any compensation claimed by the Contractor on account of Work performed to an Emergency shall be determined in accordance with the provisions relating to Force Account payment contained elsewhere in the Contract Documents.

5-1.11 **APPRENTICES.** Attention is directed to Labor Code Sections 1777.5, 1777.6 and 1777.7 and Title 8, California Code of Regulations Section 200 et seq. In accordance with Section 1777.5, the Contractor shall secure the necessary certificates and shall contribute to the apprenticeship fund or funds, a provided therein. The Contractor shall require each Subcontractor who will perform work or labor or render service to the Contractor in or about the construction of the work to fully comply with Sections 1777.5 and 1777.6 of the Labor Code. To insure compliance and complete understanding of the law regarding apprentices, and specifically the required ratio thereunder, each Contractor or Subcontractor should, where some questions exist, contact the Division of Apprenticeship Standards, , or one of its branch offices prior to commencement of Work on the public works Contract. Responsibility for compliance with this section lies with the prime Contractor.

It is State and City policy to encourage the employment and training of apprentices on public works Contracts as may be permitted under local apprenticeship standards.

5-1.12 **FAIR LABOR STANDARDS ACT.** Attention is invited to the fact that the City has been advised by the Wage and Hour Division, U.S. Department of Labor, that Contractors engaged in construction Work are required to meet the provisions of the Fair Labor Standards Act of 1958 and as amended (52 Stat. 1060).

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5-1.13 **WORKERS' COMPENSATION.** Pursuant to the requirements of Labor Code Section 1860, the Contractor will be required to secure the payment of workers' compensation to its employees in accordance with the provisions of Labor Code Section 3700.

Prior to the commencement of Work, the Contractor shall sign and file with the Director a certification in the following form:

> "I am aware of the provisions of Labor Code Section 3700 which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the Work of this Contract."

5-1.14 **AIR POLLUTION CONTROL AND ASBESTOS.** The Contractor shall comply with all air pollution control rules, regulations, ordinances and statutes which apply to any Work performed pursuant to the Contract, including any air pollution control rules, regulations, ordinances and statues, specified in Government Code Section 11017.

In the absence of any applicable air pollution control rules, regulations, ordinances or statutes governing solvents, all solvents, including but not limited to the solvent portions of paints, thinners, curing compounds, and liquid asphalt used on the project shall comply with the applicable material requirements of the applicable Air Quality Management District. All containers of solvent, paint, thinner, curing compound, or liquid asphalt shall be labeled to indicate that the contents fully comply with said requirements.

Unless otherwise provided in the Supplemental Conditions, material to be disposed of shall not be burned, either inside or outside the Premises.

The Contractor shall also comply with all rules, regulations, statutes and ordinances

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regarding asbestos removal and disposal, including but not limited to, 42 U.S.C. Sections 7401, 7412 and 7601, 40 C.F.R. Part 61, Subpart M, and California Code of Regulations Section 1529, Title 8.

If the Contractor discovers that a building to be demolished or renovated contains asbestos containing material, the Contractor shall immediately cease Work and notify the City.

5-1.15 **USE OF PESTICIDES.** The Contractor shall comply with all local, state and federal rules and regulations of the Department of Food and Agriculture, the Department of Health, the Department of Industrial Relations and all other agencies which govern the use of pesticides required in the performance of the Work.

Pesticides shall include but shall not be limited to herbicides, insecticides, fungicides, rodenticides, germicides, nematocides, bactericides, inhibitors, fumigants, defoliants, desiccants, soil sterilants, and repellents.

Any substance or mixture of substances intended for preventing, repelling, mitigating, or destroying weed, insects, diseases, rodents, or nematodes and any substance or mixture of substances intended for use as a plant regulator, defoliant or desiccant shall be considered as pesticide.

5-1.16 **SOUND AND LIGHT CONTROL REQUIREMENTS.** The Contractor shall comply with all local sound control, light control, and noise level rules, regulations and ordinances which apply to any Work performed pursuant to the Contract. Work shall not begin before 7 a.m. nor occur after 7 p.m., unless otherwise permitted by the City.

Each internal combustion engine, used for any purpose on the Work or related to the Work, shall be equipped with a muffler, in good working order, of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said

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muffler.

5-1.17 **WEIGHT LIMITATIONS.** Unless expressly permitted elsewhere in the Contract Documents, the Contractor shall not operate construction equipment or vehicles of any kind which, laden or unladen, exceed the maximum weight limits set forth in Division 15 of the Vehicle Code over completed or existing base, surfacing, pavement or structures.

5-1.18 **ENVIRONMENTAL CLEARANCES; MITIGATION MONITORING PROGRAMS; AND REGULATORY AGENCY PERMIT REQUIREMENTS.** The Department will obtain all environmental clearances and other authorizations necessary for this project as set forth in the Contract Documents. The Contractor shall comply with the provisions, including giving notices during construction when required, of said authorizations. In the event the obtaining of said authorizations delays completion of all or any portion of the Work, an extension of time determined pursuant to the provisions in Section 6-1.08, "Liquidated Damages," of these General Conditions will be granted.

Contractor shall comply with: (1) all mitigation identified in the mitigation monitoring program (attached to and adopted as a component of the mitigated negative declaration or Environmental Impact Report) to mitigate impacts to protected natural resources; and (2) all related permit requirements issued by the regulatory agencies authorizing the project. Contractor shall defend, indemnify, and save and hold harmless the City, its officers, agents, employees, and volunteers from any fines, claims, suits, actions or regulatory sanctions of every name, kind and description brought forth, or on account of, damage to protected natural resources from or arising out of Contractor's negligence or willful misconduct in the performance of this Agreement.

5-1.19 **PERMITS AND LICENSES.** The Contractor acknowledges and agrees that, prior to the submission of its bid for the Work, it fully familiarized itself with the

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requirements of all applicable federal, state, county and municipal laws, codes, rules, and regulations, as well as the conditions of any required licenses and permits.

The Contractor shall procure all permits and licenses, including any applicable building permits (except those procured or to be procured by the City which are listed elsewhere in the Contract Documents), in coordination with the Director, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the Work. Contractor shall be responsible for applying, paying all fees, and coordination for obtaining all permits for completion of the Work. All permits and licenses shall be obtained in sufficient time to prevent delays to the Work. Contractor will apply to the City for reimbursement for such permits costs. Accordingly, Contractor should not include the anticipated costs for permits in its bid, as the necessary permit costs will be reimbursed by the City.

The California Environmental Quality Act (Public Resources Code, Section 21000 to 21177) may be applicable to permits, licenses and other authorizations which the Contractor must obtain from State or local agencies in connection with performing the Work. The Contractor shall comply with the provisions of that Act in obtaining such permits, licenses and other authorizations, and all permits, licenses and other authorizations shall be obtained in sufficient time to prevent delays to the Work.

The Contractor shall maintain the applicable Contractor's license as identified in the Notice to Contractors and City business license for the duration of the Work.

5-1.20 **WATER POLLUTION.** The Contractor shall comply with all water pollution control rules, regulations, ordinances and statutes which apply to any Work performed pursuant to the Contract, including any water pollution control rules, regulations, and statutes, specified by the most current State of California NPDES General Permit for Stormwater

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Discharges Associated with Construction Activity.

The Contractor shall take all necessary precaution to protect streams, vernal pools, ponds, reservoirs, and lakes from pollution with fuels, oils, bitumen, calcium chloride, and other harmful materials as consistent with the law. Also, the Contractor shall conduct and schedule operations so as to avoid discharging pollutants, such as but not limited to: sediment and silt to the storm drain system. The storm drain system consists of all facilities that are designed to convey stormwater to the Waters of the State as defined in the California Water Code. The storm drain system includes, but is not limited to, all streets, gutters, drain inlets, roadside ditches, streams, vernal pools, ponds, and lakes. Care shall be exercised to preserve roadside vegetation beyond the limits of construction.

5-1.21 **PROTECTION AND USE OF PROPERTY.** The Contractor shall be responsible for and provide and maintain all proper temporary walkways, covered walkways, barriers, roads, guards, railings, lights, warning signs, and take precaution at all times to avoid injury or damage to any person or any property, and upon completion of the Work, or at other times as directed, restore Premises and adjacent property to a proper condition. In the event of such injury or damage, Contractor shall report such injury and damage to City within forty-eight (48) hours of occurrence.

The Contractor shall protect adjoining property and nearby buildings, including City buildings, City roads, and public streets or roads, from dust, dirt, debris, or the nuisance arising out of the Contractor's operations or storage practices, and, if ordered by the Director, the Contractor shall provide and Install suitable safeguards, approved by the Director, to protect such objects from damage. If such objects are damaged by reason of the Contractor's operations, they shall be replaced or restored at the Contractor's expense.

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If the Contractor damages any buildings, roads, utilities, or other property which belong to the City, or any Department or agency thereof, then the Director, at his or her option, may retain from the money due under the Contract an amount sufficient to insure repair of the damage.

The Director may make or cause to be made such temporary repairs as are necessary to restore to service any such damaged facility. The cost of such repairs shall be borne by the Contractor and may be deducted from any moneys due or to become due the Contractor under the Contract.

5-1.22 **RESPONSIBILITY FOR DAMAGE AND INDEMNIFICATION.**

The City of Roseville, its officers, agents, employees, and volunteers, including but not limited to the Director and his or her designee, shall not be answerable or accountable in any manner: for any loss or damage that may happen to the Work or any part thereof; for any loss or damage to any of the materials or other things used or employed in performing the Work; for injury to or death of any person, either workers or the public; or for damage to property from any cause which might have been prevented by the Contractor, its workers, or anyone employed by the Contractor or the Contractor's Subcontractors.

The Contractor shall be responsible for any liability imposed by law and for injuries to, or death of, any person including, but not limited to, workers and the public, or damage to property resulting from defects or obstructions, or from any cause whatsoever during the progress of the Work or at any time before its completion and final Acceptance.

To the fullest extent allowed by law, the Contractor shall defend (through counsel acceptable to the City), indemnify, and save and hold harmless the City, and its respective officers, agents, Subcontractors, employees, and volunteers, and the successors and assigns of

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any of them, (hereinafter referred to as "Indemnitees") from and against all claims, demands, liability, suits, actions, costs or expenses for any and all loss or damage, including but not limited to, personal injury, property damage, or economic loss, arising out of or resulting from allegations of (1) Contractor's use of the City's property or any activities or Work performed hereunder by the Contractor; (2) the Contractor's performance of the Work under the Agreement; or (3) the Contractor's breach of any provision of the Agreement. The duty of the Contractor to indemnify and save harmless includes the duties to defend as set forth in Civil Code Section 2778. The only exception to these provisions is that the Contractor's obligations under this section will not apply to the extent that the claims, demands, liability, suits, actions, costs or expenses are caused by Indemnitees' active negligence, willful misconduct, criminal acts, or for defects in design furnished by the Indemnitees, misconduct, criminal acts, or for defects in design furnished by the Indemnitees.

The Contractor waives any and all rights to any type of express or implied indemnity against the City, its officers, agents, employees, or volunteers.

The Contractor's responsibility for such defense and indemnity obligations shall survive the termination or completion of this Contract for the full period of time allowed by law. The defense and indemnity obligations of this Contract are undertaken in addition to, and shall not in any way be limited by, the insurance obligations contained in this Contract. The parties intend that the defense and indemnity obligations in this Contract shall be broadly construed.

Any person, firm or corporation that Contractor authorizes to Work on the City's property including Subcontractors, shall be deemed to be an agent of the Contractor for purposes herein, shall be subject to all the applicable terms herein, and shall be within the scope of the Contractor's indemnity obligation described herein.

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In addition to any remedy authorized by law, so much of the money due the Contractor under and by virtue of the Contract as shall be considered necessary by the Department may be retained by the City until disposition has been made of such suits or claims for damages.

The retention of money due the Contractor shall be subject to the following:

A. The City will give the Contractor thirty (30) Days' notice of its intention to retain funds from any partial payment which may become due to the Contractor prior to Acceptance of the Contract. Retention of funds from any payment made after Acceptance of the Contract may be made without such prior notice to the Contractor.

B. No retention of additional amounts out of partial payments will be made if the amount to be retained does not exceed the amount being withheld from partial payments pursuant to Section 7-1.07, "Progress Payments," of these General Conditions.

C. If the City has retained funds and it is subsequently determined that the City is not entitled to be indemnified and saved harmless by the Contractor in connection with matter for which such retention was made, the Department shall be liable for interest on the amount retained at the legal rate of interest for the period of such retention.

5-1.23 **INSURANCE COVERAGE.**

A. Evidence of Maintenance Required. The Contractor shall, at its expense, procure and at all times maintain in full force and effect at a minimum the insurance required by this section on all of its operations; and the Contractor shall not allow any Subcontractor to commence work until similar insurance required of the Subcontractor has been obtained and filed. An original Certificate of Insurance, and copies of all required endorsements, all in a form approved by the Risk Manager, evidencing all required coverage or policies shall be filed after the award of the bid and prior to approval of the Contract by the City Council. Contractor shall

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provide ten (10) days prior written notice to the City of any reduction of coverage limits or cancellation of the coverage or policies shall be given to the City of Roseville as Certificate holder.

B. Qualifying Insurers. With the exception of the State Compensation Insurance Fund, all required insurance policies shall be issued by companies acceptable to the City and licensed to do business in the State of California and who hold a current policy holders alphabetic and financial size category rating of not less than AVII according to the most recent issue of Best's Insurance Reports.

C. Insurance Required.

1. Commercial General Liability (CGL): Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations with limits of no less than Two Million Dollars ($2,000,000) per occurrence for bodily injury, personal injury and property damage for projects under One Million Dollars ($1,000,000) and limits of no less than Five Million Dollars ($5,000,000) per occurrence for bodily injury, personal injury and property damage for projects over One Million Dollars ($1,000,000). If a general aggregate limit applies, either the aggregate limit shall apply separately to this project or the general aggregate limit shall be twice the required occurrence limit.

The Commercial General Liability insurance shall include the following, copies of which shall be provided:

a. Inclusion of the City of Roseville, and its officers, agents, employees, and volunteers, as additional insureds (except for workers' compensation) as respects services or operations under the Contract. The additional insured endorsement for the general liability policy shall be at least as broad as the ISO CG 2010 10 01 combined with ISO CGL

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Endorsement CG 2037 10 01. Any other endorsement must be approved in writing by the City. Endorsements must include coverage for on-going and completed operations, which coverage shall be maintained for four (4) years following completion of the Project. Endorsements shall cover the City of Roseville, its officers, agents, employees, and volunteers.

b. The insurance shall provide coverage for claims by one insured against another insured and the policies shall not contain any cross-suits exclusions, cross-liability exclusions, or insured versus insured exclusions. The policies shall not contain any classification exclusions purporting to deny coverage for any work to be performed by Contractor or any of its Subcontractors.

c. Stipulation that the insurance is primary and noncontributory, as evidenced by a separate endorsement (CG 20 01 04 13 or an equivalent) or section of the policy, and that neither the City nor its insurers will be called upon to contribute to a loss.

d. Such insurance shall specifically cover the contractual liability of the Contractor.

e. Any available insurance proceeds in excess of the specified minimum insurance coverage requirements and limits shall be available to the additional insureds. Furthermore, the requirements for coverage and limits shall be: (1) the minimum coverage and limits specified in this Agreement; or (2) the full coverage and maximum limits of any insurance proceeds available to the named insureds, whichever is greater.

f. Waiver of subrogation endorsement.

g. The Contractor shall furnish a certificate for this period covered.

2. Automobile Liability: Insurance Services Office Form Number CA 0001 covering Code 1 (any auto), or if Contractor has no owned autos, Code 8 (hired) and Code 9

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(non-owned), with limits of no less than One Million Dollars ($1,000,000) per accident for bodily injury and property damage.

3. Workers' Compensation: In accordance with the provisions of the California Labor Code, Contractor is required to be insured against liability for Workers' Compensation or to undertake self-insurance. Statutory Workers' Compensation and Employers' Liability of at least One Million Dollars ($1,000,000) shall cover all Contractors staff while performing any work incidental to the performance or this Agreement.

4. Professional Liability: Professional Liability (Errors and Omission) Insurance appropriate to Contractor's profession, with a limit of liability not less than One Million Dollars ($1,000,000) per occurrence or claim and Two Million Dollars ($2,000,000) aggregate to cover all design and engineering services rendered by Contractor pursuant to the Agreement. Coverage must commence from the first day that Contractor or any of its Subcontractors provided any design or engineering services in connection with the Project.

5. Builder's Risk/Course of Construction Insurance (If Required by Risk Management): The Contractor shall be responsible for all loss, damage or destruction whatsoever to the work called for by this Contract until the approval of a Notice of Completion or acceptance of the Work if no Notice of Completion is to be recorded.

The Contractor shall secure "All Risk" type of builder's Risk Insurance of the type covering one hundred percent (100%) of the value of the work performed under this Contract (the value is presumed to be the Contract amount unless otherwise stated in Supplemental Conditions) and all materials, equipment, or other items to be incorporated therein while the same are located at the construction site, a bonded warehouse, or its place of manufacture. At any time, the policy shall cover the value of the work completed. The policy shall cover hazards

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including the losses due to fire, explosion, hail, rain, lightning, flood (separate insurance as needed), vandalism, malicious mischief, wind, collapse, aircraft, and smoke.

The policies providing such insurance shall name the City as a loss payee as its respective interests may appear, and certified copies of such policies shall be filed with the City. The maximum deductible allowable under the Builder's All Risk policy shall be five percent (5%) of the Contract amount.

Builder's Risk Insurance is not required for coverage of losses in excess of five percent (5%) of the Contract amount for damages resulting from earthquake in excess of a magnitude of 3.5 on the Richter scale, or tidal waves. Coverage in the amount of five percent (5%) of the Contract amount for such losses is required.

6. Pollution Coverage: Contractor shall procure pollution liability coverage or other insurance covering claims for bodily injury or property damage arising out of the abatement, removal, storage, transportation, or other exposure to hazardous materials or pollutants, in limits not less than Two Million Dollars ($2,000,000). Contractor shall add the City and all parties required to be indemnified by Contractor as additional insured on all pollution liability policies.

7. Higher Coverage Limits: If Contractor maintains higher coverage limits than the amounts shown above, then the City requires and shall be entitled to coverage for the higher coverage limits maintained by Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the City.

8. Claims Made Coverage: Liability insurance coverage may not be written on a "claims made" or modified occurrence basis. The Certificate of Insurance must clearly provide that the coverage is on an "occurrence" basis.

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5-1.24 **OTHER INSURANCE PROVISIONS.**

A. The requirements of the Standard Specifications as to types and limits of insurance coverage to be maintained by the Contractor, and any approval of insurance by the City, are not intended to, and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to the Contract, including, but not limited to, the provisions concerning indemnification, nor preclude the City from taking any other action available to it under any other provision of the Contract or law.

B. The City acknowledges that some insurance requirements contained in these Standard Specifications may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by Contractor under the Contract. Any self-insurance must be approved in writing by the City, in its sole discretion and shall not reduce the limits of liability. Any deductibles or self-insured retentions ("SIR") must be declared on the certificate of insurance and approved by City in writing. Policies containing any SIR provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named insured or City. City reserves the right to obtain a full certified copy of any insurance policy and endorsements. The failure to exercise this right shall not constitute a waiver of such right.

C. The Contractor agrees to include in its contracts with all subcontractors the same requirements and provisions of this Contract, including the indemnity and insurance requirements, to the extent they apply to the scope of the subcontractor's work. Furthermore, the Contractor shall require its subcontractors to agree to be bound to the Contractor and the City in the same manner and to the same extent as the Contractor is bound to the City under this Contract. Additionally, the Contractor shall obligate its subcontractors to comply with these

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same provisions with respect to any tertiary subcontractor, regardless of tier. A copy of the City's indemnity and insurance provisions will be furnished to the subcontractor or tertiary subcontractor upon request. Alternatively, the Contractor may insure subcontractor(s) under its own policy.

D. The City, its officers, agents, employees, and volunteers are to be covered as insureds with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the Contractor; and with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts or equipment furnished in connection with such work or operations. Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under California Insurance Code Section 11580.04.

E. The limits of insurance required in this Contract may be satisfied by a combination of primary and excess insurance. Any excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and noncontributory basis for the benefit of the City (if agreed to in a written contract) before the City's own insurance shall be called upon to protect it as a named insured.

F. The insurance procured by Contractor shall be subject to the approval of the City, but any acceptance of insurance certificates by the City shall in no way limit or relieve Contractor of its duties and responsibilities under the Agreement.

G. Contractor shall be responsible for all premiums, deductibles and self-insured retention applicable to the insurance it is required to procure under the Contract. All deductibles or self-insured retentions over five hundred thousand dollars ($500,000) must be approved by the City, in writing. Contractor shall be responsible for all deductibles, self-insured

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retention payments, and/or increased premiums incurred if the City's policies of insurance are forced to cover damages or respond to claims for which Contractor or its Subcontractors were obligated to provide insurance under the Contract.

H. Failure of the City to enforce in a timely manner any of the requirements of these insurance provisions shall not act as a waiver to enforcement of any of these provisions at a later date.

I. Contractor's indemnity obligations shall not be limited by these insurance provisions and shall survive the expiration of the Contract and the insurance provisions of the Contract shall likewise not be limited by the indemnity provisions of the Contract.

J. THE CITY RESERVES THE RIGHT TO WITHHOLD ANY PROGRESS PAYMENTS TO THE CONTRACTOR IN THE EVENT OF NONCOMPLIANCE WITH ANY INSURANCE REQUIREMENTS.

5-1.25 **THIRD PARTY BENEFICIARY.** No provisions in the Contract Documents shall in any way inure to the benefit any third party (including the public at large or any member thereof) so as to constitute such person a third party beneficiary of the Contract, or of any term or condition or other provision of the Contract or otherwise give rise to any cause of action in any person not a party to the Agreement, except as expressly provided elsewhere in the Contract Documents.

5-1.26 **COORDINATION AND ACCESS.** The Contractor acknowledges that the City may award, or has already awarded, other construction contracts for additional work or may perform additional work with its own forces and that such work may affect the Work under this Agreement. Additionally, the Contractor acknowledges that the State and other public and private agencies may be granted a right-of-entry by the City for the purpose of constructing

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facilities within and adjacent to the Work Site. It is the obligation of the Contractor to coordinate its Work with the work of others working within or adjacent to the City's property.

During performance of its Work, the Contractor shall not have exclusive access to or use of the work areas. The City may also require that certain facilities and areas be used concurrently by the Contractor and by other contractors working in the area. When two (2) or more contractors are employed on related or adjacent City work, each shall conduct its operations in such a manner as not to cause any unnecessary delay or hindrance to the other. Each contractor shall be responsible to the other for all damage to any work, to persons or property caused to the other by its operations, and for loss caused the other due to any unnecessary delays or failure to finish the work within the time specified for completion.

If any party of the Contractor's Work depends on the work of any other contractor and/or the City for proper execution and/or results, the Contractor shall promptly notify the City of any discrepancies and/or defects in said other work that would render its work unsuitable for proper execution and/or results prior to proceeding with the Contractor's own Work. If it becomes necessary, the City will resolve coordination and access problems.

The Contractor and its representative in charge of the Work shall familiarize themselves with the City's property and Work Site, and adjacent surroundings in the vicinity of said Wok, and any private or public operations on adjoining properties.

5-1.27 **OCCUPANCY BY THE DEPARTMENT PRIOR TO ACCEPTANCE.** The City may at any time notify the Contractor in writing that it intends to take Beneficial Occupancy of any portion of the Work even though the Work may not be substantially complete. Unless the reason for the City's taking Beneficial Occupancy is that the Contractor has not completed the Work (or portions thereof) in accordance with the Contract

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Time, the City's Beneficial Occupancy shall relieve the Contractor from its responsibility for maintenance, loss or damage to that portion of the Work for which the City has taken Beneficial Occupancy other than that resulting from the Contractor's act or omission, negligence, willful misconduct or breach of warranty.

Should the Work (or portion thereof) not be completed in accordance with the Construction Schedule within the Contract Time (as adjusted under the terms of the Contract Documents), the City shall have the right, but not the obligation, to take Beneficial Occupancy of the Work. In such event, the Contractor shall not be entitled to any additional compensation on account of said occupancy by the City, nor shall the Contractor be relieved of any of its responsibilities under the Contract Documents, including, without limitation, Contractor's obligation to complete the Work in accordance with the Construction Schedule.

Beneficial Occupancy shall not be deemed an Acceptance by the City either of the Work or of any portion thereof, nor will it relieve the Contractor of full responsibility for correcting defective Work or materials found at any time before the formal written Acceptance of the entire Contract by the Director or during the full warranty period after such Acceptance, as provided in Section 7-1.12, "Warranty," of these General Conditions.

The City's Beneficial Occupancy shall not relieve the Contractor of its responsibility to maintain all insurance and bonds required under the Contract Documents until the entire project is accepted by the City.

5-1.28 **RIGHT TO OPERATE UNSATISFACTORY FACILITIES AND EQUIPMENT.** If, after Installation, the operation or use of the facilities or equipment to be furnished under this Contract proves to be unsatisfactory to the Director, the City shall have the right to operate and use such facilities or equipment until they can, without damage to the City,

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be taken out of service for correction or replacement. Such period of use of the defective facilities or equipment, pending correction or replacement, shall in no way decrease the warranty period required for the acceptable corrected or replaced facilities or equipment.

5-1.29 **CONTRACTOR'S RESPONSIBILITY FOR THE WORK.** Except as otherwise provided herein, the Contractor shall have the charge and care of the Work and shall bear the risk of injury or damage to any part of the Work by the action of the elements or from any other cause whether arising from the execution or from the nonexecution of the Work until the Acceptance of the Contract by the Director. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the Work occasioned by any cause before its completion and Acceptance, and shall bear the expense thereof. In case of suspension of Work from any cause whatever, the Contractor shall be responsible for the Work and it shall also be responsible for all materials, and shall properly store them if necessary, and shall provide suitable drainage and erect temporary structures where necessary.

The Contractor will be relieved of responsibility for any injury or damage to the Work caused by the following:

A. An earthquake in excess of a magnitude of 3.5 on the Richter Scale or a tidal wave, when the effect of such has been proclaimed a disaster or state of emergency by the Governor of the State of California or by the President of the United States, or was of such magnitude at the site of the Work as to have been sufficient to have caused a proclamation of disaster or state of emergency, had it occurred in a populated area.

B. Occupancy and use by the Department or the public prior to the completion of the entire project.

C. Acts of the Federal Government or the public enemy.

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5-1.30 **RESPONSIBILITY FOR UTILITIES.** The Contractor shall be responsible at its own cost for any and all Work, expense or special precautions caused or required by the existence or proximity of utilities encountered in performing the Work, including without limitation, repair of any or all damage and all hand or exploratory excavation required. The Contractor is cautioned that such utilities may include communication cables or electrical cables which may be high voltage, and when working or excavating in the vicinity of such cables, or the ducts enclosing such cables, the Contractor shall undertake at its own cost any special precautions required. Suitable warning signs, barricades, and safety devices shall be erected as necessary or required.

However, if during the course of the Work the Contractor encounters utility Installations which are not shown or indicated in the Contract Documents or which are found in a location substantially different from that shown, and such utilities are not reasonably apparent from visual examination, then the Contractor shall promptly notify the Director in writing. Where necessary for the Work of the Contract, the Director shall issue a written order to the Contractor to make such adjustments, rearrangement, repair, removal, alteration, or special handling of such utility, including repair of the damaged utility. The Contractor shall perform the Work described in such written order, and compensation therefor will be made in accordance with Section 3 of these General Conditions relating to changes in the Work. Except for the items of cost specified in said Section 3, the Contractor shall receive no compensation for any other cost, damage, delay, interference, or hindrance to him or her due to the presence of such utility. If the Contractor fails to give the notice specified above and thereafter acts without instructions for the Director, then the Contractor shall be liable for any or subsequent to discovery thereof, and the Contractor shall repair and make good such damage at its own cost.

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The precise location of underground facilities can only be determined by careful probing or hand digging in compliance with Article 6 of the Cal/OSHA Construction Safety Orders which states in part:

> "Prior to opening an excavation, effort shall be made to determine whether underground installations, i.e., sewer, water, fuel, electric lines, etc., will be encountered, and if so, where such underground installations are located. When the excavation approaches the approximate location of such an installation, the exact location shall be determined by careful probing or hand digging, and, when it is uncovered, adequate protection shall be provided for the existing installation."

The location of known existing utilities and pipelines are shown on the Contract Drawings in their approximate locations. Some of the locations include multiple conduits. The Contractor shall exercise care in avoiding damage to those facilities which are to remain in service subsequent to the construction of the particular new facility involved and the Contractor will be held responsible for any repairs if damaged. The Contractor shall also exercise care in maintaining those pipes and facilities required for continuing operation of the existing facilities until such time as they can be abandoned. There is no guarantee that all utilities or obstructions are shown on the Contract Drawings or that the locations indicated are accurate.

The Contractor shall exercise extreme caution in working in the area adjacent to the existing pipelines and utility services. It is essential that all the existing facilities be maintained in service. Construction of the connections between the existing facilities and the new facilities shall be at times and during periods acceptable to the City. The Contractor shall advise the Director in writing of its proposed Construction Schedule for these connections at least forty-eight (48) hours in advance.

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The Contractor shall uncover all piping and conduits, to a point one foot (1') below the pipe, where crossings, interferences, or connections are shown on the Contract Drawings, prior to trenching or excavating for any pipe or structures, to determine actual elevations. New pipelines shall be laid to such grade as to clear all existing facilities which are to remain in service. If the Contractor does not expose all required utilities, it shall not be entitled to additional compensation for Work necessary to avoid interferences nor for repair to damaged utilities. Excavations around underground electrical ducts and conduits shall be performed using extreme caution to prevent injury or damage to workers and to the electrical ducts or conduits.

5-1.31 **PROPERTY RIGHTS IN MATERIALS.** Nothing in the Contract shall be construed as vesting in the Contractor any right of property in the materials used after they have been attached or affixed to the Work or soil or after partial payment has been made as provided in Section 7-1.07, "Progress Payments," of these General Conditions for material delivered on the ground or stored subject to or under the control of the City and unused. All such material shall become the property of the City upon being so attached or affixed or upon payment for materials delivered on the ground or stored subject to or under the control of the City and unused, as provided in said Section 7-1.07.

5-1.32 **COURT ORDERED DELAY.** If, pursuant to court order, the Department temporarily suspends performance of all or any portion of the Work, an extension of time determined pursuant to the provisions in Section 6-1.08, "Liquidated Damages," of these General Conditions will be granted.

5-1.33 **NO PERSONAL LIABILITY.** Neither the Director, nor any other officer or authorized employee of the City, shall be personally responsible for any liability arising under or by virtue of the Contract.

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5-1.34 **RIGHTS IN LAND AND IMPROVEMENTS.** The Contractor shall make no arrangements with any person or entity to permit occupancy or use of any land, structure or building within the limits of the Work, for any purpose whatsoever, either with or without compensation, in conflict with any agreement between the City and any third party owner, former owner, or tenant of such land, structure or buildings. The Contractor shall not occupy City-owned property outside the limit of the Work shown on the Contract Drawings unless it obtains prior approval.

5-1.35 **ANTITRUST CLAIMS.** The Contractor's attention is directed to the following provision of Public Contract Code Section 7103.5(b), which is applicable to the Contractor and its Subcontractors:

> " In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 [commencing with Section 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the contractor, without further acknowledgement by the parties."

5-1.36 **RIGHTS TO DRAWINGS, TECHNICAL DATA PATENTS.** Shop

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Drawings and Working Drawings submitted to the City by the Contractor, Subcontractor or any lower tier Subcontractor pursuant to the Agreement, are the property of the City and the City may use, and disclose in any manner and for any purpose, Shop Drawings and Working Drawings delivered under the Contract.

Technical Data including manuals or instructional materials, computer or microprocessor software which are delivered or submitted to the City by the Contractor, Subcontractor, or any lower tier Subcontract pursuant to the Contract are the property of the City, and the City may use or disclose same in any manner and for any purpose.

The Contractor shall assume all costs arising from the use of patented materials, equipment, devices, or processes used on or incorporated in the Work, and shall defend, indemnify and save and hold harmless the City, and its duly authorized representatives, from all suits at law, or in equity, and actions of every nature for, or on account of the use of any patented materials, equipment, devices or processes. In case some materials, equipment, devices or processes are held to constitute an infringement and their use enjoined, the Contractor, at its expense, shall:

1. Secure for the City the right to continue using said materials, equipment, devices or processes by suspension of the injunction or by procuring a license or licenses; or
2. Replace such materials, equipment, devices, processes; or
3. Modify them so that they become non-infringing or remove the enjoined materials, equipment, devices or processes and refund the sums paid therefor without prejudice to any other rights of the City.

5-1.37 **PAYMENT OF TAXES.** Contractor shall pay all taxes and duties applicable to and assessable against any Work, equipment, materials, services, processes, and

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operations incidental to or involved in the Agreement, including but not limited to, retail sales and use, transportation, export, import, business, and special taxes. The Contractor is responsible for ascertaining and acquainting itself with such taxes and making all necessary arrangements to pay them. The Contractor will maintain records that are auditable records, and these records shall be subject to the City's review to verify that Contractor's tax payments are current at all times.

The Contract Price paid for the Work shall include full compensation for all taxes which the Contractor is required to pay, whether imposed by Federal, State or local government, including, without being limited to, Federal excise tax. No tax exemption certificate nor any document designed to exempt the Contractor from payment of any tax will be furnished to the Contractor by the Department, as to any tax on labor, services, materials, transportation, or any other items furnished pursuant to the Contract.

The Contractor shall withhold and pay any and all sales and use taxes, withholding taxes, whether Federal, State, or local, Social Security taxes, State Unemployment Insurance charges and all other taxes which are now or hereafter may be required to be paid or withheld under any laws.

5-1.38 **GRATUITIES AND CONFLICT OF INTEREST.** The Contractor shall not offer or provide gratuities in the form of gifts, entertainment, loans, meals, rewards, and/or services to representatives of the City, including but not limited to, officers, employees, agents, Engineering Service Consultants, Consulting Engineers and Architects, Inspectors and/or Testing Agencies retained by the City. If it is found that the Contractor has violated this provision, the Contract may be subject to termination for default as defined elsewhere in these General Conditions.

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During the term of the Contract and until the final payment has been made to the Contractor, the Contractor shall not employ or compensate in any manner whatsoever, the City's officers, employees and authorized representatives, agents, and any Engineering Service Consultants, Consulting Engineers and Architects, Inspectors, and/or Testing Agencies retained by the City. Any exception to the employment or compensation to any of the above named parties must be made in writing by the City. If the Contractor offers or provides employment or compensation to those named above during the term of the Contract, the Contract may be subject to termination for default.

5-1.39 **COOPERATION.** Should construction be under way by City forces or other forces or by other Contractors within or adjacent to the limits of the Work or should Work of any other nature be under way by such forces within or adjacent to said limits, the Contractor shall cooperate with all such forces to the end that any delay, interference or hindrance to their Work will be avoided. The right is reserved to perform other or additional Work at or near the site at any time, by the use of such forces.

5-1.40 **DIGGING TRENCHES OR OTHER EXCAVATIONS.** In the event any work involves digging trenches or other excavations that extend deeper than four feet (4') below the surface, City and Contractor shall comply with the following:

A. The Contractor shall promptly, and before the following conditions are disturbed, notify City in writing of any:

1. Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.

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2. Subsurface or latent physical conditions at the site differing from those made available to Contractor for inspection as provided in the project proposal.

3. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Contract.

B. The City shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the Work shall issue a Change Order under the procedures described in the Contract.

C. In the event that a dispute arises between the City and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, the Contractor shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all work to be performed under the Contract. The Contractor shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties. However, no claim of the Contractor under this clause shall be allowed unless the Contractor has given the notice required by this Section. No claim by the Contractor for an equitable adjustment hereunder shall be allowed if asserted after final payment under this Contract.

5-1.41 **CONTRACTOR REGISTRATION.** No contractor or subcontractor may work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. During the performance of this Contract, the Contractor and its subcontractors shall have a continuing legal obligation to maintain current

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registration with the Department of Industrial Relations. The Contractor is hereby notified that this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

5-1.42 **CITY OF ROSEVILLE ENCROACHMENT PERMITS AND RIGHTS-OF-WAY.** The Contractor need not obtain a separate encroachment permit from the City prior to construction within street rights-of-way or other City rights-of-way. Execution of the Contract by the City shall be deemed an encroachment permit for work required by the Contract within rights-of-way. All work shall conform to the rules and regulations of encroachment permits and shall be subject to the inspection and approval of the Director and City Engineer.

To the extent indicated in the Contract Drawings, the City will provide the rights-of-way over private lands or the site to enable the Contractor to perform its work. The Contractor shall be solely responsible for securing any additional rights-of-way desired by the Contractor. The City will not be a party to nor assume any liability for any separate agreements reached between the Contractor and any third parties with respect to these additional rights-of-way. The Contractor shall procure evidence that agreements are in place with said third parties before the Contractor uses those areas covered by the agreements. Any damage to such private lands caused by the Contractor's operations shall be the sole responsibility of the Contractor.

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SECTION 6

PROSECUTION AND PROGRESS

6-1.01 **SUBLETTING AND SUBCONTRACTING.** The Contractor shall be responsible for all Work performed under the Contract. The Contractor shall give its personal attention to the fulfillment of the Contract and shall keep the Work under its control. Nothing in the Contract Documents shall create any contractual relationship between the City and any Subcontractor. The Contractor is fully responsible to the City for the acts and omissions of its Subcontractors of any tier. When any Subcontractor fails to prosecute a portion of the Work in a manner satisfactory to the Director, that Subcontractor shall not again be employed on the Work. Although the sections of the Contract may be arranged according to various trades, or general grouping of the Work, the Contractor is not obligated to sublet the Work in such manner. The Director will not arbitrate disputes among Subcontractors or between Contractor and one or more Subcontractors concerning responsibility for performing any part of the Work.

The on-site production of materials produced by other than the Contractor's own forces shall be considered as subcontracted. The erection, establishment or reopening of on-site plants for production of materials and the operation thereof in the production of materials for use on the Work shall conform to the requirements relating to labor set forth in the Contract Documents.

The Contractor shall also be responsible for coordinating the Work performed by Subcontractors and Suppliers.

The Contractor shall not substitute any person as Subcontractor in place of a Subcontractor listed on its bid proposal without the written approval of the Director. Substitutions must be in accordance with the provisions of the "Subletting and Subcontracting

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Fair Practices Act" beginning with Public Contract Code Section 4100. Violations of this Act by the Contractor may subject it to penalties which may include cancellation of Contract, Assessment of ten percent (10%) of the Subcontractor's bid, and disciplinary action by the Contractors State License Board.

The Contractor shall pay any Subcontractors approved by the City for work that has been satisfactorily performed no later than seven (7) Days from the date of Contractor's receipt of progress payments by the City. Within seven (7) Days after receipt from the City of funds attributable to work performed by a Subcontractor, Contractor shall release any retainage payments withheld to the Subcontractor. In the event Contractor does not make progress payments or release retention to Subcontractors in accordance with the time period specified herein, Contractor may be subject to prompt payment penalties per statute.

6-1.02 **ASSIGNMENT.** The performance of this Contract may not be assigned, except upon the written consent of the City Council of the City of Roseville. Consent will not be given to any proposed assignment which would relieve the original Contractor or its surety of their responsibilities under the Contract nor will the City consent to any assignment of a part of the Work under the Contract.

The Contractor may assign moneys due or to become due to it under the Contract and such assignment will be recognized by the City, if given proper notice thereof, to the extent permitted by law, but any assignment of moneys shall be subject to all proper set-offs in favor of the City and to all deductions provided for in the Contract and particularly all money withheld, whether assigned or not, shall be subject to being used by the City for the completion of the Work in the event that the Contractor should be in default therein.

6-1.03 **BEGINNING OF WORK.** After the execution of the Contract by both

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parties, the City will issue the Notice to Proceed upon its determination that it is appropriate for the Contract Time to commence.

The Contractor shall begin Work within fifteen (15) Days after receiving the Notice to Proceed from the Director, subject to the requirements stated elsewhere in the Contract Documents regarding, among other things, the submittal of Baseline Schedule, and shall diligently prosecute the same to completion within the time limit provided in the Supplemental Conditions. Contractor shall also achieve any and all Contract milestones as described elsewhere in the Contract Documents.

The Contractor shall notify the Director, in writing, of its intent to begin Work at least seventy-two (72) hours before Work is begun. The notice shall be delivered to the Director and shall specify the date the Contractor intends to start. If the project has more than one (1) location of Work, a separate notice shall be given for each location.

The Contractor is not authorized to perform any Work until it has received a Notice to Proceed from the City. Should the Contractor begin Work in advance of receiving notice that the Contract has been approved as above provided, any Work performed by it in advance of the said date of approval shall be considered as having been done by the Contractor at its own risk and as a volunteer unless said Contract is so approved thereafter.

6-1.04 **PROGRESS SCHEDULE.**

A. Preliminary Progress Schedule. The Contractor shall submit to the Director, within twenty (20) Days after date of the Notice to Proceed, a Preliminary Progress Schedule covering the Contractor's activities over the first three (3) months of operation in detail and the remainder of the project in summary. The Preliminary Progress Schedule shall schedule the project within the Contract Time for completion of the Work, and shall be subject to

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favorable review by the Director.

B. CPM Schedule. The Contractor shall submit an acceptable Critical Path Method (CPM) Schedule to the Director within thirty (30) Days after the receipt of the Notice to Proceed. Subsequent revisions to said schedule shall be submitted as set forth hereinafter. The requirement for the CPM schedule is included to allow for adequate planning and execution of the Work, to determine the critical nature of delays, and to assist the Director in appraising the reasonableness of the proposed schedule and evaluating progress of the Work. The CPM schedule submitted under this Section shall utilize a CPM format, either the precedence or arrow diagramming method. The definitions of CPM terms and functions shall be as provided in the Associated General Contractors of America book *CPM in Construction, A Manual for General Contractors*, or a favorably reviewed alternative publication or reference. No progress payment will be made prior to submission and acceptance of the CPM Schedule.

1. The CPM schedule system shall consist of diagrams and accompanying mathematical analyses. The diagrams shall show elements of the project in detail and an entire project summary. Diagrams shall show the order and interdependence of activities and sequence in which the Work is to be accomplished as planned by the Contractor. The basic concept of a network analysis diagram shall be followed to show how the start of a given activity is dependent on the completion of preceding activities and its completion restricts the start of following activities. Detailed network activities shall include, in addition to construction activities, the submittal and favorable review of samples of material and Shop Drawings, the procurement of critical materials and equipment, fabrication of special material and equipment, and their Installation and testing. All activities of the City and the Director that affect progress and required Contract dates for completion of all or parts of the Work shall be shown. The

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selection and number of activities shall be subject to favorable review by the Director. Summary networks shall be time scaled. Durations shall be in Days and shall not exceed fifteen (15) Days, except for submittal and delivery items. Where the duration of continuous Work exceeds fifteen (15) Days, Work items in the Construction Schedule shall be subdivided by location, approximate stationing or other sub-element of the Work.

The graphic network diagram shall include for each activity, the description, activity number, the estimated duration in Days, and all activity relationship lines. The network diagram shall be drawn for the early start of activities. All significant Submittals shall be scheduled along with manual Submittals and training on all large or critical pieces of equipment. If the precedence technique is utilized, the schedule project shall include a calendar in Work Days, a network report sorted by early start and a logic table report sorted by preceding Work item. If the arrow technique is utilized, the schedule report shall include a calendar in Work Days, a network report sorted by early start, a network report sorted by I-J numbers, and a network sorted by slack time and I-J numbers.

2. The critical path shall be shown on all reports and on the graphic network diagram. The activities which constitute the critical path shall be identified.

3. The mathematical analysis of the network diagram shall include a tabulation of each activity. The following information shall be furnished as a minimum for each activity:

(a) preceding and following event numbers

(b) activity description and number

(c) estimated duration of activities

(d) earliest start date (by calendar date)

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(e) earliest finish date (by calendar date)

(f) actual start date (by calendar date)

(g) actual finish date (by calendar date)

(h) latest start date (by calendar date)

(i) latest finish date (by calendar date)

(j) slack or float

(k) percentage of activity completed

4. The program shall be capable of accepting revised completion dates as modified by approved time adjustments and recomputations of all tabulation dates and float accordingly.

5. Submission and review of the system shall be as follows:

(a) The complete network analysis system, consisting of the detailed network mathematical analysis and network diagrams, shall be submitted within thirty (30) Days after receipt of the Notice to Proceed.

(b) The Contractor shall participate in a review and evaluation of the proposed network diagrams and analysis by the Director. Any revisions necessary as a result of this review shall be resubmitted for review by the Director within ten (10) Days. When completed, the favorably reviewed schedule shall then be the schedule to be used by the Contractor for planning, organizing and directing the Work and for reporting progress. If the Contractor thereafter desires to make significant changes in its method of operating and scheduling, the Contractor shall notify the Director in writing stating the reasons for the change.

(c) The Contractor shall submit at monthly intervals a report of the actual construction progress. Each monthly report shall cover a period of approximately thirty

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(30) Days ending around the 20th of each month. The monthly reports shall be submitted within ten (10) Days of the end of the reporting period.

(1) If the project is proceeding on schedule, the monthly update report may consist of a marked-up copy of the graphical network diagram. This submittal shall clearly indicate the status of any minor shifts in sequence or schedule and the estimated completion date or percent complete of all activities currently in progress. The Contract completion date shall also be indicated. The Contractor shall submit a narrative report relating to status of construction, the schedule, and factors which may affect the remainder of the schedule. The report shall show the activities or portions of activities completed during the reporting period. The report shall state the percentage of the Work actually completed and scheduled as of the report date and the progress along the critical path in terms of Days ahead or behind the allowable dates.

(2) If, in the opinion of the Director, the project is behind schedule, the monthly report shall include a revised network diagram and/or mathematical analysis showing the Contractor's proposed revised schedule. An analysis of the effect that the delay has on progress along other paths shall also be included in the report. The Contractor shall also submit a narrative report with each updated analysis which shall include but not to be limited to a description of current and anticipated problem areas, delaying factors and their impact, and an explanation of corrective actions taken or proposed.

(3) Periodic report shall be submitted in sufficient copies to cover Contractor needs plus five (5) copies and an available electronic copy to be retained by the Director.

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6. To the extent that the favorably reviewed initial Construction Schedule, or revisions thereto, indicate anything not jointly agreed upon, it shall be deemed to be not favorably reviewed by the Director. Any omission of Work from the detailed schedule, otherwise required for Contract compliance, will not excuse the Contractor from completing such Work within any applicable completion date. The CPM schedule shall be generated by computer methods.

C. Schedule Review. Once each month, on a date mutually agreed upon, but no later than seven (7) business days after the monthly schedule progress report date, a Work Site meeting will be held to review the Construction Schedule and job progress. The Contractor shall also attend weekly meetings scheduled by the Director to review the progress of the Work in the preceding week and in the subsequent week, coordinate the Work with public agencies or other Contractors as required, and allow the Director to plan his or her activities for testing, inspection, etc.

D. Schedule Revisions. The conditions under which the Director will require revisions of the Construction Schedule include the following:

1. When delay in completion of any Work item or sequence of Work items results in an estimated extension of project completion by either twenty (20) business days or by ten percent (10%) of the remaining duration of time to complete the Contract, whichever is less.

2. When delays in Submittals or deliveries make replanning or rescheduling of the Work necessary.

3. When the schedule does not represent actual prosecution and progress of the Work.

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4. When any change to the sequence of activities, the completion date for major portions of the Work, or when changes occur which affect the critical path.

5. When Contract Amendments or a Change Order necessitates schedule revision, the Contractor shall submit a schedule analysis of all Change Order Work with its proposal.

E. Cash Flow Projection. A cash flow projection shall be submitted with the Construction Schedule. This cash flow projection shall be revised and resubmitted when revisions of the Construction Schedule will result in changes to the projected cash flow.

F. Schedules showing project completion dates earlier than specified in the Supplemental Conditions will be rejected unless justification can be provided for early completion.

6-1.05 **SCHEDULE OF VALUES.** Prior to preparation of the first estimate for a progress payment, the Contractor shall submit for favorable review by the Director a detailed Schedule of Values or cost breakdown of the Work under each bid item awarded. The breakdown will then become the basis for partial payment determination. Elements of Work shall be grouped by structure, pipeline, system, etc. Within each grouping, Work should be itemized by readily measurable quantities of Work complete in place. For example, concrete should be in units of cubic yards including form Work and reinforcing steel. Move-on costs, bond and insurance costs, and Overhead costs shall not be considered an item of cost for this purpose but shall be prorated over items of Work. In the event the Schedule of Values is not favorable reviewed by the Director, another Schedule of Values shall be submitted that is mutually acceptable to the Contractor and the Director.

6-1.06 **CITY'S RIGHT TO STOP WORK.** The Director shall have the

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authority to order the Contractor, in writing, to suspend the Work wholly or in part, for such period as the Director may deem necessary due to the failure on the part of the Contractor to correct Work that is not in accordance with the requirements of the Contract Documents or if Contractor persistently fails to carry out Work in accordance with the Contract Documents.

The Contractor shall immediately comply with the written order of the Director to suspend the Work wholly or in part. The suspended Work shall be resumed when conditions are favorable and methods are corrected, as ordered or approved in writing by the Director.

Any stoppage of work under this section shall be at the Contractor's sole expense, and the Contractor shall have no claim against the City based on the Contractor's failure to perform the Work in accordance with the Contract Documents.

In addition to the City's right to stop Work, the City may order the Contractor to submit to the City at no additional cost to the City, additional information concerning Contractor's planned Work if the Contractor fails to promptly correct Work that is not in accordance with the requirements of the Contract Documents or persistently fails to carry out Work in accordance with the Contract Documents. The additional information ordered by the City may include, but is not limited to, preparation of Submittals or Working Drawings not otherwise required to be submitted under the Contract Documents.

In the event the City discovers that the Contractor has created an unsafe condition the City may arrange for other work forces to remedy the condition. Such remedial work shall be at the sole discretion of the City. If this action is required, the City may unilaterally terminate Work under the Contract, and will pay only for the quantities of Work actually performed, less the cost of the City's remedial Work. In the event that Work is not halted, the Contractor must take immediate steps to correct the situation. There will be no extra payment for Work required

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to correct unsafe conditions.

The right of the City to suspend the Work shall not give rise to a duty on the part of the City to exercise this right for the benefit of the Contractor or any other person or entity. This right shall be in addition to and not in restriction or derogation of the City's other rights under the Contract Documents.

In the event of a suspension of Work under any of the conditions set forth in this Section 6-1.06, such suspension of Work shall not relieve the Contractor of its legal responsibilities as set forth in these General Conditions.

6-1.07 **TIME OF COMPLETION.** The Contractor shall complete the entire Work, including Installation, repairs, startup, troubleshooting, painting, and touchup, training, submittal or record drawings, and manuals, cleanup, demobilization, and all other Work within the number of Days set forth in the Supplemental Conditions. The time for completion includes an allowance for working time lost due to normal inclement weather.

Extensions of time may be allowed for unusual inclement weather under the provisions hereinafter described. Unusual inclement weather is weather which adversely affects "controlling" operations or the critical path of construction and which meets one of the following criteria:

A. For the particular calendar month in question, the number of individual Days with rainfall exceeding 0.10 inches exceeds the average number of such Days for that month over the immediately preceding five (5) years of record by at least three (3) Days.

B. For the particular calendar month in question, the total cumulative rainfall for that month exceeds the average cumulative rainfall for that month over the immediately preceding five (5) years of record by at least two inches (2").

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Rainfall shall be measured at a publicly operated, maintained, and reported station in reasonable proximity to the construction site. A claim for delay shall indicate the period of rainfall which is claimed as "unusual," the specific dates during which the unusual rainfall and subsequent wet soil conditions prevented Work, and the specific critical path tasks adversely affected by such unusual weather. A claim for delay due to unusual inclement weather shall be filed within ten (10) Days of the apparent end of the unusual inclement rainfall period, whether or not the monthly totals are available at that time. The burden of proof that weather meets the criteria for unusual weather shall be solely the responsibility of the Contractor.

It is the responsibility of the Contractor to order materials required for the Work properly and promptly on a Notice to Proceed. If evidence presented demonstrates that, in spite of the Contractor's efforts, government-established priorities controls delay material deliveries, suitable extension of time will be made.

If performance of extra Work ordered by the City or failure of the City to provide the necessary site for Installation affects construction tasks which are "controlling" or which are on the "critical path" of the Construction Schedule, suitable extensions of time will be made.

The Contractor shall not be entitled to a time extension for delays in activities on non-critical paths of the favorably reviewed schedule unless the duration of the excusable delay exceeds the total float of the activities being delayed. If the duration of an excusable delay does exceed the total float of the activities affected by the delay, the Contractor shall be entitled to an extension equal to the difference.

C. Determination that a day is a non-working day by reason of inclement weather or conditions resulting immediately therefrom, shall be made by the Director.

6-1.08 **LIQUIDATED DAMAGES.** It is agreed by the parties to the Contract

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that in case all the Work called for under the Contract in all parts and requirements is not completed within the number of Days as set forth in the Supplemental Conditions, damage will be sustained by the City and that it is and will be impracticable and extremely difficult to ascertain and determine the actual damage which the City will sustain in the event of and by reason of such delay; and it is therefore agreed that the Contractor will pay to the City, the monetary amount indicated in the Supplemental Conditions in dollars (U.S.) per day for each and every calendar day of delay in completing the Work in excess of the number of Days prescribed and the number of additional calendar days, if any, authorized by Contract Change Order; and the Contractor agrees to pay said Liquidated Damages herein provided for, and further agrees that the City may deduct the amount thereof from any moneys due or that may become due the Contractor under the Contract.

It is further agreed that in case the Work is not finished and completed in all parts and requirements within the number of Days specified, the City shall have the right to increase the number of Days or not, as it may deem best to serve the interest of the City, and if it decides to increase the said number of Days, it shall further have the right to charge to the Contractor, its heirs, assigns or sureties and to deduct from the final payment for the Work all of any part, as it may deem proper, of the actual cost of engineering, inspection, superintendence, and other Overhead expenses which are directly chargeable to the Contract, and which accrue during the period of such extension, except that cost of preparation of final statement shall not be included in such charges.

6-1.09 **DELAYS AND EXTENSIONS TO THE WORK.** The Contractor must complete all Work within the time specified in the Agreement. The Contractor will be granted an extension of time and will not be assessed with liquidated damages or the cost of engineering

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and inspection for any delay in substantially completing the Work (or parts thereof) beyond the time set forth in the Agreement, provided that such delay was caused by unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include acts of public enemy, fire, floods, abnormal weather (as described below), earthquakes, epidemics, quarantine restrictions, strikes, labor disputes and freight embargoes, fire, changes made pursuant to the provisions of "Changes in the Work" under Section 3 of these General Conditions or acts or neglect of the City not contemplated by the Contract Documents. In all cases, any extension of time is conditioned on the following:

1. That the cause is not due to the fault or negligence of the Contractor, and the Contractor has taken reasonable precautions to prevent and minimize the effects thereof; and

2. That the Contractor notifies the Director in writing within three (3) Days from the beginning of such delay specifying the nature of the delay and the measures that have been or will be taken to prevent or minimize the delay. Failure to submit written notice within this time period shall constitute an absolute waiver of any claim for a time extension.

No extension of time will be granted for a delay caused by a shortage of materials, unless the Contractor furnishes to the City documentary proof that it has diligently made every effort to obtain such materials from all known sources within reasonable reach of the work and further proof, as acceptable to the Director, that the inability to obtain such materials when originally planned did in fact cause a delay in Final Completion of the entire Work which could not be compensated for by revising the sequence of the Contractor's operations. Only the physical shortage of material will be considered as a cause for extension of time, and no consideration

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will be given to any claim that material could not be obtained at a reasonable, practical or economical cost or price, unless it is shown to the satisfaction of the City that such material could have been obtained only at exorbitant prices entirely out of line with current rates, taking into account the quantities involved and the usual practices in obtaining such quantities.

No extension of time will be granted for a delay caused by Contractor's staff turnovers, understaffing or insufficient quantity of qualified staff able to perform the necessary work.

The term "shortage of materials," as used in this section, shall apply only to materials, articles, parts or equipment which are standard items and shall not apply to materials, parts, articles or equipment which are processed, made, constructed, fabricated or manufactured to meet the specific requirements of the Contract Documents.

No extensions of time will be granted for delays that have no measureable impact on the completion of the Work (or parts thereof) under the Contract Documents. When extensions of time are granted, they will be limited to the period equivalent to the actual number of Days lost on the critical path or controlling operations of the Construction Schedule, taking into account the extent to which that delay could be decreased by reasonable mitigation measures by the Contractor. All requests for extensions of time must be supported with a critical path analysis showing the critical path and impacts to it. Contractor's failure to submit this analysis will be sufficient cause for denial of any request for a time extension.

Within a reasonable period of time after the Contractor submits the notice and information required by this section, the City will determine whether an extension of time is justified and, if so, the number of days for the extension.

Abnormal weather may be a valid basis for a time extension under the Agreement. "Abnormal Weather" occurs when the number of days of rain above 0.5 inches in a 24 hour

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period exceeds the average for such rainfall in a particular month as determined by the National Weather Service. The Contractor will only be entitled to, at most, a time extension for the number of days of rain exceeding the average for that month in the locale where the Work is to be performed. If delays are caused by the Contractor or those for whom the Contractor is responsible, the Contractor will only be entitled to, at most, a time extension for the number of rain days exceeding the average for the month when the Work should have been performed.

In addition, before a time extension may be granted for abnormal weather, the Contractor must establish that the rain either significantly impacted at least sixty percent (60%) of the planned work of the controlling operations for a particular day or prohibited at least five (5) hours of work on the controlling operations planned for that day. Contractor shall employ reasonably methods to mitigate the impact of abnormal weather (i.e., dewatering, protection of site, etc.) The occurrence of rain during non-work hours or having minimal impact to work on the controlling operation shall not constitute a day of abnormal weather.

In the event that the project experiences favorable weather for a particular month (e.g., the number of actual rain days in a month less than that indicated above for allowable rain days per months), the additional float resulting from such favorable weather shall accrue to the project.

Any Contractor claim for damages or additional compensation based on delay shall be limited to only those circumstances where the Contractor has fulfilled each of the following three (3) requirements:

1. Contractor has established its entitlement to a time extension pursuant to the provisions described above regarding delay and extensions to the Work.
2. The delay was caused solely by the City's issuance of changes made pursuant to the

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provisions of "Changes in the Work" under Section 3 of these General Conditions or by acts or neglect of the City.

3. The delay was unreasonable under the circumstances and not within the contemplation of the parties.

It is expressly understood and agreed that delays caused by the City will be non-compensable when there are concurrent delays caused by the Contractor. Also, the Contractor shall have no entitlement to additional compensation for any delay where there have been concurrent delays caused by non-compensable delays, including, but not limited to, fire, floods, earthquakes, epidemics, quarantine restrictions, strikes, labor disputes, and freight embargoes.

Contractor's damages and/or additional compensation for delays will consist solely of the extended costs of maintaining the Contractor's Work Site presence. The Contractor will not be entitled to any extended home office overhead.

Compensation for idle time of equipment will be determined in the same manner as determinations are made for equipment used in the performance of extra work paid for on a Force Account basis with the following exceptions:

1. The time for which compensation will be paid will be the actual normal working hours during which such delay conditions exists, but in no case will exceed eight (8) hours in any one day.
2. The days for which compensation will be paid will be each calendar day of the work week (defined elsewhere in the Contract Documents) and Legal Holidays, during the existence of such delay, except that when rental of the equipment is paid for under the provisions in Section 3-1.06C, "Force Account Payment – Equipment," of these General Conditions, no payment will be made for delays in accordance with the

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provisions of this section.

Actual loss shall be understood to include no items of expense other than idle time of personnel, cost of extra moving of equipment, and cost of longer hauls. Compensation for idle time of equipment will be determined as provided in this section and compensation for idle time of personnel will be determined pursuant to Section 3-1.06A, "Force Account Payment – Labor," of these General Conditions. No markup will be added in either case for Overhead and profit. The cost of extra moving of equipment and the cost of longer hauls will be paid for as extra work as provided pursuant to "Changes to the Work" elsewhere in the Contract Documents.

6-1.10 **TERMINATION.**

6-1.10A **TERMINATION OF AGREEMENT – CONVENIENCE OF CITY.** The Department reserves the right to terminate the Contract at any time and for any reason if the Director determines that to do so would be in the best interest of the City. Any termination which is not based on the circumstances set forth in Section 6.1-10B below shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which performance of Work under the Contract is terminated, and the date upon which such termination becomes effective.

Upon the Contractor's receipt of a written Notice of Termination for convenience, the Contractor shall cease Work as to those portions of the project so terminated and shall undertake the steps outlined in Section 6-1.10B below.

1. Acceptance of the Contract as hereinafter specified shall not relieve the Contractor of responsibility for damage to materials except as follows:

   a. The Contractor's responsibility for damage to materials for which partial payment has been made as provided in Section 7-1.07, "Progress

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Payments," of these General Conditions and for materials furnished by the City for use in the Work and unused shall terminate when the Director certifies that such materials have been stored in the manner and at the locations he or she has directed.

b. The Contractor's responsibility for damage to materials purchased by the City subsequent to the issuance of the notice that the Contract is to be terminated shall terminate when title and delivery of such materials has been taken by the City.

c. When the Director determines that the Contractor has completed the Work under the Contract directed to be completed prior to termination and such other Work as may have been ordered to secure the project for termination, the Contractor will recommend that the City formally accept the Work, and immediately upon and after such Acceptance by the City, the Contractor will not be required to perform any further Work thereon and shall be relieved of its contractual responsibilities for injury to persons or damage to property which occurs after the formal Acceptance of the project by the City.

2. The total compensation to be paid to the Contractor shall be determined by the Director on the basis of the following:

a. The reasonable cost to the Contractor, without profit, for all Work performed under the Contract, including mobilization, demobilization and Work done to secure the project for termination. Reasonable cost will include a reasonable allowance for project overhead and general

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administrative Overhead not to exceed a total of seven percent (7%) of Direct Costs of such Work.

b. A reasonable allowance for profit on the cost of the Work performed as determined under subsection (a), provided the Contractor establishes to the satisfaction of the Director that it is reasonably probable that it would have made a profit had the Contract be completed and provided further, that the profit allowed shall in no event exceed four percent (4%) of said cost.

c. The reasonable cost to the Contractor of handling material returned to the vendor, delivered to the Department or otherwise disposed of as directed by the Director.

d. A reasonable allowance for the Contractor's administrative costs in determining the amount payable due to termination of the Contract.

All records of the Contractor and the Contractor's Subcontractors, necessary to determine compensation in accordance with this Section, shall be open to inspection or audit by representatives of the Department at all times after issuance of the notice that the Contract is to be terminated and for a period of three (3) years, and such records shall be retained for that period.

After Acceptance of the Work by the Director, the Director may make payments on the basis of interim estimates pending issuance of the Final Statement, when in his or her opinion the amount thus paid, together with all amounts previously paid or allowed, will not result in total compensation in excess of that to which the Contractor will be entitled. All payments, including payment upon the Final Statement, shall be subject to deduction for prior payments and amounts, if any, to be kept or retained under the provisions of the Contract.

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In the event that the City terminates this Contract under Section 6-1.10B below and it is determined for any reason that there was not sufficient cause to do so, the City's termination automatically will convert to a termination for convenience under this section and the terms and conditions outlined in this section automatically will be applied to effectuate the Contract termination. Thus, damages to which a Contractor may be entitled as a result of an improper default termination will be limited to the amounts provided for in this section.

The provisions of this section shall be included in all subcontracts.

6-1.10B **TERMINATION OF AGREEMENT - FOR CAUSE.** An "Event of Default" as referred to in this section shall occur if the Contractor:

1. Fails to maintain progress of the Work in accordance with the requirements of the Contract Documents; or
2. Fails to prosecute the Work or any of its components in accordance with the Contract Documents; or
3. Persistently or repeatedly fails or refuses to supply sufficient properly skilled workers or proper material to permit the performance of the Work in accordance with the Contract Documents; or
4. Fails to make prompt payment to Subcontractors or Suppliers in accordance with the respective agreements between the Contractor and the Subcontractor and Contractor and Supplier; or
5. Fails to comply with applicable laws, ordinances or rules, regulations or orders of a public authority having jurisdiction over the Work; or
6. Abandons, assigns or sublets the Contract without approval of the City; or
7. Becomes bankrupt or is subject to appointment of a receiver on behalf of the

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Contractor; or

8. Otherwise is guilty of a substantial breach of a provision of the Contract Documents.

Upon the City's reasonable belief that there has been an Event of Default by the Contractor, the City may elect to give the Contractor written notice thereof. The Contractor thereafter shall cure the default as soon as possible and in no event after ten (10) Days from the Contractor's receipt of the City's written notice.

If the Contractor does not timely cure its default, the City may, without waiver of any of its other rights and remedies, elect to terminate the Contract, or portion thereof.

Upon the City's election to terminate the Contract, or portion thereof, the City shall have the right to complete the Work, or portion involved, by whatever means and methods it deems expedient, including the hiring of others on such terms as the City deems advisable. The City shall have the right to take possession of the Contractor's materials, plant, tools, equipment and property of any kind provided by or on behalf of the Contractor for the purpose of the Work, or a portion of them, without being responsible to the Contractor for wear and tear. The Contractor shall have no rights in such property during its use by the City. The City shall not be required to obtain the lowest prices for completing the Work or a portion of it but shall make such expenditures as, in the City's sole judgment, best accomplish such completion.

The expense of completing such Work or portion thereof, together with a reasonable charge for engineering, managerial and administrative services, as certified by the City, shall be charged to the Contractor, and the expense so charged shall be deducted by the City out of such monies as may be due or may at any time thereafter become due to the Contractor. In case such expense is more than the sum which otherwise would have been payable to the Contractor under the Agreement, then the Contractor or its surety or sureties shall promptly pay the amount of

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such excess so due. When the City terminates the Contract under this section, the Contractor shall not be entitled to receive any further payments until the Work is completed and there has been a final settlement of costs of completing the Work covered by such notice of default.

The City will issue to the Contractor a written notice specifying that the Contract, or portion thereof, is terminated. Upon receipt of said written notice and, except as otherwise directed in writing by the City, the Contractor shall:

1. Stop all Work under the Contract; or if partial termination, stop Work relating to the terminated portion of the Agreement;
2. Perform Work the City deems necessary to secure the Work Site for termination including measures to leave the Work Site in a safe condition;
3. Remove equipment from the site of Work, as specified by the City;
4. Take such action as is reasonably necessary to protect materials from damage;
5. Notify all Subcontractors and Suppliers that the Contract or portion thereof is being terminated and that their contracts or orders are not to be further performed unless otherwise authorized in writing by the City;
6. Provide the City with an inventory list of all materials previously produced, purchased or ordered from Suppliers for use in the Work and not yet used in the Work, including its storage location, and such other information as the City may request;
7. Dispose of materials not used in the Work as directed by the Director. It shall be the Contractor's responsibility to provide the City (a) with good title to all materials purchased by the City hereunder, including materials for which partial payment has been made by the City and (b) with bills of sale or other documents of title for such

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materials;

8. Subject to the prior written approval of the City, settle all outstanding liabilities and all claims arising out of Subcontractors or orders for materials terminated hereunder. To the extent directed by the City, the Contractor shall assign to the City all rights, title and interests of the Contractor under subcontracts or orders for materials terminated hereunder. The City shall be at liberty to negotiate with and engage any Subcontractors who had contracted with the Contractor for the Work;
9. Furnish the City with the documentation required to be furnished by the Contractor under the provisions of the Contract Documents, including, on projects as to which Federal funds are involved, all documentation required under the Federal requirements included in the Agreement; and
10. Take such other actions as the City may direct.

If only a portion of the Work has been terminated, the Contractor shall perform the remainder of the Work in conformity with the Contract Documents and in such a manner as not to interfere with the City or others in their performance and completion of the portion of the Work which was terminated.

The City may recover from the Contractor the amount of any loss or damage, including consequential damages, suffered or incurred as a result of the Contractor's default.

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SECTION 7

ACCEPTANCE AND PAYMENT

7-1.01 **ACCEPTANCE.** When the Contractor believes that the entire Work is fully and finally completed, including the satisfactory completion of inspections, tests, and documentation specified in the Contract Documents and completion of all punch list and clean-up items, the Contractor shall submit to the City a written request for final Acceptance within fifteen (15) Days thereafter, specifying that the Work is fully and finally completed and the date on which it was completed. Within thirty (30) Days after receipt of the request for final Acceptance, the City will inspect the Work and will either:

1. Reject the request for final Acceptance, specifying the defective and/or uncompleted portions of the Work; or
2. Notify the Contractor that the Work will be accepted by Resolution of the City Council of the City of Roseville, and a Notice of Completion will be caused to be recorded by the City Clerk; or
3. Notify the Contractor that the Work has been accepted by the City but no Notice of Completion will be recorded.

If the City rejects the request for final Acceptance, the Contractor shall promptly remedy the defective and/or uncompleted portions of the Work. Thereafter, the Contractor shall again submit a written request for final Acceptance of the Work, specifying a new date based on the date the defective and/or uncompleted portions of the Work were corrected. Thereafter, the foregoing procedure shall apply successively until the City has verified that the Work is fully and finally completed and accepted the Work by Resolution of the City Council or by written

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notification from the Director. Immediately upon such Acceptance, the Contractor shall be relieved of the duty of maintaining the Work as a whole.

All warranties commence upon final Acceptance of the Work. The City's final Acceptance of the Work shall not be construed as an acceptance by the City of any latent defects discovered with regard to the Contractor's work. Furthermore, Contractor's obligations under Section 5-1.22 "Responsibility for Damage and Indemnification" shall still remain applicable after the City's grant of final Acceptance of the Work.

Prior to final Acceptance, the Contractor shall submit to the City the Record Documents and Operation and Maintenance Manuals as specified in the Contract Documents.

7-1.02 **SCOPE OF PAYMENT.** The Contractor shall accept the compensation provided in the Contract as full payment for furnishing all labor, materials, tools, equipment, and incidentals necessary to the completed Work and for performing all Work contemplated and embraced under the Contract; also for loss or damage arising from the nature of the Work, or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the Work until the Acceptance by the Director and for all risks of every description connected with the prosecution of the Work, also for all expenses incurred in consequence of the suspension or discontinuance of the Work as provided in the Contract; and for completing the Work according to the Contract. Neither the payment of any estimate nor of any retained percentage shall relieve the Contractor of any obligation to make good any defective Work or material.

No compensation will be made in any case for loss of anticipated profits.

7-1.03 **NOTICE OF POTENTIAL CLAIM.** The Contractor shall not be entitled to the payment of any additional compensation for any act or failure to act by the City,

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including failure or refusal to issue a Change Order, or for the happening of any event, thing, occurrence or other cause unless the Contractor has given the City due written Notice of Potential Claim as hereinafter specified, provided, however, that compliance with this Section 7-1.03 shall not be a prerequisite as to matters within the scope of the notice provisions in Section 6-1.07, "Time of Completion," or the notice provisions in Section 6-1.08, "Liquidated Damages," of these General Conditions, nor to any claim which is based on differences in measurement or errors of computation as to correct quantities.

The written Notice of Potential Claim shall set forth the reasons for which the Contractor believes additional compensation will or may be due, the nature of the costs involved, and, insofar as possible, the amount of the potential claim. The said Notice as above required must have been given to the Director prior to the time that the Contractor shall have performed the Work giving rise to the potential claim for additional compensation, if based on an act or failure to act by the Director, or in all other cases within seven (7) Days after the happening of the event, thing, occurrence or other cause giving rise to the potential claim.

If the Notice of Potential Claim does not include complete information about the claim or the parties do not execute a Contract Change Order in connection with the Notice of Potential Claim, Contractor shall submit complete information about its claim for additional compensation and/or extension of time for performance within fifteen (15) Days after such work is performed. Failure to provide written notice of claim prior to undertaking such work or failure to timely submit a complete and specific information about the claim for additional compensation and/or extension of the time for performance shall be deemed a waiver and abandonment of such claim.

If there is a dispute over any claim, the Contractor shall continue to Work during the dispute resolution process in a diligent and timely manner as directed by the City, and shall be

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governed by all applicable provision of the Agreement.

The Contractor shall maintain cost records of all Work that is the basis of any dispute. On a daily basis, Contractor shall submit to City completed daily forms, the format of which will be acceptable to the City, with respect to the Contractor's costs of performing the disputed work. These daily forms shall itemize all of Contractor's costs in performing the disputed work, including, but not limited to, all costs relating to materials, labor and equipment with respect to the disputed work. These daily forms shall provide names or identification and classification of affected workers, the hourly rate of pay and hours worked, and also the size, type, and identification number of equipment and hours operated. Said daily work forms shall be duly signed and verified by the Contractor or its authorized representative. The City's receipt of the Contractors' daily forms shall not constitute an approval of the Contractor's claim. Contractor's failure to submit the daily forms on a daily basis shall constitute a waiver of the Contractor's right to claim any additional compensation for the disputed work.

Each Contractor claim shall include full and complete information concerning the Claim. Contractor shall provide a clear, concise recital of the basis, upon which the claim is asserted, including a designation of the provisions of the Contract Documents upon which the claim is based. Contractor shall also include a statement as to the amount of time and/or compensation sought pursuant to the claim; if Contractor's claim arises from an ongoing occurrence, Contractor shall so state in its claim, including a description of the specific Work activities affected by the claim. All costs, expenses or damages and extensions of time claimed shall be described in reasonable detail under the circumstances together with complete supporting documentation.

The City will review any timely Notice of Potential Claim and supporting information

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submitted by Contractor. In conducting this review, the City shall have the right to require the Contractor to submit such additional or supporting documents, data and other information as the City may require.

If an agreement can be reached which resolves the Contractor's claim, the parties will execute a Contract Change Order to document the resolution of the claim. If the parties cannot reach agreement with respect to the Contractor's claim, the Contractor shall still be obligated to comply with the claim identification provisions identified in these General Conditions, including but not limited to Section 7-1.04.

It is the intention of this Section 7-1.03 that differences between the parties arising under and by virtue of the Contract be brought to the attention of the Director at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action promptly taken. The Contractor hereby agrees that it shall have no right to additional compensation for any Claim that may be based on any such act, failure to act, event, thing or occurrence for which no timely written Notice of Potential Claim as herein required was filed.

7-1.04 **CLAIMS.** Contractor must submit all Claims, for which it has previously submitted a Notice of Potential Claim, prior to Acceptance of the Work. Each such Claim must be sent to the City by registered mail or certified mail with return receipt requested and must contain reasonable documentation to support the Claim.

Upon receipt of a Claim, the City shall conduct a reasonable review of the Claim and, within a period not to exceed forty-five (45) Days, or such further time as mutually agreed upon or necessary pursuant to Public Contract Code Section 9204, the City shall provide the Contractor a written statement identifying what portion of the Claim is disputed and what portion is undisputed. If the City does not respond to a Claim from the Contractor within the time

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specified herein, such Claim shall be deemed rejected in its entirety.

Any payment due on an undisputed portion of the Claim shall be processed and made within sixty (60) Days after the City issues its written statement.

If the Contractor disputes the City's written response, or if the City does not respond within the time specified herein, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the City shall schedule a meet and confer conference within thirty (30) Days for settlement of the dispute.

Within ten (10) business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the City shall provide the Contractor a written statement identifying the portion of the Claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the Claim shall be processed and made within sixty (60) Days after the City issues its written statement. Any disputed portion of the Claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation, with the City and the Contractor sharing the associated costs equally. The City and the Contractor shall mutually agree to a mediator within ten (10) business days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the Claim remaining in dispute shall be resolved in accordance with Section 7-1.05 below.

7-1.05 **DISPUTE RESOLUTION PROCEDURE** All Claims not resolved

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pursuant to Section 7-1.04, shall be resolved pursuant to Public Contract Code Section 10240, et seq.

7-1.06 **STOP PAYMENT NOTICES.** The City, by and through the Department or other appropriate office or officers, may at its option and at any time retain out of any amounts due the Contractor, sums sufficient to cover claims, filed pursuant to Civil Code Section 9350, et seq., including an amount to provide for the reasonable cost of any litigation thereunder.

7-1.07 **PROGRESS PAYMENTS.** Within fifteen (15) Days after the effective date in the Notice to Proceed, but in any event prior to Contractor's first Application for Payment, the Contractor shall submit to the City a detailed Schedule of Values.

Upon its approval, the Schedule of Values will form a basis for determining the compensation payable to the Contractor based on its actual progress of Work with respect to each Lump Sum bid item. The City, prior to any progress payment being made, must approve the Schedule of Values.

At the Director's discretion the approved Schedule of Values may be used as the basis for calculating the adjustment in compensation for a lump sum bid item due to changes ordered by the Director. When an ordered change increases or decreases the quantities shown in an approved Schedule of Values, at the Director's discretion, the adjustment in compensation may be determined in the same manner specified for increases and decreases in the quantity of a bid item of work in accordance with Section 3-1.05(B), "Contract Price Adjustment," of these General Conditions.

The Contractor once in each month shall submit an Application for Payment, for approval by the Director. Contractor's Applications shall be based on the Schedule of Values submitted to the City. These applications shall be supported by: (1) documentation requested by the City to

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substantiate the payment request; (2) statutory releases from Contractor and all Subcontractors and suppliers pursuant to Civil Code Sections 8132 and 8138; and (3) certified payroll records for the period for which payment is requested. Specifically, the Contractor will submit conditional waivers upon progress payment executed by all contractors and suppliers that will be receiving sums sought in the instant payment request and also submit unconditional waivers upon progress payment executed by all contractors and suppliers that have been paid to the date of the payment request. The Contractor shall certify that the Work for which payment is requested has been accomplished. When requested by the City, the Contractor shall submit receipts, invoices and other documentation that the City requires to be furnished for purpose of evaluating the application.

The City will pay the Contractor within thirty (30) Days after its receipt of an undisputed and properly submitted Application for Payment, after deducting all previous payments, retention, and other sums as described in the Contract Documents. Within seven (7) Days of its receipt of the Contractor's Application for Payment, the City will determine whether it complies with the provisions of the Contract Documents. As appropriate, the City will return the application to the Contractor accompanied by a document prepared by the City setting forth the reasons for the rejection. Thereafter, the Contractor shall correct and resubmit the Application for Payment. Progress payments may be withheld for Work that is not performed in accordance with the Contract Documents.

The City may deduct the following from each progress payment:

1. An amount equal to one hundred and twenty-five percent (125%) of the amount claimed under any stop payment notice or other lien filed against the Contractor, which includes an amount to provide for the reasonable cost of any litigation

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thereunder.

2. Any Liquidated Damages or Assessments that have accrued as of the date of the Application for Payment.
3. Any sums expended by the City in performing any of the Contractor's obligations under the Agreement that the Contractor has failed to perform.
4. Any other sums that the City is entitled to recover from the Contractor under the terms of the Contract including damages to the City's property.
5. The failure of the City to deduct any of the above identified sums from a progress payment shall not constitute a waiver of the City's right to such sums.

No such estimate or payment shall be construed to be an acceptance of any defective Work or improper materials.

Under no circumstances will the City make payment to unlicensed Contractors. As a condition of payment, the Contractor is required to maintain the applicable Contractor's license as identified in the Notice to Contractors for the duration of the Work.

7-1.08 **PAYMENT FOR MATERIALS AND EQUIPMENT ON HAND.**

Partial payments may be made to the extent of seventy-five percent (75%) of the cost of materials and equipment plus delivery to be incorporated in the Work, provided that such materials and equipment meet the requirements of the Contract Documents and are delivered to acceptable sites on the plant site or at other sites in the vicinity that are acceptable to the City and only with the prior written approval by the City. Such delivered costs of stored or stockpiled materials and equipment may be included in the next progress payment after the following conditions are met:

A. Equipment and materials will only be eligible if given conditional or final

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Acceptance by the Director and are in apparent compliance with favorably reviewed Submittals.

B. Only equipment or materials which have received favorable review of Shop Drawings will qualify.

C. The material or equipment has been stored or stockpiled adequately protected against damage in a manner acceptable to the Director at an approved site.

D. The Contractor has furnished the Director with acceptable evidence of the quantity and the quality of such stored or stockpiled materials or equipment with identification of where they will be incorporated into the project with Specification reference.

E. The Contractor has furnished the Director with satisfactory evidence that the material or equipment and transportation costs have been paid.

F. The Contractor has furnished the City legal title (free of liens or encumbrances of any kind) and lien releases to the material or equipment so stored or stockpiled.

G. The Contractor has furnished the City evidence that the material or equipment so stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the Work.

It is understood and agreed that the transfer of title and the City payment for such stored or stockpiled materials or equipment shall in no way relieve the Contractor of its responsibility for furnishing and placing such materials or equipment in accordance with the requirements of the Contract Documents.

In no case will the amount of progress payments for materials or equipment on hand exceed the Contract Price for such materials or equipment or the Contract Price for the Contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant

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materials.

The Contractor shall bear all costs associated with the progress payment of stored or stockpiled materials or equipment in accordance with the provisions of this Section.

7-1.09 **RETENTION ON PROGRESS PAYMENTS.** From each progress payment estimate, five percent (5%) will be deducted and held in retention by the City. The remainder, less any deductions described in Section 7-1.07, "Progress Payments," of these General Conditions, will be paid to the Contractor as progress payments.

Pursuant to Public Contract Code Section 22300, the successful Bidder may submit Securities in lieu of retention payments by the City. Upon the Contractor's request, the City will make payment of funds withheld from progress payments, pursuant to the requirements of California Public Contract Code Section 22300, if the Contractor deposits in escrow with the City or with a bank acceptable to the City, securities eligible for investment under California Government Code Section 16430, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by the Contractor and the City, upon the following conditions:

1. The Contractor shall bear the expenses of the City and the escrow agent in connection with the escrow deposit made.
2. Securities or certificates of deposit to be placed in escrow shall be of a value at least equivalent to the amounts of retention to be paid to the Contractor pursuant to this section.
3. Contractor shall enter into an escrow agreement satisfactory to the City, which agreement shall be substantially similar to the form provided in California Public Contract Code section 22300.

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4. The Contractor shall obtain the written consent of the surety to such agreement.

7-1.10 **FINAL PAYMENT.** Final payment will be made only after Contractor has achieved Final Completion of the Work pursuant to the provisions of Section 7-1.01, "Acceptance," of these General Conditions. Before final payment can be made, the Contractor shall have furnished the City with the following:

1. All Record Documents, catalogues, instruction sheets and information as required by the Contract Documents.
2. Conditional Waivers and Releases Upon Final Payment executed by Contractor and all Subcontractors and Suppliers, as provided by Civil Code Section 8136. Unconditional Waivers and Releases Upon Final Payment, as provided in Civil Code Section 8138, executed by Contractor and all Subcontractors and Suppliers, must be provided for all Subcontractors and Suppliers that have been paid in full.

Within thirty (30) Days of the date of the City's Acceptance of the Work, the Contractor shall prepare and submit a Final Invoice, showing the proposed total amount due the Contractor, segregated by Bid item quantities, Change Order Work, and other basis for payments; deductions made or to be made for prior payment; and amounts previously retained. Prior invoices and payments shall be subject to correction in the proposed Invoice for Final Payment. Payments to the Contractor will be made only for actual quantities of the Contract items of work constructed in accordance with the Contract Documents.

The City will review the Contractor's proposed Final Invoice and necessary changes or corrections will be forwarded to the Contractor. Within ten (10) Days thereafter, the Contractor

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shall submit a revised proposed Final Invoice incorporating changes or corrections made by the City together with any new claims resulting therefrom. Upon approval by the City, the corrected proposed Final Invoice will become the approval Final Invoice.

If agreements are reached on all questions regarding the Final Invoice, the City will pay the entire sum found due on the approved application. However, the City will withhold sums sufficient to pay all unsettled claims for which stop payment notices have been filed pursuant to Section 9350, et seq. of the California Civil Code, together with the reasonable cost of any litigation thereunder.

Final payment will be made within thirty (30) Days after receipt of an approved Final Invoice and other required Submittals referenced above or within sixty (60) Days after Acceptance of the work by the City, whichever is later, provided, however, that if an approved Final Invoice has not been submitted within sixty (60) Days after Acceptance of the Work by the City, the City may elect to make payment of sums not in dispute without prejudice to the right of either the City or the Contractor in connection with such disputed sums. Notwithstanding the foregoing, if a Notice of Completion is recorded, final payment shall not be made prior to the expiration of the thirty-five (35) calendar day lien period. The start of this lien period is the date the Placer County Recorder's Office records the Notice of Completion.

The City may withhold from the Final Payment an amount not to exceed one hundred fifty percent (150%) of any amount in dispute between the City and the Contractor.

The making of Final Payment shall not operate to release the Contractor or its sureties from obligations arising under the Contract, the Contract bonds and warranties as herein provided. Specifically, the making of final payment shall not constitute a waiver and release of claims by the City arising from:

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1. Unsettled or future liens;

2. Failure of the Work to comply with the requirements of the Contract Documents;

3. The terms of any warranties required by or contained in the Contract Documents;

4. The right to any insurance proceeds or the right to make any insurance or bond claims;

5. Any claims with respect to Contractor's obligations of indemnity with respect to claims asserted by third parties; or

6. Any latent deficiencies with the Work or Contractor's fraud.

7-1.11 **CLERICAL ERRORS.** Notwithstanding the provisions of Section 7-1.10, "Final Payment," of these General Conditions, for a period of three (3) years after Acceptance of the Work, all estimates and payments made pursuant to said Section 7-1.10, are subject to correction for clerical errors in the calculations involved in the determination of quantities and payments. The Contractor and the City agree to pay to the other any sum due under the provisions of this Section 7-1.11, provided, however, if the total sum to be paid is less than $100, no such payment shall be made.

7-1.12 **WARRANTY.** Notwithstanding inspections and Acceptance by the City of Work furnished under the Contract Documents, the Contractor hereby unconditionally guarantees that all materials and equipment furnished will be of good quality and new, that the Work will be free from defects in workmanship and materials and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective.

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This warranty by the Contractor is in addition to any warranties or guarantees required elsewhere in the Contract Documents. This warranty shall be in effect notwithstanding any disclaimers, or limiting or conditional terms contained in such separate warranties furnished by manufacturers or suppliers.

The Contractor hereby agrees to repair or replace any and all Work, together with any other adjacent Work which may be displaced in so doing, that may prove to be not in accordance with the requirements of the Contract or that may be defective in its workmanship or material during the greater of a period of one (1) year after Acceptance of the Work by the City or the period specified in the Special Conditions, without any expense whatsoever to the City, ordinary wear and tear and unusual abuse or neglect excepted.

The Contractor further agrees, that within ten (10) Days after being notified in writing by the Department of any Work not in accordance with the requirements of the Contract Documents or of any defects in the Work, the Contractor will commence and prosecute with due diligence all Work necessary to fulfill the terms of this warranty, and to complete such Work within a reasonable period of time. In the event Contractor fails to comply, it does hereby authorize the Department to proceed to have such Work done at the Contractor's expense and the Contractor will honor and pay the cost and charges therefore upon demand. The Department shall be entitled to all costs and expenses, including reasonable attorneys' fees, necessarily incurred upon the Contractor's refusal to honor and pay the above costs and charges.

All warranties set forth in the Contract Documents shall be deemed cumulative and not alternative or exclusive. Nothing contained in this section shall be construed to establish a period of limitation with respect to any other obligation, which Contractor has under the Contract Documents or under any separate warranty or guaranty required thereby. The establishment of a

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specific warranty period relates only to the specific obligation of Contractor to correct defective Work, and it has no relationship to the time within which its obligation to comply with the Contract Documents or applicable provision of law may be sought to be enforced, nor to the time within which proceedings may be commenced to establish Contractor's liability with respect to its obligations other than specifically to correct the Work. Without limiting the foregoing, it is understood and agreed that Contractor shall remain responsible for latent defects with its work, regardless of the expiration of any warranty period set forth in the Contract Documents.

7-1.13 **WARRANTY OF TITLE.** No material, supplies, or equipment for the Work under this Contract shall be purchased subject to any chattel mortgage, security agreement, or under a conditional sale or other agreement by which an interest therein or any part thereof is retained by the seller or supplier. The Contractor warrants good title to all material, supplies, and equipment Installed or incorporated in the Work and agrees upon completion of all Work to deliver the Premises, together with all improvements and appurtenances constructed or placed thereon by it, to the City free from any claim, liens, security interest, or charges, and further agrees that neither the Contractor nor any person, firm, or corporation furnishing any materials or labor for any Work covered by this Contract shall have any right to a lien upon the Premises or any improvement or appurtenances thereon. Provided, that this shall not preclude the Contractor from Installing metering devices and other equipment of utility companies, the title of which is commonly retained by the utility company. In the event of the Installation of any such metering device or equipment, the Contractor shall advise the City as to the legal owner thereof. Nothing contained in this paragraph, however, shall defeat or impair the right of such persons furnishing materials or labor under any bond given by the Contractor for their protection or any rights under any law permitting such persons to look to funds due the Contractor in the hands of the City.

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The provisions of this paragraph shall be inserted in all subcontracts and material Contracts, and notice of its provisions shall be given to all persons furnishing materials for the Work when no formal Contract is entered into for such materials.

[END OF GENERAL CONDITIONS]

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SUPPLEMENTAL CONDITIONS

Project: RAC Slide Procurement and Installation

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Scope of Supplemental Conditions

1. The Work shall be performed in accordance with the General Conditions and Department Standards, except as the General Conditions may be modified by the following additional City Standards, incorporated herein by this reference, if so indicated.

	COMMUNITY DESIGN GUIDELINES 311 Vernon Street, Roseville, CA 95678
	SPECIFICATIONS FOR COMMERCIAL CONSTRUCTION (ELECTRIC) 2090 Hilltop Circle, Roseville, CA 95747
X	PARKS CONSTRUCTION STANDARDS 316 Vernon Street, Suite 400, Roseville, CA 95678
X	DESIGN AND CONSTRUCTION STANDARDS 311 Vernon Street, Roseville, CA 95678
	OTHER

Above documents are available at: www.roseville.ca.us.

2. Numbering in these Supplemental Conditions conforms to that in the General Conditions. The existence of a section in these Supplemental Conditions means that the corresponding section in the General Conditions is modified in some respect. Unless otherwise specified, the modified General Condition is deleted entirely and the provisions of these Supplemental Conditions are substituted.

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SECTION 1. DEFINITIONS AND TERMS

1-1.24 **DEPARTMENT.** Section 1-1.24 of the General Conditions is amended to include the following:

The Department for Contract Administration is the PARKS, RECREATION & LIBRARIES Department of the City of Roseville.

1.1.56 **QUALIFIED BIDDERS**. A pool slide manufacturer/installer with a Class "A" General Engineering license or Class "B" General Building license is allowed if, 1) a majority of work is performed by the general contractor; and 2) the general contractor has successfully completed other pool slide manufacturing and installation work equal to the size and scope of the current project within the last three years.

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SECTION 2. CONTROL AND SCOPE OF THE WORK

2-1.08 **SUBMITTALS.** Section 2-1.08 of the General Conditions is amended to include the following:

The time allowed for review of each submittal is 14 Days after receipt of the submittal by the Director.

2.1.28 **PROJECT DOCUMENTS.** Potential bidders are advised to obtain all documents and specifications related to this project directly from the City of Roseville. The City of Roseville does not guarantee the accuracy of any forms, plans, or project manuals obtained through outside sources other than the City of Roseville. Furthermore, the City does not guarantee the distribution of any addendums or the accuracy of their content if obtained from a third party. Bidders expressly assume the risk that their bid will be rejected from the use of plans and manuals obtained from third parties other than the City of Roseville.

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SECTION 3. CHANGES IN THE WORK

There are no amendments to the General Conditions.

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SECTION 4. CONTROL OF MATERIALS

4-1.01 **MATERIALS.** Section 4-1.01 of the General Conditions is amended to include the following:

City to furnish and install, by separate contract, removal of existing pool slide and associated piping, removal and replacement of water play structure and associated piping, pool deck modifications, removal and replacement of existing pool and water play structure equipment, and replaster of existing recreation pool.

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SECTION 5. LEGAL RELATIONS AND RESPONSIBILITY

5-1.14 **AIR POLLUTION CONTROL AND ASBESTOS.** Section 5-1.14 of the General Conditions is amended to include the following:

To the best of the City's knowledge, asbestos is not present in the vicinity of the Project. Additional information shall be made available to Contractor upon request.

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SECTION 6. PROSECUTION AND PROGRESS

6-1.04 **PROGRESS SCHEDULE.** Section 6-1.04F of the General Conditions is amended to include the following:

Progress schedules showing project completion dates more than __0____ Days earlier than specified in Section 6-1.07 shall be rejected.

6-1.07 **TIME OF COMPLETION.** Section 6-1.07 of the General Conditions is amended to include the following:

The Contractor shall begin Work within _10__ business days after receiving a Notice to Proceed and shall diligently prosecute the Work to completion. The Work shall be completed no later than April 30, 2022.

If landscaping plants require an establishment period, that period will be _90_ calendar days. Start of the establishment should be as outlined in the Specifications.

6-1.08 **LIQUIDATED DAMAGES.** Section 6-1.08 of the General Conditions is amended to include the following:

The amount of Liquidated Damages is the sum of $_800____ per Day.

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SECTION 7: ACCEPTANCE AND PAYMENT

7-1.07 **PROGRESS PAYMENTS.** Section 7-1.07 of the General Conditions is amended to include the following:

The Contractor shall email an electronic copy of Certified Payroll Reports to the Project Manager along with each Application for Payment.

[END OF SUPPLEMENTAL CONDITIONS]

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SPECIFICATIONS

Project: _____

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SECTION 00 31 46
PERMITS

PART 1 - GENERAL

1.01 General Requirements

A. The requirements set forth in the General Conditions shall be in addition to the standards provided herein.

B. The requirements set forth in the Supplemental Conditions shall be in addition to the standards provided herein.

C. The intent of this Section is to furnish bidders with the known list of required permits for the Work under the Contract Documents. Bidders should note that the list is not necessarily complete and that additional requirements may exist or arise.

1.02 Permits

A. The Contractor shall obtain copies of the following permits from the Project Manager. Copies of these shall be obtained prior to start of work and shall be kept on the jobsite.

1. State Water Resources Control Board General Permit for Discharges of Storm Water Associated with Construction Activity:

   Contractors must comply with General Conditions 5-1.20 Water Pollution. .

2. City of Roseville Department of Development Services, Building Permit for all structural items associated with this project, including, but not limited to, accessibility improvements, pool slide structure, mechanical/plumbing improvements, lighting, , and miscellaneous electrical.
3. Placer County Environmental Health Permit for remodel of existing Pool C (recreation pool) and Pool D (water play structure).

B. Contractor shall comply with the conditions of these permits, and will be solely responsible for all costs associated with meeting permit conditions unless specifically specified otherwise in these Contract Documents.

C. A trench/excavation permit must be on file with the City. Submit a copy of the notification letter to CAL OSHA, which outlines the project, and contracted scope of work.

PART 2 - PRODUCTS

Intentionally left blank.

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PART 3 - EXECUTION

Intentionally left blank.

END OF SECTION

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SECTION 01 10 00
SUMMARY OF WORK

PART 1 - GENERAL

1.01 General

A. The requirements set forth in the General Conditions shall be in addition to the standards provided herein.

B. The requirements set forth in the Special Conditions shall be in addition to the standards provided herein.

1.02 Project Description

A. Project Name and address:

Roseville Aquatics Complex Slide Procurement and Installation Project
Roseville Aquatics Complex
3051 Woodcreek Oaks Boulevard
Roseville, CA 95747

B. Project description/scope of work:

The scope of this project includes, but is not limited to: labor, materials, equipment, and engineering to furnish and install one outdoor body flume ride inclusive of fiberglass flume components, flume support system, starting platform with shade structure, stair, railing, and steps, and concrete footings and foundations. Removal of existing pool slide and associated piping, removal and replacement of water play structure and associated piping, pool deck modifications, removal and replacement of existing pool and water play structure equipment, and replaster of existing recreation pool shall be by separate contract.

C. The Contractor, prior to submission of his bid, shall visit the site and become familiar with the physical site conditions, the plans and specifications. All existing site conditions, apparent in a detailed, on-site inspection, shall be a part of the project. Submission of a bid shall represent the Contractor's acknowledgment of the existing site conditions and its effect on the implementation of the contract documents.

1.03 Engineering

A. Field Engineering, as a part of this contract, shall include:

1. Layout of the work and establishment of lines and grades.
2. Said work to be performed by a California Registered Civil Engineer or a California licensed Land Surveyor.

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3. When discrepancies between the drawings and actual site conditions are discovered, notify the Inspector for instruction on how to proceed.
4. All work shall:
   a) Establish indicated layout in relation to the property survey and existing reference points.
   b) Establish and preserve permanent reference points during the course of construction.
   c) Set locations and elevations of all site elements as required for proper completion of the work.

1.04 Permits, Fees and Notices

A. The Contractor and/or his assigned Subcontractors shall obtain any and all required permits (beyond those provided in the Appendix) from all governing authorities, including other City Departments, prior to start of construction.

1.05 Construction Plans

A. Any discrepancies or omissions found in the Contract Documents shall be reported to the City's project manager immediately. The City's project manager will clarify discrepancies or omissions, in writing, within a reasonable time.
B. In resolving inconsistencies among two or more sections of the Contract Documents, precedence shall be given in the following order:
   1. Notice to Contractors
   2. Special Provisions
   3. City of Roseville Parks Construction Standards
   4. City of Roseville Design and Construction Standards
   5. Drawings

   Addenda shall take precedence over all sections referenced therein. Figure dimensions on Drawings shall take precedence over scale dimensions. Detailed Drawings shall take precedence over general Drawings.

1.06 Definitions

A. The term "accepted" where used within, shall mean accepted in writing by the City of Roseville's Project Manager.
B. The term "Inspector", where noted, shall mean the project representative, appointed by the City of Roseville, who will oversee the project on a day-to-day basis.
C. The term "Project Manager", where noted, shall mean the project representative appointed by the Parks Department.
D. The term "Consultant", where noted, shall mean the prime Consultant listed on the cover sheet of these Specifications.

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E. The term “accepted equal”, where used herein, shall mean the equal in the opinion of the Project Manager, in consultation with the Consultant, when necessary, and as accepted in writing by the Project Manager.
F. The term “Project Owner”, where used herein, shall mean the landowner or developer.
G. The term “provide”, where used herein, shall mean furnish and install complete.
H. The term “as selected”, where used herein, shall mean as selected by the Consultant and as accepted by the Project Manager.
I. The term “substantially complete”, where used herein, shall mean the state of which the project can be used in the manner of which it is intended with the exception of minor items as determined by the Project Manager.
J. See Section 1 of the General Conditions for additional definitions and terms.

1.07 Standards

A. Numerous standards are referenced in these contract documents. The referenced standards shall be the current edition as of the date of these contract documents. Also, see Section 4 - 1.02 of the General Conditions.
B. The codes adopted by the City, County, State and federal agencies shall govern minimum requirements for this project. Where codes conflict with these Specifications, the more stringent shall apply, and such conflicts shall be brought to the attention of the Project Manager. Caltrans Standards shall be applied where specifically referenced. In the absence of specific reference requirements in the contract documents, the applicable codes shall govern.
C. In addition to the standards noted in individual sections of these Specifications, standards of the following organizations shall be noted by initials only.
    1. ANSI: American National Standards Institute.
    2. ASTM: American Society for Testing and Materials.

1.08 Submittals

A. All submittals shall be submitted at one time within ten (10) working days from issuance of Notice to Proceed. The review time for submittals shall be as noted in Section 2 - 1.04 of the Special Conditions. Items returned for re- submittal shall be returned to the City within two weeks
B. The Contractor shall include a cover sheet indicating the following (A sample is provided in Section 5: Forms):
    1. Drawing sheet or specification section reference (by section, paragraph and sub-paragraph numbers);
    2. Item description;
    3. Indication whether this item is “as specified” or “proposed substitution” and
    4. A space for itemized response summary, e.g. “reviewed” or “resubmit”.

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C. Contractor shall provide submittals electronically in PDF file format and physical product samples as required in specifications. It shall be the Contractor's responsibility to ensure that the summary sheet is included in the submittal package. Incomplete submittal packages (i.e., the lack of a summary sheet or lack an appropriate product sample) will not be reviewed.
D. Proposed substitution requests must include a comparison between the originally specified item and the proposed substitute. The burden of proof of compliance for proposed substitutions with project requirements rests with the Contractor. Coordination of the installation of accepted substitutions, including incidental changes/modifications to accommodate proposed products shall be at no additional cost to the Owner.
E. Where required in specified Section of these Specifications, submittals shall include proof of order of site furnishings, play equipment or other materials within two weeks (ten working days) of receipt of the returned, approved submittal. Submittals of orders shall be made at one time. Exceptions will be considered, with justification.

1.09 Tests

A. In addition to Section 4 - 1.03 of the General Conditions, testing and inspections may be performed by a private testing laboratory. The testing laboratory, provided by the City, shall be under the direction of a California registered civil engineer. All work shall conform to requirements set forth by ASTM B329, and shall be acceptable to the City.
B. Copies of the laboratory reports/results of each test or inspection shall be provided to the Project Manager, Inspector and Contractor.

1.10 Temporary Facilities

A. Sanitary provisions shall be the responsibility of the Contractor. Existing restroom facilities shall be not utilized by the Contractor, his Sub-contractors, or employees thereof, unless specifically accepted by the Project Manager. Provide chemical toilets or water closets and urinals connected to the sewer in a location accepted by the Project Manager.
B. Barricades shall be the responsibility of the Contractor and shall be erected as necessary to protect the property, the construction and the public from hazards due to construction.
C. Signs, other than those identified in these Specifications, shall be prohibited. Notices, required by law, shall be posted and maintained.

1.11 Utilities

A. All utility fees, including, but not limited to, connection fees, installation fees, meters, monthly service fees and cost of utilities used during the course of

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construction are considered a direct cost and are the responsibility of the Contractor until project acceptance by City Council.

1.12 Dust/Noise Control Requirements

A. Dust and other air pollution nuisances on or adjacent to the site shall be abated, per Section 2 - 1.15 of the General Conditions. Dirt shall not be allowed to accumulate on streets or sidewalks nor be washed into sewer.

B. Noise from construction operations shall be kept to a minimum. Allowable hours of operations shall be from 7 a.m. to 7 p.m. Monday through Friday. Work on weekends and holidays must be approved by the Project Manager. Work on weekends and holidays shall not begin before 8 a.m. and must be completed by 8 p.m. Requests for weekend work shall be submitted to the Project Manager 7 days in advance.

1.13 Tree Replacement Schedule

A. Trees damaged or removed without prior approval shall be replaced at an inch per inch basis on-site, except otherwise accepted. New stock shall follow the table provided:

Plant Size	Inch Value
3 Five Gallon Stock	One Inch
1 Fifteen Gallon Stock	One Inch
1 24” Box Stock	Two Inches
1 36” Box Stock	Three Inches

1.14 Inspection of Construction

A. In addition to the routine inspections performed by the Parks Inspector, portions of work may be inspected by the other city departments. Notify the Parks Inspector and Project Manager a minimum of 48 hours prior to date of inspection.

B. The Parks Inspector shall be the main line of communication between the site superintendent, the project manager and other City department inspectors. Changes in scope of work or standards shall be approved by the project manager.

C. Refer to the parks inspection record. This shall be issued at the Pre-Construction meeting and shall be utilized by the Contractor throughout the course of construction. A completed “hard card” shall be submitted to the Project Manager along with required turn in items (See 1.19 this Section) upon final acceptance of the project. The Notice of Completion shall not be filed until all record documents have been received and accepted.

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1.15 Adverse Impacts to Site Conditions Due to Construction

A. Impacts that affect the site conditions to the detriment of the park or streetscape Impacts that affect the site conditions to the detriment of the park or streetscape construction or long term viability of the site shall be mitigated by the contractor prior to acceptance of the project. Such impacts shall include, but are not limited to:
   1. Soil compaction in non-structural areas;
   2. Diesel or gas fuel leaks/spillage;
   3. Buried concrete or other construction debris;
   4. Hazardous material contamination;
   5. Lime treatment in planting areas;
   6. and more.

1.16 Pre-final (Punch List) Review

A. Notify, in writing, to the Parks Construction Inspector, that the work is substantially complete. Substantially complete is defined as “the state of work where it may be used in a suitable and intended manner with exception of minor corrections”. Partial acceptances will not be granted. Items to be reviewed as a part of substantial completion include:
   1. All construction items
   2. Installation of all site furnishings, including lights and signs
   3. Seeding or sodding of all turf areas
   4. All planting, including weeding of planted areas
   5. The irrigation system is fully functioning as designed and as confirmed by the Parks Construction Inspector.

B. Within five workings days of receipt of notification, the Parks Construction Inspector will confirm substantial completion. The Parks Construction Inspector will schedule the punch list walk (pre-final review) within five working days after the project has been determined as substantially complete. A formal punch list will be developed at the punch list walk. The Parks Construction Inspector will provide a copy of the formal punch list to the Contractor within five working days of punch list walk. .
   1. If at any point during this review that it becomes apparent that the Contractor has not properly prepared for the site review, the inspection shall immediately be terminated and re-scheduled at such a time as the site has been readied for a review. Any costs for the re-scheduling of the review shall be the responsibility of the Contractor.

C. Concurrent to the pre-final review, the City will make a formal request for all required turn-in items to be submitted to the City. All turn-in items shall be submitted to the City (single point of contact), at one time and only by

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appointment. Do not drop off the turn-in items at the front counter and without an appointment.

1.17 Establishment Period – not applicable

1.18 Final Review

A. A final on-site review shall be conducted to review project readiness for final turn-over. All punch list items must be satisfactorily addressed prior to the final review.
B. The project shall be prepared and cleaned per Section 2 - 1.12 of the General Conditions; the turf shall be mowed; and the irrigation heads shall be adjusted appropriately one day prior to the scheduled final review.
C. Acceptance of the project shall be considered "field accepted" and a recommendation will be forwarded to the City Council for "final acceptance" per Section 7 - 1.01 of the General Conditions.
D. Turn over for City maintenance shall occur only after:
    1. A Notice of Completion (NOC) for city-built parks and for streetscapes has been approved by the City Council.
E. Contractor shall provide a written guarantee covering all improvements associated with this project. See 1.19 – Warrantees and Guarantees.

1.19 Record Documents

A. Record documents or as-built plans shall be maintained on-site and updated routinely as specified in Section 2 - 1.13 of the General Conditions. Record documents shall include **all items under the contracted scope of work**.
B. Record documents shall be submitted:
    1. one full size set of final as-built drawings (verified/initialed by the Parks Inspector)
    2. one set of 11 x 17 reductions of the complete as-built package; and
    3. one USB storage device containing PDF scanned images (in color) of the verified/initialed as-built drawings.
    4. For City of Roseville CIP projects, SWPPP binder, if applicable.

1.20 Warranties and Guarantees

A. Warranties are required under various Sections of these Specifications. Prior to final acceptance, the Contractor shall assemble all warranties into a single, bound or stapled package. All warranties shall be clearly labeled and the number of years highlighted. Also, see Sections 7 - 1.10 and 7 - 1.11 of the General Conditions.

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1. Warranties for equipment shall be submitted in the manufacturer's standard form and shall be countersigned by the subcontractor or supplier and the Contractor.
2. All other warranties shall be provided in the following format, written on subcontractor's or supplier's letterhead, signed by the subcontractor or supplier and countersigned by the Contractor:

WARRANTY FOR _____ YEARS

"We hereby warrant that the ***product*** which we have installed at ***project name*** has been done in accordance with the contract documents, and that the work, as installed will fulfill the warranty requirements included in the Specifications.

We agree to repair or replace any or all of our work, together with any other adjacent work which may be displaced by so doing, that may prove to be defective in its workmanship or material within the warranty period stated above commencing from the date of final acceptance of the above named project by the City of Roseville's City Council, without additional expense to the City, ordinary wear and tear and unusual abuse or neglect excepted.

In the event of failure to comply with the above conditions within thirty (30) days of notification by the City, we collectively or separately do hereby authorize the City to proceed with the repairs or replacement of such defects at our expense. Payment of said costs and charges will be forwarded to the City upon demand.

Signed: _____ _____
Subcontractor or Supplier Date

Countersigned:_____ _____
Contractor Date

B. Guarantees shall be a minimum of one (1) year for all plant material including trees and shrubs. The guarantee shall state that plant materials (trees & shrubs) to be free of all defects or disease and all plants are in a healthy and thriving condition at the completion of the contract. Deciduous plant material shall be warranted beyond the time of contract completion until such time as growth becomes evident.

PART 2 - PRODUCTS

Intentionally left blank.

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PART 3 - EXECUTION

Intentionally left blank.

END OF SECTION

For Council Approval - Not for Bidding

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SECTION 01 57 23
STORM WATER POLLUTION CONTROL

PART 1 - GENERAL

1.01 General

A. The requirements set forth in the General Conditions shall be in addition to the standards provided herein.
B. The requirements set forth in the Special Conditions shall be in addition to the standards provided herein.

1.02 References

A. State Water Resources Control Board Order No. 2009-0009-DWQ National Pollutant Discharge Elimination System General Permit No. CAS0000002, for Storm Water Discharges Associated with Construction and Land Disturbance Activities.
B. CASQA California Stormwater BMP Handbook – Construction, November 2009

1.03 Definitions

A. NOI: Notice of Intent
B. NOT: Notice of Termination
C. QSP: Qualified SWPPP Practitioner
D. QSD: Qualified SWPPP Developer
E. SWPPP: Storm Water Pollution Prevention Plan
F. SWRCB: State Water Resources Control Board
G. NPDES: National Pollutant Discharge Elimination System General
H. WDID: Waste Discharger Identification number
I. BMP: Best Management Practices

PART 2 - PRODUCTS

Intentionally left blank.

PART 3 - EXECUTION

3.01 SWPPP

A. Comply with State Water Resources Control Board Order No. 2009-0009-DWQ National Pollutant Discharge Elimination System General Permit No.

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CAS0000002, for Storm Water Discharges Associated with Construction and Land Disturbance Activities.

B. A SWPPP has not been developed for this project. Contractors must comply with General Conditions 5-1.20 Water Pollution.
C. Implementation of the Erosion and Sediment Control Plan is the responsibility of the Contractor and a part of this project. Costs associated with implementation and maintenance of the BMPs per the Erosion and Sediment Control Plan shall be included in the lump sum base bid.
D. Major changes to the Erosion and Sediment Control Plan shall be reviewed by the Parks Inspector prior to implementation. Cost associated with the major changes will be paid for using the unit cost listed in the Additions or Deletions Sheet of the Proposal
E. The Parks Inspector will perform inspections of the jobsite. Implementation of and minor changes to the Erosion and Sediment Control Plan as directed by the Parks Inspector shall be incidental to the Work. Contractor shall start all inspection corrective actions within 72 hours of observation, and complete as soon as possible.
F. All BMPs installed will be inspected by the Parks Inspector for compliance with the Erosion and Sediment Control Plan and BMP Fact Sheets. BMPs that are not in compliance shall be brought into compliance by the Contractor at no cost to the City.
G. Keep one copy of the Erosion and Sediment Control Plan and amendments at the project site.
H. The Erosion and Sediment Control Plan shall be readily available throughout the course of construction and until the Project has been accepted by the City. The Erosion and Sediment Control Plan shall be made available upon request by a representative of the Regional Water Quality Control Board, State Water Resources Control Board, United States Environmental Protection Agency, or City' storm water staff.
I. When requested by the City for pre-fianl (punch list) review, the Contractor shall submit the project site copy of the Erosion and Sediment Control Plan to the City's Project Manager.

3.02 Schedule

A. Contractor shall develop a Water Pollution Control Schedule that describes the timing of grading or other work activities that could affect water pollution. The schedule shall be updated by the Contractor to reflect changes in the Contractor's operations that would affect the necessary implementation of water pollution control practices. The typical sequence of work shall be adjusted by the Contractor based on weather conditions and forecasted rain events. The schedule is considered an appropriate and applicable BMP.

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3.03 Penalties and fines

A. Contractor is responsible for all penalties and fines assessed to or levied on the project related to the implementation of the Erosion and Sediment Control Plan.

B. In an effort to maintain compliance with the General Permit, the Contractor may be asked to make changes to the BMPs. If the Contractor is unable to perform these services in a timely manner the City reserves the right to address any areas of concern and deduct the cost from the contract.

3.04 BMP's

A. Construction BMP's shall be installed per the Erosion / Sediment Control Plan, and in accordance with the CASQA California Stormwater BMP Handbook. Use of alternative BMP's will be reviewed and accepted at the discretion of the City's Parks Inspector.

3.05 Cleaning

A. Thoroughly clean all areas where work has occurred. Remove from the site excess material, debris and rubbish.

B. Take all precautions to protect completed work. Immediately repair or replace all damaged areas due to tire ruts, erosion, compaction failure, etc. Keep all erosion control measures intact.

END OF SECTION

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SECTION 02 41 13

SELECTIVE SITE DEMOLITION

PART 1 - GENERAL

1.01 WORK INCLUDED:

A. General Description of Work: Clear the construction site of existing structures as indicated on the plans, below grade foundations as indicated, walls, retaining walls, or other structures; asphaltic and concrete paving; trees, shrubs, grass, roots and other vegetation; utility piping and accessories, and trash and grass, other waste materials, where indicated or necessary to prepare the site for construction.

1.02 RELATED WORK:

A. Section 01 10 00: Summary of Work

B. Section 31 10 00: Clearing and Grubbing

C. Section 31 20 00: Earthwork

D. Section 33 00 00: Utilities

1.03 PERFORMANCE REQUIREMENTS:

A. Clear the construction site of existing obstructions such as structures, walls, concrete, paving, utilities, planting, grass and other materials, where indicated or as necessary to prepare the site for construction.

B. Arrange and complete clearing and site preparation work required for the start of construction before the start of earthwork. Erect temporary barricades, enclosures and protection of adjacent property and existing work before site clearing is started.

1.04 PROJECT CONDITIONS:

A. The drawings show general information only. Examine the site to determine the exact existing conditions and character and extent of the construction activities to be performed and clearing operations required.

1. The failure or omission to visit the site and become acquainted with the existing conditions shall not be considered as relief from obligations with respect to contract.

B. Traffic: Conduct site clearing operations to ensure minimum interference with roads, streets, walks, other adjacent occupied or used facilities. Do not close or obstruct streets, walks or other occupied or used facilities without permission from authorities having jurisdiction.

C. Existing Utilities.

1. Existing underground and overhead lines indicated are shown from best possible information available and shall be verified before start of site clearing operations.

2. It shall be understood and agreed that certain lines cannot be or have not been located

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and no indication is contained on the Drawings or referred to in the Specifications (i.e. storm drainage, electrical, plumbing, sewer, water or gas); therefore, exercise extreme caution during clearing, grading, excavating, trenching, and similar construction activities. Should such lines be encountered, give notice, in writing, and do not proceed until adequate investigation has been made, the line identified, and instructions issued as to how to proceed.

D. Barricades and Work Areas: Provide barricades, warnings (signs and lighting), and maintenance and supervision thereof, in accordance with applicable Federal, State and local Codes and their respective requirements, or as may be directed from time to time. Do not commence site clearing until barricades and warnings are in place.

E. Protection of Existing Trees and Vegetation: Protect existing trees and other vegetation indicated to remain against unnecessary cutting, breaking or skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line. Provide temporary guards to protect trees and vegetation to remain. Refer to the Plans and Specifications for existing trees to be removed. Utility lines and other facilities may require field adjustment in alignment to protect healthy trees.

1.05 RECYCLING OF MATERIALS

A. Contractor shall develop and implement a waste management plan, quantifying material diversion goals. Recycle and/or salvage at least 75% of construction, demolition and land clearing waste. Calculations can be done by weight or volume, but must be consistent throughout.

B. Demolished building materials should be recycled in accordance with City of Roseville policies.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 EXAMINATION:

A. Examine and review the site and determine existing conditions which affect construction operations.

3.02 PROTECTION:

A. Protect existing appurtenances and improvements, which are to remain. Repair or replace damaged facilities promptly.

B. Provide and maintain bracing and shoring as required by applicable regulations for safety.

C. Protection of Utilities: Preserve in operating condition, active utilities traversing or within and about the site, protect property and items, including but not limited to piping, conduits, drains, manholes, mains, laterals, catch basins, valve boxes, meters, and other appurtenances and structures. Promptly repair damage to such utility or work due to construction activities under this Contract, to the satisfaction of the Owner.

D. No blasting or on site burning will be permitted.

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3.03 SITE CLEARING:

A. Equipment: The use of proper equipment is the responsibility of the Contractor.

B. Disposition of Materials:

1. Materials shall be recycled per City of Roseville policies.

2. Removed material is the property of the Contractor and shall be promptly recycled, or where it cannot be recycled it shall be removed to a legal disposal area unless otherwise indicated on the plans or called out in the Specifications.

3. Stockpiling of removed materials on the project site will not be permitted without written approval from the Architect. Material suitable for topsoil may be stockpiled on site at a location to be approved by the Architect.

C. Clear the site of all obstructions including trees, shrubs and miscellaneous debris that may be present. After clearing, strip the ground surface of surface vegetation. Dispose of materials from the clearing and stripping operations off-site to a legal disposing area.

D. Remove from the project site, existing structures, concrete, paving, walks, curbs and similar items indicated to be removed. The extent of the boundaries of such existing work removal shall be as indicated and as required to accomplish the contract work.

E. Remove subsurface obstructions which interfere with the new subsurface construction activities. The drawings indicate the approximate location of known existing sub-surface utilities, piping, and other subsurface conditions. If existing subsurface obstructions are discovered or encountered which are not indicated, suspend the site preparation work at such locations and notify the Architect immediately and obtain instructions from him before proceeding.

F. Remove existing materials and items which are required to be removed, in such manner that minimum damage and disturbance is caused to adjacent and connecting construction. Repair or replace existing construction which is damaged by these operations.

G. Existing utility lines, either above ground or sub-surface, such as gas, water, electric, sewer, telephone, landscape irrigation, other existing utilities, that are to be removed or relocated are indicated, based on available information. Before their removal, complete required new re-routing as well as required temporary connections and make operative so that their functions to other existing structures served by them can be continuous and uninterrupted. Cut off existing construction which is to be removed from their connections beyond this project site before excavation is started.

H. Grubbing: Remove and dispose of roots larger than 3 inches in diameter, matted roots, and stumps from the indicated grubbing areas. Excavate this material together with logs, organic and metallic debris, brush, and refuse and remove to a depth of not less than 18 inches below the original soil surface in areas indicated to be grubbed and in areas indicated as construction areas under this contract. Fill depressions made by grubbing with suitable material and compact in accordance with the requirements specified in Section 02200, "Earthwork", to make the new surface conform with the existing adjacent surface of the ground.

3.04 NOISE ABATEMENT AND DUST CONTROL:

A. Noise Abatement: Limit noise to a reasonable level as related to specific items of equipment

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used and their hours of use. This does not preclude use of mechanical equipment, i.e. jack hammers, power-driven fasteners, and similar equipment. Noise abatement control shall meet the requirements of the Owner. Refer to Section 5-1.16 of the General Conditions.

B. Dust Control: During demolition and site clearing, keep dust, dirt and pollen from vegetation from blowing or spreading by means of watering down at regular intervals and as directed. Refer to Section 2-1.15 of the General Conditions.

END OF SECTION

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SECTION 13 11 13

POOL GENERAL

1. GENERAL

1.01 SECTION INCLUDES

A. Project administrative requirements that relate to Division 13 11 Pools.

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

B. The following contain requirements that relate in Division 13 11:
   1. Mechanical/Electrical/Equipment Coordination: General Conditions, Supplementary General Conditions and Division 01 General Requirements
   2. Earth Work and Pool Excavation: Division 31
   3. Concrete Deck Work: Division 03
   4. Mechanical: Plumbing Systems - Division 22, HVAC Systems and Equipment - Division 23
   5. Electrical: Division 26

C. Applicable requirements of the following Codes and Standards apply to Work in Division 13 11:
   1. Association of Pool and Spa Professionals (APSP)
      a. Minimum Standard for Public Swimming Pools
   2. National Electrical Code (NEC)
   3. National Sanitation Foundation (NSF): Seal of Approval Program
   4. American Society for Testing and Materials (ASTM): Specifications referenced herein.
   5. Governmental Health and Building Codes
   6. ADA Accessibility Guidelines for Buildings and Facilities
   7. American National Standards Institute

1.03 REFERENCES

A. Refer to individual Division 13 11 sections.

1.04 DESCRIPTION OF WORK

A. Work of Division 13 11 includes, but is not limited to, the following:
   1. Layout of all pool(s) and pool related work required under Division 13 11.
   2. Project benchmarks and control points.
   3. Excavation and stone fill as required for pool tank structure and pipe trenching. Refer to Division 01 and 31 for special conditions.
   4. Pool vessels, as detailed on Contract Drawings and Shop Drawings.
   5. Pool mechanical systems, including piping, recirculation system, filtration system, activity mechanical systems and water chemical treatment system.
   6. Heating system for swimming pool. Coordinate venting and interlocking for pool heater(s) with HVAC Contractor.
   7. Waterslide and water activity mechanical systems including all piping.
   8. Interior pool finishes.

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9. Pool deck equipment and accessory equipment shown and/or specified, including required anchors embedded within the pool deck and coordination with Deck Contractor.
10. Coordination of all electrical interlocks for pool and pool related equipment.
11. Miscellaneous pool testing, safety and control equipment.
13. Low voltage wiring for pool and pool related equipment is installed and connected by the Swimming Pool Contractor unless required otherwise by code. Where code requires that low voltage wiring is installed by a licensed electrical contractor, low voltage wiring is specified in Electrical Documents.

B. Definitions
1. The term "pool" as used in Division 13 11 shall refer to the following:
   a. Pool C – Leisure Pool Existing
   b. Pool D – Spray Pad Existing
2. The term "concrete" as used in Division 13 11 refers to concrete for swimming pool construction only.
3. The term "Architect/Engineer" as used in Division 13 11 refers to the swimming pool designer only.
4. The term "Contractor" as used in Division 13 11 refers to the swimming pool contractor only.
5. The term “Low Voltage Wiring” as used in Division 13 11 includes wiring <= 24V. All Low Voltage Wiring is Provided with the Equipment. Low voltage wiring is shown in Low Voltage Wiring Diagram included in the pool drawings except where specified by Electrical Consultant.
6. The term “Control Wiring” as used in Division 13 11 refers to connections from individual equipment components to the Building Management System (BMS).

C. Applicable Code Permit and Inspection Responsibilities.
1. State and/or County Health Department permit fees by Owner.
2. Local Departments of Health inspection fees by Contractor.
3. Other permits/fees required paid by Contractor.
4. Scheduling of Required Inspections – Contractor
5. Documentation and Submission of accepted modifications to approved plans to Permit Authorities – Contractor.

D. Related Work Not in Division 13 11 Specified Elsewhere
Pool deck construction, including finishes, sealants, and drains.
1. Potable water or fresh water: Fresh water connection to auto fill and wastewater connections (see Contract Drawings).
2. Pool electrical work: Electrical connections shall be by the General Construction Contract Electrical Sub-Contractor. The Pool Contractor shall provide the filter pumps, motors, solenoids, relays, water level probes (with housing), motorized valves, etc., as shown on Contract Drawings and required by pool systems equipment manufacturer. The Electrical Contractor shall install and wire electrical equipment furnished by the Pool Contractor and shall provide motor starters and disconnect switches as indicated or required by Codes. The Electrical Contractor shall provide grounding and bonding per NEC Article 680.
3. Control Wiring for all electrical and HVAC equipment shall be by the control system sub-contractor.
4. Heating system for pools, heater by the Pool Contractor; venting and controls by Division 23.
5. Surge Tank Ventilation System
   a. All surge tank equipment shall be purchased and installed by the Pool Contractor.
   b. All surge tank ventilation and plumbing shall be purchased and installed by the Mechanical Contractor.
   c. All plumbing shall be Schedule 40 PVC.
   d. Exhaust fan shall be of non-corrosive materials, Plastec 20 model PLA 20, or equal.

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e. Pool Contractor to coordinate surge tank penetrations with Mechanical Contractor.
f. The Electrical Contractor shall provide all wiring, bonding, and grounding per NEC Article 680.

1.05 QUALITY ASSURANCE

A. Qualifications of Pool Contractor:
1. Work of Division 13 11 shall be performed by a Pool Contractor who has a minimum of five (5) projects with a proven five (5) year record of competence and experience in the construction of similar facilities of this size and complexity.
2. Pool Contractor prequalification is required prior to bid. This must be received by the Architect fourteen (14) days prior to the bid date on the appropriate AIA form. (AIA A305)
3. Pool Contractor shall meet all Local and State Certifications and License requirements prior to bidding. Copies of the required Certificates and Licenses shall be made available upon request.

B. Performance Criteria: Certain sections of Division 13 11 contain performance criteria rather than product descriptions. It shall be the obligation of the Pool Contractor to ensure that all criteria are satisfied and the burden of proof of conformance shall rest with the Pool Contractor. The Architect/Engineer shall require complete calculations, past performance records and, if required, inspection trips of similar facilities to substantiate conformance with these criteria. The Architect/Engineer shall be sole judge of conformance, and the Pool Contractor is cautioned that he will be required to provide a finished product meeting all stated criteria and meeting or exceeding Department of Public Health requirements.

C. All work of Division 13 11 shall be performed by the qualified Pool Contractor or a Subcontractor to the qualified Pool Contractor unless otherwise pre-approved in writing by the Architect/Engineer. A representative of the Pool Contractor shall oversee work subcontracted by the Pool Contractor.

D. The following shall be performed during construction of the project.
1. Refer to General Conditions, Division 01, and other Division 13 11 sections for further requirements.

1.06 SUBMITTALS

A. Submittals Required
1. Refer to General Conditions, Division 01, and individual Division 13 11 sections for number required.
2. The Contractor shall submit for approval to the Architect/Engineer complete lists, including descriptions, catalogs, product cut sheets, etc., and where applicable dimensioned shop drawings of all material, fixtures, and equipment to be furnished and installed as part of Division 13 11.
3. Submittals shall adequately and completely describe the equipment, including where necessary or requested complete construction and installation dimensions, complete capacity and performance data, all accessories and auxiliary equipment and all pertinent details of manufacture.
4. Submittals shall be provided complete and bound in a 3-ring binder or as pre-approved by Architect/Engineer.
a. Contractor's Option – In lieu of paper copies indicated above, submit in Adobe PDF electronic file format via email file size (10 MB max.). Create PDFs at native size and right-side up; illegible, partial, unlabeled, or unorganized submittal sections will be returned rejected. Contractor shall make their own copies from the original returned by the Architect.

B. Product Data: Provide manufacturer's/installer's written installation instructions.

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C. Shop Drawings
   1. The drawings accompanying this Specification are diagrammatic in nature and show the general arrangement of all equipment, piping, ductwork, services, etc. Because of the small scale of the drawings, it is not possible to show all offsets, fittings and accessories that may be required. The Contractor shall carefully investigate the structural and finish conditions of his work and shall arrange such work; accordingly, furnishing all fittings, pipe and accessories that may be required to meet such conditions. Where conditions necessitate a rearrangement, the Contractor shall obtain the Architect/Engineer's approval.
   2. Shop drawings for equipment shall be submitted, and Engineer's review of shop drawing shall be obtained before proceeding with fabrication. Shop drawings shall not be "doctored" reproductions of Architect/Engineer's drawings.

D. Samples: Submit samples of materials, finishes, and trim as requested by the Architect/Engineer.

E. Schedule of Values
   1. Provide Architect/Engineer with a copy of the Schedule of Values developed for this project relevant to Division 13 11 for approval.

F. Valve Charts: Submit two (2) copies of valve charts for each piping system, consisting of Isometric Drawings or piping layouts showing and identifying each valve and describing its function to the Architect/Engineer for approval.
   1. Upon completion of the Work, one (1) copy of each chart sealed to rigid backboard with clear lacquer placed under glass and framed, shall be hung in a conspicuous location in the equipment room.

G. Furnish to the Architect/Engineer the following:
   1. Refer to individual Division 13 11 sections for additional requirements.
   2. Submittals
      a. Shotcrete Nozzle Man Qualifications and Certifications
      b. Pool Finish Experience/Qualification Requirements
      c. Concrete Mix Design
      d. Non-shrink Grouts
      e. PVC and Pre-formed Plastic Adhesive Waterstop
      f. Expansion/Construction Joint Materials
      g. Caulking/Sealants
      h. Pumps and Strainers
      i. Heater(s)
      j. Chemical Controller(s)
      k. Chemical Feeders
      l. Bulk Chemical Storage Tanks
      m. Valves
      n. Gauges
      o. Flow Meters
      p. Thermometers
      q. Pool Water Test Kit
      r. Inlets
      s. Grating
      t. Pre-fabricated Submerged Outlets
      u. Under Water Pool Lighting
      v. Deck Equipment
      w. Safety Equipment
      x. Maintenance Equipment
      y. Piping Materials (pipe, fittings, solvents, cements)
      z. Wall Sleeves and Seals for Piping

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aa. Tile Setting Materials and Joint Fillers

3. Shop Drawings
   a. Reinforcing Steel
   b. Water Activities
   c. Filters
   d. Stainless Steel Gutter
   e. Precast Pool Coping Stone
   f. UV Disinfection System
   g. Concrete Pump Pit & Surge Tank Penetration Drawings
4. Test Results
   a. Water Treatment Analysis
   b. Compaction
   c. Piping Pressure Testing
5. Samples
   a. Special Aggregate – Factory and Field Applied
   b. Tile
   c. Gratings
6. Guarantees/Warranties
   a. Standard 1-Year
   b. Standard 5-Year on Quartz Aggregate Finish
   c. Standard 2-Year on Pool Finish Application
   d. Special Equipment – Standard Manufacturer's Warranty
   e. Future 3-Days of Instruction and Operational Checkout
7. Close Out Documents
   a. O & M Manuals
   b. Record Drawings
   c. Owner's Certification of Instruction
   d. Extra Materials

1.07 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

B. Along with the Shop Drawings, the Contractor shall submit, in duplicate, a certificate properly attested, stating the material, equipment, and construction comply with the requirements of the Contract Documents, for all equipment and materials proposed as a Substitute for the specified equipment and materials.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Refer to General Requirements and Division 01 of the Specifications for additional requirements.

B. Deliver all materials and equipment to the work site in original packages, fully identified with manufacturer's label. Store off ground and protect from weather with a suitable covering.

C. Protect plastic pipe from exposure to chemicals (aromatic hydrocarbons, halogenated hydrocarbons and other esters and ketones) that might attack the material. Protect all pipes from mechanical damage and long exposure to sunlight during storage.

1.09 WARRANTIES

A. Warranty: Provide one (1) year warranty covering all pool workmanship, materials, and equipment. Refer to General Requirements and Division 01 of the Specifications for additional requirements.

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B. All standard manufacturer's warranties shall apply to all equipment and products provided by this Contractor.

2. PRODUCTS

2.01 NOT USED

3. EXECUTION

3.01 EQUIPMENT BASES AND SUPPORTS

A. Provide for major equipment, reinforced concrete housekeeping bases poured directly on structural floor slabs (or as required by equipment manufacturer) 4 inches thick minimum; unless noted otherwise on plans, extended 4 inches beyond machinery bedplates. Provide templates, anchor bolts, vibration isolators, and accessories required for mounting and anchoring equipment. Anchorage system shall be in accordance with the equipment manufacturer's specifications and local code requirements. Consult with equipment manufacturer for length and installation of anchor bolts.

3.02 CLEAN UP AND PROTECTION

A. After work of Division 13 11 has been completed, cleanup work areas and remove all equipment, excess materials, and debris. Protect pool from damage until substantial completion. Remove and replace equipment and finishes that are chipped, cracked, abraded, improperly adhered, or otherwise damaged.

B. At turnover to Owner, Contractor shall be responsible for, but not limited to, the following:
1. Vacuuming and cleaning all pool floors, steps, and walls.
2. Cleaning all depth marker tiles, pool tile and gutter grating.
3. Cleaning and waxing of all pool deck equipment, water features and stainless-steel products per Manufacturer's instructions.
4. See also Division 01 Specification requirements.

END OF SECTION

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SECTION 13 11 14

POOL START-UP, MAINTENANCE & OPERATIONS TRAINING

1. GENERAL

1.01 SECTION INCLUDES

A. Pool start-up and chemical balancing of water.

B. Training of the Owner's personnel in pool operations procedures.

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 DESCRIPTION OF WORK

A. Water treatment and balancing.

B. Operations and maintenance instruction and manuals.

1.04 SUBMITTALS

A. Operations and Maintenance (O&M) Manual
   1. Pool Contractor shall deliver to the Architect/Engineer water sample location, analysis test results, SI calculation, and chemical adjustment calculations as required per Part 3.02.
   2. Pool Contractor shall deliver to the Architect/Engineer, bound together in a three-ring binder a complete manual, four (4) complete sets of operating and maintenance instructions for the swimming pool structure(s), finishes, and all component equipment. O&M Manual shall include, but is not limited to, the following:
      a. Table of contents.
      b. All equipment cut sheets.
      c. Accurate parts lists.
      d. Pool start-up, emptying, and winterization instructions.
      e. Pool cleaning instructions.
      f. Pool maintenance requirements, divided into the following:
         1) Daily
         2) Weekly
         3) Monthly
         4) Seasonally
         5) Annually
      g. Narrative on the pool operation through all sequences.
      h. A DVD of complete start-up and shut-down procedures and training session.
      i. Trouble shooting information and procedures.
      j. A schematic of piping as installed.
      k. Valve charts for each piping system, consisting of isometric drawings or piping layouts showing and identifying each valve and describing its function.
      l. Record Drawings
      m. Warranties

   3. Slide Contractor shall deliver to the Architect/Engineer, bound together in a three-ring binder a complete manual, four (4) complete sets of operating and maintenance

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instructions for the swimming pool structure(s), finishes, and all component equipment. O&M Manual shall include, but is not limited to, the following:

a. Table of contents.
b. All equipment cut sheets.
c. Accurate parts lists.
d. Slide start-up, emptying, and winterization instructions.
e. Slide cleaning instructions.
f. Slide maintenance requirements, divided into the following:
    1) Daily
    2) Weekly
    3) Monthly
    4) Seasonally
    5) Annually
g. Narrative on the Slide operation through all sequences.
h. A DVD of complete start-up and shut-down procedures and training session.
i. Trouble shooting information and procedures.
j. Record Drawings
k. Warranties

2. MATERIALS

2.01 NOT USED

3. EXECUTION

3.01 OPERATIONS & MAINTENANCE INSTRUCTION

A. Provide an experienced swimming pool operator-instructor (NSPF Certified Pool Operator, or equivalent certification) for a period of not less than three (3) days (two (2) full days operations and start-up, and one (1) full day shut-down assistance) after the pool has been filled and initially placed into operation.
    1. During this period, the Owner's designated representative(s) shall be thoroughly instructed in all phases of pool and pool equipment operation and maintenance (O&M).
    2. At a minimum, the swimming pool training and O&M Manuals must include the following:
        a. General pool operations,
        b. Pool materials and deck equipment maintenance,
        c. Pool fill and operating water level
        d. Pool/Equipment start-up, shut-down, emptying, and winterizing procedures.
        e. Circulation pumping, pipe, fittings, valves, and ancillary equipment,
        f. Filtration equipment,
        g. Heating/cooling equipment,
        h. Chemical treatment & monitoring systems,
        i. Water features
    3. Equipment training must be provided by the certified swimming pool operator-instructor and qualified equipment manufacturer representatives. See individual Specification sections for pool materials/equipment training and O&M requirements.

B. Contractor shall obtain written certification from the Owner's designated representative acknowledging that all O&M instructions/training and materials have been provided. Certification shall include the detailed listing of equipment above with training completion and delivery dates, instructor contact information, and Owner representative's signatures.

C. Include the cost of three (3) additional days of instruction and operational checkout/verification by an experienced swimming pool operator-instructor during the first year's operation. Written reports of each of these three (3) visits outlining the pool's operation, competence and performance of the pool's operating personnel and other

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pertinent comments shall be submitted to the Owner and Architect/Engineer within one week after each visit.

D. Provide a DVD documenting training and operational requirements, including start-up, emptying, and winterizing procedures.

E. In addition to initial pool instruction listed, the Pool Contractor shall perform the first season pool closing (winterizing) and the following season pool start-up, including all labor and materials required.

3.02 WATER TREATMENT AND BALANCING

A. Obtain a chemical analysis of the source/pool make-up water supply from a location as close as possible to the actual pool autofill. Conduct laboratory testing for the following parameters:
1. Total Alkalinity [Parts per Million (ppm)]
2. pH
3. Calcium Hardness [ppm]
4. Free Chlorine [ppm] & Combined Chlorine [ppm]
5. Total Dissolved Solids (TDS) [ppm]
6. Iron (Must test to a lower detectable limit of <=0.05 ppm)
7. Manganese (Must test to a lower detectable limit of <=0.01 ppm)
8. Copper (Must test to a lower detectable limit of <=0.1 ppm)

B. The following are ideal ranges for the water analysis test results. If results fall outside these ranges the Contractor shall make chemical adjustments to the water during the pool filling process until values within the ideal ranges are obtained.
1. Total Alkalinity: 80-100 ppm (for high pH disinfectants) 100-120 ppm (for low pH disinfectants)
2. pH: 7.4-7.6
3. Calcium Hardness: 200-400 ppm (Pools), 150-250 ppm (Spas)
4. Free Chlorine: 2.0-4.0 ppm & Combined Chlorine: 0.0-0.2 ppm
5. Total Dissolved Solids: Acceptable Start-up Range is not applicable (Maintain future TDS levels to within 1200 ppm above the start-up measurement)
6. Temperature: Ideal Range is +-2 degrees F from the desired pool operating water temperature.
7. Iron: <=0.05 ppm
8. Manganese: <=0.01 ppm
9. Copper: <=0.1 ppm

C. Contractor shall calculate the Langlier Saturation Index (LSI) using values from the water analysis. The formula for LSI is shown below. Calculations may be made easier using through use of Orenda Technologies Mobil App, or a similar calculator. The LSI values shall fall within an acceptable “balanced” range of -0.3 to +0.3. If the LSI is outside this range OR test values are outside the ideal range listed above, the Pool Contractor shall prepare to add chemicals to the pool water volume as required until all parameters are within the ideal ranges previously listed, and the LSI is considered “balanced”, Contractor is responsible for calculating required chemical additions and for adding all adjustment chemicals up until the time of project completion. Owner is responsible for providing the chemicals.

LSI Equation:
(pH) + (Temperature ºF) + (Calcium Hardness) + [(Total Alkalinity) – (CYA correction factor @ current pH)] – (TDS factor) = LSI

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Equivalent Factors - Langelier Saturation Index (LSI)

Temperature (°F)	Temperature Factor	Calcium Hardness (PPM)	Calcium Hardness Factor	Alkalinity (PPM)	Alkalinity Factor	Cyanuric Acid (if present)	Cyanurate Correction Factor	Total Dissolved Solids	TDS Factor
32	0.0	5	0.3	5	0.7	**pH**	**Factor**	< 1000 ppm	12.10
37	0.1	25	1.0	25	1.4	7.0	0.23	1000 ppm	12.19
46	0.2	50	1.3	50	1.7	7.2	0.27	2000 ppm	12.29
53	0.3	75	1.5	75	1.9	7.4	0.31	3000 ppm	12.35
60	0.4	100	1.6	100	2.0	7.6	0.33	4000 ppm	12.41
66	0.5	150	1.8	150	2.2	7.8	0.35		
76	0.6	200	1.9	200	2.3	8.0	0.36		
84	0.7	300	2.1	300	2.5	Note: Only use if CYA is used in your pool. Only applies to >7.0pH. If so, select correction factor based on pool pH.		Note: most calculators assume **12.1** for under 1000ppm, or **12.2** for anything over 1000.	
94	0.8	400	2.2	500	2.6				
105	0.9	800	2.5	800	2.9				

D. Contractor shall provide a submittal to the Engineer/Architect after receiving the water analysis. Submittal shall include the following:
   1. Water sample location and analysis test results,
   2. SI Calculation,
   3. Chemical adjustment calculations indicating the following:
      a. Pool Volume
      b. Chemical Parameters requiring adjustment
      c. Chemicals required to make the adjustments
      d. Calculations showing amounts of each chemical addition that is required

E. Contractor shall provide list of required balancing chemicals with quantities to the Owner for Owner purchase immediately after receiving the approved submittal from the Engineer/Architect.

F. The Owner shall be responsible for payment of water required to fill each pool one time for leak testing and a second time for the final pool start-up process. The Contractor shall be responsible for payment of any additional water and chemicals required due to draining and refilling of pools as needed for pool or pool piping repairs.

G. Contractor shall make chemical adjustments to the pool water during the pool startup process based on calculations provided in the approved submittal. It is critical to keep the pool water clean and balanced during the initial fill and while the pool plaster finish is curing. Follow all recommendations of the National Pool Plasterers Council for initial adjustments required during the plaster cure time. See additional requirements in Pool Finish Specification Section/s.

H. Stabilize pool water to within a range of 5 to 15 ppm maximum of cyanuric acid.

I. Heat pool water to within 5 degrees Fahrenheit of the desired pool operating temperature. Once this temperature is attained, the Pool Contractor shall enter the chemical controller settings for all chemical parameters. Do not enter chemical controller settings prior to reaching the desired pool operating temperature range.

END OF SECTION

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SECTION 13 11 18

POOL CONCRETE

1. GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Cast-in-Place Concrete to be used for pool floor and wall construction and related structures including surge/collector/balance tanks.
   2. Shotcrete alternate to pool wall construction only if Contractor's qualifications have been pre-approved by Architect/Engineer.
   3. Admixtures.
   4. Curing and Treatment Requirements.
   5. Formwork, shoring, bracing, and anchorage.
   6. Concrete reinforcement and accessories.

B. Related Sections:
   1. Applicable provisions of Division 01 – General Requirements shall govern all work under this Section

1.02 REFERENCES

A. Incorporated Guides and References:
   1. American Concrete Institute (ACI):
      a. ACI 302.1R – Guide for Concrete Floor and Slab Construction.
      b. ACI 304R – Guide for Measuring, Mixing, Transporting and Placing Concrete.
      c. ACI 304.2R - Placing Concrete by Pumping Methods.
      d. ACI 305R - Hot Weather Concreting.
      e. ACI 309R – Guide for the Consolidation of Concrete.
      f. ACI 347 – Guide to Formwork for Concrete.
      g. ACI SP-66 – ACI Detailing Manual.
   2. Concrete Reinforcing Steel Institute (CRSI):
      a. CRSI Manual of Standard Practice
      b. CRSI 63 – Recommended Practice for Placing Reinforcing Bars.
   3. National Electric Code (NEC):
      a. Article 680 – Swimming Pools, Fountains, and Similar Installations.

B. Specifications & Standards:
   1. American Concrete Institute (ACI):
      a. ACI 117 - Specifications for Tolerances for Concrete Construction and Materials.
      b. ACI 301 - Specifications for Structural Concrete.
      c. ACI 305.1 – Specification for Hot Weather Concreting.
      d. ACI 306.1 – Standard Specification for Cold Weather Concreting.
      e. ACI 308.1 – Specification for Curing Concrete.
      f. ACI 315 - Details and Detailing of Concrete Reinforcement.
      g. ACI 318 - Building Code Requirements for Structural Concrete and Commentary
      h. ACI 350.1 – Specification for Tightness Testing of Environmental Engineering Concrete Containment Structures
      i. ACI 506.2 – Specification for Shotcrete
   2. ASTM International (ASTM):

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a. ASTM D2487 – Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
b. ASTM A615 – Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
c. ASTM C31 – Standard Practice for Making and Curing Concrete Test Specimens in the Field.
d. ASTM C33 – Standard Specification for Concrete Aggregates.
e. ASTM C39 – Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
f. ASTM C94 – Standard Specification for Ready-Mixed Concrete.
g. ASTM C143 – Standard Test Method for Slump of Hydraulic-Cement Concrete
h. ASTM C150 – Standard Specification for Portland Cement.
i. ASTM C171 – Standard Specification for Sheet Materials for Curing Concrete.
j. ASTM C172 – Standard Practice for Sampling Freshly Mixed Concrete.
k. ASTM C231 – Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
l. ASTM C260 – Standard Specification for Air-Entraining Admixtures for Concrete.
m. ASTM C321 – Standard Test Method for Bond Strength of Chemical-Resistant Mortars.
n. ASTM C494 – Standard Specification for Chemical Admixtures for Concrete.
o. ASTM C618 – Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for use in Concrete.
p. ASTM C672 – Standard Test Method for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals
q. ASTM C1602 – Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete.
r. ASTM D1037 – Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials.
s. ASTM D4541 – Standard Test Methods for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
t. ASTM E96 – Standard Test Methods for Water Vapor Transmission of Materials.

3. Corps of Engineers:
   a. CRD C-527 - Corps of Engineers Specification for Polyvinylchloride Water Stop.
4. NSF International (NSF)
   a. NSF/ANSI Standard 61 – Drinking Water System Components

1.03 SUBMITTALS

A. Submit proposed mix design of each class of concrete to Engineer/Architect not later than 10 days after Notice to Proceed or twenty-one (21) days prior to the first concrete placement, whichever comes first.

B. Submit shop drawings of reinforcing steel under provisions of Division 01 – General Requirements.
   1. Initial submittal of reinforcement shop drawings shall be complete. No partial submittals will be accepted.
   2. Indicate reinforcement sizes, spacing, locations and quantities of reinforcing steel, bending and cutting schedules, splicing, supporting and spacing devices. Include additional reinforcement for opening through concrete structures.
   3. Reinforcement placement shop drawings shall conform to ACI SP-66 providing full wall elevations.

C. Material Certificates: For each of the following, signed by the manufacturers:
   1. Cementitious materials.

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2. Admixtures.
3. Waterstops.
4. Non-shrink grouts.
5. Expansion Joint Materials.
6. Sealants.
7. Waterproof Bondcoat
   This is Basecrete and is the product that replaces THOROSEAL which can no longer be used on pools. Delete if you are using stainless steel gutters.
8. Concrete Densifier
   This is Basecrete + and is used in tandem with Basecrete under tiled surfaces on RENOVATIONS ONLY.

D. Material Test Reports: For the following, from a qualified testing agency, indicating compliance with requirements:
   1. Aggregates.
   2. Concrete Testing
   3. Compaction

E. Shotcrete Nozzleman Qualifications.

F. Pool Finish Experience/Qualification Requirements.

1.04 QUALITY ASSURANCE

A. Perform work in accordance with ACI 301, 305.1, and 306.1.

B. Maintain copy of ACI 301 on site.

C. Qualifications of Pool Contractor
   1. Work of this Section shall be performed by a Contractor who has a proven record of competence and experience in the construction of similar facilities of this size and complexity for not less than five (5) years. Contractors shall have an established record of reliability.

D. Qualifications of Nozzleman and Gunman
   1. Except when shotcrete is applied under a fully automated process, the quality of shotcrete depends largely on the skill of nozzleman and gunman, and the Contractor shall satisfy the Architect/Engineer that the nozzleman has had a minimum of two years' continuous experience on shotcreting of this type of work, and that the gunman has handled the gun for a period of at least six months. The nozzleman shall show proof of good quality successful shotcreting work similar to that required for this project. Experience gained on shotcrete and ditch construction will not be considered as experience for qualifying the nozzleman.

E. Concrete Testing: The following tests shall be performed during construction of the project. Refer to General Conditions and Division 01 for further requirements.
   1. Tests to measure slump, entrained air content and compressive strength shall be conducted by independent testing laboratory employed by the Contractor unless noted otherwise in front-end specifications.
      a. Provide minimum of two 6 by 12 in. cylinders or three 4 by 8 in. cylinders per 150 cubic yard or fraction thereof for each class of concrete poured each day. Comply with ACI 318 (samples secured - ASTM C172, cylinders prepared and cured - ASTM C31, and tested - ASTM C39). Identify samples moist cure at 70 degrees F for five (5) days and ship samples to laboratory.

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2. Slump and Air Content Tests
    a. Perform on concrete from same batch as sampled for strength tests and whenever there is consistency of concrete. Slump tests shall be made in accordance with ASTM C143. Air content tests shall be made in accordance with ASTM C231. If measured slump or air content falls outside specified limits, check shall be made immediately on another portion of same sample. In event of second failure, concrete shall not be used in Work.
3. Compliance
    a. Average of any three (3) consecutive strength tests for each class of concrete shall be equal to or greater than specified strength, and no individual test shall fall more than 500 psi below specified strength.
    b. When tests results are below specified requirements or when tests of field cured cylinders indicate deficiencies in protection and curing, Architect/Engineer may require additional tests in accordance with ACI 318.

F. Wet Mix Process Cylinder Sample
1. Where automated wet mix equipment is used, shotcrete cylinders shall be taken from the mixer or ready-mix truck and tested in accordance with the requirements specified in this Section. Wet mix processes shall only be used with approved automated equipment.

G. Pools, surge tanks, and gutters shall have a water tightness performed per ACI 350.1. Documentation of testing and results shall be submitted for review. Refer to Water Tightness Test section of this specification.

1.05 REGULATORY REQUIREMENTS

A. Conform to requirements of local, state and federal rules and regulations applicable to Work and Project location.

1.06 ENVIRONMENTAL REQUIREMENTS

A. Cold Weather Concreting
1. Placement and curing of concrete where (1) average daily temperature for three consecutive days is less than 40 degrees F, and (2) air temperature is not greater than 50 degrees F for more than one-half of a 24-hour period from midnight to midnight shall be in accordance with ACI 306.1.

B. Hot Weather Concreting
1. Placement and curing of concrete subject to a combination of (1) rising air temperature (generally greater than 75 degrees F) and (2) wind and low relative humidity shall be in accordance with ACI 305.1.
2. Contractor shall provide plan for minimizing exposure of concrete to adverse conditions due to combinations of high air temperature, direct sunlight, drying winds, and high concrete temperature.
3. Protect concrete from rapid temperature drop.
4. Pre-wet subgrade and forms.

1.07 WARRANTIES

A. Special 2-Year on Concrete Structure: The Pool Contractor shall guarantee for two (2) years repair of the concrete pool structure.

2. PRODUCTS

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2.01 SUBGRADE, SUBBASE AND BACKFILL MATERIALS

A. Pool Subgrade:
   1. In-situ soils meeting the Project Geotechnical Report requirements for materials and preparation.
   2. Subgrade soils must meet the soil parameters for pool structural design as stated in the Pool Structural Drawings for:
      a. Net allowable soil bearing capacity in pounds per square foot (PSF),
      b. Stated equivalent fluid pressure in pounds per square foot per foot (PSF/FT),
      c. Ground water elevation
   3. Pool subgrade materials shall be free of large rocks, organic matter, and other deleterious substances.

B. Filter Fabric:
   1. MIRAFI 140N: Nonwoven polypropylene geotextile barrier, 4.8 oz/yd2, by Tencate Geosynthetics.

C. Pool Subbase & Backfill Materials:
   1. Existing subsoil materials shall not be used for pool subbase.
   2. ASTM D 2487 Class IA Manufactured Aggregate:
      a. Aggregate containing little or no fines (clear), including angular, crushed stone or rock, crushed slag, cinders, or shell.
      b. Gradation: Open graded, clean: < = 10% Passing No.4 sieve, < 5% Passing No. 200 sieve.
      c. Pool Subbase: ¾" to 1" nominal sized aggregate.
      d. Pool backfill: ¾" nominal sized aggregate.

2.02 FORM MATERIALS

A. Plywood Forms: Douglas Fir or Spruce-Pine-Fir species: Sound, undamaged sheets with clean true edges, exterior glue, facing material to provide finish specified.

B. Lumber: Douglas Fir or Spruce species; construction grade or better; with grade stamp clearly visible.

C. Preformed Steel Wall Forms: Minimum 16 gage thick, Vertically and horizontally matched, tight fitting, stiffened to support weight of concrete without deflection detrimental to tolerances and surface appearance.

D. Tubular Column Type: Round, spirally wound laminated fiber material; inside surface treated with release agent.

E. Form Ties for Exposed Surfaces: Plastic cone snap ties with 1-inch outside diameter by 1-inch (nominal) long cones, with no metal within 1-inch of concrete face after removal.
   1. Manufacturers:
      a. Advance Concrete Formwork, Inc.
      b. Dayton Superior.
      c. Symons - A Dayton Superior Company.
      d. Williams Form Engineering Corporation.
      e. Substitutions: As approved by Engineer/Architect.

2.03 SHOTCRETE

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A. Mix Design
   1. Wet-mix design only. Dry mix, mixed at the nozzle, shall not be allowed.
   2. A proven mix design shall be used for all Shotcrete applications.
   3. In addition to cylinders, testing of shotcrete shall be done per ACI 506.2.

B. Rebound
   1. Rebound materials shall not be reused in any form for shotcrete work and shall never be worked into the construction by the nozzleman.

2.04 REINFORCING STEEL

A. Reinforcing Steel: ASTM A615, 60 ksi yield grade carbon steel deformed bars; uncoated, finish.

B. Reinforcement Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded wire fabric, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete. Supports shall have a minimum 2" concrete cover on waterside of pool concrete.

2.05 CONCRETE MATERIALS

A. Cementitious Materials
   1. Portland Cement: ASTM C150, gray color, Type I except as specified below.
   2. Fly Ash: ASTM C618, Class C.
   3. Limit cement replacement to 20%.

B. Fine and Coarse Aggregates: ASTM C33.

C. Water: ASTM C1602, clean and not detrimental to concrete.

D. Admixtures
   1. Admixtures to be used in the concrete mixture shall be submitted to the Engineer for approval as part of the mixture proportions.
   2. Admixtures containing intentionally-added chlorides, sulfides, or nitrides are not permitted.
   3. Admixtures shall be certified to NSF/ANSI 61.
   4. Air-Entraining Admixture: ASTM C260.
   5. Water Reducing Admixture: ASTM C494, Type A.
   6. Retarding Admixture: ASTM C494, Type B or Type D.
   7. Accelerating Admixture: ASTM C494, Type C or Type E.
   8. High-Range Water-Reducing Admixture: ASTM C494, Type F.
   9. Workability-Retaining Admixture: ASTM C494, Type S.
   10. Shrinkage-Reducing Admixture: ASTM C494, Type S.
   11. Crystalline Waterproofing Admixture: ASTM C494, Type S.
   12. The amount of admixture added to the concrete shall be in accordance with the manufacturer's recommendations.
   13. Admixtures permitted shall be supplied by a single manufacturer for project.
   14. Approved Manufacturers:
       a. Axim Italcementi Group.
       b. BASF Corporation
       c. Grace Construction Products.
       d. The Euclid Chemical Company.
       e. Xypex

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15. Substitutions: As approved by Engineer/Architect.

2.06 ACCESSORIES

A. Pool Concrete PVC Waterstop
   1. Center bulb type, as shown on Drawings, extruded from an elastomeric plastic compound, the basic resin of which shall be polyvinyl chloride (PVC). The size shall be as shown. Specific gravity shall be approximately 1.37, and the Shore durometer Type A hardness approximately 80. No reclaimed PVC shall be used in the compound. Meet the performance requirements of CRD C-572.
   2. Waterstop shall have a constant thickness from the edge of the bulb to the outside edge. All waterstops shall have a number of parallel ribs or protrusions on each side of the center of the strip. Corrugated type or tapered waterstops are not acceptable. The minimum weight per foot for waterstop shall be 1.62 pounds for 3/8-inch by 6-inch and 2.30 pounds for 3/8-inch by 9-inch.
   3. Manufacturers and suppliers who have provided samples meeting the specified geometry and who have the specified waterstop readily available are listed below. Other products shall not be used without prior review and acceptance by the Architect/Engineer.
      a. Sika Greenstreak Waterstops, P.O. Box 7139, St. Louis, Missouri 63177, phone: (314) 225-9400 or fax: (314) 225-9854. Style 717 for the 6-inch by 3/8-inch and Style 735 for the 9-inch by 3/8-inch.
      a. BoMetals, Inc., 141 Hammond Street, Carrollton, GA. Phone 770-832-2000 or fax (770-832-2095.Style RCB638NT for the 6-inch by 3/8” and style RCB938NT for the 9-inch by 3/8”.
      b. Paul Murphy Plastics Company, Wirestop Waterstop, 15301 Eleven Mile Road, Roseville, Michigan, 48066, phone 800-544-2200 fax 586-774-9146. Style CR-6380 for the 6-inch x 3/8” and Style CR-9380 for the 9-inch by 3/8”.

B. Pool Concrete Compressible Waterstop
   1. Use as illustrated in drawing details for the following:
      a. Sealing non-moving cold joints and construction joints between structural elements against penetration of water from wet-face of structure with less than 30-foot hydrostatic head.
      b. Sealing pool piping penetrations against water penetration from wet-face of structure with less than 30-foot hydrostatic head.
   2. Product Description: The product shall be a 0.59” x 0.39” compressible hydrophilic sponge rubber strip composed of vulcanized rubber and urethane polymer as the hydrophilic agent.
   3. Product & Manufacturer:
      a. Adeka KBA-1510FP waterstop, manufactured by Adeka Corporation and distributed by OCM, Inc., Chicago, IL. USA.
      b. Website: www.adeka.com
      c. Physical & Swelling Property Requirements: The product shall at a minimum meet the physical properties as shown in the official Adeka literature as follows.
      d. Expansion Pressure: The product shall not produce more than 0.03MPa (4.35 psi) expansion pressure when fully hydrated.
      e. Tensile Strength: At least 0.78 MPa (113 psi),
      f. % Elongation: No greater than 350% when fully hydrated.
      g. Volume (thickness) % Change: No greater than 30% volume change or increase in thickness when fully hydrated.
      h. Alternative Products:
         1) General: Drawing documents have been completed using the specified Adeka waterstop product as a basis of design. Alternative compressible waterstops shall not be used without approval from Engineer/Architect. Considerations such as

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concrete coverage requirements and wall thicknesses must be considered when substituting alternative products. Contractor will be responsible for any structural changes required due to alternate product concrete coverage requirements.

2) Product Requirements: Compressible waterstop alternatives may not contain bentonite materials and may not have swelling properties that exceed the specified product.
3) Acceptable Alternative: An acceptable alternative may be Synko-Flex SF302 Preformed Plastic Adhesive Waterstop with Synko-Flex SF311 primer or equal, but it must be approved prior to use. Manufacturer: Henry Company, Houston, TX. Website: http://us.henry.com/

C. Non-Shrink Grout: Premixed compound with non-metallic aggregate, cement, water reducing and plasticizing agents; capable of minimum compressive strength of 2400 psi.
   1. Upcon High Flow, the Upco Company, Cleveland, Ohio; MasterFlow 713, BASF Corporation, Cleveland, Ohio; Crystex, L & M Construction Chemicals, Inc., Omaha, Nebraska.

D. Joint Materials:
   1. Waterstop: See Pool Concrete PVC Waterstop.
   2. Expansion Joint Dowel Sleeves: PVC or molded plastic sleeve with end cap/plug. Size sleeve to allow movement of dowel.
   3. Pre-molded Expansion Joint Filler: Multicellular, closed cell, flexible polyethylene plastic foam as manufactured by Dow Chemical Co., Midland, MI. Ethafoam expanded polyethylene closed-cell foam, W.R. Meadows, Elgin, IL, Ceramar or a pre-approved equal.
   4. Backer Rod Joint Backing Material: Closed cell, polyethylene, flexible, rope-like foam joint backing material. Material shall be fully compatible with polysulfide sealant and for use in swimming pools. Product shall be Kool-Rod as Manufactured by W.R. Meadows, Elgin, IL, or pre-approved equal.
   5. Gun Grade Sealant: Two-part polysulfide sealant and primer certified by Manufacturer as suitable for use in pools including submerged locations. “Deck-O-Seal Gun Grade” and “P/G” solvent based primer as manufactured by W.R. Meadows or equal. Color shall be white.

E. Adhesive Waterproof Bondcoat
   This is Basecrete and is the product that replaces THOROSEAL which can no longer be used on pools.
   1. Provide adhesive waterproof bondcoat where indicated on drawings.
      a. Impact strength: 19 lbs / 8.6 kg
      b. Compressive strength: 7050 psi / 48.61 MPa
      c. Tensile strength: 732 psi / 5.05 MPa
      d. Flexural strength: 2380 psi / 16.41 MPa
      e. Adhesive strength (concrete): 1372 psi / 9.46 MPa
      f. Shear bond adhesion: 720 psi / 4.96 MPa
      g. ASTM C321
      h. ASTM C672
      i. ASTM D4541
      j. ASTM E96
   2. Materials
      a. Basecrete or equal.

F. Concrete Densifier
   This is Basecrete + and is used in tandem with Basecrete under tiled surfaces on RENOVATIONS ONLY.
   1. Provide concrete densifier under tile pool installations and where indicated on drawings.
      a. Basecrete + or equal.

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2.07 CURING AND TREATMENT MATERIALS

A. Water: Potable and clean.

B. Burlap shall be clean, evenly woven, free of encrusted concrete or other contaminating materials, and shall be reasonably free of cuts, tears, broken or missing areas.

C. Polyethylene Film: ASTM C171, 6 mil thick, clear.

D. Curing Paper: ASTM C171;
   1. Manufacturers:
      a. Fortifiber – Orange Label Sisalkraft 280.
      b. Sabel Sisalkraft 280.
         308.1 Keep concrete slabs and walls continuously wet for a 7-day perior. Intermittent wetting is not acubstitutions: As approved by Engineer.

2.08 CONCRETE MIXTURE

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture of field test data, or both, according to ACI 301.

B. Mix concrete in accordance with ASTM C94.

C. Concrete mix designs shall be designed and submitted in accordance with Division 01 and included as part of cost of this Work.

D. Mix designs shall be prepared by a qualified agency acceptable to Engineer/Architect. Electronic copies of mix designs shall be submitted for Engineer/Architect's review prior to placing any concrete.

E. Mix design shall indicate brands, types, and quantities of admixtures included, compressive strength, slump, sieve analysis for fine and coarse aggregate, quantities of all ingredients, type and brand of cement, source of aggregate, whether fine aggregate is natural or manufactured.

F. Design of mix shall assure placing and finishing characteristics that meet Project requirements.

G. Mix designs contained in the Schedule of Mixes may be modified and submitted to Engineer for approval, by use of mid or high range water reducing admixtures to control slumps required for pumping of concrete. Strength, placing and finishing requirements shall be maintained.

H. Concrete mixtures shall be designed to have low shrinkage characteristics and designed to minimize slab curling.

I. Initial and final set times of concrete mix designs shall be coordinated between the contractor and concrete supplier.

2.09 SCHEDULE OF MIXES

A. Pool Structures: Proportion normal-weight concrete mix as follows:
   1. Compressive Strength (28 Days): 4500 psi.

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2. Maximum Aggregate Size: 1 inch.
3. Maximum Slump (Inch): 3
4. Air Entrainment: 6 percent air content is required with an acceptable air content of plus or minus 1.5 percent. Required for pool structures subject to freeze/thaw cycles.
5. Maximum Water-Cementitious Materials Ratio: 0.45.
6. Additional admixtures may be required as indicated on Structural Drawings.

B. Surge Tanks (Walls and Floor): Proportion normal-weight concrete mix as follows:
1. Compressive Strength (28 Days): 4500.
2. Maximum Aggregate Size: 1- inch.
3. Air Entrainment: 6 percent air content is required with an acceptable air content of plus or minus 1.5 percent. Required for tanks subject to freeze/thaw.
4. MasterLife 300D or Xypex C-500 admixture: Provide dosage per manufacturer's recommendations.

C. Shotcrete: Proportion normal-weight concrete mix as follows:
1. Compressive Strength (28 Days): 5000 psi.
2. Wet-mix design only. Dry mix, mixed at the nozzle, shall not be allowed.
3. Maximum Aggregate Size: 3/8 - inch.
4. Air Entrainment: 6 percent air content is required with an acceptable air content of plus or minus 1.5 percent. Required for pool structures subject to freeze/thaw cycles.
5. Additional admixtures may be required as indicated on Structural Drawings.

3. EXECUTION

3.01 SUBGRADE, SUBBASE AND BACKFILL PLACEMENT

A. Prepare pool subbase using in-situ soils in compliance with the Project Geotechnical Report placement methods and testing requirements. Materials shall be graded to proper elevations, free of large rocks, organic matter, and other deleterious substances.

B. Place geotextile barrier below entire pool and up the sides of the pool walls separating the subbase aggregates and pool backfill aggregates from the subgrade and remaining backfill or in-situ soils to prevent mitigation of fines.

C. Place pool subbase & backfill aggregate materials in 6” compacted lifts to minimize void spaces and eliminate potential future settlement. Compact materials using walk-behind plate compactors properly sized and operated to prevent damage to pool pipes.

3.02 FORMWORK

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until concrete structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance per ACI 117.

C. Verify lines, levels, and measurement before proceeding with formwork.

D. Earth forms are not permitted.

E. Align form joints.

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F. Do not apply form release agent where concrete surfaces receive special finishes or applied coatings which may be affected by agent.

G. Coordinate work of other Sections in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts.

3.03 REINFORCEMENT

A. Place, support, and secure reinforcement against displacement.

B. Locate reinforcing splices as shown on Drawings.

C. Place reinforcing steel in conformance with the information on the drawings and CRSI 63 and CRSI, except as modified herein. Minimum length of splices shall be as shown in table on drawings. Tie splices with 18-gauge annealed wire as specified in the referenced CRSI standard. All tie wires shall be "made tight" for electrical bonding purposes, as required by NEC, Article 680.

3.04 WATERSTOP

A. PVC Waterstop
   1. Split formwork is generally required for slab-to-slab, slab-to-wall and wall-to-wall joints where ribbed style waterstops are used. The centerline of the waterstop should be aligned with the center of the joint. The split form shall firmly hold the waterstop in position to prevent misalignment of waterstop during concrete placement. Secure waterstop with hog rings or integral wire loops prior to concrete placement. Loop tie wires through the hog ring/wire loops and tie off to adjacent reinforcing steel to prevent displacement of the waterstop during concrete placement. Fasteners through the body of the waterstop are not permitted.
   2. Lapping of the waterstop is not permitted. PVC waterstop may be butt spliced in the field with Teflon coated, thermostatically controlled splicing iron. Direct exposure to a flame is not permitted. Factory fabricated fittings are recommended for ells, tees and crosses.
      a. The following defects at splices will not be acceptable:
         1) Use of adhesives, solvents, or free lap joints
         2) Misalignment of center bulb greater than 1/16"
         3) Misalignment that reduces waterstop cross section area more than 15%.
         4) Bond failure at joint, deeper than 1/16" or 15% of material thickness.
         5) Combination misalignment and bond failure with net reduction of waterstop cross-section area greater than 15%.
         6) Misalignment of waterstop splice resulting in misalignment of waterstop in excess of ½" in 10 feet.
         7) Visible porosity in the weld joint, including pinholes
         8) Charred or burnt material
         9) Bubbles or inadequate bonding detectable with a penknife
         10) Visible signs of splice separation when cooled splices are bent at a sharp angle.
         11) Edge welding
   3. Thoroughly consolidate the concrete around the waterstop to prevent voids or honeycombing next to the waterstop. Maintain adequate clearance between reinforcing steel and the waterstop. Typical clearance should be twice the maximum aggregate size. Maintain continuity of the entire waterstop system. Properly store PVC waterstops prior to installation to prevent UV degradation.

B. Compressible Waterstop – Adeka KBA-1510FP
   1. Non-moving Joint Installation:

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a. Consult manufacturer and follow all recommended installation instructions.
b. Allow concrete to cure a minimum of 24 hours.
c. Concrete must be dry and free from form oils, release agents, curing compounds, laitance and other dirt or debris prior installation. Use a wire brush to remove contaminants prior to installation of waterstop.
d. Use butyl tape to attach KBA-1510FP to a dry and clean substrate. The butyl tape comes in a 3/4" X 1/8" X 82-foot roll (1 roll per roll of KBA-1510FP). Press the butyl strip onto the substrate and remove the release paper. Press the KBA-15010FP firmly onto the butyl tape.
e. Check for any gaps between the product and the substrate. If gaps are present, fill in using Adeka P-201 applied to the side of the strip. Use P-201 on corner joints and on side-by-side splice joints.
f. Once installed, keep the product covered, clean, and dry prior to concrete placement. For best results, place the waterstop product immediately before pouring concrete. Check to make sure the waterstop is firmly adhered before placing concrete.
g. During concrete placement, assure that the concrete is well consolidated around the waterstop at all locations with no voids or gaps.

2. Penetration Installation:
   a. Consult manufacturer and follow all recommended installation instructions.
   b. Pipe must be dry and free from form oils, release agents, curing compounds, laitance, and other dirt or debris prior to installation.
   c. Press the butyl strip onto the clean pipe completely around the pipe diameter and remove the release paper. Press the KBA-15010FP firmly onto the butyl tape. Tightly butt strip ends together with 1” overlap or side lap.
   d. Once installed, keep the product covered, clean, and dry prior to concrete placement. For best results, place the waterstop product immediately before pouring concrete. Check to make sure the waterstop is firmly adhered before placing concrete.
   e. During concrete placement assure that the concrete is well consolidated around the waterstop at all locations with no voids or gaps.
3. Alternative Products Installation:
   a. Drawing documents have been completed using the specified Adeka waterstop product as a basis of design. Alternative flexible adhesive waterstops shall not be used without approval from Engineer/Architect. See Section 2 for additional information.
   b. If Synko-Flex has been approved during the submittal process, the following installation requirements shall be met, as well as all manufacturer’s installation instructions.
      1) Allow concrete to cure a minimum of 24 hours before priming with Synko-Flex primer.
      2) Concrete must be dry and free from form oils, release agents, curing compounds, laitance and other dirt or debris prior to priming. Use a wire brush to remove contaminants prior to installation of primer.
      3) Apply Synko-Flex SF311 primer.
      4) Apply Synko-Flex SF302 Preformed Plastic Adhesive Waterstop over primed areas. Place Synko-Flex to primed areas at an approximately 5/8” thickness and approximately 1 ½” width.
      5) Tightly butt strips together with 1” overlap or side lap.

3.05 PLACING CONCRETE

A. Notify Engineer/Architect a minimum of 48 hours prior to commencement of concreting operations.

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B. Failure to notify Engineer/Architect may result in rejection of concrete placed without observation.

C. Place concrete in accordance with ACI 301.

D. Place pumped concrete in accordance with ACI 304.2R. Line coating mix to initiate pumping shall not be used in pour but shall be wasted.

E. Ensure reinforcement and embedded items are not disturbed during concrete placement.

F. Concrete with excessive honeycomb or embedded debris shall be rejected and replaced at no cost to OWNER.

G. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures and mechanical injury.

H. Placing During Hot Weather:
   1. Place concrete during hot weather conditions in accordance with ACI 305.1.

I. Placing During Cold Weather:
   1. Place concrete during cold weather conditions in accordance with ACI 306.1.

J. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

3.06 POOL WALL SHOTCRETE

A. Wet Mix Process
   1. The delivery equipment shall be of an approved design and size that has given satisfactory results in similar previous work.
   2. The equipment must be capable of discharging mixed material into the hose under close control, and it must be able to deliver a continuous smooth stream of uniformly mixed material at the proper velocity to the discharge nozzle, free from slugs of any kind.
   3. The nozzle shall be of a design and size that will ensure a smooth and uninterrupted flow of materials.
   4. Delivery equipment shall be thoroughly cleaned at the end of each shift.

B. Surface Preparation
   1. Verify forms are true to line and dimensions, adequately braced against vibration, and constructed to permit escape of air and rebound during gunning operations.
   2. Do not place shotcrete on any surface which is frozen, spongy, or where there is free standing water.

C. Alignment Control
   1. Provide alignment wires to establish thickness and plane surface.
   2. Install alignment wires at corners and offsets not established by form work.
   3. Verify alignment wires are tight, true to line, and placed to allow further tightening.

D. Application
   1. Ensure correct placement of reinforcement. Ensure sufficient clearance around reinforcement to permit complete encasement.
   2. Allow easy access to shotcrete surfaces for screeding and finishing, permitting uninterrupted application.

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3. Determine operating procedures for placement in close quarters, extended distances, or around unusual obstructions where placement velocities and mix consistency must be adjusted.
4. In shotcreting walls, begin application at bottom. Ensure work does not sag.
5. Hold nozzle as perpendicular to surface as work will permit, to secure maximum compaction with minimum rebound.
6. Follow routine that will fill and completely encase reinforcement, using maximum layer thickness.
7. Build up layers by making several passes of nozzle over work area. Completely encase reinforcement with first layer.
8. After initial set, remove excess material outside of forms and alignment lines.
9. Allow each layer of shotcrete to take initial set before applying succeeding layers.
10. Remove laitance that has taken final set, by sandblasting. Clean with air-water jet.
11. Sound work with hammer for voids. Cut out voids and replace with succeeding layers.
12. Keep rebound, and other loose or porous material out of new construction.
13. Remove rebound that does not fall clear to work. Discard salvaged rebound.
14. Remove trapped rebound at construction and expansion joints.

E. Protection of adjacent surfaces
1. Contractor shall take every possible precaution to protect adjacent concrete surfaces, equipment, etc., from being damaged by overshooting concrete. Overshot concrete and rebound materials deposited shall be removed at the Contractor's expense.

3.07 EXPANSION & CONTROL JOINTS

A. All control and expansion joints require PVC waterstop.

B. Installation of Joint Filler: At locations where joint sealant is to be applied, the pre-molded joint filler shall be installed in the joint accurately as detailed. Precut the pre-molded expansion joint filler to the required depth. Filler material shall be of sufficient width to completely fill the joint and shall be accurately cut to butt tightly against the waterstop and the side forms. Attach filler material to concrete with a bonding agent. Bonding agent shall be approved in writing by the joint sealant and joint filler manufacturer for compatibility.

C. Concrete shall be thoroughly vibrated along the joint form to produce a dense, smooth surface. Surface irregularities along the joint sealant cavity, due to improper concrete consolidation or faulty form removal, shall be repaired with an approved compound compatible with the joint sealant in a manner that is satisfactory to the sealant manufacturer.

D. All expansion and control joints require gun grade sealant. Cavities for joint sealant shall be formed with precut or pre-molded joint filler that can be removed as needed for sealant. Circular backer rod shall be used in joints as detailed to provide accurate shape for sealant.

3.08 CONSTRUCTION JOINTS

A. Construction joints shall be located as required for the contractor’s scheduling, means and methods.

B. All construction joints require waterstop.

C. Contractor shall provide a submittal showing construction joint locations and detailing for review and approval.

3.09 ADHESIVE WATERPROOF BONDCOAT PLACEMENT

This is Basecrete and is the product that replaces THOROSEAL which can no longer be used on pools.

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A. Clean and prepare surfaces and apply all products in accordance with manufacturer's recommendations.

B. Pool Renovations: Apply concrete densifier to all pool concrete surfaces receiving a tile finish and where indicated on drawings.

This concrete densifier is Basecrete+ and is used in tandem with Basecrete under tiled surfaces on RENOVATIONS ONLY. Apply adhesive waterproof bondcoat beneath gutter grating on the exposed sides and bottom of all concrete gutter trenches, and where indicated on drawings. Apply material in two coats (one horizontal and one vertical). Each layer shall be 1/16 inch in thickness.

C. Pool Renovations: Provide fiberglass mesh to bridge over cold joints and cracks in accordance with product manufacturer's recommendations.

This fiberglass mesh is for use beneath the Basecrete product and is only required on Renovations as needed for cold joints and cracks.

D. Do not apply materials to frozen substrates or when temperatures are below 40 or above 105 degrees Fahrenheit.

3.10 CURING AND TREATMENT

A. Curing shall begin promptly to prevent drying of concrete. Curing shall continue for seven (7) days after placing.

B. Provide a moist cure for a full seven (7) days in accordance with ACI 308.1. Keep concrete slabs and walls continuously wet for a 7-day period. Intermittent wetting is not acceptable. Material shall completely cover the concrete surface and shall be weighted down to prevent shifting due to wind or other factors.

3.11 REPAIR OF VERTICAL SURFACE DEFECTS

A. Upon stripping of forms, vertical surfaces shall be inspected for defects caused by surface air voids, honeycombing, form tie holes, peeling, and fins.

B. Surface air voids shall be repaired with a unit packaged mixture of sand and cement mixed on job site with water and a unit of acrylic. Mixture shall be brushed uniformly on to surface and into voids. Where surface is to be exposed, surface finish of repair shall match adjacent surface.

C. Honeycombed and other defective concrete shall be removed down to sound concrete and patched to match adjacent surfaces. Cut edges perpendicular to surface at least 1 inch deep – no feathered edges allowed.
   1. Areas not subject to water shall be repaired similar to surface air voids as indicated above. A bonding agent shall be used prior to filling the holes. Patches shall be kept moist for a minimum of 7 days.
   2. Areas subject to water shall be moist for a period of 24 hours prior to patching. Holes shall be filled with non-shrink grout and cured per recommendations by manufacturer. Concrete surface shall be prepared per recommendations by manufacturer.

D. Form tie holes shall be filled with non-shrink grout. Surface of concrete to prepared per recommendations by manufacturer. Grout shall be cured per recommendations by manufacturer.

3.12 FINISHING

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A. Floor slabs shall not vary from level or true plane more than ¼ inch in 10 feet when measured with a straightedge. Floor slabs shall receive a broom finish to accommodate special aggregate mechanical bonding requirements.

B. After removal of forms and repair of defects, surfaces of concrete shall be given finishes specified below.

C. Rough Form Finish: Surface left with texture imparted by forms; form facing material not specified; tie holes and defects shall be patched; all fins shall be chipped or rubbed off. The surface shall be finished in such a way that will leave the surface for the substrate rough, coarse, and porous enough to ensure that subsequent application of the cementitious surface coating can achieve a good mechanical bond to the substrate similar to a broom finish.

D. Tops of walls or buttresses, horizontal offsets, and similar unformed surfaces occurring adjacent to formed surfaces shall be struck smooth after concrete is placed and shall be floated to a texture reasonably consistent with that of formed surface.

E. Final finish on formed surfaces shall continue uniformly across unformed surfaces.

3.13 WATER TIGHTNESS TEST

A. General
1. This test applies to the pool, the surge tank, and the gutter system. A water tightness test shall be completed on each pool, surge tank and gutter system, independently of each other, prior to the application of the pool finish.
2. The cost of the water shall be allocated as outlined in Specifications Section 13 11 14, Part 3, 3.02, F.
3. Contractor shall include and itemize these requirements in the overall construction schedule.
4. The Owner may elect to waive leak test requirements if schedule becomes a critical factor. Only the Owner may waive these requirements. If the Owner elects to waive these requirements the Contractor is still responsible for providing leak-free structures, and at a minimum, all specified applicable warranties shall apply.

B. Water Tightness Test Procedure
1. Preparation
   a. Visually examine the concrete structure and joints for potential leakage prior to fill. Contractor shall repair areas of potential leakage prior to fill.
   b. Allow the concrete structure to cure a minimum of 28 days, or as required to gain sufficient strength to withstand the test load, prior to initiating test.
   c. Securely seal all inlets/outlets and penetrations prior to fill.
   d. The test shall not be scheduled when the weather forecast indicates the water surface could freeze before the test is completed.
2. Fill
   a. Fill the pool with potable water from an approved water source, and then isolate the pool, the surge tank, and the gutter system. The water tightness test and measurement documentation shall begin after the test structure has been filled for a minimum of three (3) days to allow the concrete to absorb water and minimize absorption effects during the testing period.
   b. Fill each structure to the design maximum liquid level or 4 inches below any fixed overflow level.
   c. After the initial fill, remove ground water to a level below the bottom of the structure main drain or floor slab (below lowest concrete plane) utilizing the pool observation

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tube, the pool de-watering system, or the construction dewatering system. This shall be completed prior to the start of the water tightness test and maintained for the duration of the test.

d. For elevated pools with secondary containment structure, the secondary containment structure shall be monitored for the presence of water for the duration of the test. Groundwater elevation is not a factor in these pools.

3. Evaporation/Precipitation Measurement Procedure
   a. Partially fill a floating, restrained, calibrated (known volume and surface area), open container (hereafter "container" or "control container") with water and allow this container to float within the filled structure during the testing period. This will be used to measure total evaporation and precipitation.
   b. Mark and measure the change in container's water level. If the container water level has gone down (evaporation), this change shall be subtracted from each structure's water loss measurement. If the container water level has risen (rain), this change shall be added to each structure's water loss measurement.
4. Measurement
   a. Conduct all measurements with the Architect or Owner's representative present and document all measurements on the table below.
   b. Provide an as-built drawing or sketch the pool, surge tank, and gutter identifying measurement locations and the evaporation control container's location.
   c. The water surface elevation shall be recorded to within 1/16 of an inch, measured from a fixed point on the structure above the water surface.
   d. Average multiple sample locations for structures exposed to wind.
   e. Repeat and record the measurements for a total of three (3) consecutive days.

Measurement Times	Pool Measurements	Gutter System Measurements	Surge Tank Measurements	Control Container Measurements
12 Hrs.				
24 Hrs.				
36 Hrs.				
48 Hrs.				
60 Hrs.				
72 Hrs.				

5. Water Leakage
   a. Calculate water leakage as follows:

Leakage [Gallons] = [7.481 x Structure Surface Area (SF)] x
[Structure Loss Measurement* (FT) – Control Container Measurement (FT)].

- Structure loss measurement is a generic term referring to Pool Measurement, Gutter System Measurement or Surge Tank Measurement independently. Calculate the leakage from the pool, gutter, and surge tank independently.

   b. Add the measurements for two consecutive 12-hour periods to obtain the total daily loss due to leakage.
   c. Record Daily losses due to leakage for Day #1, #2, and #3 in the table below.

Total Daily Loss Due To Leakage	Pool Leakage	Gutter Leakage	Surge Tank Leakage
Day 1			
Day 2			
Day 3			

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6. Submittal
   a. Provide test location as-built/sketch, measurement tables, and Water Leakage calculations to Engineer in the form of a submittal for review and records.
7. Allowable Loss from Leakage
   a. The allowable leakage rate for an unlined, open concrete structure (i.e. backfilled pool, gutter, and surge tank) shall not exceed 0.1 percent of the total water volume in a 24-hour period. (Example: 0.001 x 200,000-gallon pool = 200 gallons per 24-hour period.)
   b. Elevated pools and gutters with a secondary containment vessel shall have no measurable loss; the drop in the water surface shall not exceed 1/8" over the three-day test period when adjusted for evaporation and precipitation.
8. Repair and Retest
   a. If the leakage volume calculated exceeds the "allowable loss" in section 7, Contractor shall locate and identify leakage points, repair the structure and provide documentation on the location of repaired areas.
   b. After proper curing of all repair work, re-test the water tightness of structure following the procedure specified in this section.

END OF SECTION

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SECTION 13 11 20

POOL PIPE AND PIPE FITTINGS

1. GENERAL

1.01 SECTION INCLUDES

A. Pipe, pipe fittings, connections, wall penetrations.

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 REFERENCES/PIPE – FITTING REQUIREMENTS

A. The following latest edition reference specifications, guides, and standards shall become part of this Specification as if herein written. If provisions conflict, the more stringent provisions shall apply.
   1. ANSI/ASTM D2564 - Solvent Cements and ASTM F656 – Primers for Polyvinyl Chloride (PVC) Plastic Pipe and Fittings
   2. ASTM D2855 – Practice for Making Solvent Cemented Joints with PVC Pipe and Fittings
   3. ANSI/ASTM D1785 – Standard Specification for Polyvinyl Chloride (PVC) Plastic Pipe Schedules 40, 80 and 120, NSF Seal for Potable Water
   4. ASTM D2466 – PVC Plastic Pipe Fittings, Schedule 40, Injection Molded, Sizes Through 12”, NSF Listed. As manufactured by Spears Manufacturing Company, “or approved equal”.
   5. ASTM D2467 – Socket Type PVC Plastic Pipe Fittings, Schedule 80, Injection Molded, Sizes through 12”, NSF Listed. As manufactured by Spears Manufacturing Company, “or approved equal”.
   6. ASTM D2487 – Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
   7. ASTM D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
   8. ASTM D-1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (Modified Proctor Maximum Dry Density)
   9. ASTM F679 – PVC Large Diameter Plastic Gravity Sewer Pipe and Fittings, Bell Gasketed Joints, Sizes 18” Through 36”. As manufactured by J-M Manufacturing Co., Inc. “Perma-Loc”, “or approved equal”.
   10. ASTM B88 – Seamless Copper Water Tube
   11. Eslon Engineering Manual for Plastic Piping Systems
   12. ASTM D2563 – Fabricated, Fiberglass Wrapped PVC Pipe Fittings 12”, 14”, and above, Schedule 40 or 80 manufactured from PVC pipe conforming to ASTM D1785 and compliant to the most recent publication of the “Spears General Specification for Standard Fabricated Fittings (FAB-7-702)”. Butt-fusion welded fabricated fittings are not acceptable. All fittings shall be certified for potable water service by NSF. As manufactured by Spears Manufacturing Company or “approved equal”
   13. CLASS 150 - All plastic pipe flanges shall be Class 150 and of the same schedule as the associated pipe with neoprene gaskets where required.

1.04 QUALITY ASSURANCE

A. Qualifications of Pool Contractor

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1. Work of this Section shall be performed by a Contractor who has a proven record of competence and experience in the construction of similar facilities of this size and complexity for not less than 5 years. Contractors shall have an established record of reliability.

B. The following tests shall be performed during construction of the project. Refer to General Conditions and Division 01 for further requirements.
   1. Testing and Flushing of Piping
      a. Contractor shall be responsible for discovering leaks and making necessary repairs.
         1) Pressure piping and suction piping: After the piece is laid, the joints completed and the trench partially backfilled, leaving joints exposed for examination, subject new lines to a hydrostatic pressure of not less than 50 pounds per square inch. Joints shall remain watertight under this pressure for a period of two (2) hours. All air must be expelled from pipes prior to testing.
         2) Gravity lines: A water test shall be applied to all gravity drain piping systems, either in their entirety or in sections. All openings shall be tightly plugged and each system filled with water and tested with at least a 10 foot head of water (4.3 psi). The water shall be kept in the system, or in the portion under test, for at least fifteen (15) minutes before the inspection starts. System shall be watertight at all joints.
         3) Leaks shall be repaired and tested repeatedly until leakage or infiltration is approved.
      b. Provide test results to the Architect/Engineer before covering with concrete.

1.05 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Product Data: For each type of manufactured material and product indicated.

C. Provide Shop Drawings showing all pipe penetration locations through concrete pump pit walls and concrete surge tank walls. Include dimensioned location of pipe penetrations in plan and elevation view, pipe sizes, sleeve sizes, link-seal sizes, and sleeve and link-seal material/product information.

D. Provide a submittal including system drain valves and location of drain valves for Owner's use during pool shutdown and/or pool winterizing.

1.06 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

2. PRODUCTS

2.01 PIPE BEDDING & BACKFILL MATERIALS

A. Pipe Trench Foundation/Subbase: In-situ soils meeting the Project Geotechnical Report requirements for preparation. Trench base materials shall be free of large rocks, organic matter, and other deleterious substances.

B. Pipe Trench Embedment Zone (bedding, haunching, initial backfill):
   1. Existing subsoil materials shall not be used for pipe bedding.
   2. Condition 1: ASTM D 2487 Class IA Aggregate.
      a. Manufactured aggregates containing little or no fines including angular, crushed stone or rock, crushed slag, cinders, or shell.

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b. Open graded, clean: < = 10% Passing No.4 sieve, < 5% Passing No. 200 sieve
c. Maximum pipe diameters >=6": Maximum aggregate size <= 1.5".
d. Maximum pipe diameters <6": Maximum aggregate size 3/4".
e. Where conditions may cause migration of fines into the trench from adjacent soil (and loss of pipe support) apply Condition 2 and use Class 1B Aggregate. Alternatively, include the addition of a filter fabric between the trench and Class 1A aggregate to prevent migration of fines into the embedment zone.

3. Condition 2: ASTM D 2487 Class IB Aggregate.
   a. Use where conditions may cause migration of fines from adjacent soil and loss of pipe support. Process materials as required to obtain gradation which will minimize migration of adjacent materials.
   b. Manufactured processed aggregates; angular, crushed stone (or other Class IA materials) and stone/sand mixtures with gradations selected to minimize migration of adjacent soils.
   c. Dense graded, clean: < = 50% Passing No.4 sieve, < 5% Passing No. 200 sieve
   d. Maximum pipe diameters >=6": Maximum aggregate size <= 1.5".
   e. Maximum pipe diameters <6": Maximum aggregate size 3/4".

C. Final Pipe Trench Backfill: Use on-site existing soils meeting the Project Geotechnical Report requirements for backfill materials. Final trench backfill may not include organic material, clay, topsoil, or other deleterious substances. The source and suitability of all proposed off-site fill shall be confirmed by the Project Geotechnical Engineer prior to bringing material on site.

2.02 PIPE & FITTINGS

A. Refer to Section 1.03 for pipe and fitting requirements.

B. Refer to pipe schedule(s) on drawings for size and type.

2.03 THREAD TAPE

A. Teflon 2

2.04 SOLVENT CEMENTS AND PRIMERS

A. PVC pipe shall be installed using solvent weld materials including primers, cleaners, and cements. All solvent weld materials, methods, and applicator tools shall conform to all ASTM Standards for solvent cements used for plastic pipe installations.

B. Manufacturer: IPS Corporation, Weld-On Product Line

2.05 WALL SLEEVES

A. Pipes penetrating all watertight walls shall use "Century Line" thermoplastic wall sleeves in combination with "Link Seals" having stainless steel service designation. As manufactured by Thunderline Corporation, or the Metraflex Company, "or approved equal".

2.06 NON-SHRINK GROUT

A. Upcon High Flow, The Upco Company, Cleveland, Ohio; Masterflow 713, The Master Builder Company, Cleveland, Ohio; Crystex L & M Construction Chemicals, Inc., Omaha, Nebraska.

2.07 PIPE SIGNAGE

A. Brady, B-946, custom legend, self-sticking markers, and arrows or equal.

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3. EXECUTION

3.01 PIPE INSTALLATION

A. Pool Pipe Trench Excavation
   1. General:
      a. Excavation for all pool systems and related piping shall comply with the following:
         i. Division 31 Earthwork Specifications for buried utilities.
         ii. Project Geotechnical Report requirements for pipe trench preparation, backfilling, and engineered fill.
         iii. Current OSHA criteria and regulations.
      b. See pool pipe plans for additional piping details, notes/requirements, pipe routing, material types and sizes.
   2. Pipe Trench Requirements: Excavate pool piping trenches to proper depths for pool operations, required pipe slopes, and a minimum final cover plus backfill depth of 36-inches. Trench widths shall be minimized as indicated in the Pool Drawings “Typical Pool Pipe Trench Detail” and as required for proper compaction. Maintain a clear trench width of 6 to 12-inches beyond the nearest pipe wall. Maintain a minimum of 6-inches between each adjacent pipe. Protect the soils adjacent to the trench to maintain an undisturbed condition for optimal pipe support.
   3. Pipe Trench Foundation/Subbase: The trench bottom shall be smooth and free from large dirt clods, frozen material, and stones greater than 1.5-inches in diameter. A subbase is necessary only when native subgrade soils are unstable. For such conditions, over excavate the subgrade soils and place a layer of supportive engineered fill material as the trench subbase. Compact subbase materials to provide a firm foundation for the subsequent pipe embedment materials. Match the compaction effort specified in the Final Backfill layer of the pipe trench.

B. Pool Pipe Bedding & Backfill
   1. Embedment Zone: Controlled placement of pipe trench materials is required in the embedment zone for pipe performance and to minimize deflection. Schedule inspections prior to the backfilling as needed, however backfilling the embedment zone should follow pipe assembly as closely as possible to protect the pipe from falling debris, minimize the possibility of flooding an open trench and avoiding shifting pipe. See Part 2 PRODUCTS for material specifications and assure selected embedment zone materials are free from dirt clods, clay, frozen materials, and rocks greater than 1.5-inches in diameter. Place materials in six-inch lifts in the following three subzones:
      a. Bedding: Place six inches of supportive, compacted bedding materials beneath the pool piping to provide uniform longitudinal support under the pipe, prevent low spots, and to set piping to the proper grade. Do not use blocking of any type to bring the pipe to grade. If the native trench soil is comprised of fine grain soils and migration of those soils into the bedding material is anticipated, a well-graded bedding material without voids or a fabric barrier should be used to avoid compromising the trench backfill materials. Consult the Geotechnical Report for specific recommendations.
      b. Haunching: Haunching is required from the bottom of the pipe to the centerline of the pipe (“springline”). To provide resistance to pipe deflection compaction of the haunching zone is required prior to placement and compaction of the initial and final backfill. Place the haunching materials by hand to give effective support of the pipe. Compact materials using shovel slicing and/or firmly tamping the materials under the pipe haunches, around the pipe, up to the spring-line of the pipe and out to the trench walls. If automatic tampers are used, avoid contacting and damaging the pipe. Control haunching to avoid vertical and horizontal displacement of the pipe from proper alignment.
      c. Initial Backfill: The initial backfill extends from the pipe springline to a point above the top of the pipe. Place the initial backfill to a 12-inch minimum compacted depth of cover above the pipe.

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2. Final Backfill: This zone extends from the top of the initial backfill to the top of the trench and up to final grade. Adjust final grades as required to allow for landscaping, flatwork, or roadwork materials if applicable. Place materials for this zone using materials and compaction efforts in accordance with the Geotechnical Report and/or Division 31 Specification requirements. If those requirements are not provided, place materials in accordance with the following:
    a. +- 2% of the optimum moisture content
    b. 12-inch maximum lifts, as measured in loose thickness.
    c. Uniformly compact each lift to a minimum of 95 percent of the material's ASTM D-1557 Modified Proctor Maximum Dry Density, prior to placement of subsequent lifts.
    d. Place each subsequent lift and compact in a similar manner until achieving proposed finished grades.
    e. Final cover plus backfill materials shall measure a minimum of 36-inches above the top of the pipe/s unless noted otherwise on the plans or details.

C. Piping Placement and Use
1. Base Bid shall be on pipe materials shown. See the PL Drawings and associated schedules for required pipe material types.
2. All material transitions shall be above-grade, flange to flange connections and include ribbed EPDM type rubber gaskets. Below-grade materials transitions will not be allowed.
3. Piping must be laid on a grade so it will drain completely by gravity. In all instances where gravity drainage is not provided, the contractor shall install drain valves so that all lines can be drained completely. Shop drawings will be required on any such installation.
4. No installation shall be made that will provide a cross connection or inter-connection between distribution supply for drinking purposes and the swimming pool that will permit a backflow of water into the potable water supply. Pipe openings shall be closed with caps or plugs during installation. Equipment and pool fittings shall be tightly covered and protected against dirt, water and chemical or mechanical injury. At the completion of work the fittings, materials and equipment shall be thoroughly clean and adjusted for proper operation.
5. All gutter lines shall drain by gravity to the surge tank.
6. All above grade outdoor piping shall be painted, in accordance with the manufacturer's recommendations, to protect against ultraviolet degradation.

D. PVC Pipe
1. Cut all pipe with mechanical cutter without damage to pipe.
2. Placing and laying: Inspect pipe for defects before installation. Clean the interior of pipe thoroughly of foreign matter and keep clean during laying operation. Pipe shall not be laid in water or when trench conditions are unstable. Water shall be kept out of the trench until the pipe is installed. When Work is not in progress, open ends of pipe and fittings shall be securely closed so that no trench water, earth or other substance will enter the pipes or fittings.
3. Threaded joints: After cutting and before threading, the pipe shall be reamed and shall have burrs removed. Screw joints shall be made with graphite or inert filler and oil or with an approved graphite compound applied to male threads only. Threads shall be full-cut and not more than 3 threads on the pipe remained exposed. Use Teflon tape on the male threads of all threaded pipe joints. Caulking of threaded joints to stop or prevent leaks will not be permitted. Unions shall be provided where required for disconnection of exposed piping. Unions will be permitted only where access is provided.
4. All PVC pipe connections shall be flanged or solvent welded.
5. Solvent welded joints shall be made in accordance with the manufacturer's printed instructions and the following minimum standards:
    a. All fittings shall fit easily on the pipe before applying cement. The outer surface area of pipe and inner wall of fitting shall be dry and clean. Cleaner is to be applied to the outer surface of the pipe and to the inner surface of the fitting. Cement is to be applied to the outer surface of the pipe, or on the male section of fittings only. When

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the outside surface area of the pipe is satisfactorily covered with cement allow ten (10) seconds open time to lapse before inserting pipe end into fittings. After full insertion of pipe into fitting, turn fitting about the pipe end approximately 1/8 to 1/4 of a turn. Wipe off excess cement at the joint in a neat cove bead. Follow manufacturer's instructions on solvents. Remove all debris, including, containers, brushes, applicators and other items from premises, dispose of properly. Burying of debris on site is not permitted.

b. In addition to the requirements outlined above, the solvent weld process for pipe sizes of 6" diameter and larger includes additional requirements outlined below. As pipe diameter increases, so does the difficulty in installing it. Follow all of the solvent weld manufacturer's recommendations for larger diameter pipe.
   1) The installer shall use proper size applicators to ensure enough cement is applied to fill the larger gap that exists between the pipe and fittings.
   2) Use the applicable cement for the size of pipe and fittings being installed.
   3) End of pipe must be cut square and chamfered (beveled).
   4) Provide adequate crew size to properly handle and fit pipe installations.
   5) It is important in large diameter joining that the primer and cement be applied simultaneously to the pipe and fittings. Apply a second, full layer of cement to the pipe. Pipe must be bottomed into the fitting.
   6) Large diameter pipe and fittings require longer set and cure times. Prefabricate as many joints as possible. If pipe is to be buried, fabricate as many joints as possible above ground, after joints have cured, carefully lower into trench.

c. All joints shall remain completely undisturbed for a minimum of 10 minutes from time of jointing the pipe and fitting. If necessary, to apply pressure to a newly made joint, limit to 10% of rated pipe pressure, during the first 24 hours after the joint has been made.

d. Make provisions for expansion and contraction by way of swing joints or snaking.

e. Protect plastic pipe from exposure to aromatic hydrocarbons, halogenated hydrocarbons, and most of esters and keytones that attack the material. Protect all pipe from mechanical damage and long exposure to sunlight during storage.

f. PVC welding is not allowed without prior approval of the Architect/Engineer.

E. Field Coordination
   1. It is the Contractor's responsibility to provide piping by means that account for all necessary coordination, including, but not limited to: water stops, oversize sleeves, pipe supports, valves and other attachments, over-excavations required for fusion machinery or other equipment, etc.
   2. Provide pipe extensions and temporary caps necessary for pressure testing requirements.
   3. Contractor is required to provide coordination and adequate protection as needed to all external services (i.e., ducts, pipes, cables) that run throughout the project site. Plumbing shall be located and placed to prevent damage during and after construction from traffic loads above.

F. Overhead piping in mechanical room/pool room shall be run such that a minimum head clearance of 7'-0" is observed to all piping, pipe fittings and pipe hangers/supports. Piping runs shall not create path obstruction or a tripping hazard.

G. Pipe Identification
   1. Provide identification on all piping located in mechanical equipment, chlorine, acid rooms, heater courts, etc.
   2. All piping in Mechanical Room to be labeled with description of line and arrows indicating direction of flow.
   3. Mark at least once on each line and at 5 ft. intervals minimum. Consult Health Department Code for minimum marking requirements.

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4. Color code per Health Department requirements. If code does not identify color coding requirements consult Architect/Engineer.

3.02 SLEEVES AND WALL PENETRATIONS

A. Patch exterior side of wall penetrations with non-shrink grout. Other methods of water tightness shall be pre-approved by the Architect/Engineer.

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SECTION 13 11 23

POOL PIPE SUPPORTS

1. GENERAL

1.01 SECTION INCLUDES

A. Pipe Hangers & Supports.

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Product data including manufacturer's specifications, installation instructions.

C. Shop Drawings showing type and locations.

1.04 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

1.05 DELIVERY, STORAGE AND HANDLING

A. Refer to General Requirements and Division 01.

2. PRODUCTS

2.01 MATERIALS

A. Hangers and Supports
   1. General
      a. All hangers, pipe supports, threaded rod, hardware, etc. shall be hot-dipped galvanized steel, ASTM A123, or type 304 stainless steel or better grade.
      b. All piping connections and support hardware inside surge tanks and gutters shall be stainless steel.
   2. Strut
      a. Minimum height 1 5/8", minimum width 1 5/8", minimum thickness 12-gauge material.
      b. Finish shall be hot-dipped galvanized steel, ASTM A123; or type 304 stainless steel or better grade, ASTM A240.
   3. Strut Clamps
      a. Pipe sizes ½" thru 12", two-piece clamps with clamping bolt and nut. Pipe sizes 14" and larger, provide "U" bolts, nuts and washers.
      b. Finish shall be hot-dipped galvanized steel, ASTM A123; or type 304 stainless steel or better grade, ASTM A240.
   4. Strut Accessories
      a. Flat plate fittings, corner braces, post bases, etc. Finish shall be hot-dipped galvanized steel, ASTM A123; or type 304 stainless steel or better grade, ASTM A240.

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5. Wedge Anchors
    a. One-piece assembly, 3/8” minimum body diameter.
    b. Grade 2, hot-dipped galvanized steel anchors and clips, ASTM A123; or type 304 stainless steel or better grade, ASTM A240.
6. Beam Clamps
    a. Steel “C” clamp type with locknut.
    b. Finish shall be hot-dipped galvanized, ASTM A123; or type 304 stainless steel or better grade, ASTM A240.
7. Support Components
    a. All threaded rod, threaded rod couplings, nuts, washers, etc. Finish shall be hot-dipped galvanized, ASTM A123; or type 304 stainless steel or better grade, ASTM A240.

3. EXECUTION

3.01 GENERAL

A. All mechanical room piping must be properly supported using the schedule indicated on the drawings as a guideline for maximum allowable spacing between supports.

B. It shall be the contractor’s responsibility to properly support piping at all valves, pumps, equipment, overhead areas, and changes in direction.

C. All piping must be supported laterally as well as vertically hung.

D. Ring, clevis, roller, and J hook type hangers are not acceptable.

E. Comply with manufacturer’s written instructions.

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SECTION 13 11 24

POOL VALVES

1. GENERAL

1.01 SECTION INCLUDES

A. Butterfly Valves

B. Ball Valves

C. Check Valves

D. Expansion Joint/Flexible Connector

E. Modulating Float Valves

F. Modulating Electrical Main Drain Valves

G. Submerged Service Operators

H. Valve Operator Extension

I. Drainage Valves

J. Reducers

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 REFERENCES

A. The following latest edition reference specifications, guides and standards shall become part of this Specification as if herein written. If provisions conflict, the more stringent provisions shall apply.
   1. ANSI – American National Standards Institute
   2. ASTM – American Society of Testing Materials

1.04 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Submit Shop Drawings, clearly indicating make, model, location, type, size, pressure rating, and type of service.

C. Valve charts
   1. Submit two copies of valve charts for each piping system, consisting of isometric Drawings, or piping layouts showing and identifying each valve and describing its function to the Architect/Engineer for approval.

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2. Upon completion of the Work, one copy of each valve chart sealed to rigid backboard with clear lacquer, placed under glass and framed, shall be hung in a conspicuous location in the equipment room.

1.05 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

1.06 DELIVERY, STORAGE AND HANDLING

A. Refer to General Requirements and Division 01.

1.07 WARRANTIES

A. Standard Manufacturer's Warranty

2. PRODUCTS

2.01 GENERAL

A. Cast Iron valves 3" and larger shall have an epoxy coated body on all interior and exterior surfaces, ductile iron-nylon II coated disc, one piece 416 stainless steel shaft with Buna-N or EPDM seat minimum, 150 PSI rating, or cast aluminum ASTM S12A housing and fully coated with Rilsan on all interior and exterior surfaces. Internal components include EPDM resilient lining, Rilsan coated ductile iron disc and T304 stainless steel shaft. 150 psi rating.

B. Cast Aluminum valves 3" and larger shall have an ASTM S12A body and coated with Rilsan on all interior and exterior surfaces. Internal components include Buna-N or EPDM resilient lining and seat, Rilsan coated ductile iron disc and T304 stainless steel shaft. 150 psi rating.

C. Thermoplastic valves 3" and larger shall be constructed from PVC Type 1 Cell Classification 12454 or CPVC type 4 cell classification 23447. Thermoplastic valves shall include PVC disc with solid type 316L stainless steel shaft with Buna-N or EPDM seat pressure rated to 150 psi @ 73 degrees Fahrenheit.

2.02 BUTTERFLY VALVES

A. Butterfly valves 3" - 12" shall be wafer or lug bodies and shall be suitable for use between ANSI 125 and 150 lb. Flanges.

B. Bodies of the flangeless design shall be provided with at least two bolt guides to center the valve in the pipeline.

C. All valves shall be as manufactured by Bray Valve (713) 894-5454, Dominion or equal.

D. All bolts and, nuts and washers shall be corrosion resistant hot-dipped galvanized, ASTM A123 or type 304 stainless steel with plated washers to be used when secured to PVC flanges.

2.03 UV LAMP STRAINER VALVE

A. EZ Strainer 4" to 12" butterfly type valve with stainless steel strainer disc and shaft, case aluminum Rilsan (nylon) coated valve housing, with manual locking valve handle as manufactured by Neptune Benson. Install on downstream side of UV lamp per UV installation details.

2.04 BALL VALVES

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A. PVC True Union Ball Valves, Ipex, Asahi, Spears or equal.

2.05 CHECK VALVES

A. ½" thru 2 ½" shall be PVC body, true union, ball type, seal material EPDM as manufactured by Ipex, Asahi Spears or equal as indicated on Contract Drawings.

B. 3" thru 20" diameter check valves:
   1. Type: Split disc wafer style
   2. Valve Body: Ductile or cast iron with an epoxy painted exterior
   3. Lining: Fully lined with a Buna N elastomer
   4. Shaft: 316 stainless steel shaft and shaft plug
   5. Plates: 316 stainless steel (3" – 12") or Aluminum Bronze (14"+)
   6. Spring & Plate Travel Stop: 316 stainless steel
   7. Manufacturer: Center Line Series 800 as manufactured by CRANE ChemPharma & Energy, or Model CVXXK Series by Metraflex, or approved equal.

2.06 EXPANSION JOINT/FLEXIBLE CONNECTOR (where required)

A. Shall be the Metrasphere, Style R with EPDM body and threaded bolt holes, Model #MSREE Series manufactured by Metraflex, as indicated on drawings. Install with a control unit assembly (tie rods) from flange to flange per manufacturer's instructions to minimize expansion joint damage caused by excessive motion.

2.07 MODULATING FLOAT VALVES

A. Float operated modulating valve shall be designed for submerged service.

B. The housing body shall be fabricated using Sch. 80 PVC pipe with Sch. 80 PVC van stone flanges. The internal wafer shall be 12 gauge T304L material and positioned with 1/8" (+1/16") clearance around the perimeter. The body shall also incorporate an interior stop plate constructed of PVC to define that allowable range of arm motion. Close fitting Delrin bushings shall be included on the shaft penetration of the body to provide a seal against water loss and air entrance.

C. The valve shaft shall be T304L material 1" in diameter. Float arms shall securely fasten to shaft using T316SS nuts with washers to provide adjustability. Arms shall be ½" diameter all thread rod T316SS with length as required. Valve sizes 14" – 20" shall have ¾" square tubing for arms.

D. Ball floats shall be constructed of T304L stainless steel and be 7" in diameter with internal weighting. Floats shall also be adjustable using T316SS nuts with washers as previously described. Provide one (1)/two (2) float arms as shown on the drawings. Valve sizes 14" – 20" shall have 12" diameter cylindrical floats.

E. The float arms shall be hinged to allow for vertical operation. A 12 gauge T304L bracket shall be provided as a guide to maintain the vertical float positions.

2.08 MODULATING ELECTRONIC MAIN DRAIN VALVES

A. The modulating electronic main drain valves shall be assembled and installed as specified in the Contract Drawings. The purpose of the valve is to use the surge tank and/or balance tank water level as a means of electronically adjusting and controlling the flow from the pool main drain plumbing.

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B. Provide and install equipment as detailed in the Contract Drawings and as follows:
   1. The surge tank sensor and transmitter (Basis of Design): Shall be a BECSys, Model SLS continuous level sensor, or equal with the following characteristics:
      a. Piezoresistive pressure measurement of the water column.
      b. Automatically adjusts for changes in atmospheric pressure.
      c. Factory calibrated.
      d. Field configurable sensor length.
      e. Solid-state; no moving parts that can wear out over time.
      f. Installation options for wall mount and stand pipe glass configurations.
   2. Digital Processor (Basis of Design): Is internal with the BECSys 7 Chemical Controller or approved equal (see pool mechanical and main drain detail on PL drawings). Program settings as shown on detail per the manufacturer's instructions. The controller shall continuously monitor, display and data log surge tank level with 10 mm (0.4") resolution or better. The controller shall also use the surge tank level to control a water makeup valve to maintain water level (Autofill) and/or control a main drain modulating valve.
   3. Valve: One (1) butterfly valve. Valve shall be one pipe size smaller than the main drain pipe.
      a. See "Butterfly Valves" within this specification section for additional valve material and manufacturer requirements.
   4. Valve Positioner:
      a. DHC-100 digital positioner, electronic actuator with manual over-ride wheel operator, and battery back-up.
      b. Positioner: Pushbutton calibration to plus/minus 0.1 degree within a 90-degree quadrant. See detail for range of positions. Fail position (loss of command/signal) shall be 100% closed.
      c. Electronic Actuator: Provide Series 92 Quarter master Protek Failsafe electric actuator with rechargeable battery pack and low battery indicator. Voltage: Available in 115/230VAC and 12/24VDC, 0.2 to 4.0 amp draw.
      d. Manufacturer: Asahi America, Inc., www.asahi-america.com; or equal.

2.09 SUBMERGED SERVICE OPERATORS

A. Use only approved service operators for the valve requiring underwater operation in the surge tank or in manhole used for pool draining.

2.10 VALVE OPERATOR EXTENSION

A. Extensions shall be stainless steel and by same manufacturer as the valve manufacturer.

2.11 DRAINAGE VALVES

A. Provide min. 3/4" True Union Ball valve on all piping at such a location to allow complete drainage of system.

2.12 REDUCERS

A. Use Eccentric reducers on pump suction lines only and concentric reducers on pump discharge lines only.

B. Stainless steel body and flanges, T304 materials, ANSI 125# rated flanges.

C. Use Neptune Benson, 15-CNS/15ECS series "or equal".

D. Provide valves of same manufacturer throughout where possible and practical.

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E. Provide valves with manufacturer's name and pressure rating clearly marked on outside of body.

2.13 VALVE LABELS

A. Provide and install 2” round, 1/16” thick, multi-layered valve tags with contrasting lettering with non-corrosive beaded tie on all valves. All labels shall be me labeled in accordance with the valve chart per Section 13 11 14.

3. EXECUTION

3.01 VALVE CONNECTIONS

A. Provide valves suitable for connection to adjoining piping.

B. Valve size shall be the same as the pipe size.

3.02 VALVE USE

A. Pipe sizes 3" - 14" – Butterfly

B. Miscellaneous valves 1/2" – 2-1/2" - PVC True Union Ball Valves

C. All chemical lines and equipment - PVC True Union Ball Valves

3.03 VALVE OPERATORS

A. All butterfly valves shall have gear operators and chain operators as required unless drawings indicate otherwise. Chain operators shall be required on all gear operators located 7’-0” or higher above finished floor.

B. Provide extension lengths as necessary to operate submerged or below surface valves and the appropriate valve box access cover.

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SECTION 13 11 25

POOL CENTRIFUGAL PUMPS

1. GENERAL

1.01 SECTION INCLUDES

A. Pumps
   1. Flooded Suction

B. Pump Accessories
   1. Pump Strainers
   2. Gauges
   3. Flow meters

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 REFERENCES

A. The following latest edition reference specifications, guides, and standards shall become part of this Specification as if herein written. If provisions conflict, the more stringent provisions shall apply.
   1. Hydraulic Institute Standards
   2. Institute of Electrical and Electronics Engineers Standards (IEEE)
   3. National Electrical Manufacturers Association Standards (NEMA)
   4. Occupational Safety and Health Administration Rules and Regulations (OSHA)
   5. National Sanitary Foundation (NSF)
   6. American Society for Testing and Materials Standards (ASTM)
   7. American Iron and Steel Institute (AISI)
   8. American National Standards Institute (ANSI)
   9. ASTM A48 – Standard Specification for Gray Iron Castings
   10. ASTM B584 – Standard Specification for Copper Alloy Sand Castings for General Applications
   11. AISI 1045
   12. ASTM B62 – Standard Specification for Composition Bronze or Ounce Metal Castings

1.04 DESCRIPTION OF WORK

A. The pumping units shall be installed in accordance with the instructions of the manufacturer and as shown on the drawings by the Architect/Engineer.

B. Pump capacity, horsepower, TDH (Total Dynamic Head), speed, suction and discharge diameters, type, and other requirements shall be as shown on the drawings and shall comply with the requirements as specified herein.

C. The General Conditions shall apply to this Section as fully as if repeated herein.

1.05 QUALITY ASSURANCE

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A. To assure a properly integrated and compatible system, the Equipment Manufacturer shall assume full responsibility for the warranty and proper operation of the pumps and/or accessory equipment.

B. Acceptable Products and Manufacturer: As listed on the contract documents or included herein or, an Engineer approved equal product and manufacturer.

C. All pumps and strainers shall be NSF50 certified as provided, including required coatings, and shall be labeled as such on the serial number identification tag.

1.06 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Submit complete motor and pump data together with shop drawings for the driven machine. All material is to be collated in a card stock binder, with pockets for large drawings, and with index. This data shall be prepared by the motor and/or pump manufacturer and shall include:
   1. Pump manufacturer and model number, name of motor manufacturer, type of pump and motor with dimensioned drawings.
   2. Characteristic curves at full load motor speed showing flow, TDH, efficiency, horsepower, and NPSH required. For all VFD applications include a family of performance curves, separate of the full load motor speed curve, for speeds of 105%, 100%, 89%, 83%, 66%, and 50% of the scheduled RPM.
   3. Nominal motor horsepower, speed at full load, frame size, enclosure construction, winding insulation class and treatment, temperature rise at nominal horsepower, service factor, voltage rating (indicate if dual voltage), number of phases, frequency rating, full-load amperes at nominal horsepower for application voltage, starting code letter, or locked rotor KVA or amperes.
   4. Complete pump description plus material list including casings, impellers, seals, shaft, bearing frame, motor mounts, guards, base plate, exterior coating type and mill thickness.
   5. Installation Instruction and Operation and Maintenance Manuals shall include recommended protection and maintenance required for storage prior to putting pumps in service and may be submitted any time before shipment of the pumps.

1.07 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Refer to General Requirements and Division 01.

1.09 WARRANTIES

A. Manufacturer's standard pump warranty. Warranty on mechanical seals covering 100% of the cost on all parts and labor extending over the same time period as the standard pump warranty.

B. Flooded Suction Pumps
   1. Pump failure of any pump component directly attributable to materials and/or workmanship within one (1) year after substantial completion shall be repaired or replaced by the pump manufacturer at no cost to the Owner.
   2. Motor failure of any motor component directly attributable to materials and/or workmanship within three (3) years after substantial completion shall be repaired or replaced by the pump manufacturer at no cost to the Owner.

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2. PRODUCTS

2.01 END SUCTION, CENTRIFUGAL PUMPS

A. General
1. Pump performance shall be optimized with provision of variable speed drives where designated in the drawings.
2. Operational Pump Characteristics
   a. Engineer has the right to reject any pump with a pump curve having a design point operating efficiency more than 5% below the operating efficiency of the scheduled pump provided on the drawings.
3. Furnish and install horizontal close-coupled end suction centrifugal pumps as specified on the Contract Drawings or as pre-approved by the Architect/Engineer.

B. Materials of Construction:
1. Flooded Suction Pumps
   a. Pump internal materials shall be as follows:
      1) Casing – Cast Iron (ASTM A48)
      2) Impeller – 316 Stainless Steel
      3) Shaft – 316 Stainless Steel
      4) Shaft Sleeve – 316 Stainless Steel
   b. Coating: All internal cast iron wetted parts shall be sandblasted and coated per the coating manufacturer's recommendations with Scotchkote 134 or equal product.
   c. Casing
      1) The casing will be of the end suction design with tangential discharge outlet. For suction piping diameters of 2" or greater, the suction and discharge shall be bolt through flanged connections. Flange connections shall be ANSI 125# rated with NPT gauge tapings.
      2) The casing shall have tapped and plugged holes for priming and draining. The casing bore shall be large enough to allow "back pullout" of the impeller without disturbing the casing or suction and discharge piping. The casing shall be supported by casing feet to avoid pipe strain.
   d. Impeller: The impeller shall be of the enclosed type, vacuum cast in one piece. It shall be finished all over, the exterior being turned and the interior being finished smooth and cleaned of all burrs, trimmings and irregularities. The impeller shall be dynamically balanced. The impeller will be keyed to the shaft, and fastened with 316 stainless steel washers, gasket and cap screw.
   e. Mechanical Seal: Shaft sealing shall be accomplished by means of a John Crane Type 21 or equal mechanical seal with solid silicone carbide face/primary ring; solid silicone carbide seat/mating ring; 316 stainless drive band, retainer and spring; and Buna-N elastomers.
   f. Shaft: The impeller shall be direct coupled to the 316SS motor shaft. The motor shaft shall be machined to provide a key way and drilled and tapped to accept the impeller fastener. Stub shafts are not acceptable.
   g. Shaft Sleeve: The pump shaft shall be fitted with a 316SS shaft sleeve to minimize shaft wear. The sleeve shall be sealed to the impeller hub by an O-ring and shall be positively driven by a pin to the key way. The use of adhesive compounds to fasten the sleeve to the shaft shall not be accepted.
   h. Pump / motor must mount on the same plane and preserve back-pull-out design. 304SS MOTORIZER shall be supplied when pump mounting feet and motor feet do not align.
   i. Pump nameplate shall be engraved via computer on 316SS data plate.
   j. Motor
      1) The motor shall be a NEMA-JM configuration motor meeting current NEMA Premium Efficiency Standards and shall be totally enclosed fan cooled (TEFC).

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NEMA –JP configurations shall only be used on large pumps (Aurora 6x8x13.5 & 8x10x13.5) only.

2) The motor shall have a service factor of a least 1.15. The service factor is reserved for variations in voltage and frequency.
3) Motor must be rated for use with a Variable Frequency Drive and meet the NEMA MG1 Standard, Part 30.
4) Motors shall have 316SS shaft
5) Motors must achieve 15:1 constant torque turndown.
6) Motors shall come equipped with internal shaft grounding brush.
7) Motors Frames 326 and below shall have removable feet to achieve F1, F2, & F0 field convertible conduit box position.
8) Motor Conduit box shall have NPT threaded entry
9) The motor shall have a sufficient horsepower rating to operate the pump at any point on the pump's head capacity curve at full load speed (60 Hz) regardless of selected operating speed without overloading the nameplate horsepower rating of the motor, regardless of service factor. Vendor shall confirm that motor current does not exceed allowable full load amperage at reduced frequency. Vendor shall verify scheduled horsepower meets above requirements. In no case shall the horsepower be less than indicated on the Drawings without specific approval from the Engineer.
10) Electrical requirements including phase, frequency, and voltage are indicated on the Drawings.

2.02 PUMP ACCESSORIES

A. Pump Strainers
   1. All Horizontal Pumps
      a. Unless the pump has an integral hair and lint strainer, supply and install strainers equal to those indicated on the Contract Documents.
      b. Provide each strainer with two strainer baskets.

B. Gauges
   1. Provide compound gauges where called for on Drawings and as required by Code.
   2. Compound gauges shall be Liquid Filled, 30 Hg to 60 PSI with gauge cock and snubber as manufactured by Weksler, Marsh, Winters or equal.

C. Flowmeters
   1. Provide flow meters where called for on the Drawings and as required by Code on main lines and on branch lines of flow ranges indicated.
   2. Flowmeters shall be as specified on the contract documents or approved equal.
   3. Transmitter shall have an operating voltage of 12-24VDC and meet appropriate CE, CSA & UL standards. Reading accuracy must be within +/- 0.5% of reading at 25°C. Device shall meet NEMA 4X & IP65.

D. Pump Labels
   1. Provide corrosion-resistant, permanent pump labels with contrasting lettering.
   2. Label shall include pump ID from contract drawings and a description. (e.g. "P1A Lap Pool Filtration Pump")

3. EXECUTION

3.01 PUMP INSTALLATION

A. The pumping units shall be installed in accordance with the instructions of the manufacturer and as shown on the drawings by the Pool Engineer.

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B. Ensure that the pumps and motors are properly supported and aligned with no pipe strain transmitted to the pump casing.

C. Installation shall include furnishing the required oil and grease for initial operation. The grades of oil and grease shall be in accordance with the manufacturer's recommendations.

D. Permanently affix pump label to the pump.

3.02 ACCESSORY INSTALLATION

A. Install accessories as shown on the contract documents and in accordance with manufacturer’s instructions.

B. Strainers shall be supported on a concrete housekeeping pad and provided with sufficient space for maintenance.

C. Gauges shall be positioned to be read adjacent to the pump or from above, where pumps are in a pump pit.

D. Field mount the flowmeter and flow meter transmitter as located and shown on the pool plans. Mount transmitter at 4-5 feet above the floor utilizing the 3-8050 universal mounting kit.

E. Permanently affix pump label to the pump in an easily visible location.

3.03 FACTORY TRAINED REPRESENTATIVE

A. Provide a factory-trained representative for the purpose of supervising installation, start-up, final field acceptance testing, and providing instruction to the owner's operating personnel in the proper operation and maintenance of the equipment in this section.

B. Contractor and factory-trained representative shall verify pump flow aligns with the pump curve and calibrate flowmeter as required.

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SECTION 13 11 26

POOL PUMP VFD

1. GENERAL

1.01 DESCRIPTION

A. Work Includes:
   1. Furnish all labor, materials, tools, and equipment, as indicated, in accord with provisions of Contract Documents.
   2. Completely coordinate with work of all other trades.
   3. Although such work is not specifically shown or specified, all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation shall be furnished and installed as part of this work.
   4. See Section 26 0001 for General Electrical Requirements.
   5. See Division 1 for General Requirements.
   6. Coordinate all requirements with Contractor providing equipment including but not limited to contacts bypass and controls.

1.02 RELATED WORK

A. Section 26 05 26 – Grounding and Bonding
B. Section 26 05 53 – Electrical Identification
C. Section 26 28 13 - Fuses
D. Section 26 28 16 – Enclosed Switches

1.03 REFERENCE STANDARDS

A. ANSI/IEEE 519 Guide for Harmonic Control and Reactive Compensation of Static Power Converters.

1.04 SUBMITTALS

A. Submit shop drawings and product data under provisions of Division 01, General Conditions of the Contract, and Section 26 0001.

B. Include physical, electrical, and performance characteristics of each variable frequency drive and associated components, including dimensions; weight; input and output performance; voltage, phase, current and overcurrent characteristics; installation instructions; protective features; wiring and block diagrams indicating specified options; electrical noise attenuation equipment where required to meet the criteria specified; line side voltage notch wave form and line side current harmonics; certified efficiency versus load and speed curves; and required operating environment.

1.05 OPERATING AND MAINTENANCE INSTRUCTIONS

A. Submit operation and maintenance data under provisions of Section 26 0001 and Division 01.

B. Instructions to include recommended maintenance procedures, maintenance schedules, recommended spare parts list, and vendor name for those parts.

1.06 EQUIPMENT STARTUP AND AGENCY TRAINING

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A. Provide the services of a factory trained and certified technician to approve the installation; start-up, test, and adjust for proper operation; and instruct and train the Agency's representative in the operation and maintenance of the unit(s). Upon completion of the equipment startup, submit a complete manufacturer's field report, including startup and test log, signed by the factory trained technician. Coordinate with other Contractors as required. The startup shall be completed within ten (10) working days from the startup date.

1.07 WARRANTY

A. The warranty shall be for a period of 36 months applied from the date of project Substantial Completion, but not to exceed 42 months from shipment. Further, the warranty shall include all parts, labor, travel time, administrative costs, overhead, travel expenses, technical support and any and all other costs to provide the warranty service.

1.08 COORDINATION

A. All line voltage power wiring to equipment, factory mounted control panels, to motor control centers, to and from disconnect switches, and to individually mounted starters, and from starter to motors, shall be provided by the Electrical Contractor.
B. Vendor/Contractor that specifies "starters by Electrical Contractor" shall furnish project specific wiring diagrams to Electrical Contractor for all equipment and devices furnished by this Contractor and indicated to be wired by the Electrical Contractor. In addition, furnish complete sets of wiring diagrams for Owner's bound maintenance manual.
C. All line, or low voltage, wiring which is not indicated on the drawings, or specified, but necessary to complete the installation, shall be provided by this Division.

2. PRODUCTS

2.01 MANUFACTURERS

A. ABB or Eaton.

2.02 DESIGN AND CONSTRUCTION

A. The unit shall be variable torque, modular design for control of the motors as specified by others, to be furnished by Electrical Contractor and rated at the motor full load nameplate amps.

B. The unit shall be U.L. listed, solid state, micro processor-based with a pulse width modulated (PWM) output wave form (none others are acceptable).

C. The VFD shall employ a full wave bridge rectifier, to prevent line notching, with DC output bus choke, capacitors to minimize the ripple of the rectified voltage to maintain near constant DC voltage. Insulated gate bipolar transistors (IGBT's) shall be employed as the output switching device.

D. Control circuitry shall be plug-in, plug-out modular basis with a corrosion resistant coating on printed circuit boards.

E. Units to be suitable for an operating environment from 0°C to 40°C temperature and humidity up to 90% non-condensing.

F. Electrically and physically isolate control circuitry and conductors from power circuitry and power conductors. Control conductors and power conductors shall not be run in the same conduit.

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G. The unit enclosure shall be UL Type 12 enclosure for the application minimum and all components shall be fully factory assembled and tested prior to leaving the manufacturing facility.

H. Include the following operating and monitoring devices mounted on the front cover:
   1. Fused disconnect switch with door interlocked handle and lock-open padlocking provisions (VFDs with no bypass).
   2. Operating mode selector switch marked "hand-off-auto". Manual speed adjustment via keypad, mounted on the door.
   3. Manual bypass selector switch to select power through drive or bypass where indicated on drawings.
   4. Pilot light marked "RUN".

I. Provide a manual bypass circuit and bypass starter to transfer from variable frequency drive operation to bypass operation where indicated on drawings.

J. Provide partitioning within drive enclosure to separate and isolate bypass section from variable frequency drive section and to house bypass wiring, contactors, relays, and manual bypass circuit so that devices within the converter/inverter compartment are able to be serviced without electrical danger to the service technician.

K. Starters shall have provisions for additional control requirements such as, but not limited to inputs and outputs for connection to external relays and equipment where required.

2.03 PERFORMANCE REQUIREMENTS

A. Units shall be suitable for input power of electrical system as scheduled on the drawings ±10%, 3 phase, 60 Hertz nominal.

B. Provide minimum 5% line reactor in each AC phase on the input side or 5% dual DC bus reactors to reduce harmonic voltage distortion. Limit line noise, as measured at the point of common coupling, to a voltage factor of 5% or less as defined in IEEE-519, latest edition. If the distortion is greater than that allowed by IEEE-519, latest edition, the line reactor shall be changed in size to ensure compliance. The supplier of the VFD shall provide distortion calculations to be used for setup and analysis.

C. Use a current limiting control device to limit output current to 110% continuous for one minute; also refer to Protection Features in this section. Full load output current available from drive shall not be less than motor nameplate amperage. The full load amp rating of the VFD shall not be less than the values indicated in the NEC Table 430-150.

D. Output power shall be suitable for driving standard NEMA B design, three phase alternating current induction motors at full rated speed with capability of 6:1 turndown.

E. Additional performance capabilities to include the following:
   1. Ride through a momentary power outage of 15 cycles.
   2. Start into a rotating load without damage to drive components or motor.
   3. Capable of automatic restart into a rotating load after a preset, adjustable time delay following a power outage.
   4. Input power factor: Min 0.95 throughout the speed range.
   5. Minimum efficiency: 95% at 100% speed, 85% at 50% speed.

2.04 CONTROL FEATURES

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A. Use control circuits compatible with input signal from control system in the automatic mode and from manual speed control in the manual mode. Vary motor speed in response to the input control signal. Include components necessary to accept the signal from the control system in the form that it is sent. Coordinate with Vendor/Contractor supplying control system and or motor.

B. Include the following additional control features:
   1. Hand-Off-Automatic (HOA) selector switch to select local or remote start/stop and speed control.
   2. Analog input, selectable 0-10v or 4-20 mA, for automatic control from the temperature control system. Include a RS485 Port with BACnet protocol.
   3. Local speed control at the VFD.
   4. Adjustable acceleration and deceleration rate so that the time period from start to full speed and from full speed to stop can be field adjusted.
   5. Adjustable minimum and maximum speed settings for both automatic and manual modes of operation.
   6. Manual transfer bypass circuit where required.
   7. Field adjustment of minimum and maximum output frequency.
   8. Three (3) sets of programmable form “C” contacts for remote indication of variable frequency drive condition. Note: default programming to be set for “Drive Run & Fault”.
   9. Illuminated display keypad.
   10. External Fault indicator.
   11. One (1) input for a N.O. dry contact type input for a 2-wire remote start/stop.
   12. One (1) input for a N.C. dry contact type input for external faults: (freezestats, fire alarm, smokes, etc). This input shall be factory wired to prevent both the VFD and bypass starter operation when external fault is present.

2.05 PROTECTION FEATURES

A. Use electronic protection circuitry in the power circuits to provide an orderly shutdown of the drive without blowing fuses or tripping circuit breakers and prevent component loss under the following abnormal conditions:
   1. Activation of any safety device.
   2. Instantaneous overcurrent and/or over voltage of output.
   3. Power line overvoltage and undervoltage protection.
   4. Phase loss.
   5. Single and three phase short circuiting.
   6. Ground faults.
   7. Control circuit malfunction.
   8. Over temperature.
   9. Output current over limit.

B. Provide the following additional protective features:
   13. Input transient overvoltage protection up to 3000 volts per ANSI 37.90A;
   14. DC bus fusing or other electronic controls which limit the rate of rise of the DC bus current and de-energizes the drive at a predetermined current level;
   15. Fusing for the control circuit transformer;
   16. Grounded control chassis; and
   17. Devices and/or control circuitry to ensure that the
   18. variable frequency drive and bypass starter are not both energized and driving motor simultaneously.

2.06 DIAGNOSTICS

A. Provide an English character display (no error codes) with indicators for the following:

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1. Phase Loss
2. Ground Fault
3. Over Current
4. Over Voltage
5. Under Voltage
6. Over Temperature
7. Overload
8. DC Buss Status

2.07 QUALITY ASSURANCE TESTS

A. Use a factory heat stress test to verify proper operation of all functions and components under full load.

B. Field performance test of variable frequency drives to determine compliance with this specification will be performed at the owner's discretion and may include any specified feature, including operation of protective devices through a simulated fault. Contractor will pay for initial testing. Should drive be found deficient by this testing, drive manufacturer will be required to make any and all changes necessary to bring unit(s) into compliance with the specified performance and demonstrate this performance by retesting. Cost of changes and retest will be by this contractor.

C. Variable frequency drive manufacturer or designated representative to perform a field test of each drive, in the presence of the owner's representative, for the following items:
1. Provide general inspection to verify proper installation;
2. Demonstrate drive reaction to simulated power interruptions of two seconds and sixty seconds;
3. Demonstrate adequate protection during switching from variable frequency drive operation to bypass starter operation and back again;
4. Measure and record voltage distortion factor and line notch depth at the point of common coupling. Provide the recorded value as part of the startup report.

2.08 BYPASS EQUIPMENT

A. Bypass Starters:
19. The bypass starters shall be across-the-line magnetic starter type.

B. Bypass Configuration:
1. Provide one main fused disconnect switch or circuit breaker to isolate both the drive and bypass circuit. Bypass configuration shall consist of one input drive contactor or disconnect, one output drive contactor and one output bypass contactor. The two output contactors shall be mechanically and electrically interlocked.

C. Provide motor overload protection in the bypass circuit.

D. Provide bypass equipment inside the main VFD panel enclosure.

2.09 LINE REACTORS

A. Furnish and factory install line reactors to comply with the specified limits on electrical line noise.

B. Line reactors shall be designed for operation on the input side of the VFD.

C. Line reactors shall be installed in each phase of the AC input side of the VFD and mounted within a common enclosure with the VFD.

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D. Line reactor shall be suitable for the voltage of the system ± 10%, 3 phase, 60 Hertz.

E. Line reactor ampere rating shall be sized in accordance with the variable frequency drive manufacturer's recommendations with the minimum size equal to the NEC Table 430-150 full load ampere rating of the connected motor.

F. Line reactor shall be a three-phase inductor, 3% impedance, iron core, 600V, Class H insulation, 115 degree C rise, copper windings with screw type terminal blocks.

3. EXECUTION

3.01 VARIABLE FREQUENCY DRIVES

A. Install where indicated on drawings and in accordance with approved submittals and manufacturer's published recommendations. Installation to be by the Division 26 contractor.

B. Input wiring shall be installed in a separate conduit system, output wiring shall be installed in a separate conduit system and control wiring shall be installed in a separate conduit system. Do not mix input power, output power, or control wiring in a common conduit.

C. Control signal for drive will be provided as indicated on drawings.

D. VFD manufacturer to perform a field test of each drive and provide Owner operational and maintenance training.

END OF SECTION

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SECTION 13 11 32

POOL FIBERGLASS FILTERS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Pool Fiberglass Filters

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 REFERENCES

A. The following latest edition reference specifications, guides and standards shall become part of this Specification as if herein written. If provisions conflict, the more stringent provisions shall apply.
   1. National Sanitary Foundation (NSF)
   2. ASTM D-2150 – Specification for Woven Roving Glass Fabric for Polyester

1.04 DESIGN REQUIREMENTS

A. As assurance that each item of apparatus is properly sized to perform in conjunction with each other, the Owner requires bidders to use the filter manufacturer as a single source of supply for the items of equipment as listed and described herewith.

B. The system shall be supplied complete by the manufacturer and shall include: internals, face piping and valves, gauge panel with tubing and petcocks, sight glass, air relief connection, bottom drain connection with internal strainer.

C. System shall be fabricated and fully assembled at the manufacturer's plant for pressure testing and dimensional verification. System shall be knocked down for shipping purposes in subassemblies for minimum field assembly. Internal manifold and lateral piping shall be factory installed and shipped in place. Loose fitted piping furnished for field assembly will not be accepted.

D. The filter system including tank quantity, size, filter rate, capacity and model number shall match the basis of design as indicated on the drawings.

1.05 SUBMITTALS

A. Provide detailed shop drawings of the items of equipment being provided, indicating the dimensions, material of the filter tanks, exterior face piping, internal manifolds and laterals and filter media.

B. Provide a complete set of operating instructions, embracing the operational functions and recurring maintenance processes involved in connection with the complete filtration system.

C. Provide all warranties relating to filter systems including valves, internal piping, face piping, controls and all standard accessories.

1.06 CERTIFICATIONS

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A. Shall bear the NSF Seal of Approval, Standard #50 for sand type filters.

1.07 QUALIFICATION STATEMENTS

A. The equipment described herein shall be a product of a manufacturer regularly engaged in the fabrication of fiberglass pressure vessels for at least fifteen years.

1.08 WARRANTY

A. The equipment supplier shall guarantee that the equipment to be furnished is of the correct capacity, that the various parts are designed to operate correctly and in conjunction with each other, that if the installation is made in accordance with his drawings and operated in accordance with his instructions, the system will perform the prescribed functions correctly, the water entering the pool will be clear, bright, free from suspended matter visible to the unaided eye, will not produce any toxic effect or impart undesirable taste, odors or colors, and will be sanitary to the satisfaction of all authorities having jurisdiction.

B. Equipment Warranties
   1. Filter tanks shall carry a 15 year non-prorated warranty as regularly offered by the tank manufacturer.
   2. Internal and external face piping shall carry a non-prorated 3 year warranty.
   3. Valve bodies shall carry a 5 year non-prorated warranty.
   4. Valve operators and system accessories including sight glass, pressure gauges and air relief valve shall carry one year warranty as provided by the product manufacturer.
   5. Unless otherwise specified, workmanship is to carry a one (1) year warranty

1.09 SYSTEM STARTUP

A. An authorized representative of the equipment supplier shall provide the supervisory services of an Installation Engineer for at least one day to fully instruct designated personnel in the operation, care and maintenance of the filter system.

1.10 MANUFACTURER

A. The equipment manufacturer shall be per the basis of design as listed in the drawings equipment schedule.

B. Alternative manufacturers meeting the specifications within may also be accepted. Product submittal and review with approval by the Aquatics Engineer/Architect shall be required.

C. Equipment not meeting these specifications must be pre-approved prior to bid. Other treatment systems may be considered with Owner's approval and only if a complete set of drawings and specifications detailing such equipment as it pertains to this project are submitted for evaluation ten (10) days prior to the bid date. The submission should include a list of five (5) operating installations with names and telephone numbers of the operating personnel. The technical contents of the submittal shall include hydraulic calculations, equipment fabrication details, filter room layout in plan and elevation views, warranties, installation and operating instructions.

PART 2 - PRODUCTS

2.01 FILTERS

A. Fiberglass Filter Tank

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1. The filter tank shall be suitable for 50 psi working pressure, hydrostatically tested to 75 psi and designed with a 4:1 safety factor.
2. Two saddle style bases shall be provided for tank support. Systems that incorporate stacked tanks shall include similar bases and mounting saddles for the upper vessel. Access to the tank shall be provided by a 14" x 18" manhole with a two-bolt, 4-point yoke. Manhole seal shall be complete with one piece ¼" neoprene gasket and positioned so that internal pressure from the filter will augment the seal. Externally mounted bolt-on covers will not be accepted.
3. Drain out system shall consist of one (1) 3/4" fiberglass coupling mounted to the tank bottom. Each coupling to be fitted with a slotted PVC sand retainer. Air relief connection shall be one (1) 3/4" coupling provided on top of the tank. Bulkhead fittings will not be accepted.
4. Each filter tank shall be equipped with the necessary flanges and connections for the internal and external piping. Connections shall be comprised of 1" minimum thickness fiberglass flanges with ANSI standard 150 lb. bolt pattern. Connections requiring bolt-thru hardware will not be accepted.
5. The resin used shall be a commercial grade, premium corrosion resistant vinyl ester that has been evaluated in a laminate by test in accordance with ASTM C-581 in service comparable to the intended service and recommended for this service by the manufacturer. Other generic types of resin such as isophthalics or general purpose polyester resins shall not be acceptable.
6. Ultraviolet absorbers shall be added to the exterior surface for improved exterior resistance.
7. Chopped strand mat shall be constructed from commercial grade E-type glass strands bonded together using a binder. The strands shall be treated with a sizing that is chemically compatible with the resin system used. Continuous roving shall be a commercial grade of E-type glass fiber with a sizing that is chemically compatible with the resin system used.
8. The inner surface exposed to the corrosive environment shall be followed with a layer composed of vinylester resin, reinforced only with non-continuous glass fiber strands applied to a minimum thickness of 0.100 inches. The combined thickness of the inner surface and interior layer shall be 0.110 to 0.130 inches and in no case less than 0.100 inches.
9. The exterior laminate shall consist of filament winding and unilateral construction so as to create a modulus of elasticity to maintain no more than 0.1% strain in any direction.
10. Resin used in these layers shall be Hetron 922 incorporating a Cobalt/MEKP cure system as recommended by the manufacturer.

B. Filter Piping - Internal
1. The upper and lower internal distribution system shall be a horizontal header/lateral arrangement. The headers shall be Schedule 80 PVC construction, capped on one end and flanged on the other end. Lateral connections shall be spaced no more than 6" on the centers and shall be 1½" FPT connections.
2. Underdrain laterals shall consist of 1.5" Schedule 80 PVC pipe with machined double slotted openings on 1/8" centers. Machined openings shall be designed to retain all media particles as small as 0.012 inch (0.30 mm) particle size. Molded or drilled openings or retainer screens will not be acceptable. Each lateral shall be fabricated complete with a socket cap on one end and male adapter on the other. Both fittings to be solvent welded to the slotted pipe. Laterals shall be fitted with a rubber 0-ring to allow for proper positioning of the machined openings.
3. Upper laterals shall consist of 1½" Schedule 80 PVC pipe with 1/2" wide machine slotted openings on 1 1/4" centers. Upper laterals shall be designed and sized at the factory so as to provide uniform distribution and unrestricted flow during filter and backwash cycles. Laterals shall be fitted with a rubber 0-ring to allow for proper positioning of the machined openings.
4. All hardware shall be T304L stainless steel or non- metallic.

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C. Face Piping
   1. External face piping shall be Schedule 80 PVC pipe and fittings. All fittings, including 10" and 12" sizes shall be molded type. Fabricated or fiberglass wrapped fittings will not be acceptable. Flanges shall be located so as to allow for easy dismantling of face piping. All fittings shall be solvent cemented.
   2. Piping shall be drilled and tapped where necessary to accommodate gauge tubing connectors.
   3. All valves shall be constructed in accordance with the Specification 13 11 24 unless otherwise specified. All valves 3" – 12" shall be constructed with cast aluminum ASTM S12A housing and fully coated with Rilsan on all interior and exterior surfaces. Internal components include EPDM resilient lining, Rilsan coated ductile iron disc and T304 stainless steel shaft. Valves 14" and larger shall be constructed with cast iron housing epoxy coated and with nylon coated ductile iron disc.
   4. Unless otherwise specified, all nuts and bolts shall be stainless steel with stainless steel washers to be used when secured to PVC flanges.
   5. Standard accessory items shall include sight glass rated for 50 psi with polycarbonate glass, remote mounted gauge panel with two 4½" diameter pressure gauges, ¼" petcocks, ¼" poly vent tubing with PVC compression adapters.
   6. Face piping shall be fully factory assembled, knocked down and crated for shipment. The warranty of the face piping shall be provided by the filter manufacturer. Field gluing of the face piping by anyone other than the filter manufacturer will not be accepted.
   7. Face piping arrangement shall be as indicated on the drawings. All backwash control valves shall be located no greater than 60" off the floor.

D. Automatic Air Relief Valve
   1. A minimum 1" valve shall be provided to automatically and continuously release air in the filter. The valve shall be fabricated of plastic with Buna-N seals.

E. Air Relief & Drain Plumbing
   1. An air relief plumbing kit shall be provided for each filter with two (2) True Union PVC ball valves to allow manual air relief and isolation of the automatic valve. A filter drain plumbing kit shall be provided for each filter with a single True Union PVC ball valve to allow manual draining of each filter. Air relief and drain plumbing shall be properly supported and extended to as close as possible to the nearest floor area drain without crossing any maintenance aisle/s. Valves fabricated of cast iron, bronze or stainless steel shall not be acceptable.

F. Valve Control Assembly
   1. A mechanical linkage constructed of T304 stainless steel shall connect two valves in order to create simultaneous movement.
   2. Assembly shall be designed so that filter and backwash cycles can be accomplished by repositioning two pairs of valves.
   3. Each pair of valves shall be operated as specified with gear or electric actuation.
   4. All linkage components shall be grit blasted to a 1-2 mil profile. All linkage components shall be finish coated with minimum 3-4 mils Type 316 stainless steel paint.

G. Gear Operators
   1. Valves shall be provided with infinite position gear operators. Gear case (body) shall be constructed of cast iron painted internally and externally for maximum protection. Enclosure shall be sealed to IP65 and maintenance free.
   2. Self-locking gearing shall be capable of holding the disc in any position with no movement up the full pressure rating of the valve. Gear operator shall provide 90° of travel with ± 5° adjustment in closed position. Gear operator shall include a non-corrosive sealed indicator for remote visibility. Gear operator shall include manual adjustment capabilities.

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H. Electric Operators
   1. Electric service shall be 110 VAC unless otherwise indicated in drawings. Operator housing shall be corrosion resistant NEMA 4X (IP65). Electrical connectors shall be four-pole industrial style and meet DIN 43650 standards. Plug connection shall be gasketed and mechanically secured with a stainless steel screw. Harness assemblies from operator to control panel shall be factory fabricated. No field wiring shall be required.
   2. Drive assembly shall include hardened steel and polyamide reduction gears with permanent lubrication. Operator shall be equipped with a manual override. Operator shall have a visual position indicator.
   3. Electric drive motor minimum duty cycle rating to be 35%. Overloading protection shall be self-resetting. Limit switches shall be provided to allow adjustment of cycle. Two additional limit switch contacts shall be provided for indication or auxiliary.

I. Automatic Controller - MFP4
   1. The automatic controller shall provide total control of the system's filtration and backwash, and provide all necessary equipment interlocks and timing mechanisms to execute the filter program.
   2. The controller shall contain at least two microprocessors that will monitor all functions of the system.
   3. The controller shall control the operation of the following functions by time or pressure differential:
      a. Backwash: Manual or automatic; with or without security interlock for data logging
      b. Heater cool down delay
      c. Auxiliary contacts to interlock UV lamps, chemical control, or other equipment
      d. 7 inch Hi-Res LCD Screen with Tactile Feedback Membrane
      e. Step-by-step animated graphics
      f. Last backwash display
      g. Remote Operation via browser or phone
      h. Off Site Real-Time Status
      i. Data logging of process
      j. Differential Pressure Monitoring and Bump Control
      k. Exporting of process data logs to .csv Excel™ files
      l. Modbus Communications for PLC connectivity
      m. Nema 4X / IP66 approved / UL Listed
      n. Electrical Requirements: 120VAC-1Ø-60Hz, 15 amp Circuit Protection (CP)/230VAC-1Ø-50Hz, 10 amp CP

2.02 FILTER MEDIA

A. Each filter tank shall be provided with media as required per manufacturer's recommendations.

B. Gravel support media of a hard coarse aggregate with a subangular grain shape with a particle size of 1/8" x ¼" shall be used on the inside of the bottom head to the elevation where the filter media commences. The specific gravity shall not be less than 2.5. Place support media by hand to avoid damage to the underdrain system and level before the addition of the upper layer of filter media. Support gravel shall be delivered and stored in bags (approximately one cubic foot) for ease of handling and elimination of possible contamination. Concrete underfill shall not be used. Media shall be free from minerals that may precipitate onto pool surfaces.

C. Sand shall be a carefully selected grade of hard, uniformly graded silica material. Media shall be naturally rounded particles of silica or milled angularly shaped particles of silica quartz. Sand shall have a particle size between .45 mm and .55 mm (#20). No more than 1.5% shall be allowed to pass through a #40 sieve (.0164"). Uniformity coefficient shall not exceed 1.53.

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Specific gravity to be not less than 2.5. Bed depth shall be placed as required by the filter manufacturer. Sand shall be delivered and stored in bags (approximately one cubic foot) for ease of handling and elimination of possible contamination. Media shall be free from minerals that may precipitate onto pool surfaces.

3. EXECUTION

3.01 FILTER SYSTEM

A. All filter piping and valves shall be factory assembled and knocked down into sub-assemblies for shipment. The components shall be carefully packaged in a totally enclosed wooden crate to prevent damage during transport.

B. Filters shall be installed level and anchored to the floor.

C. Provide installation complete with factory representative training and equipment start.

D. Pool Contractor shall deliver operating and maintenance instructions for operation, maintenance and cleaning of Filter system.

E. Training and Start-Up
1. Filter installation shall include a filter system “start-up” and “system operator training (SOT)”. Start-up shall include the first-time use of the filter in recirculation mode and all system adjustments as needed for proper operation of all filter modes. SOT shall include written and verbal instructions and demonstrations required for the system operator to properly operate and maintain the filter system in all filter operating modes.
2. Start-Up and SOT shall be completed by a fully trained and authorized filter manufacturer representative.
3. Prior to initiating the Start-Up procedures, the contractor shall complete all equipment installation and tests as required for proper filter operations. Contractor shall obtain the “Pre-Start-Up” requirements/checklist directly from the filter manufacturer.
4. Contractor shall coordinate and schedule the system start-up and training directly with the filter manufacturer and Owner.
5. SOT session shall be a minimum of one (1) day duration. Obtain written documentation with a dated signature from the system operator that training was provided to their satisfaction

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SECTION 13 11 35

POOL ULTRAVIOLET DISINFECTION EQUIPMENT

1. GENERAL

1.01 SECTION INCLUDES

A. Pool Ultraviolet Disinfection Equipment

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 REFERENCES

A. The following latest edition reference specifications, guides and standards shall become part of this Specification as if herein written. If provisions conflict, the more stringent provisions shall apply.
   1. NSF – National Sanitary Foundation
   2. MET – Met Laboratories, Inc.
   3. CSA – Canadian Standards Association
   4. UL – Underwriters Laboratory
   5. NEMA – National Electrical Manufacturers' Association
   6. ANSI – American National Standards Institute
   7. USEPA UVDGM- U.S. Environmental Protection Agency Ultraviolet Guidance Manual
   8. Din- German Institute of Standardization
   9. IP- International Electrotechnical Commission

1.04 SUBMITTALS

A. Drawings and Instructions
   1. Provide detailed Shop Drawings of the items of equipment being provided, indicating the dimensions, material, and characteristics.
   2. Provide a detailed Operations Manual, embracing the operation functions and recurring maintenance processes.

1.05 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

1.06 QUALITY ASSURANCE

A. All SYSTEM components shall be supplied to the CONTRACTOR by a single EQUIPMENT SUPPLIER.

B. The EQUIPMENT SUPPLIER shall have at least twenty (20) year experience providing medium pressure UV systems to the Aquatics market.

C. The EQUIPMENT SUPPLIER shall design, develop, manufacture and test the SYSTEM in a facility that is assessed and registered as conforming to the requirements of ISO 9001:2008 quality management system.

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1.07 DELIVERY, STORAGE, AND HANDLING

A. Refer to General Requirements and Division 01.

1.08 WARRANTY

A. A factory trained representative of the manufacturer shall perform all warranty work. Manufacturer to warranty Ultraviolet chamber and Spectra Control panel for a period of 5 years (see requirements) excluding lamps, quartz, and seals. Medium pressure Ultraviolet bulbs shall be warranted for a period of 8,000 hours. Intermittently operated lamps (≥ 1 on/off cycle per day) will be replaced free of charge should failure occur prior to 4,000 hours and replacement will be prorated between 4,000 and 8,000 hours.

B. Manufacturer must maintain spare or replacement parts in the USA for same day or no longer than next day delivery in North America, other areas based on expedited delivery available.

C. A Service Agreement (twice per year maintenance) from a qualified factory certified distributor shall be provided to initiate the service to maintain the five-year warranty.

2. PRODUCTS

2.01 GENERAL

A. The UV System shall have a MET or equivalent (ETL, CSA, or UL) listing, be NSF-50 (2016 or later) certified including Section 14.18 (crypto inactivation), and 3rd party validated to the USEPA UVDGM 2006 Guidelines.

B. Equipment General Description: The Ultraviolet System shall be provided in a complete package to include:
   1. Stainless steel chamber,
   2. Spectra Control System located in a NEMA 12 (IP52) rated panel,
   3. Medium pressure bulb(s) designed to emit wavelengths within the UVC electromagnetic spectrum,
   4. UV EZ Clean strainer,
   5. Automatic wiper system, and
   6. Project Commissioning by an Ultraviolet Technician certified by the manufacturer.

C. Manufacturer: Ultraviolet Lamp/Chamber and Spectra Control Panel by Neptune Benson / Evoqua Water Technologies Ltd., or Architect/Engineer approved equal. Any deviation/exception must be provided in writing to and approved by the designer prior to the bid date.

2.02 UNIT TYPE

A. Wafer (WF) UV Units: Ultraviolet manufacturer to offer unit capability of a horizontal or vertical installation application using state of art design and direct flow through characteristics. Direct flow will be required in order to reduce total head loss through the system. Unit shall be medium pressure system with a flow rating as scheduled in the drawings, or greater, @ a maximum of 94% UV Transmission (UVT). Chamber and Control Cabinet shall be as indicated on the drawings.

2.03 ULTRAVIOLET REACTOR/CHAMBER

A. The unit shall be constructed of 316L stainless steel, electropolished and passivated to prevent corrosion within the harsh pool environment. Pressure drop across the unit will be minimal.

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B. The Ultraviolet chamber shall come complete with the following equipment:
   1. Ultraviolet intensity monitor factory calibrated to provide intensity in mW/cm2 (monitors providing percentage of lamp output are not acceptable).
   2. Built-in alarm system to notify operator when output level drops below operator set dosing levels or the required level of 60 mj/cm2 for indoor pools and 40mj/cm2 for outdoor pools.

C. Ultraviolet temperature control system shall be provided to maintain system integrity in the event of flow interruptions to the chamber.

D. Ultraviolet chamber shall come complete with annealed quartz sleeve with “O” ring seals for water tightness. System shall be complete with advanced seal arrangement to reduce risk of quartz over compression on the seal face.

E. Chambers shall be complete with ANSI 150 or DN flanges (as specified) and all ports or vents shall be threaded NPT. The Ultraviolet chamber must be capable of installation in the system so that it remains full under all conditions.

F. Ultraviolet Reactor (Chamber) will be a validated system with third party testing to a recognized international standard such as the USEPA DGM.

G. The ultraviolet unit must be complete with integrated brackets or feet for ease of installation in either vertical or horizontal mounting.

H. The Chamber shall have a sacrificial anode attached to the chamber, extending inside the chamber and be bonded to the installation bond loop.

2.04 ULTRAVIOLET LAMP

A. Ultraviolet lamp shall be medium pressure high intensity. Each lamp shall be designed to emit continuous ultraviolet wavelengths in the range of 200nm to 400nm. This will provide optimal disinfection/inactivation of bacteria, algae, molds and viruses and destruction of the Monochloramine, Dichloramine, and Trichloramine compounds. The lamp(s) must remain unaffected by temperature variance of 0 degrees F (-17C) to 200 degrees Fahrenheit (93 degrees Celsius).

B. The lamp system must provide a constant calculated dose of not less than 60 mj/cm2 until the end of the lamp life for indoor applications and not less than 40 mj/cm2 for outdoor disinfection and this must be based on constantly treating the full recirculating flow rate, not on a side stream treatment. The system must be equipped with infinity variable power control of the lamp intensity & dose. Power stepping is not an acceptable alternative. The lamps shall be capable of turndown to 30% of the nominal rated power.

C. The lamp shall be connected via means of a plug connector and shall have a mechanical interlock to prevent lamp removal when lit for safety reasons.

2.05 AUTOMATIC WIPER SYSTEM

A. An automatic cleaning system shall be provided for cleaning of quartz sleeve and Ultraviolet monitor probe. The system shall travel the entire length of the quartz sleeve twice per desired cleaning cycle. Precision molded wiper rings shall be provided to ensure thorough quartz tube cleaning and quartz tube protection.

B. Wiper cycle shall be user selectable and adjustable within a range of 5 minutes to 24 hours depending on anticipated application and deposit build-up.

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C. Automatic Wiper system shall have the following characteristics:
   1. System shall utilize direct drive with square faced coupling and acme threaded shaft to prevent slippage and pin shearing. Systems utilizing shear pins or complicated gear boxes will be unacceptable.
   2. Wiper power supply shall be 24-volt DC for improved safety. Higher voltage not acceptable.
   3. System shall incorporate Direct Shaft Encoding for positional location. Systems relying on external limit switches or internally located magnets will be unacceptable.
   4. Wiper interval shall be operator selectable with optional override switch.
   5. Wiper faults are to be indicated on the control system display.
   6. Wiper System to utilize “Intelligent Operation” for automatic start-up commissioning.
      a. Records wiper position at chamber ends. Position must be fixed and not dependent on a timed interval or component striking end of chamber.
      b. Establish a travel run without setting limit adjustments to ensure system integrity and longevity.

2.06 UV STRAINER

A. The UV system must be provided with a downstream strainer to protect against the remote possibility of lamp /quartz breakage traveling downstream.

B. The UV strainer must be cleanable by manual action without removal from the piping system. If electrical or pneumatic automation of this valve is required, the valve control shall be integrated into each the filtration and UV control systems.

2.07 ULTRAVIOLET CONTROL SYSTEM

A. Control cabinet shall be a SPECTRA control unit and or pre-approved equal.

B. The cabinet shall be an epoxy coated NEMA 13 / IP54 rated cabinet. If mounted outdoors it must be a NEMA4X /IP56 rated cabinet with an integral A/C unit to protect the components from the environment.

C. The power must be controllable to provide full power, half power and infinite variable power based on real time interface with changes in UVT, Flow Rate or Combined Chloramines. The power panel must house the electronic ballasts required to ignite the lamps.

D. Three levels of operation shall be provided to meet the needs of the operator and pool environment:
   1. Simple Control (start, stop and reset),
   2. Full Parameter Display, and
   3. Customized Operator Configuration.

E. Modes of operation shall be password protected to secure system critical setup functions.

F. Control system shall have clearly identifiable start, stop, and reset icons (suitable for gloved operation) with Running and Fault LCD indicators.

G. The screen shall display the following:
   1. Ultraviolet Calculated Dose, derived from flow and intensity inputs
   2. Ultraviolet Intensity in units of % and mw/cm2
   3. Lamp Current
   4. Flow Rate. System shall accept a signal from an optional flow meter with display in units of gallons per minute (GPM) and m3/hour
   5. Chamber Temperature in units of deg. F and deg. C
   6. Operation Hour Meter

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7. System shall include alarm functions with simple text message display to assist in fault finding. Fault Indicators to include:
    a. Lamp fault,
    b. Low Ultraviolet Alarm
    c. Temperature Alarm
    d. Ground Fault Trip
    e. Wiper Fault.

H. Control system shall have a minimum of the following system interface control:
1. Remote Operation
2. Process Interrupt Features (from valves, flow meters)
3. Low UV Dose (configurable to shut down or alarm only)
4. Flow Meter Input
5. Auto-Restrike
6. Half to Full Power Ultraviolet Setting, with 24-hour/7-day settable timer
7. Variable Power/Dose Pacing Interface

I. Control system shall have built in data-logging capabilities to record the following information:
1. Ultraviolet Intensity Required
2. Ultraviolet Intensity Measured
3. Lamp Current
4. Chamber Temperature
5. Flow Rate (if flow meter is connected))Time and Date Stamp of all alarms generated

J. Control system must be capable of the following communications:
1. Interface with a Chemical Controller that can measure Total or Combined Chloramines to maintain the proper UV dosage required during the life of the lamp.
2. Interface with the Defender filtration controller.
3. Operating through Ethernet or Wi Fi with a method of uploading data to a Web based portal.
4. Interfacing with a SCADA system including Modbus.

K. Electrical Requirements:
1. See Drawings for scheduled units and electrical requirements. Confirm scheduled information with manufacturer prior to purchase.
2. Units include the following power/voltage capability:
    a. 208/220/230/240-Volt, single-phase for the 3” to 8” diameter UV units, 50/60 Hz
    b. 380/400/415/440/480-Volt, three-phase for the 10” and 12” diameter units, 50/60 Hz power.

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3. EXECUTION

3.01 SYSTEM INSTALLATION, STARTUP & TRAINING

A. Install in accordance with contract documents and manufacturer's instructions.

B. All UV electrical power supply and connections shall be performed by licensed electrician in conformance with all applicable Building/Electrical Code requirements.

C. Commissioning
   1. Ultraviolet Chamber and Control Panel shall be commissioned by a qualified factory trained technician to institute the Warranty.
   2. Final electrical and control cabling shall be connected from the control cabinet to the Ultraviolet disinfection chamber during the commissioning process.

D. TRAINING
   1. System operations and maintenance instructions shall be provided during a training session to the Owner's operations personnel. All training shall be conducted by a technician trained and certified by the UV manufacturer.
   2. Contractor shall obtain Owner signature and date upon completion of training and include copy in the project Operations & Maintenance Manual.

END OF SECTION

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SECTION 13 11 37

POOL CHEMICAL SYSTEMS AND CONTROLS

1. GENERAL

1.01 SECTION INCLUDES

A. Chemical Controller with the following sensors:
   1. pH Sensor
   2. ORP Sensor
   3. Temperature Sensor
   4. Flow Sensor

B. Free Chlorine Sensor

C. Acid (Hydrochloric or Sulfuric) Feed Pumps

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 QUALITY ASSURANCE

A. The controller shall carry the following product certifications:
   1. NSF Standard 50
   2. UL 61010-1

1.04 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Submittals required: For each type of manufactured material and product indicated. Provide Submittals indicating equipment provided, dimensions, material specifications, wiring diagrams and all accessory components including sensors.

1.05 SUBSTITUTIONS

A. Refer to General Conditions, Division 01.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Refer to General Conditions, Division 01.

1.07 WARRANTIES

A. Controller shall be covered by manufacturer's 5-year warranty.

B. ORP and pH sensors shall be covered by manufacturer's 2-year warranty.

C. Other sensors and flow cell components shall be covered by manufacturer's 1-year warranty.

D. Chemical feed pumps shall be covered by manufacturer's 2-year warranty.

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E. A factory trained/authorized representative shall provide training to the owner. The control system shall be provided with on-site start-up, on-site operator training, and 1-year on-site warranty service performed by a representative trained and authorized by the controller manufacturer.

2. PRODUCTS

2.01 All products listed as basis of design are acceptable, as are approved equivalents by Project Manager.

2.02 CHEMICAL CONTROLLER

A. The water chemistry control system shall provide continuous monitoring and control of the water chemistry and related disinfection equipment.
   1. The controller shall continuously monitor and control pH. Chemical feed shall be configurable for manual, automatic, proportional, and on/off modes.
   2. The controller shall continuously monitor and control sanitizer based upon the ORP reading, the free chlorine sensor, or both. Chemical feed shall be configurable for either on/off or time-based proportional feed.
   3. The controller shall have a programmable superchlorination function, based upon ORP or ppm superchlorination setpoint, which is triggered manually.
   4. The controller shall have a programmable dechlorination function, based upon ORP or ppm dechlor setpoint, which is triggered either manually or by the completion of the superchlorination function.
   5. The controller shall compute the Langelier Saturation Index and the Ryznar Saturation Index based upon sensor data and/or manual entered by the operator.
   6. The controller shall continuously monitor, display, and datalog system flow, maintaining a total flow volume. A Low Flow Alarm shall be operator settable, which can be programmed to disable chemical feeds.

   7. The controller shall control the boost function for a UV dosing based on real-time combined chlorine as calculated by the readings from an amperometric free chlorine and total chlorine sensor.

   8. The controller shall continuously monitor, display, and data log pool or surge tank level. The controller shall automatically control a water makeup relay to add makeup water to maintain pool level set point based on pool or surge tank level.

B. The standard display shall be a backlit transflective LCD that will continuously display information related to the following:
   1. All installed sensor readings
   2. Set points, with current control status
   3. All active alarms, including time activated

C. The flow sensor shall be used to prove flow to the chemical controller to prevent dosing of chemicals during a system low flow/no flow condition.

D. The controller shall automatically abort a Manual or Scheduled Turndown upon declining water chemistry and return to the standard programmed circulation rate to maintain optimal water quality. Declining water chemistry is signaled by any of the alarm conditions.

E. The controller shall signal all alarm conditions with the following indicators:
   1. A bright flashing LED on the front of the controller.
   2. Each active alarm listed on the LCD display along with time activated.

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3. Email and text alarm notifications.

F. The controller inputs are as follows:
   1. The controller shall have inputs available for pH, ORP, Temperature, free chlorine, and flow sensors.
   2. The controller shall come with a minimum of (3) fully assignable digital inputs available for items other than those listed above.

G. The controller outputs are as follows:
   1. The controller shall have integral line or dry contact 5A solid-state relay outputs capable of switching 3A under all normal operating conditions available for Acid or Co2 feed and sanitizer feed pumps.
   2. The controller shall come with a minimum of (2) fully assignable integral line or dry contact 5A solid-state relay outputs capable of switching 3A under all normal operating conditions available for items other than those listed above.
   3. All relays must account for the effects of the temperature gradient inside the IP66 or NEMA 4X enclosure. Systems that utilize relays that are not de-rated must submit an engineering evaluation justifying the use of relays at their full, optimal-condition capacity. All solid-state relays shall have a provision for an electrical interlock with the circulation pump motor starter.
   4. The controller shall come with a minimum of (8) separately isolated 4-20mA output signals.
   5. The controller shall be capable of expanded capabilities with optional expansion package.

H. Required controller safety features:
   1. The controller shall have built-in limits to the amount of time any relay control output may be forced on (i.e. in “Manual On” mode).
   2. The controller shall have programmable high and low alarm settings for pH, ORP, PPM, temperature, low flow & no flow. The controller shall have a programmable lockout of sanitizer feed upon pH high or low alarm.
   3. The controller shall activate a No Flow alarm when the dedicated sample stream flow switch indicates there is insufficient flow through the sample stream. This No Flow alarm shall lockout all chemical feed control operations.
   4. The controller shall have a dedicated Emergency Off button on the front panel of the system, which immediately halts all chemical feeds and control outputs when pressed. This feature shall require entry of a security access code.

I. Required controller remote communication and access features:
   1. The controller shall have the ability to allow field upgrades and updates and programming as needed. Controller must be capable of being accessed via remote communication.
   2. The controller shall have a means to preserve data logs during power outages, for input level recording and events. All input levels shall be recorded and maintained for 365 days on the controller, with a sample taken every minute. The controller shall record and maintain the events over the last 365 days recording all alarms, parameter changes, user logins, and operational cycles related to all control features.
   3. The controller shall also support the following types of connection to 3rd party applications such as EMS, BMS, BAC and SCADA systems:
      a. 1) MODBUS TCP/IP
      b. MS/TP (RS485)
      c. TCP/IP (Ethernet) BACnet connection
         The connection shall support access to Inputs (current readings), System Information, Set Points, Alarm Points, Control Status and Alarms. Set Points and Alarm Points shall be modifiable from the 3rd party application via the selected interface.
   4. The controller shall come with an integral Wi-Fi module.

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5. The controller shall be Windows 10 compatible or include the necessary software and apps to allow for the real-time monitor/ of the following via personal computer, smartphone, or tablet device:
   a. Auto-Polling – to allow automatic download of data logs.
   b. Graphical Operator's Console – to display current readings, setpoints, alarm points and control status mode.
   c. Data Logging
   d. Email and text alarms notifications.
6. The controller shall require security access codes.

J. The controller shall be housed in an IP66 or NEMA 4X polycarbonate enclosure. All high-voltage wiring shall be performed in a separate IP66 OR NEMA 4X enclosure that precludes access to the controller electronics.

2.03 pH SENSOR

A. The controller shall provide a measurement of pH by utilizing a sensor with the following characteristics:
   1. 2 – 12 sensing range
   2. operating temperature range of 32-140 °F (0-60°C)
   3. operating pressure range of 0 - 60 psi (0 TO 4.1 bar)

   The controller shall continuously monitor, display and data log pH with minimum 0.1 resolution.

2.04 ORP SENSOR

A. The controller shall provide a measurement of ORP by utilizing a sensor with the following characteristics:
   1. 0 to 999 mV sensing range;
   2. operating temperature range of 32- 140° F (0-60°C)
   3. operating pressure range of 0- 60 psi (0 TO 4.1bar)

   The controller shall continuously monitor, display and data log ORP with minimum 6mV resolution.

2.05 TEMPERATURE SENSOR

A. The controller shall provide a measurement of water temperature by utilizing a sensor with the following characteristics:
   1. 32 – 212°F (0 – 100°C) sensing range
   2. Operating temperature range of 32 – 212°F (0 – 100°C)
   3. Operating pressure range of 0-145 psi (0-10 bar)

   The controller shall continuously monitor, display and data log temperature with 5/9 °C (1°F) resolution.

2.06 CIRCULATION FLOW SENSOR

A. The controller shall provide a measurement of pool circulation flow rate and volume by utilizing a flow sensor with the following characteristics:
   1. paddle wheel flow sensor
   2. O-ring seal

   The controller shall continuously monitor, display and data log flow rate with 0.45 lpm (0.1 gpm) resolution.

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2.07 FREE CHLORINE SENSOR

A. The controller shall provide a measurement of free chlorine by utilizing a sensor with the following characteristics:
   1. 0.0 to 10.0 mg/l (ppm) measuring range
   2. 32° - 176°F (0°-80°C) operating temperature range
   3. Replaceable cleaning beads

   The sensor shall not utilize a membrane or electrolyte. Sensors utilizing a membrane and/or electrolyte, which must be replaced and/or replenished on a regular basis, shall not be considered equal. The controller shall continuously monitor, display and data log free chlorine with 0.1 mg/l resolution.

2.08 AUTO-FILL WATER LEVEL SENSOR

A. The controller shall provide a measurement of the water level by utilizing a continuous level sensor with the following characteristics:
   1. Field configurable sensor length,
   2. Installation options for wall mount and stand pipe glass configurations.
   3. 4 to 20 mA output

   The controller shall continuously monitor, display and data log the water level with 10 mm (0.4”) resolution or better. The controller shall use the sensor to control a water makeup valve to maintain water level (Autofill) and/or control a main drain modulating valve.

2.09 ACID (HYDROCHLORIC/SULFURIC) FEED PUMPS

A. All acid feed pumps shall be of the size and meet the output requirements indicated on the construction documents, meet all state and local code requirements, and shall meet the following criteria:
   1. Self-priming adjustable peristaltic pump
   2. 32-125° F (0-52°C) operating temperature range
   3. Operating pressure range: 0-25 psi (0-1.7 Bar)
   4. Required suction lift: 25’ (7.6 M) at sea level
   5. Motor: Variable Speed.
   6. Tubing: Norprene®, Norprene Chemical®, or Santoprene® tubes. Feed pump shall provide a mechanism to detect chemical spills from worn-out tubing and provide alarm notification.
   7. Chemical compatibility: All components of feed pump must be resistant to Hydrochloric and Sulfuric Acid at 50% maximum strength.

3. EXECUTION

3.01 CHEMICAL CONTROLLER INSTALLATION

A. Installation of the system shall be per the manufacturer’s specification and no exceptions shall be allowed. A factory trained/authorized representative shall provide training to the owner. The control system shall be provided with on-site start-up, on-site operator training and 1-year on-site warranty service performed by a representative trained and authorized by the controller manufacturer.

B. Provide coordination and instructional training of the chemical controller’s remote use functions and alarms with Owner’s designated staff and information technology personnel.

C. Calibration of chemical controller shall be executed only after the monitored pool temperature has been established to within 4 degrees of the design temp, or as required by the manufacturer’s installation instructions, if more stringent.

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3.02 MANUALS

A. Manufacturer shall supply an Installation, Operation and Maintenance Manual describing features, operating instructions, maintenance procedures and replacement parts.

END OF SECTION

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SECTION 13 11 42

PERIMETER OVERFLOW GUTTER GRATING

1. GENERAL

A. A perimeter overflow gutter system consisting of a continuous grating covered overflow channel as shown in documents shall be installed. The gutter shall be level throughout.

1.01 SECTION INCLUDES

A. PVC Parallel grating

B. PVC Perpendicular grating

C. Polymer / High Density Polyethylene (HDPE) Grating

1.02 RELATED DOCUMENTS

A. Drawings and Contract Requirements, including General and Supplementary Conditions and Division 01 – General Requirements, apply to this Section.

B. Division 13 11 Pool specifications apply to this section

C. Division 13 11 18 Pool Concrete

D. Division 13 11 43 Pool Stainless Steel Gutter

1.03 REFERENCES

A. The following latest edition reference specifications, guides and standards shall become part of this Specification as if herein written. If provisions conflict, the more stringent provisions shall apply.
   1. ANSI – American National Standards Institute
   2. ASTM – American Society of Testing Materials
   3. NSF – National Sanitation Foundation Standard 50
   4. MAHC – Model Aquatic Health Code

1.04 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Submit Shop Drawings, clearly indicating make, model, type, and size of grating

C. Submit 4” x 4” samples of each of MFG. standard colors

1.05 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

1.06 DELIVERY, STORAGE AND HANDLING

A. Refer to General Requirements and Division 01.

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1.07 WARRANTY

A. Manufacturer's Ten-Year Warranty, prorated after one year.

B. Grating installation shall be completed in accordance with all manufacturer's requirements for warranty coverage.

2. PRODUCTS

2.01 GENERAL

A. Provide perimeter overflow gutter grating type as identified and detailed in the drawings.

B. Perimeter overflow gutter grating shall be provided from a single manufacturer.

C. Materials shall meet product requirements within these specifications.

2.02 PARALLEL OVERFLOW GUTTER GRATING - PVC

A. The grating surface bars shall run parallel to the pool wall.

B. The grating shall be formed from molded, modular, interlocking, UV-stabilized PVC bars. The top surface of the grating bars shall be raised, water-shedding, slip-resistant and shall meet the IBC Classification C for Wet-Barefoot inclining platform (ramp) test for swimming pool surroundings.

C. Grating bars shall be a minimum of 15/32" (12mm) wide and an outside depth of 1.0" (25.4mm) with a middle depth that varies, dependent on grating width and load strength requirements.

D. Grating design shall meet ASTM D790-10 or ANSI/AS3996 Class A for covers and grates with load exceeding 10kN (2,248lb).

E. The grating shall provide at least 37.5% open area per foot for unrestricted water flow. The space between the bars shall not exceed 3/8" (9.5mm) and shall comply with IBC child finger/toe entrapment guidelines.

F. Grating width shall allow the insertion of the touchpad holding brackets between the grating and the gutter lip.

G. All inside and outside corners and custom radii sections under 3-feet inside diameter (short radius section) shall be custom fabricated and strengthened by the manufacturer.

H. Fasteners shall be SS-316, provided by the manufacturer, and installed per manufacturer instructions and as shown on drawings.

I. Colors selected by the Architect/Owner from manufacturer's standard colors.

J. Acceptable manufacturers:
   1. Daldorado LLC
   2. Lawson Aquatics

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2.03 PERPENDICULAR OVERFLOW GUTTER GRATING - PVC

A. The grating surface bars shall run perpendicular to the pool wall.

B. The grating shall be formed from molded, modular, interlocking, UV-stabilized PVC bars. The top surface of the grating bars shall be raised, water-shedding, slip-resistant and shall meet the IBC Classification C for Wet-Barefoot inclining platform (ramp) test for swimming pool surroundings.

C. Grating shall be a minimum of 15/32” (12mm) wide and an outside depth of 1.0” (25.4mm) with a middle depth that varies, dependent on grating width and load strength requirements.

D. Grating design shall meet ASTM D790-10 or ANSI/AS3996 Class A for covers and grates with load exceeding 10kN (2,248lb).

E. The grating shall provide at least 37.5% open area per foot for unrestricted water flow. The space between the bars shall not exceed 3/8” (9.5mm) and shall comply with IBC child finger/toe entrapment guidelines.

F. Grating width shall allow the insertion of the touchpad holding brackets between the grating and the gutter lip.

G. All inside and outside corners and custom radii sections under 3-feet inside diameter (short radius section) shall be custom fabricated and strengthened by the manufacturer.

H. Fasteners shall be SS-316, provided by the manufacturer, and installed per manufacturer instructions and as shown on drawings.

I. Colors selected by the Architect/Owner from manufacturer’s standard colors.

J. Acceptable manufacturers:
   1. Daldorado LLC
   2. Lawson Aquatics
   3. RenoSys

2.04 POLYMER / HDPE OVERFLOW GUTTER GRATING

A. The grating shall be machined from a marine grade polymer or High Density Polyethylene (HDPE) sheets using 1” thick, UV- stabilized material. Material must meet or exceed ASTM D696 for Coefficient of Linear Expansion of material.

B. The top surface of the grating shall be raised, water-shedding, slip-resistant and shall meet ASTM D2047 slip resistance (wet) with a nominal value of 0.62.

C. Grating design shall meet ASTM D790-10 or ANSI/AS3996 Class A for covers and grates with load exceeding 10kN (2,248lb).

D. The grating shall include machined slots providing at least 37.5% open area per foot for unrestricted water flow. The openings shall not exceed 3/8” (9.5mm) and shall comply with IBC child finger/toe entrapment guidelines. Direction of slots may be parallel and/or perpendicular to the pool wall as indicated in drawings.

E. Grating width shall allow the insertion of the touchpad holding brackets between the grating and the gutter lip.

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F. All inside and outside corners and custom radii sections under 3-feet inside diameter (short radius section) shall be custom fabricated and strengthened by the manufacturer.

G. Fasteners shall be SS-316, provided by the manufacturer, and installed per manufacturer instructions and as shown on drawings.

H. Colors selected by the Architect/Owner from manufacturer's standard colors.

I. Acceptable manufacturers:
   1. Paddock Pool Equipment Company
   2. RenoSys
   3. Natare Corporation

3. EXECUTION

3.01 GENERAL

A. Inspect project conditions prior to installation. Concrete support ledge must the grating manufacturer's minimum width requirements. Concrete surface shall be clean and level to allow a level grating installation. Report conditions detrimental to grating installation in writing to Architect prior to initiating installation.

B. Install grating per manufacturer's instructions. Include manufacturer's PVC grating accessories (PVC curb angle, supports, hand-holds, fasteners and other accessories) as required by project conditions and/or as detailed in drawings.

C. Installation shall not allow water flow beneath the grating and into the gutter trench. Follow manufacturer's installation methods and use manufacturer's approved sealant as required between grating and pool wall surface on the front skimming edge to assure water uniformly skims over the top skimming edge.

D. Provide templates for corners or other conditions for shop fabrication to the manufacturer, per manufacturer's requirements. Field fabrication of corners and short radius sections is not permitted.

E. Gap width between individual grating sections shall not exceed the specified machined opening width or width between bars. Gap width between grating and other surfaces shall not exceed 5/16" (8mm).

F. The skimming edge elevation at the face of the pool wall shall be within 1/8" +/- of the pool static water elevation and must provide continuous skimming around the entire pool perimeter.

G. Install manufacturer's fasteners to anchor grating. Space fasteners as indicated in drawings. Locate fasteners more frequently if required by code or manufacturer requirements.

H. Protect grating from damage and concrete splatter. Clean grating of all dirt, debris, concrete splatter, and staining per manufacturer's instructions. Replace grating that becomes permanently marked, damaged, or stained during the construction process.

END OF SECTION

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SECTION 13 11 46

POOL EQUIPMENT

1. GENERAL

1.01 SECTION INCLUDES

A. Pool Equipment
   1. Pool fittings, deck, maintenance, and safety equipment.

B. Pool Specialty Equipment
   1. Spray and play equipment manufactured for use in swimming pools and/or spray pads.

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 REFERENCES

A. Specialty Equipment
   1. Equipment submitted shall be designed by manufacturer to meet all federal, state, and local requirements.
   2. Equipment manufacturer shall meet applicable requirements of Consumer Product Safety Commission, ASTM, UL, and other applicable standards.
   3. Comply with ASTM F2461-09, standard practice for manufacture, construction, operation, and maintenance of aquatic play equipment.

1.04 DESCRIPTION OF WORK

A. Refer to General Requirements and Division 01 of the Specifications for additional requirements.

1.05 QUALITY ASSURANCE

A. Refer to General Requirements and Division 01 of the Specifications for additional requirements.

1.06 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Submittals required:
   1. Pool Fittings and Equipment
   2. Deck Equipment
   3. Safety Equipment
   4. Maintenance Equipment
   5. Pool Specialty Equipment
      a. Provide detailed Shop Drawings of equipment being installed, including but not limited to:
         1) Location
         2) Flow rates
         3) Safety equipment

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C. Provide a typed sheet of Operating Instructions, embracing the operation functions and maintenance processes involved in connection with the complete system, including routine maintenance, start-up, and winterization requirements.

D. Printed and bound operating, installation, and service manuals.

1.07 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Refer to General Requirements and Division 01.

1.09 WARRANTIES

A. Pool Equipment
   1. Manufacturer's Standard Warranty

B. Pool Specialty Equipment
   1. Manufacturer's Standard Warranty – 2-year minimum

2. PRODUCTS

2.01 GENERAL

A. Provide the equipment scheduled on the drawings, and any necessary fittings, anchors, and connectors as required and not provided by the manufacturer. The equipment shall be the manufacturer and model number listed or a pre-approved equal. Although unit quantities are shown for value engineering purpose, it is the installing contractor's responsibility to verify actual quantities required.

3. EXECUTION

3.01 INSTALLATION

A. Manufacturer's Installation Instructions
   1. All equipment of this section shall be installed in accordance with industry standards and comply with manufacturer's installation instructions/recommendation. The contractor shall notify the engineer in writing of any discrepancies between the contract documents and the manufacturer's instruction. This notification shall include a request for clarification prior to installation.

B. Install equipment true and level.

C. Protect Equipment from damage during installation and up to substantial completion. Repair or replace damaged parts.

END OF SECTION

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SECTION 13 11 60

POOL QUARTZ AGGREGATE FINISH

1. GENERAL

1.01 SECTION INCLUDES

A. Includes but is not limited to the complete installation of a quartz aggregate finish as designated in the plans and specifications within strict accordance to manufacturer instructions and listed references.

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 REFERENCES

A. The following latest edition reference specifications, guides and standards shall become part of this Specification as if herein written. If provisions conflict, the more stringent provisions shall apply.
   1. National Plasterer's Council "Pool Plaster Technology", Phone # 866-483-4672, www.mpconline.org
   2. National Spa and Pool Institute "Start Up Do's and Don'ts for Newly Plastered Swimming Pools; Why You Should Use Plaster in Your Swimming Pool; Care Tips for New Swimming Pool Plaster and Technical Manual", Phone # 703-838-0083.

1.04 QUALITY ASSURANCE

A. The installer shall provide documentation providing a minimum of five (5) successful installations of similar scope and complexity with current contact information and phone number.

B. The installer shall be a member of the National Plasterer's Council in good standing.

C. The installer shall provide documentation/certification that the laborer's performing the work on site have been factory trained by the pool finish manufacturer.

D. The installer shall provide a letter of reference from the pool finish manufacturer.

1.05 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Submit product literature and sample colors for Quartz Aggregate Finish and manufacturer approved bond coat forty (40) days prior to use. Quartz Aggregate material shall be listed in the material submitted.

C. Submit all documents required above for experience and qualification.

D. Provide three (3) 3'x3' onsite mock-ups of varying grades of coarseness for Owner's approval. The pool contractor is responsible to coordinate approval of mock ups prior to the quartz aggregate pool finish installation.

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1.06 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

1.07 DELIVERY, STORAGE, AND HANDLING

A. If material is stored, it must be in a cool, dry area, protected from the elements.

1.08 WARRANTIES

A. It shall be noted that the pools may be subject to be drained for prolonged periods of time for normal maintenance and cleaning.

B. Provide Manufacturer's Product Warranty on the Quartz Aggregate Pool Finish Product. The pool finish manufacturer shall acknowledge that the pool(s) are subject to be drained completely for winterization and periods during normal maintenance and shall guarantee the pool finish for five (5) years covering any defects caused by product failure.

C. Provide Special Project Application Warranty on the Quartz Aggregate Finish Application. The pool finish installer shall acknowledge that the pool(s) are subject to be drained completely for winterization and periods during normal maintenance and shall guarantee the pool finish application for two (2) years covering any defects caused by the application of the product not limited to: abnormal cracks (other than closed shrinkage cracks that may appear), discoloration, hollow spots and de-lamination.

D. Special Project Warranty on Concrete Structure and Special Aggregate Finish: The Pool Contractor shall guarantee for two (2) years repair of the special aggregate finish covering any defects, cracks and/or leaking in the pool shell.

2. PRODUCTS

2.01 ACCEPTABLE PRODUCTS AND MANUFACTURERS

A. Sun Stone by:
CLI Industries, Inc.
P.O. Box 593704
Orlando, FL 32859,
(407) 851-2660.
www.clindustries.com

B. Approved Equal

2.02 INSPECTION/MEETINGS AND PREPARATION

A. Schedule a pool finish pre-installation conference before applying the pool finish.
1. Attendees: Manufacturer's representative, Pool Finish Installer, Contractor and its superintendent and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the work.
2. Agenda: Review the manufacturer's application instructions and discuss items of significance that could affect progress and installation, including but not limited to the following:
   a. Construction schedule
   b. Critical work sequencing
   c. Accessibility
   d. Designation of responsible personnel qualified to do the work

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e. Concrete surface preparation requirements
f. Bond coat curing and application
g. Pool Finish application and surface preparation
h. Finishing methods as recommended by the manufacturer to include exposing the aggregate
i. Verify and discuss proposed work force is adequate to complete the installation as recommended by the manufacturer
j. Verify pool mechanical and chemical system is prepared for immediate start up after filling the pool

3. Record significant discussions and agreements and disagreements of the conference, and the approved schedule. Promptly publish and distribute any issues or discrepancies to the Architect/Engineer prior to installing the pool finish.

3. EXECUTION

3.01 PREPARATION

A. All pool finish work must strictly follow manufacturer installation guidelines, references and recommendations.

B. Environmental conditions must comply with manufacturer's requirements, and finish may not be applied to frozen or frost laden surfaces or when the temperature is 40 degrees F or due to fall to 40 degrees within 24 hours.

C. The filtration and chemical system must be ready for startup and operating immediately after the pool is filled for pool finish curing per manufacture instruction.

D. The pool finish applicator shall coordinate with the pool shell concrete contractor, specific concrete finish requirements for the pool finish application.

E. It is the applicator's responsibility to ensure that the concrete substrate is adequate for proper bonding of pool finish in accordance with manufacturer recommendations.

F. Prepare all pool surfaces to receive the quartz aggregate finish per manufacturer recommendation.

G. A brush or roll on bonding coat produced and approved by the pool finish manufacturer is required to be applied to the entire pool structure where the pool finish is to be applied. The manufacturer's approved bond coat must be installed and cured in accordance with manufacturer instructions prior to applying the quartz aggregate finish. No exceptions.

H. Adding any supplements to the manufacturer's pre-bag mix is strictly prohibited unless manufacturer's approved written documentation is submitted and is pre-approved by the pool Architect/Engineer.

3.02 APPLICATION

A. All pool finish work must strictly follow manufacturer installation guidelines, references and recommendations.

B. Apply the quartz aggregate finish so that it is flush with the pool gutter, tiles and other embedded items as detailed in the plans and specifications.

C. The pool finish must be installed to a thickness and tolerance between 3/8" to 1/2" or as recommended by the manufacturer.

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D. Finish quartz aggregate in a workmanlike fashion. Trowel surface smooth. Proceed with application to natural breaks.

E. No hollow areas, discolored or delaminated areas will be acceptable, any and all hollow areas must be chipped out and repaired, patching shall be done in a quality workmen's like fashion. If hollow spots are detected where individual patching required will reduce the overall aesthetic value, it will be the Architect/Engineers discretion to have an entire area between breaks removed and replaced.

F. All pool floors and horizontal surfaces shall have a slip resistant finish. Slip resistance shall meet Dynamic Coefficient of Friction (DCOF) value of WET:> 0.42. Abrasive resistance shall meet a DCOF value of WET:>0.60.

G. The contractor is responsible for all brushing/cleaning, chemical monitoring and other requirements set forth by the manufacturer installation and curing instructions. This shall not be the responsibility of the owner.

H. The installing contractor shall guaranty the finish to be free of sharp edges and splatter that may cause cuts on swimmers' feet.

END OF SECTION

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SECTION 13 11 61

POOL CERAMIC TILE

1. GENERAL

1.01 SECTION INCLUDES

A. Porcelain Ceramic Pool Tile

1.02 RELATED DOCUMENTS

A. Drawings and Contracting Requirements, including General and Supplementary Conditions and Division 01 - General Requirements, apply to this Section.

1.03 REFERENCES

A. The following latest edition reference specifications, guides and standards shall become part of this Section as if herein written. If provisions conflict, the more stringent provisions shall apply.
   1. ANSI A108 – Specifications for Installation of Ceramic Tile
   2. ANSI A137.1 – Tile Grade Requirements
   3. ASTM C-150, Type 1 – Portland Cement
   4. ASTM C-206, 7 Type S – Hydrated Lime
   5. ASTM C-144 - Sand
   6. ANSI A118.1 – Dry Set Mortar
   7. TCA 759 – Dry Set Mortar
   8. ANSI A118.3 – Epoxy Adhesive
   9. TCNA – Tile Council of North America, Handbook for Ceramic, Glass, and Stone Tile Installation, latest edition
   10. ISO 13007 – International Standards Organization; Classification for Grouts and Adhesives.

1.04 SUBMITTALS

A. Refer to General Requirements and Division 01.

B. Submit product data and samples for each tile product indicated.

C. Submit shop drawings for approval before ordering tile. Include the following:
   1. Plan, elevations, and sections of pool tank and deck.
   2. Indicate tile layout, patterns, color, expansion joints, junctions with dissimilar materials and setting details.

D. Plans of all tile marking showing exact locations and positions of individual tiles.

E. Maintenance data: Include routine maintenance and stain removal methods.

F. Provide five copies of submittals.

1.05 SUBSTITUTIONS

A. Refer to General Requirements and Division 01.

1.06 DELIVERY, STORAGE AND HANDLING

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A. Refer to General Requirements and Division 01.

B. Deliver all products to job in manufacturer's unopened containers with grade seals unbroken and labels intact.

C. Keep tile cartons dry.

1.07 QUALITY ASSURANCE

A. Single source responsibility:
   1. Obtain each type and color tile material from single source.
   2. Obtain setting and grouting materials from one manufacture to ensure compatibility.
   3. Obtain membrane from same manufacturer as setting material or from manufacturer approved by setting material manufacturer to ensure compatibility.
   4. Furnish fifteen (15) year guarantee from installation material manufacturer. This guarantee is inclusive of installation materials, finish product, and labor.

B. Manufacturer Qualifications:
   1. Tile: Minimum five (5) years' experience in manufacture of tile products.
   2. Setting Materials: Minimum ten (10) years' experience in manufacture of setting and grout materials specified.

C. Installer Qualifications: Specializing in tile work having a minimum of 5 years successful documented experience with finish work comparable to that required for this project.

D. Certifications:
   1. Submit "Master Grade Certificate" for each shipment, type, and composition of tile, signed by tile manufacturer and installer with requirements of ANSI A137.1.
   2. Submit manufacturers certifications that tile, setting materials, adhesives, and grouts are suitable for intended use in submerged, swimming pool environment.

E. Field Samples:
   1. Sample Installation:
      a. For final review of each type of installation, construct sample panel of approximately 100 square feet.
      b. Install in location as directed by Architect and approved by Owner's Representative.
      c. Show workmanship of finished work and construction techniques including installation and incorporation of waterproofing membrane. Where a particularly difficult detail or technique is required, or where special sizes or shapes of product are needed, they shall be included in sample panel.
      d. Approved field samples will serve as project standard and may remain as part of the work.

F. Pre-Installation Conference:
   1. Require attendance of General Contractor, Pool Contractor, Tile Installer and Installers of related work. Review installation procedures and coordination required with related and adjacent work. Hold meeting at least one week prior to commencing work of this section. Publish meeting minutes within 5 days of meeting, distribute minutes to participants, copy Architect.
   2. Meeting agenda shall include, but is not limited to:
      a. Surface preparation
      b. Tile and installation material compatibility
      c. Edge protection, transition and pre-fabricated movement joint profiles
      d. Waterproofing techniques
      e. Crack Isolation techniques

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f. Environmental requirements
g. Finish protection

1.08 DELIVERY, STORAGE AND HANDLING

A. Deliver materials in manufacturer's unopened containers, fully identified with brand, name, type and grade. Comply with requirements in ANSI A137.1 for labeling sealed tile packages.

B. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location. Protect materials from contamination, dampness, freezing or overheating in accordance with manufacturer's instructions.

C. Broken, chipped, warped, stained or damaged tile will be rejected.

D. Store liquid latexes in unopened containers and protect from freezing.

1.09 ENVIRONMENTAL REQUIREMENTS

A. Comply with requirements of referenced standards and recommendations of material manufacturers for environmental conditions before, during, and after installation.

B. Do not begin installation until construction in spaces is complete and ambient temperature and humidity conditions are consistent with standards and manufacturers written instructions.

C. Ventilate spaces receiving tile in accordance with manufacturer's instructions.

1.10 WARRANTIES

A. Contractor shall provide written materials and installation warranty, executed by the contractor, Installer and Manufacturer, agreeing to repair or replace tile that fails in material or workmanship within the specified warranty period to Architect/Engineer prior to filling pool with water.
1. Warranty Period: Two (2) years after Substantial Completion, or manufacturer's system warranty, if longer.
2. 1. Warranty Period: Fifteen (15) years after Substantial Completion, or manufacturer's system warranty, if longer

2. MATERIALS

2.01 GENERAL

A. ANSI Standard for Ceramic Tile: Provide tile that complies with ANSI 137.1 for types, compositions, and grades of tile indicated.

B. ANISI Standard for Tile Installation Materials: Provide materials that comply with ANSI standards referenced in "American Standard Specifications for the Installation of Ceramic Tile" with products and materials indicated for setting and grouting.

C. Furnish ceramic tile required as follows. Colors shall be as selected by Owner and Architect.

D. Furnish all tiles required for special markings and lettering in conformance with the drawings and applicable Codes, including depth markings and no diving markers.

E. Racing lane tile edges shall be installed flush with finish pool floor.

F. Target tile shall be installed flush with finish pool wall.

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G. Use surface bullnose on pool edge where required for proper trim and as directed on the drawings.

2.02 POOL CERAMIC TILE

A. Indoor Pool Ceramic Tile
   1. Agrob Bucthtal, Dal-Tile - Keystone or equal as scheduled.
      a. Provide impervious tile with water absorption rate of less than .5% per ASTM C373. Sizes, types, and slip resistance as scheduled, see end of this section [PL101].
      b. Color as selected by Owner/Architect (see Architect's tile selection schedule).
      c. Increase the slip resistance of all endwall target tile with the addition of 7.5% by weight abrasive grains.
      d. Provide special shapes, bullnose and other tile as required.

2.03 MORTAR, GROUT AND ADHESIVE MANUFACTURERS

A. Acceptable Manufacturers: Subject to compliance with requirements herein, provide products from one of the following manufacturers or an approved equal:
   1. Custom Building Products, Huntington Beach, CA.
   2. Laticrete International, Inc., Bethany, CT.
   3. MAPEI Corporation, Deerfield Beach, FL.

2.04 MORTAR MATERIALS: THICK SET

A. Latex – Portland Cement Mortar: Thick Set (ANSI A118.4)

B. Description: Two component system; latex additive water emulsion added to Portland cement mortar in place of water or replacing part of the water. The dry-set mortar must be pre-blended and must be specified by the latex manufacturer for use with the particular latex additive. Use amount of liquid latex recommended by latex additive manufacturer.

C. Acceptable Products:
   1. Thick Bed Mortar mixed with Patching & Leveling Latex Additive, by Custom Building Products
   2. Laticrete 226 thick bed mortar mixed with Laticrete 3701 Mortar Admix, by Laticrete International.
   3. MAPEI, 4 to 1 Mud Bed Mix mixed with MAPEI, Planicrete AC, by MAPEI Corporation.

2.05 MORTAR MATERIALS: THIN SET AND SLURRY BOND COAT

A. Improved Modified Dry-Set Cement Mortar: Thin Set (ANSI A118.15)

B. Description: Two component system; latex additive water emulsion added to Portland cement mortar in place of water or replacing part of the water. The dry-set mortar must be pre-blended and must be specified by the latex manufacturer for use with the particular latex additive. Use amount of liquid latex recommended by latex additive manufacturer.

C. Acceptable Products:
   1. Laticrete 254 Platinum thin set mortar by Laticrete International.
   2. Keralastic System consisting of Keralastic polymer additive and Kerabond dry-set mortar by MAPEI Corporation.

2.06 EPOXY GROUT

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A. Multi-component, factory prepared, 100 percent epoxy resin and hardener with sand or mineral filler material. (ANSI A118.3)

B. Acceptable Products:
1. CEG-Lite by Custom Building Products
2. Laticrete SpectraLock Pro Grout by Laticrete International.
3. Kerapoxy CQ by MAPEI Corporation.

2.07 Elastomeric Joint Sealant

A. Provide as required by TCNA guidelines, and as indicated on drawings, conforming to ASTM 920 and ASTM C 794

B. Acceptable products:
1. Commercial 100% Silicone Sealant by Custom Building Products
2. Latasil by Laticrete International
3. Mapesil by MAPEI Corporation

2.07 ANTI-FRACTURE/ WATERPROOFING MEMBRANE

A. Multi-component, factory prepared, anti-fracture/ waterproofing membrane system comprised of a self-curing liquid rubber polymer

B. Acceptable Products:
1. RedGard by Custom Building Products
2. Laticrete Hydroban by Laticrete International.
3. Mapelastic AquaDefense by MAPEI Corporation.

2.08 WALL PATCH & RENDER MORTAR

A. Quick-Setting, Fiber-Reinforced, Cementitious Patch and Render Mortar.

B. Acceptable Products:

C. 1. Custom Float Bedding Mortar by Custom Building Products
2. Laticrete 3701 Fortified Mortar Bed by Laticrete International
3. Planitop 330 Fast by MAPEI Corporation.

2.09 MISCELLANEOUS MATERIALS

A. Temporary protective coating: Provide product that is formulated to protect exposed surfaces of tile against adherence of mortar and grout, is compatible with tile and mortar/grout products, and is easily removable after grouting is completed without damaging grout or tile.
1. Grout release in form of manufacturers standard propriety liquid coating that is specially formulated and recommended for use as a temporary protective coating for tile.

B. Acceptable Products:
1. 1. Aqua Mix Grout Release by Custom Building Products

2. Stonetech Grout Release by Laticrete International.
3. . UltraCare Grout Release by MAPEI Corporation.

C. Epoxy Grout Haze Remover.

1. 1. Aqua Mix Non-cement Grout Haze Remover
2. Stontech Epoxy Grout Haze & Coating Stripper by Laticrete International

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3. UltraCare Epoxy Grout Haze Remover by MAPEI Corporation

2.10 MIXING MORTAR AND GROUT

A. Mix mortars and grouts in accordance with manufacturer's instructions.

2.11 EXTRA MATERIALS

B. Supply extra 5% of each color of flat and trim in clean marked cartons for Owner's use.

3. EXECUTION

3.01 ACCEPTABILITY OF SURFACES

A. Before tiling, check area to be tiled for acceptability as follows:
1. Surface medium-rough texture.
2. All surfaces to be tiled shall be free of dust, rust, paint, from oil or other release coatings.
3. Provision for ladders and other embedments at proper locations.
4. Concrete true to line, level, plumb and curvature.
5. Width, depth and length will permit finished accuracy of markings and dimensions.
6. Verify surfaces for compatibility with tile setting material manufacturer's requirements prior to installation.

3.02 ENVIRONMENTAL CONDITIONS

A. Protect all newly tiled areas.

B. Maintain temperature at 50 degrees F minimum during tile work and for seven days after completion or furnish protection as approved by the Architect/Engineer.

3.03 PREPARATION

A. Clean substrates.

B. Wet down or wash dry, dusty surfaces and remove excess water immediately prior to tile applications.

C. Install waterproofing membrane at pools A & B.

D. Install slurry bond coat.

E. Do not seal substrate unless required by manufacturer.

F. Prime substrate if required by manufacturer.

3.04 INSTALLATION

A. Tile installation, General
1. Install tile materials in accordance with ANSI A137.1, other reference ANSI or TCNA specifications, and TCNA "Handbook For Ceramic, Glass, and Stone Tile Installation", except for more stringent requirements of manufacturer or these specifications.
2. Cut and fit tight to protrusions and vertical interruptions.
3. Work tile joints uniform in width, subject to variance in tolerance in tile size. Make joints watertight, without voids, cracks, excess mortar or grout.

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4. Prepare surface, fit, set, bond, grout and clean in accordance with applicable requirements of ANSI standards and Tile Council of North America.
5. Floors and walls: dry set: TCNA F113, F115, and W202E.
6. Comply with tile setting material manufacturer's installation requirements.

B. Thin set method
1. Apply mortar or adhesive with notched trowel using scraping motion to work material into good contact with surface to be covered. Back bed tiles with mortar. Maintain 95 percent coverage on back of tile and fully bed all corners.
2. Apply only as much mortar or adhesive as can be covered within allowable windows as recommended by mortar or adhesive manufacturer or while surface is still tacky.
3. Set tile in place and rub or beat with small beating block.
4. Beat or rap tile to ensure proper bond and also to level surface of tile.
5. Align tile to show uniform joints and allow to set until firm.
6. Clean excess mortar or adhesive from surface of tile with wet cheesecloth while mortar is fresh.
7. Sound tile after setting. Replace hollow sounding tiles.

C. Thick Set Method
1. Apply slurry bond coat.
2. While the slurry bond coat is wet, spread the mortar and compact well.
3. While slurry bond coat is wet and sticky, set tile in place and beat in well.
4. Beat or rap tile to ensure proper bond and also to level surface of tile.
5. Align tile to show uniform joints and allow to set until firm.
6. Clean excess mortar or adhesive from surface of tile with wet cheesecloth while mortar is fresh.
7. Sound tile after setting. Replace hollow sounding tiles.
8. Maintain ambient temperature above 50 F and below 100F for 72 hours after installation.

D. Grouting
1. Allow tile to set a minimum of 72 hours before grouting.
2. If bonding materials are rapid setting, follow manufacturer's recommendations.
3. Install in accordance with grout manufacturer's recommendations and ANSI A108.10.
4. Pack joints full and free before mortar takes initial set.
5. Clean excess grout from surfaces per manufacturer recommendations, as work progresses.

3.05 LAYOUT

A. Align all joints to give straight uniform grout lines.

B. Observe exact minimum length per dimensions shown on Contract Drawings.

C. Observe exact minimum width per dimensions shown in Contract Drawings.

D. Observe +/- 1/16" maximum finish elevation tolerance on all gutter edges.

E. Provide expansion joints per TCNA EJ171.

3.06 WORKMANSHIP

A. Supply first-class workmanship in all tile work.

B. Use all products in strict accordance with recommendations and directions of manufacturer.

C. Proportion all mixes in accordance with latest ANSI Standard Specifications.

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D. Smooth all exposed cut edges.

E. Gutter edges shall not vary from level or true plane more than 1/8" of pool static water level.

3.07 CLEANING

A. Clean excess mortar from surface with water as work progresses.

B. Clean tile surface as thoroughly as possible on completion of grouting, preform cleaning while mortar is fresh and before it hardens on surfaces.

C. Before acid cleaning, saturate with clean water all grout joints in areas to be cleaned.

D. Use manufacturers suggested products for cleaning off grout film.

E. Remove temporary protective coating by method recommended by coating manufacturer. Trap and removing coating to prevent it from clogging drains.

3.08 PROTECTION

A. Prohibit traffic from tile finish for 72 hours after installation.

B. Protect work so that it will be without any evidence of damage or use at time of acceptance.

C. Allow tile finish to set for 14 days prior to submerging tile.

3.09 TILE SCHEDULE

A. See Tile schedule, following [PL101], for tile information.

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SECTION 13 11 65

WATER FLUME RIDES

1. GENERAL

1.01 DESCRIPTION:

A. Scope of Work: Slide Contractor shall include the furnishing of all labor, materials, equipment, engineering expertise and other incidentals to the construction of:
   1. One (1) outdoor body flume rides all to include but not be limited to:
      a. Fiberglass flume components.
      b. Flume support system.
      c. Starting platform with shade structure, all stairways and railings and steps as necessary to enter ride.
      d. Concrete footings and foundations.

B. Work Provided Elsewhere by General/Pool Contractor in the Specifications or on the Drawings:
   1. Furnish and install pumps for water supply to the slide and all necessary piping as specified by the successful water flume ride bidder.
   2. Cut-outs in pool wall to accept slides.
   3. Patch in and waterproofing of entry sections into the pool after installation of the slide.
   4. Pool and deck structure around slide foundation and columns.
   5. Refer to Division:
      a. Earthwork - 31.
      b. Concrete - 03.
      c. Pool - 13.
      d. Electrical - 26.
   6. Refer to General & Supplementary Conditions - This contractor shall be bound by the General and Supplementary Conditions.

1.02 REGULATIONS

A. The Water Flume Ride starting platform, stairways and railings shall be designed and installed to conform to all requirements of:
   1. The Department of Public Health, and all other state and local health and building codes.
   2. WWA Considerations for Operating Safety, published by World Waterpark Association.
   3. ASTM-F2376-08 “Standard Practice for Classification, Design, Manufacture, Construction, and Operation of Water Slide Systems”.
   4. Suggested Health and Safety Guidelines for recreational water slide flumes, published by U.S. Department of Health and Human Services.
   5. Applicable local, provincial or state building codes.

1.03 SITE CONDITIONS

A. Topography - The drawings indicate the location and building information pertaining to the site for Water Flume.

B. Soils - Refer to Division 02.

1.04 USE OF SITE

A. General
   1. All contractors will restrict their construction to their general area shown on the drawings.

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2. Access and egress shall be coordinated with the general contractor and controlled so as not to conflict with the normal operations of the project.

B. Design
   1. The design, shown on the drawings show the intended use and desired locations of the elements in relation to the adjacent deck uses.
   2. The slide manufacturer, in providing its bid, warrants that it is licensed to do work in the project's state and municipality and holds appropriate professional registrations, permits and/or meets other requirements by authorities having jurisdiction.
   3. The slide manufacturer shall indemnify and hold harmless the architect and the owner from any and all actions caused by or related to the design, fabrication and installation of the work of this specification section.

1.05 PERMITS & FEES

A. The manufacturer and/or the contractor shall provide sufficiently detailed information on all items furnished to secure all necessary permits, including but not limited to:
   1. Building permit.
   2. State Department of Public Health construction and operating permits.

B. All applicable fees and permits for construction will be paid for by the contractor(s) and shall be included in the bid price. The Department of Public Health construction permit for the swimming pools will be paid for by owner.

1.06 JOB CONDITIONS

A. Protection:
   1. Use all means necessary to protect existing work and, in the event of damage, immediately make all repairs and replacements necessary, subject to approval of the architect/engineer and at no additional cost to the owner.

B. Store Products:
   1. Contractor shall assume full responsibility for the protection and safe keeping of products under this contract stored on the site.

C. Lines, Levels and Layout of Work:
   1. The contractor shall establish and guarantee all lines, levels, etc. called for on the drawings.
   2. The contractor shall be responsible for the lines, levels, etc. of all his subcontractors.

1.07 SUBMITTALS

A. Submit in accordance with Division 0.

B. Construction Schedule:
   1. The contractor will cooperate with scheduling determined for the complete job so as not to create any delays or slowdown of other contractors.

C. Shop Drawings:
   1. Promptly after award of the contract, the Slide Contractor shall submit complete shop drawings to include, but not be limited to:
      a. Course layout with dimensions.
      b. Flume detail.
      c. Flume support details, including footings and foundations.
      d. Tower and stair details, including foundations, structural support, bracing, and starting chute as indicated on the plans.

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e. Modifications to plunge area, if any, required for the safety of the contractor's slide path design.
f. Modifications to the slide pumps, if any, required for the contractor's slide path design.

2. All shop drawings shall be certified and sealed by a structural engineer, registered, and licensed in the project state.

1.08 GUARANTEE/WARRANTY

A. Labor and Material Payments Bonds: The contractor may be required to furnish bonds equal to the total contract amount guaranteeing the payment of all labor and materials. See General Project Requirements.

B. Special Project Requirements: Manufacturer agrees to provide evidence of product liability insurance naming the owner, architect and Water Technology, Inc. as additional insured. This insurance will be maintained for a minimum of five (5) years or as required by statue, whichever is greater. In addition, the manufacturer agrees to indemnify, hold harmless, and defend the owner, the architect and Water Technology, Inc. including their agents and employees for any and all claims, damages, losses and expenses of whatsoever nature, including but not limited to claims for property damage, personal injury (including death), attorneys fees, litigation expenses, court costs and all other damages arising out of or incidental to, resulting from or in connection with performance of this manufacturer's work.

C. Qualification of Workmen: At least one (1) person who is thoroughly familiar with the materials, methods and equipment being utilized shall be present at all times during the construction to direct the work where required.

D. Approved Manufacturers - The following manufacturers have submitted sufficient information to be pre-qualified as sources of water flume equipment:
1. PROSLIDE TECHNOLOGY, INC., 2650 Queensview Dr. Suite 150, Ottawa, Ontario, CANADA K2B 8H6, (613) 526-5522.
2. SPLASHTACULAR Operations Facility Kansas: 102 W. Kaskaskia, Suite 201 Paola, KS 66071 (800) 844-5334; Corporate Office – California 78-670 Hwy 111, PMB 225 La Quinita, CA 99253.
3. WHITEWATER, 6700 McMillan Way, Richmond, BC V6W 1J7, (604) 273-1068.

2. PRODUCTS

2.01 FIBERGLASS FLUME COMPONENTS

A. General: The fiberglass flume components are those various elements that compose the water flume and include:
1. Starting Section.
2. Curved Sections.
3. Straight Sections.
4. Drop or Accelerating Sections and Deceleration Sections.
5. Built-up Sections Including Lead-ins and Lead-outs.
6. Exit Section or End Section.
7. All other incidental fiberglass components necessary for a complete system.
8. All sections shall be bolted and caulked. No fiberglass joints allowed.

B. Fiberglass Laminate Materials:
1. Gelcoat: Interior gel coat shall be "crystal clear" high quality isophtalic polyester with U.V. inhibitors. 20 mils thickness. Exterior coat 18 mils wet clear gloss U.V. protective coating.
2. Resins: Thixotopic promoted low profile polyester resin with alternate layers of continuous roving chop and 18 oz. woven roving.

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3. Structure: Fiberglass lamination with sandwich panel center line reinforcement. Standard flume section shall be 3/16" thick, minimum weight 14 oz. per square foot. Flanges shall be minimum 1/4" thick and extend at least 4-3/4" from the slide surface, "L" type.

C. Joints, Connections and Seams:
1. Flume to flume joints shall be fastened with 3/8" stainless steel bolts, washers (2 per bolt), and self-locking nuts.
2. Flume to support system connections shall be made with stainless steel hardware and shall be connected separately form water slide section connections.
3. Fiberglass joint connections shall be made using waterproof non-shrink caulking with suitable adhesion to fiberglass. Silicone sealants will not be permitted.
4. Fiberglassing over seams within the riding surface is not permitted. Sanding within the slide surface should be minimized to maintain adequate gel coat thickness and gloss. Any sanded areas shall be polished to a high gloss until undetectable.

D. Color:
1. Shall be as standard to the manufacturer, and approved by architect/engineer, integral to the fiberglass and the same top and bottom (inside and outside). Verify color selection with architect and owner.

E. Ride Configuration:
1. The body slide length and configuration shall be as indicated in the drawings.
2. Alternate configurations will be considered if rides commence and terminate at the same location/elevation, are of the same length and configuration, and all other features of the specifications are met.

F. Required Components: All slides shall be furnished with the following components:
1. Entry tray shall be pre-plumbed for water injection down-stream of the rider entry point. Rider entry area shall be a non-skid surface, no steps are permitted.
2. Factory pre-drilling of all sections.
3. Waterproof joint sealant as specified in Article 2.01.C.
4. Stainless steel assembly hardware as specified in Article 2.01.C

2.02 FLUME SUPPORT, TOWER, AND STAIR SYSTEM

A. General: The flume support tower and stair system shall consist of all elements necessary to safely and securely support the fiberglass water flume from the starting platform to the plunge pool and consists of:
1. Concrete footings and foundations, including excavation, backfill and compaction.
2. Concrete supports.
3. Factory painted galvanized steel tower and stair system. Follow paint manufacturer's specifications for surface preparation of galvanized steel.
4. All connecting hardware.
5. Shade structure over tower.

B. Design: The supports and footings shall be certified by a licensed structural engineer in the project state for the soil conditions as indicated, and the stresses generated by the water flume ride during use.

C. Concrete
1. Cast-in-place: Minimum compressive strength shall be 3,000 psi at 28 days. Maximum size aggregate shall be 3/4 inch. Slump shall not be more than 3 inches. Concrete shall be vibrated but not to excess so as to cause segregation of materials. Check all applicable drawings for locations of blockouts, anchors, inserts, etc. before concrete is placed.
2. Reinforcing Steel:
a. Fy = 60,000 psi min., for: ASTM A615 (deformed bar) or equivalent. ASTM A82 (welded wire fabric) or equivalent.

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3. Unless otherwise noted, concrete cover of reinforcing shall be as follows: Footing 3 inches and walls, pedestals, and columns 1 ½ inch minimums.
4. All concrete procedures to conform to latest ACI Building Code.
5. Steel reinforcing lap splices for concrete slab shall be a minimum of 36 bar diameter.

D. Structural Steel
1. Shall consist of radial arms with end yoke type fastening assembly for each support point. (NOTE: A central column support with radial arms may be used to support circular sections of 180 degrees or greater.)
2. Structural steel shall be new material of sizes and shapes listed in current AISC handbooks and as indicated on drawings.
3. Shapes and plates: ASTM A36 or equivalent minimum Fy = 36,000 psi (248.2 MpA).
4. Square structural section: ASTM A500 minimum Fy = 46,000 psi (317 MpA).
5. Round steel pipes: ASTM A53 grade B minimum Fy = 35,000 psi (241.3 MpA).
6. Cast steel: ASTM A27 minimum Fy = 36,000 psi or equivalent.
7. Tension rods, bolts, and anchor bolts: ASTM A36 minimum allowable tensile stress Ft =19,100 psi (131.7 MpA).
8. Structural bolts: ASTM A325, friction type or equivalent minimum allowable shear stress, Fv = 21,000 psi (144.8 MpA). Minimum allowable tensile stress, Ft = 44,000 psi (303.4 MpA).
9. Welding electrodes: E480XX electrode (E70XX). Minimum allowable shear stress, Fv=21,000 psi (144.8 MpA).
10. Grout: Masterflow 713 or approved equal non-shirk, non-metallic grout. Use as recommended by manufacturer.
11. All plates, shapes and tubes in contact are to be welded with ¼-inch minimum fillet welds all around unless otherwise indicated.
12. Unless otherwise noted all steel structure shall be galvanized.
13. Contractor shall supply temporary bracing to take care of all loads on the structure during erection to ensure the safety of the structure, leave as long as is required, remove when safety is assured.
14. All flumes and support arms shall be properly set and installed prior to installation of permanent column bracing. Additional column bracing as required by engineer, in addition to those noted on the drawing, shall be provided upon site inspection.
15. All hollow structural sections shall be closed airtight with end plates sealed with welds.
16. All steel shall be thoroughly cleaned of all loose mill scale, loose rust, oil and dirt.
17. Surface to be welded shall be free from loose scale, rust, paint or other foreign matter. Care shall be taken to minimize stresses due to heat expansion, contraction and distortion by using proper sequence in welding and by other approved methods.
18. Fabrication and erection shall conform to the latest editions of the ASTM Specifications and Code of Practice: Welding shall be done by welders certified with AWS D-1.1.
19. Equivalent structural steel sizes listed in current AISC or CISC Handbook may be used upon approval of the architect/engineer.
20. Definitions:
    a. ASTM - American Society of Testing Materials.
    b. AISC - American Institute of Steel Construction
    c. CISC - Canadian Institute of Steel Construction

E. Column System
1. A single or multiple concrete post system shall be used.

F. Starting Tower/Stairway/Railing
1. General -The starting tower/stairway shall consist of:
    a. A factory painted galvanized tower and stair support system with Duradek I-1800 or fiberglass grating. Risers shall be closed.
    b. All stair treads shall have a step edge of a contrasting color.
    c. Powder Coated Type 304 Stainless Steel. Color Selection by Owner/Architect.
    d. Bracing and structural support (non-corrosive).
    e. Hand rails on both sides of entire stair tower.

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2. Design
   a. The structured design shall be certified by an engineer licensed in the project state. Structure shall be sized to handle the user volumes, the height required by the flume length, and the location on the existing topography.
   b. Stair design shall follow current State building codes.
   c. Coordinate with slide manufacturer.
3. Concrete Footings & Piers
   a. Shall be designed and constructed to support the design loads.
   b. All concrete shall have a minimum twenty-eight (28) day compressive strength of 4,000 psi.
   c. All footings shall be on undisturbed soil.
   d. Vertical members shall be on concrete footings, above grade and be secured with flange plates and anchor bolts.
4. Hardware
   a. Steel Hardware, ASTM A-7 or A-36 (hot dipped galvanized).
   b. Bolts, Federal Specification FF-B-SC1.
5. Starting Tower
   a. Shall be factory painted hot dipped galvanized steel structure and shall be supported by their own hot dipped galvanized steel columns. Coordinate design with building structural engineer and slide manufacturer.
   b. Shall have Duradek T-1800 or Fibredek fiberglass grate, decking, treads, and closed risers.
6. Stairs and Railings
   a. Stairs shall have factory painted hot dipped galvanized steel stringers with fiberglass grating treads and closed panels. Stairs shall have four foot minimum width.
   b. Rail system shall be a minimum of 42" high at any point, non-climbable and designed to prevent accidental exit. Handrails shall be located at 34” above stair riser. Color selection by architect and owner.
   c. The stair entry shall be provided with a 42” high lockable gate of similar construction as the rail system.
7. Finish
   a. All galvanized metal:
      1) Wash all galvanized to be painted with a simple green soap, rinse thoroughly.
      2) Clean galvanized surfaces with Xylene, which will leave a whitish film - do not remove film.
      3) Prime galvanized with Devoe Tru-Glaze Epoxy Primer # 12735/12702, following manufacturer’s instructions.
      4) Finish coat to be Devoe Deythane 369 Aliphatic Urethane Gloss Enamel #369-K-XXXX, following manufacturer’s instructions - color by owner.
      5) Second coat may be necessary, depending on appearance of first finish coat; second coat to be Devoe Deythane 369 Aliphatic Urethane Gloss Enamel #369-K-XXXX.
   b. All ferrous metal parts:
      1) Surface Preparation: Blast all surfaces to be coated to the extent of an SSPC-SP6 commercial-grade level of cleanliness. Create a 1.5 - 2.0 mil profile and prime before any rust bloom forms on the surface.
      2) Primer: Spray apply, in the shop, one full coat of Tnemec Series 90-97 Aromatic Urethane Zinc-Rich or Amercoat 68 HS primer to a DFT of 4.0 mils. Allow to cure as per data sheet (4 hours @ 75°F) before applying topcoat.
      3) Topcoat: Spray apply in the shop one even finish coat of Tnemec Series 74 Color Endura-Shield. Acrylic Polyurethane or Ameron PSX-700 finish to a minimum DFT of 5.0 mils. Allow to cure as per data sheet (6 hours @ 75°F) before handling/loading in the shop.
      4) Field Touchup: If the broken area of the shop applied film is rough from scaring, disc-abrade that area smooth and then solvent clean it as per an SSPC-SP1, level of cleanliness. Brush or roller apply one coat of Tnemec Series 135 Chembuild or Ameron epoxy primer. Allow to cure as per data sheet. Brush or roller apply one

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coat of Tnemec Series 74 or Ameron PSX-700 shop applied color to bring the film up to specification thickness.

c. Fiberglass handrail posts:
   1) Finish: Tnemec Series 74 or Ameron PSX-700 shop applied at 5.0 mils DFT.
   2) Field Touch-up: Tnemec Series 74 or Ameron PSX-700 shop applied at 5.0 mils DFT.
   3) Manufacturer: Tnemec 816/483-3400 or Amercoat 800/244-0025 or pre-approved equal.
d. Top deck and landing shall have a non-slip finish.
e. Treads non-slip shall have a non-slip finish.
f. All exposed concrete vertical surface shall have a sack rubbed finish.
g. Seal all concrete with a minimum of two (2) coats of slip resistant Concrete Sealer.
h. Colors shall be as selected by the architect and owner.

3. EXECUTION

3.01 GENERAL

A. The installation of this work shall comply with the following governing and regulatory authorities.
   1. Department of Labor (OSHA).
   2. State Department of Public Health.
   3. All State and Local Building Codes.
   4. Any other agency that has legal jurisdiction.

3.02 FLUME CONSTRUCTION

A. All construction shall conform to the recommendations of the approved manufacturer selected through this bidding process.

B. The manufacturer shall be responsible for the quality of the flume material and equipment.

C. The slide manufacturer shall be responsible for the layout, assembly and erection of the flume products in a workmanlike manner.

D. Flume joints shall be properly connected so as to avoid abrupt edges that may cause irritation.

E. Flume flanges shall be bolted together with 3/8 inch diameter bolts. All connectors shall be stainless steel.

F. Polyurethane sealant or any other approved sealant shall be provided on each flange connection.

G. All flumes shall be properly cleaned and surfaces smooth finished, and complete with all the necessary sections prior to use of the slide.

H. All flumes underground shall be carefully backfilled to prevent the flumes from getting damaged. All fill in contact with flume shall be of good quality and free of boulders.

I. Flumes shall be inspected by the representative of the slide manufacturer to ensure a smooth finish prior to acceptance of work.

3.03 OWNER INSTRUCTION

A. In addition to Section 13150 requirements for operation/maintenance instructions, the slide manufacturer shall deliver four complete sets of operating and maintenance instructions bound together in a complete manual for the slide(s) to the Architect/Engineer. Including, but not limited to the following:

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1. Narrative on the slide operation including recommended loading procedures and operation through all sequences.
2. Recommended user requirements including recommended signage and height and weight restrictions.
3. Written slide warranty and contact information.
4. Maintenance information and recommended maintenance program.

END OF SECTION

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SECTION 26 05 00

GENERAL PROVISIONS

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

A. The provisions of this section apply to all work specified in all sections of Division 26.

B. The General Conditions, Supplementary Conditions, Special Requirements, and applicable portions of Division 1 of the Specification are a part of this Division and the requirements contained herein are supplementary to them.

1.02 PRINCIPAL WORK IN THIS SECTION

A. Division 26 includes all in materials, equipment, fabrication, installation and tests required for fully operational and safe systems, including, but not limited to, all appurtenances and features, whether specified or shown on drawings, required for conformance with applicable Codes and approval by the Authorities Having Jurisdiction.

B. Special Conditions

1. All existing electrical, telephone, CATV and street/parking lot lighting systems shall remain fully operational until new systems are completely installed, tested and ready for final connection. Demolition work shall not start until new systems are completely installed, tested and approved and fully operational. See specification for "Sequence of Work".

2. All existing materials and equipment which are required to be removed or disconnected (but are not indicated for use in the new work) shall be offered to the Architect/Owner's Representative for salvage. If declined by the Architect/Owner's Representative, the Contractor shall dispose of the existing materials and equipment off campus at a bonafide disposal area. Items indicated to be salvaged shall remain the property of the Owner and, if not indicated to be reused in the new work, shall be transported and delivered to an on-campus storage area as directed by the Architect/Owner's Representative.

1.03 RELATED WORK AND REQUIREMENTS

A. Related Work Specified Elsewhere:

B. Coordination: Refer to Architectural, Civil, Structural and Mechanical Drawings for the construction details and coordinate the work of this Division with that of other Divisions. Order the work of this Division so that progress will harmonize with that of other Divisions and all work will proceed expeditiously. The work of this Division shall include direct responsibility for the correct placing and connection of electrical work in relation to the work of other Divisions.

C. Examine other Divisions for work related to the work of this Division especially Division 15 / 25 - MECHANICAL.

1.04 REFERENCE STANDARDS

A. By submitting a Bid, Contractor is deemed to represent himself as competent to

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accomplish the work of this Division in conformance with applicable Codes. In case of conflict between the Contract Documents and Code requirements, the Codes shall take precedence. Should such conflicts appear, cease work on the parts of the contract affected and immediately notify the Architect in writing. It shall be the Contractor's responsibility to correct, at no cost to the Owner, any work he executes in violation of Code requirements. Specific references to Codes elsewhere in this Division are either to aid the Contractor in locating applicable information or to deny him permission to use options which are permitted by Codes.

B. Applicable Codes: (Current adopted editions unless otherwise noted):

1. National Electrical Code.

2. California Building Code

3. California Fire Code

4. CCR Titles (as applicable)

5. Fire Marshal Regulations

6. Regulations of all other authorities having jurisdiction.

C. Where conflict or variation exists among Codes, the most stringent shall govern.

1.05 QUALITY ASSURANCE

A. All equipment and accessories shall be the product of a manufacturer regularly engaged in its manufacture.

B. All equipment and accessories shall be new, free from defects and listed by Underwriters' Laboratories, Inc. or bearing its label unless otherwise noted.

C. All equipment and accessories shall be in compliance with the applicable standards and with all applicable National, State and local Codes.

D. All items of a given type shall be the products of the same manufacturer. Contractor shall provide same manufacturer's product throughout the project.

1.06 SUBMITTALS

A. Submittal requirements for Division 26 shall be in accordance with Division 1 except as modified herein. All time requirements shall be based on the notice to proceed date of the General Contract. All materials and equipment furnished under Division 26 shall be submitted to the Architect/ Owner's Representative for approval. Such approval shall be in writing from the Architect/ Owner's Representative including that which is exactly as specified. Any materials or equipment installed without written approval shall be subject to immediate removal.

B. Submittals shall be packaged separately for each system or major piece of equipment and reviewed by the Contractor for verification of compliance with the contract documents prior to submitting. Separate, bound submittals shall be provided for each specification section to the. All interface between specification sections shall be indicated in each submittal. Any deviations from the specific materials or substitutions for items specified shall be itemized in the front of each submittal.

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C. Equipment submittal shall include manufacturer's name, model, type, number, finish, size and capacity of the equipment at the given conditions. This information shall be provided in bound submittals, each containing an index and all submittals. [The number of copies shall be as indicated in Division 1. The title shall provide the project name, system identity, the specification number and the Contractor's name and address. This submittal shall be in addition to the shop drawings hereinafter specified. Partial submittals of material submitted from time to time are not acceptable and may be returned without review.

D. Equipment Layout Drawings: "Equipment Layout Drawings" shall be provided for each equipment room, yard or area containing equipment items furnished under Division 26. Layout drawings shall consist of a plan view of the room or area (to a 1/4"=1'-0" minimum scale) showing projected outlines of all equipment, complete with dotted lines indicating all required clearances, including all clearances needed for removal or service. Location of all conduit and pull boxes shall be indicated. Drawings shall indicate any and all conflicts with other trades.

E. General

1. Architect's review of the submittal is only for general conformance with design concept of the project and general compliance with the information given in the contract documents. The submittal procedure is required in an effort to minimize the problems which occur due to the discovery of Contractor non-compliance at the construction site. The Contractor is responsible for confirmation and correlation of the dimensions, quantities and sizes, for information that pertains to fabrication methods or construction techniques and for coordination of work of all Divisions of the work. Deviations, if any, from Contract Documents shall be clearly and completely indicated (by a separate letter if deviations are extensive) in the submittals, and the lack of such is deemed complete compliance with Contract Documents without any deviations. Submittals favorably processed will not relieve the Contractor of responsibility for deviations not so reported nor for errors in the submittal.

2. Contractor Stamp: All submittals shall be stamped with the following text or equivalent and signed by the Contractor's representative.

> "IT IS HEREBY CERTIFIED THAT THE PRODUCTS SHOWN AND MARKED IN THIS SUBMITTAL ARE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS AND CAN BE INSTALLED IN THE ALLOCATED SPACES EXCEPT WHERE DEVIATIONS ARE NOTED.
>
> CERTIFIED BY: _____ DATE:_____"

3. All submittals shall be complete and with catalog data and information properly marked to show, among other things, equivalency of product (where substitution is requested) adequacy in capacity and performance to meet minimum capacities of performance as specified or indicated. Arrange the submittals in the same sequence as these specifications and reference (at the upper right-hand corner) the particular specification provision for which each submittal is intended. Incomplete submittals will be rejected.

4. Refer to the other sections of this Division for specific requirements.

B. Material List

Within 15 days after award of Contract, submit for approval a complete list of materials proposed for use. Furnish names and addresses of manufacturers, catalog numbers (where applicable) types and trade names. For purposes of uniformity, only one manufacturer will be accepted for each class or type of material. This list is in addition to Shop Drawings.

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C. Shop Drawings:

Submit shop drawings with such promptness as to cause no delay in the work. Do not commence fabrication of the equipment until the approved drawings are received from the Owner's representative.

D. Other Submittals: As required by other sections of this Division.

1.07 SUBSTITUTIONS:

1. A sample of each item submitted for substitution shall be accompanying the submittal for review.

2. A unit price quotation shall be provided with each item intended for substitution. This quote shall include a unit price for the specified item and a unit price for the intended substitute item. The Contractor shall also provide a total (per item) of the differential payback to the Owner should the intended substitute item be approved as equivalent to that which is specified.

1.08 OPERATION AND MAINTENANCE MANUALS:

A. The Contractor shall furnish operation and maintenance manuals for each electrical system and for each piece of equipment. The complete manual, bound in hardback binders or an approved equivalent, shall be provided to the [Architect/Owner's Representative.] [The number of copies shall be as indicated in Division 1.] One (1) manual shall be furnished prior to the time that system or equipment tests are performed and the remaining manuals shall be furnished before the contract is completed. The following identification shall be inscribed on the cover the words "OPERATING AND MAINTENANCE MANUAL," the name and location of the building, the name of the Contractor and the contract number.

B. The manual shall include the names, addresses and telephone numbers of each Subcontractor installing equipment and systems and of the local manufacturer's representatives for each item of equipment and each system. The manual shall have a table of contents and be assembled to conform to the table of contents with tab sheets placed before instructions covering each subject. The instruction sheets shall be legible with large sheets of drawings folded in. The manual shall include, but not be limited to, the following:

1. System layout showing components.

2. Devices and controls.

3. Wiring and control diagrams showing operation and control of each component.

4. Sequence of operation describing start-up, operation and shutdown.

5. Functional description of the principal system components.

6. Installation instructions.

7. Maintenance and overhaul instructions.

8. Lubrication schedule including type, grade, temperature range and frequency.

9. Safety precautions, diagrams and illustrations.

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10. Test procedures.

11. Performance data.

12. Parts list.

C. The parts list for equipment shall indicate the sources of supply, recommended spare parts and the service organization which is reasonably convenient to the building site. The manual shall be complete in all respects for all equipment, controls and accessories provided.

D. The manual shall include the following:

1. Final panelboard schedules (8-1/2”x11”).

2. Final motor control center schedules (8-1/2”x11”).

3. Coordination studies and short circuit calculations.

4. Final test reports (including infrared scans).

1.09 RECORD DRAWINGS:

A. On one (1) set of contract drawings, kept at the site during construction, mark all work that is installed differently from that shown on plans, including revised circuitry, material or equipment. Sufficient dimensions shall be provided to locate all materials installed beneath and outside the building including, but not limited to, underground conduits, cabling, ground rods and stubouts.

B. All changes or revisions to the contract drawings including, but not limited to, those indicated by amendment, change order, field order, written response to RFI/RFC or other contractual means shall be kept current as the work progresses and shall be incorporated onto the final record drawings.

C. Accurately locate and dimension all underground and embedded conduit runs on the record drawings.

D. The marked drawings shall be kept current as the work progresses and shall be available for inspection upon request.

E. At the close of construction, prepare a set of accurate reproducible record drawings and turn them over to the Architect. The correct and completed record drawings are a prerequisite to final contract payment.

1. As part of the reproducible record drawings, the Contractor shall include:

a. Final motor control schedules as modified during construction.

b. Final panelboard schedules as modified during construction.

F. Drawings and specifications are intended to complement each other. Where a conflict exists between the requirements of the drawings and/or the specifications, request clarification.

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G. The Architect shall interpret the drawings and the specifications, and his decision as to the true intent and meaning thereof and the quality, quantity, and sufficiency of the materials and workmanship furnished thereunder shall be accepted as final and conclusive.

H. In case of conflicts not clarified prior to Bidding deadline, use the most costly alternative (better quality, greater quantity, or larger size) in preparing the Bid. A clarification will be issued to the successful Bidder as soon as feasible after the Award and if appropriate a deductive change order will be issued.

All provisions shall be deemed mandatory except as expressly indicated as optional by the word "may" or "option".

Accumulate the following and deliver to the Architect's representative prior to final acceptance of the work.

I. Record (as-built) Drawings:

1. Maintain in good order in the field office a complete set of electrical prints. Update the drawings daily with neat and legible annotations in red ink showing the work as actually installed.

2. The actual size, location and elevation of all buried lines, boxes, monuments, and stubouts shall be accurately located and diminished from building walls or other permanent landmarks.

3. Furnish the originals.

J. O&M Manuals: Furnish copies of an operating and maintenance manual as indicated in Division 1. Each manual shall be bound and indexed and shall include the following:

1. Operating and service instructions for systems and equipment as required by other sections of this Division. A spare parts list recommended for purchase by Owner shall be included.

2. Updated approved materials list, shop drawings, and catalog information as required by SUBMITTALS subsections.

3. List of material and equipment manufacturers (with names, addresses and phone numbers of local suppliers) in order to expedite ordering of replacement parts by the Owner. This list may be integrated with the material list.

K. Permits and Certificates of Inspection: Furnish the originals.

L. Testing procedures and test results required in this and other sections: Furnish two copies.

M. Other data required by other sections of this Division: Furnish two copies.

1.10 MATERIALS

A. Materials shall be new, in accordance with the specifications of the Institute of Electrical and Electronic Engineers (IEEE), National Electrical Manufacturer's Association (NEMA), National Fire Production Association (NFPA), and the National Electrical Code (NEC), and shall have an Underwriter's Laboratories (UL) listing and bear their label where such services is available.

B. Materials for the same purpose shall be of the same make and shall be the manufacturer's latest

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standard design that complies with the specification requirements.

1.11 SUBSTITUTIONS

A. Substitutions will be allowed only in strict conformance with the General Conditions of the Contract and Division 1.

B. Whenever in specifications any materials, process, or article is indicated or specified by grade, patent, or proprietary name or by name of manufacturer such specification shall be deemed to be used for the purpose of facilitating description of material, process, or article desired and shall be substantially equal or better in every respect to that so indicated or specified. If material, process, or article offered by Contractor is not, in opinion of architect, substantially equal or better in every respect to that specified, then Contractor shall furnish material, process, or article specified. Burden of proof as to equality of any material, process, or article shall rest with Contractor. Contractor shall submit request together with substantiating data for substitution of an "or equal" item within thirty-five (35) days after award of contract. Provision authorizing submission of "or-equal" justification data shall not in any way authorize an extension of time for performance of this contract.

C. When no specific make of material, apparatus or equipment is mentioned, a first-class specification grade product made by a well established manufacturer shall be used that conforms to the requirements of the contract documents and is acceptable to the Architect.

D. The Contractor shall assume any extra costs to other work or trades resulting from the use of substitutions. All substitutions accepted shall be provided at no extra charge.

1.12 WORKMANSHIP AND INSTALLATION METHODS

A. Workmanship shall be in conformance with the "NECA (National Electrical Contractors Association) Standards of Installation" and the best standard practice of the trade except where indicated otherwise.

B. Execute the work so as to contribute to ease of operation and maintenance, maximum accessibility and best appearance. Execute it so that the installation will conform and adjust itself to the building structure, its equipment and its usage. The work shall be symmetrical, plumb, uniform, properly aligned and firmly secured in place.

C. Install equipment in accordance with the manufacturer's instructions and recommendations unless otherwise noted or specified.

1.13 LOCATIONS, SIZES, ROUTINGS AND CLEARANCES

A. For the purpose of clearness and legibility, the drawings are essentially diagrammatic. The size and location of equipment is shown to scale wherever possible, but the Contractor shall make use of all the data in the Contract Documents, and shall verify such information. Contractor is responsible for the equipment provided by him fitting in the spaces available while maintaining required working, ventilation, and equipment maintenance access space. Exercise particular care that such space is not infringed by the work of other Divisions.

B. Conduit Routing: The drawings show the points of termination of the conduits, and may suggest a route for the conduit. However, it shall be the responsibility of the Contractor to install the conduits with a minimum number of bends in such a manner as to conform to the structure, avoid obstructions, preserve headroom, keep openings and passageways clear, and meet all Code requirements with such offsets and special fittings as may be required. Conduit shall be run concealed in building structure unless otherwise indicated.

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1.14 TESTS

A. General

1. Demonstrate that all components of the work of this Division have been provided and that they operate in accordance with the Contract Documents.

2. Provide instruments and personnel for tests and demonstrations. Submit signed test results.

3. Notify the Architect in writing, seven days in advance of tests to allow presence of his representative.

B. Specific: Refer to the other sections of this Division for test requirements.

Cleaning shall be done as the work proceeds. Remove waste and debris weekly to keep the site as clean as is practical.
Vacuum clean dirt and debris from interiors of switch-boards, panelboards, transformers, and similar items. Leave exposed parts of the electrical work in a neat, clean and usable condition, with painted surfaces unblemished and plated metal surfaces polished. Clean lighting fixtures and wipe lamps clean.

1.15 CLEANUP AND HOUSEKEEPING

A. Cleaning shall be done as the work proceeds. Remove waste and debris weekly to keep the site as clean as is practical.

Vacuum clean dirt and debris from interiors of switch-boards, panelboards, transformers, and similar items. Leave exposed parts of the electrical work in a neat, clean and usable condition, with painted surfaces unblemished and plated metal surfaces polished. Clean lighting fixtures and wipe lamps clean.

1.16 DESCRIPTION OF BID DOCUMENTS

A. Contract Documents, the Contractor shall notify and secure directions from the Architect.

B. Drawings and specifications are intended to complement each other. Where a conflict or ambiguity exists between the requirements of the drawings and the specifications, request clarification. Do not proceed with work without direction.

C. The [Architect] [Owner's Representative] shall interpret the drawings and the specifications. The interpretation by the [Architect] [Owner's Representative] as to the true intent and meaning thereof and the quality, quantity and sufficiency of the materials and workmanship furnished thereunder shall be accepted as final and conclusive.

D. In the case of conflicts or ambiguities not clarified prior to the bidding deadline, use the most costly alternative (better quality, greater quantity and larger size) in preparing the bid. A clarification will be issued to the successful bidder as soon as feasible after the award and, if appropriate, a deductive change order will be issued.

E. Where items are specified in the singular, this division shall provide the quantity as shown on drawings plus any spares or extras indicated on the drawings or in the specifications.

1.17 DEFINITIONS:

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A. "Provide" means furnish, install and connect unless otherwise described in specific instances.

B. "Extend", "Submit", "Repair" and similar words mean that the Contractor shall accomplish the action described.

C. "Codes" or "Code" means all codes, laws, statutes, rules, regulations, ordinances, orders, decrees, and other requirements of all legally constituted authorities and public utility franchise holders having jurisdiction.

D. "Verify Location" when noted for an item, means that the locations of the item within the room is tentative and not necessarily as shown on the drawings. Contractor shall request the exact location of the item from the Architect's Representative during construction. The item may be located anywhere in the room at no additional cost to the Owner.

E. "Products", "materials" and "equipment" are used interchangeably and mean materials, fixtures, equipment, accessories, etc.

F. "Utility areas" are defined as mechanical, electrical, telephone, janitorial, and similar rooms or spaces which are normally used or occupied only by custodial or maintenance personnel. "Public areas" are defined as the rooms or spaces which are not included in the utility areas definition.

1.18 EXAMINATION OF SITE:

1.19 PERMITS, FEES AND INSPECTIONS:

A. Obtain, schedule and pay for permits, licenses, approvals, tests, and inspections required by legally constituted authorities and public utility franchise holders having jurisdiction over the work.

1.20 ELECTRO-MECHANICAL REQUIREMENTS:

1.21 GUARANTEES:

A. Guaranty requirements for Division 26 shall be in accordance with Division 1 except as modified herein.

B. All materials and equipment provided shall be warranted for a minimum period of one (1) year from the official date of completion.

C. Refer to Division 1 for guaranty format.

TEMPORARY ELECTRICAL SERVICE:

D. The Contractor shall provide labor and materials required for the installation and maintenance of temporary lighting and required power sources for the Contractor's equipment inside the building or construction site and for pedestrian walkways during the period of construction.

E. The building or construction site shall be sufficiently illuminated so that construction work can be safely performed. Special attention shall be given to adequately lighting stairs, ladders, pedestrian walkways, floor openings, etc. Walkway lights shall be controlled by a switch within the building or construction site.

F. Power shall be on and all lighting shall be in operation before painting work commences.

1.22 PROGRESS OF UNDERGROUND CONSTRUCTION:

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1.23 ELECTRICAL PHASING AND PHASE ROTATION:

1.24 ELECTRICAL SERVICE OUTAGES:

Written notice of proposed utility outages shall be delivered to the [Architect/ Owner's Representative] at least fourteen (14) days prior to the start of the proposed outage. Contractor shall be responsible for all the related work that may be required to provide continued electrical service. The Contractor shall be responsible for the sequencing of all work including, but not limited to, installation of new electrical lines, abandonment of existing electrical lines and interfacing between new and existing lines to ensure uninterrupted service.

B. Describe outages.

1.25 SEQUENCING OF ELECTRICAL WORK:

1.26 POSTED OPERATING INSTRUCTIONS:

1.27 TRAINING:

A. User staff and maintenance personnel shall be thoroughly trained in the use of each system or major piece of equipment installed. This training shall be provided as part of the Contractors bid to supply the system or equipment. Additional training requirements shall be as specified in the subsequent sections of Division 26.

1.28 DELIVERY AND STORAGE:

A. Equipment and materials shall be properly stored, adequately protected and carefully handled to prevent damage before and during installation. Equipment and materials shall be handled, stored and protected in accordance with the manufacturer's recommendations. Electrical conduit shall be stored to provide protection from the weather and accidental damage. Plastic conduit shall be stored on even supports and in locations not subject to direct sunrays or excessive heat. Cables shall be sealed, stored and handled carefully to avoid damage to the outer covering or insulation and damage from moisture and weather. Damaged or defective items shall be replaced with new items at no cost to the Owner. The [Architect/ Owner's Representative] shall determine if a damaged or defective item is to be replaced with a new item. The decisions by the [Architect/ Owner's Representative] in these matters shall be final.

END OF SECTION

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SECTION 26 05 19

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Building and Exterior wires and cables rated 600 V and less.
2. Connectors, splices, and terminations rated 600 V and less.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

1.3 INFORMATIONAL SUBMITTALS

A. Field quality-control test reports.

1.4 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 CONDUCTORS AND CABLES

A. Copper Conductors: Comply with NEMA WC 70.

B. Conductor Insulation: Comply with NEMA WC 70 for specified types herein.

C. Multiconductor Cable: Not allowed.

2.2 CONNECTORS AND SPLICES

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

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B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. AFC Cable Systems, Inc.
2. Hubbell Power Systems, Inc.
3. O-Z/Gedney; EGS Electrical Group LLC.
4. 3M; Electrical Products Division.
5. Tyco Electronics Corp.
6. Or equal.

C. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

D. All cables shall arrive on the job site in un-broken packages.

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

A. Copper conductors: Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

A. Insulation: Thermoplastic type THWN or THHN. Use conductors with 150 degrees C insulation in abnormally high ambient temperatures as applicable. Type THHN may be used in dry locations.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

A. All conductors are to be installed in conduit/raceways.

B. Conceal cables in finished walls, ceilings, and floors, unless otherwise indicated.

C. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.

E. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.

F. Identify and color-code conductors and cables according to Division 26 Section "Identification for Electrical Systems."

G. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

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H. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.

1. Use oxide inhibitor in each splice and tap conductor for aluminum conductors.

3.4 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS & FIRESTOPPING

A. Provide sleeves for conduits passing through poured concrete walls and concrete or concrete fireproofed steel beams. Provide 18 gauge galvanized steel and place in correct position in forms before concrete is poured. Sleeve shall be at least ½" above finished floor all around. Pack void between sleeve and conduit as follows:
1. Where conduit is run between floors in a fireproof shaft, pack with Duxseal
2. Where conduit penetrates a fire separation, any of the following packing methods may be used to restore integrity of the separation if code approved: cement, mineral fiber sprayed with flame retardant coating or Dow Corning 3—6548 RTV silicon foam, 3M caulk #CP25, 3M putty #303 or equal. Seal shall be water tight and shall be accomplished prior to wire pulling.

3.5 FIELD QUALITY CONTROL

A. Perform tests and inspections and prepare test reports.

B. Tests and Inspections:
1. After installing conductors and cables and before electrical circuitry has been energized, test for compliance with requirements.
2. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.

C. Test Reports: Prepare a written report to record the following:

1. Test procedures used.
2. Test results that comply with requirements.
3. Test results that do not comply with requirements and corrective action taken to achieve compliance with requirements.

D. Remove and replace malfunctioning units and retest as specified above.

END OF SECTION

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SECTION 26 05 33

RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.

B. See Division 26 Section "Underground Ducts and Raceways for Electrical Systems" for exterior ductbanks and manholes, and underground handholes, boxes, and utility construction.

1.2 SUBMITTALS

A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.

B. Shop Drawings: For custom enclosures and cabinets. Include plans, elevations, sections, details, and attachments to other work.

1.3 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 METAL CONDUIT AND TUBING

A. Rigid Steel Conduit: ANSI C80.1.

B. IMC: ANSI C80.6.

C. EMT: ANSI C80.3.

D. FMC: Zinc-coated steel.

E. LFMC: Flexible steel conduit with PVC jacket.

F. Fittings for Conduit (Including all Types and Flexible and Liquid tight), EMT, and Cable: NEMA FB 1; listed for type and size raceway with which used, and for application and environment in which installed.

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1. Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 886.
2. Fittings for EMT: **compression** type.

2.2 NONMETALLIC CONDUIT AND TUBING

A. ENT: NEMA TC 13.

B. RNC: NEMA TC 2, **Type EPC-40-PVC,** unless otherwise indicated.

C. LFNC: UL 1660.

D. Fittings for ENT and RNC: NEMA TC 3; match to conduit or tubing type and material.

E. Fittings for LFNC: UL 514B.

2.3 METAL WIREWAYS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Cooper B-Line, Inc.
2. Hoffman.
3. Square D; Schneider Electric.
4. Or equal

C. Description: Sheet metal sized and shaped as indicated, NEMA 250, Type **1, 12 or 3R**, as indicated.

D. Fittings and Accessories: Include couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.

E. Wireway Covers: **As indicated**.

F. Finish: Manufacturer's standard enamel finish.

2.4 NONMETALLIC WIREWAYS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Hoffman.
2. Lamson & Sessions; Carlon Electrical Products.
3. Or equal

C. Description: PVC plastic, extruded and fabricated to size and shape indicated, with snap-on cover and mechanically coupled connections with plastic fasteners.

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D. Fittings and Accessories: Include couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.

2.5 SURFACE RACEWAYS

A. Surface Metal Raceways: Galvanized steel. **Manufacturer's standard enamel finish or in color selected by Architect per drawings**.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Thomas & Betts Corporation.
b. Walker Systems, Inc.; Wiremold Company (The).
c. Wiremold Company (The); Electrical Sales Division.
d. Or equal.

B. Surface Nonmetallic Raceways: Two-piece construction, manufactured of rigid PVC with texture and color selected by Architect.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Butler Manufacturing Company; Walker Division.
b. Enduro Systems, Inc.; Composite Products Division.
c. Hubbell Incorporated; Wiring Device-Kellems Division.
d. Lamson & Sessions; Carlon Electrical Products.
e. Panduit Corp.
f. Walker Systems, Inc.; Wiremold Company (The).
g. Wiremold Company (The); Electrical Sales Division.
h. Or equal.

2.6 BOXES, ENCLOSURES, AND CABINETS

A. Sheet Metal Outlet and Device Boxes: NEMA OS 1.

B. Cast-Metal Outlet and Device Boxes: NEMA FB 1, **ferrous alloy**, Type FD, with gasketed cover.

C. Nonmetallic Outlet and Device Boxes: NEMA OS 2.

D. Metal Floor Boxes: **Cast metal**, **fully adjustable**.

E. Nonmetallic Floor Boxes: Nonadjustable, round.

F. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.

G. Cast-Metal Access, Pull, and Junction Boxes: NEMA FB 1, **cast aluminum**, with gasketed cover.

H. Hinged-Cover Enclosures: NEMA 250, Type 1, with continuous-hinge cover with flush latch, unless otherwise indicated.

1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.

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2. Nonmetallic Enclosures: PVC.

I. Cabinets:

1. NEMA 250, Type 1, galvanized-steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel.
2. Hinged door in front cover with flush latch and concealed hinge.
3. Key latch to match panelboards.
4. Metal barriers to separate wiring of different systems and voltage.
5. Accessory feet where required for freestanding equipment.

PART 3 - EXECUTION

3.1 RACEWAY APPLICATION

A. Outdoors: Apply raceway products as specified below, unless otherwise indicated:

1. Exposed Conduit: **Rigid steel conduit, EMT, RNC, Type EPC-40-PVC, RNC, Type EPC-80-PVC**.
2. Concealed Conduit, Aboveground: **Rigid steel conduit**, **EMT**, **RNC**
3. Underground Conduit: Type EPC-**40 or 80**-PVC, direct buried.
4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): **LFMC or LFNC**.
5. Boxes and Enclosures, Aboveground: NEMA 250, Type **3R or 4**X as noted.

B. Comply with the following indoor applications, unless otherwise indicated:

1. Exposed, Not Subject to Physical Damage: **EMT or rigid steel conduit**.
2. Exposed and Subject to Severe Physical Damage: **Rigid steel conduit**. Includes raceways in the following locations:

   a. Loading dock.
   b. Corridors used for traffic of mechanized carts, forklifts, and pallet-handling units.
   c. Mechanical rooms.

3. Concealed in Ceilings and Interior Walls and Partitions: **EMT**.
4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.
5. Damp or Wet Locations: **Rigid steel conduit**.
6. Raceways for Optical Fiber or Communications Cable: **EMT**.
7. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4X in damp or wet locations.

C. Minimum Raceway Size: **1/2-inch** trade size.

D. Raceway Fittings: Compatible with raceways and suitable for use and location.

1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.

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3.2 INSTALLATION

A. Conduit passing through roof: flash and counter flash. Method shall be compatible with roofing system and acceptable to the owner's representative.

B. Comply with NECA 1 for installation requirements applicable to products specified in Part 2 except where requirements on Drawings or in this Article are stricter.

C. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.

D. Complete raceway installation before starting conductor installation.

E. Arrange stub-ups so curved portions of bends are not visible above the finished slab.

F. Install no more than the equivalent of three 90-degree bends in any conduit run except for communications conduits, for which fewer bends are allowed.

G. Conceal conduit and EMT within finished walls, ceilings, and floors, unless otherwise indicated.
   1. Conduit shall not be imbedded in slabs on grade.

H. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating sealing bushings to protect conductors, including conductors smaller than No. 4 AWG.

I. All conduit stubs shall have insulated bushings.

J. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull rope.

K. Raceways for Optical Fiber and Communications Cable: Install as follows:

   1. 3/4-Inch Trade Size: Install raceways in maximum lengths of 50 feet .
   2. 1-Inch Trade Size and Larger: Install raceways in maximum lengths of 75 feet.
   3. Install with a maximum of two 90-degree bends or equivalent for each length of raceway unless Drawings show stricter requirements. Separate lengths with pull or junction boxes or terminations at distribution frames or cabinets where necessary to comply with these requirements.

L. Install raceway sealing fittings at suitable, approved, and accessible locations and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points:

   1. Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
   2. Where otherwise required by NFPA 70.

M. Expansion-Joint Fittings for RNC: Install in each run of aboveground conduit that is located where environmental temperature change may exceed 30 deg F, and that has straight-run length that exceeds 25 feet.

   1. Install expansion-joint fittings for each of the following locations, and provide type and quantity of fittings that accommodate temperature change listed for location:

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a. Outdoor Locations Not Exposed to Direct Sunlight: **125 deg F** temperature change.
b. Outdoor Locations Exposed to Direct Sunlight: **155 deg F** temperature change.
c. Indoor Spaces Connected with the Outdoors without Physical Separation: **125 deg F** temperature change.
d. Attics: **135 deg F** temperature change.

2. Install fitting(s) that provide expansion and contraction for at least 0.00041 inch per foot of length of straight run per deg F of temperature change.
3. Install each expansion-joint fitting with position, mounting, and piston setting selected according to manufacturer's written instructions for conditions at specific location at the time of installation.

N. Flexible Conduit Connections: Use maximum of 72 inches of flexible conduit for **recessed and semirecessed lighting fixtures,** equipment subject to vibration, noise transmission, or movement; and for transformers and motors.

1. Use LFMC in damp or wet locations subject to severe physical damage.
2. Use LFMC or LFNC in damp or wet locations not subject to severe physical damage.

O. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall.

P. Set metal floor boxes level and flush with finished floor surface.

Q. Set nonmetallic floor boxes level. Trim after installation to fit flush with finished floor surface.

3.3 INSTALLATION OF UNDERGROUND CONDUIT

A. Direct-Buried Conduit:

1. Excavate trench bottom to provide firm and uniform support for conduit. Prepare trench bottom as specified in Division 31 Section "Earth Moving" for pipe less than 6 inches in nominal diameter.
2. Install backfill as specified in Division 31 Section "Earth Moving."
3. After installing conduit, backfill and compact. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process. Firmly hand tamp backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction as specified in Division 31 Section "Earth Moving."
4. Install manufactured duct elbows for stub-ups at poles and equipment and at building entrances through the floor, unless otherwise indicated. Encase elbows for stub-up ducts throughout the length of the elbow.
5. Install manufactured rigid steel conduit elbows for stub-ups at poles and equipment and at building entrances through the floor.

a. Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with 3 inches of concrete.
b. For stub-ups at equipment mounted on outdoor concrete bases, extend steel conduit horizontally a minimum of 60 inches from edge of equipment pad or foundation. Install insulated grounding bushings on terminations at equipment.

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6. Warning Planks: Bury warning tape approximately 12 inches above direct-buried conduits, placing them 24 inches o.c. Align tape along the width and along the centerline of conduit.

B. Bury underground conduit (except under building) to a 24” minimum depth below finished grade to top of conduit or concrete envelope (when encased)except that for conduit below a road or driveway to dimension shall me a 30” minimum.

1. All conduit risers from below grade shall be PVC schedule 80 with the exception of risers to lighting pole may be PVC schedule 40.

3.4 FIRESTOPPING

A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly.

END OF SECTION

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SECTION 26 05 53

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Identification for raceways.
2. Identification of power and control cables.
3. Identification for conductors.
4. Underground-line warning tape.
5. Warning labels and signs.
6. Instruction signs.
7. Equipment identification labels.
8. Miscellaneous identification products.

1.2 SUBMITTALS

A. Product Data: For each electrical identification product indicated.

1.3 QUALITY ASSURANCE

A. Comply with ANSI A13.1.

B. Comply with NFPA 70.

C. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.

D. Comply with ANSI Z535.4 for safety signs and labels.

E. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

PART 2 - PRODUCTS

2.1 POWER RACEWAY IDENTIFICATION MATERIALS

A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway size.

B. Colors for Raceways Carrying Circuits at 600 V or Less:

1. White letters on a black field.
2. Legend: Indicate voltage and system or service type.

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C. Self-Adhesive Vinyl Labels for Raceways Carrying Circuits at 600 V or Less: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

D. Snap-Around Labels for Raceways Carrying Circuits at 600 V or Less: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeve, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

E. Snap-Around, Color-Coding Bands for Raceways Carrying Circuits at 600 V or Less: Slit, pretensioned, flexible, solid-colored acrylic sleeve, 2 inches long, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

F. Write-On Tags: Polyester tag, 0.015 inch thick, with corrosion-resistant grommet and cable tie for attachment to conductor or cable.

1. Marker for Tags: Permanent, waterproof, black ink marker recommended by tag manufacturer.
2. Marker for Tags: Machine-printed, permanent, waterproof, black ink marker recommended by printer manufacturer.

2.2 POWER AND CONTROL CABLE IDENTIFICATION MATERIALS

A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway and cable size.

B. Self-Adhesive Vinyl Labels: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

C. Write-On Tags: Polyester tag, 0.015 inch thick, with corrosion-resistant grommet and cable tie for attachment to conductor or cable.

1. Marker for Tags: Permanent, waterproof, black ink marker recommended by tag manufacturer.
2. Marker for Tags: Machine-printed, permanent, waterproof, black ink marker recommended by printer manufacturer.

D. Snap-Around Labels: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeve, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

E. Snap-Around, Color-Coding Bands: Slit, pretensioned, flexible, solid-colored acrylic sleeve, 2 inches (50 mm) long, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

2.3 CONDUCTOR IDENTIFICATION MATERIALS

A. Color-Coding Conductor Tape: Colored, self-adhesive vinyl tape not less than 3 mils thick by 1 to 2 inches wide.

B. Self-Adhesive Vinyl Labels: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

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C. Marker Tapes: Vinyl or vinyl-cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.

D. Write-On Tags: Polyester tag, 0.015 inch thick, with corrosion-resistant grommet and cable tie for attachment to conductor or cable.

1. Marker for Tags: Permanent, waterproof, black ink marker recommended by tag manufacturer.
2. Marker for Tags: Machine-printed, permanent, waterproof, black ink marker recommended by printer manufacturer.

2.4 FLOOR MARKING TAPE

A. 2-inch- wide, 5-mil pressure-sensitive vinyl tape, with black and white stripes and clear vinyl overlay.

2.5 UNDERGROUND-LINE WARNING TAPE

A. Tape:

1. Recommended by manufacturer for the method of installation and suitable to identify and locate underground electrical **and communications** utility lines.
2. Printing on tape shall be permanent and shall not be damaged by burial operations.
3. Tape material and ink shall be chemically inert, and not subject to degrading when exposed to acids, alkalis, and other destructive substances commonly found in soils.

B. Color and Printing:

1. Comply with ANSI Z535.1 through ANSI Z535.5.
2. Inscriptions for Red-Colored Tapes: ELECTRIC LINE, HIGH VOLTAGE.
3. Inscriptions for Orange-Colored Tapes: TELEPHONE CABLE, CATV CABLE, COMMUNICATIONS CABLE, OPTICAL FIBER CABLE.

C. Tag: Type I:

1. Pigmented polyolefin, bright-colored, continuous-printed on one side with the inscription of the utility, compounded for direct-burial service.
2. Thickness: 4 mils.
3. Weight: 18.5 lb/1000 sq. ft..
4. 3-Inch Tensile According to ASTM D 882: 30 lbf , and 2500 psi.

D. Tag: Type ID:

1. Detectable three-layer laminate, consisting of a printed pigmented polyolefin film, a solid aluminum-foil core, and a clear protective film that allows inspection of the continuity of the conductive core, bright-colored, [**continuous-printed on one side** with the inscription of the utility,]compounded for direct-burial service.
2. Overall Thickness: 5 mils.
3. Foil Core Thickness: 0.35 mil.
4. Weight: 28 lb/1000 sq. ft.
5. 3-Inch Tensile According to ASTM D 882: 70 lbf, and 4600 psi.

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2.6 WARNING LABELS AND SIGNS

A. Comply with NFPA 70 and 29 CFR 1910.145.

B. Self-Adhesive Warning Labels: Factory-printed, multicolor, pressure-sensitive adhesive labels, configured for display on front cover, door, or other access to equipment unless otherwise indicated.

C. Baked-Enamel Warning Signs:

1. Preprinted aluminum signs, punched or drilled for fasteners, with colors, legend, and size required for application.
2. 1/4-inch grommets in corners for mounting.
3. Nominal size, 7 by 10 inches.

D. Metal-Backed, Butyrate Warning Signs:

1. Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs with 0.0396-inch galvanized-steel backing; and with colors, legend, and size required for application.
2. 1/4-inch grommets in corners for mounting.
3. Nominal size, 10 by 14 inches.

E. Warning label and sign shall include, but are not limited to, the following legends:

1. Multiple Power Source Warning: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES."
2. Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES."

2.7 INSTRUCTION SIGNS

A. Engraved, laminated acrylic or melamine plastic, minimum 1/16 inch thick for signs up to 20 sq. inches and 1/8 inch thick for larger sizes.

1. Engraved legend with White letters on black face.
2. Punched or drilled for mechanical fasteners.
3. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.

B. Adhesive Film Label: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch.

C. Adhesive Film Label with Clear Protective Overlay: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch. Overlay shall provide a weatherproof and UV-resistant seal for label.

2.8 EQUIPMENT IDENTIFICATION LABELS

A. Adhesive Film Label with Clear Protective Overlay: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch. Overlay shall provide a weatherproof and UV-resistant seal for label.

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B. Self-tapping, stainless-steel machine screws (no rivets or glue), Engraved, Laminated Acrylic or Melamine Label: Adhesive backed, with white letters on a dark-gray background. Minimum letter height shall be 3/8 inch.

2.9 MISCELLANEOUS IDENTIFICATION PRODUCTS

A. Paint: Comply with requirements in Division 09 painting Sections for paint materials and application requirements. Select paint system applicable for surface material and location (exterior or interior).

B. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.

B. Apply identification devices to surfaces that require finish after completing finish work.

C. Self-Adhesive Identification Products: Clean surfaces before application, using materials and methods recommended by manufacturer of identification device.

D. Attach signs and plastic labels that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.

E. System Identification Color-Coding Bands for Raceways and Cables: Each color-coding band shall completely encircle cable or conduit. Place adjacent bands of two-color markings in contact, side by side. Locate bands at changes in direction, at penetrations of walls and floors, at 50-foot maximum intervals in straight runs, and at 25-foot maximum intervals in congested areas.

F. Underground-Line Warning Tape: During backfilling of trenches install continuous underground-line warning tape directly above line at 6 to 8 inches below finished grade. Use multiple tapes where width of multiple lines installed in a common trench [or concrete envelope exceeds 16 inches overall.

G. Painted Identification: Comply with requirements in Division 09 painting Sections for surface preparation and paint application.

3.2 IDENTIFICATION SCHEDULE

A. Accessible Raceways and Metal-Clad Cables, 600 V or Less, for Service, Feeder, and Branch Circuits More Than 2**0**A, and 120 V to ground: Install labels at 10-foot maximum intervals.

B. Accessible Raceways and Cables within Buildings: Identify the covers of each junction and pull box of the following systems with self-adhesive vinyl labels with the wiring system legend and system voltage. System legends shall be as follows:

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1. Emergency Power.
2. Power.
3. UPS.

C. Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use color-coding conductor tape to identify the phase.

1. Color-Coding for Phase and Voltage Level Identification, 600 V or Less: Use colors listed below for ungrounded feeder and branch-circuit conductors.

a. Color shall be factory applied.
b. Colors for 208/120-V Circuits:

1) Phase A: Black.
2) Phase B: Red.
3) Phase C: Blue.

c. Colors for 480/277-V Circuits:

1) Phase A: Brown.
2) Phase B: Orange.
3) Phase C: Yellow.

d. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches from terminal points and in boxes where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding. Locate bands to avoid obscuring factory cable markings.

D. Install instructional sign including the color-code for grounded and ungrounded conductors using adhesive-film-type labels.

E. Conductors to Be Extended in the Future: Attach marker tape to conductors and list source.

F. Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.

1. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, and pull points. Identify by system and circuit designation.
2. Use system of marker tape designations that is uniform and consistent with system used by manufacturer for factory-installed connections.
3. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual.

G. Locations of Underground Lines: Identify with underground-line warning tape for power, lighting, communication, and control wiring and optical fiber cable.

1. Limit use of underground-line warning tape to direct-buried cables.
2. Install underground-line warning tape for both direct-buried cables and cables in raceway.

H. Workspace Indication: Install floor marking tape to show working clearances in the direction of access to live parts. Workspace shall be as required by NFPA 70 and

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29 CFR 1926.403 unless otherwise indicated. Do not install at flush-mounted panelboards and similar equipment in finished spaces.

I. Warning Labels for Indoor Cabinets, Boxes, and Enclosures for Power and Lighting: Baked-enamel warning signs.

1. Comply with 29 CFR 1910.145.
2. Identify system voltage with black letters on an orange background.
3. Apply to exterior of door, cover, or other access.
4. For equipment with multiple power or control sources, apply to door or cover of equipment including, but not limited to, the following:

    a. Power transfer switches.
    b. Controls with external control power connections.

J. Operating Instruction Signs: Install instruction signs to facilitate proper operation and maintenance of electrical systems and items to which they connect. Install instruction signs with approved legend where instructions are needed for system or equipment operation.

K. Emergency Operating Instruction Signs: Install instruction signs with white legend on a red background with minimum 3/8-inch- high letters for emergency instructions at equipment used for power transfer.

L. Equipment Identification Labels: Unless otherwise noted, equipment identified in place shall be affixed in self tapping machine screws. On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and the Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems include power, lighting, control, communication, signal, monitoring, and alarm systems unless equipment is provided with its own identification.

1. Labeling Instructions:

    a. Indoor Equipment: Engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with 1/2-inch- high letters on 1-1/2-inch- high label; where two lines of text are required, use labels 2 inches high.
    b. Outdoor Equipment: Engraved, laminated acrylic or melamine label.
    c. Elevated Components: Increase sizes of labels and letters to those appropriate for viewing from the floor.
    d. Fasten all equipment labels that do not

END OF SECTION

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SECTION 31 00 00

EARTHWORK

PART 1 - GENERAL

1.1 SECTION INCLUDES:

A. Removal, stockpile and placement of topsoil and subsoil.

B. Excavation, including as required for foundations, slabs-on-grade, paving, and landscaping.

C. Fill and backfilling to required elevations.

D. Consolidation and compaction.

E. Site Contouring.

1.2 RELATED SECTIONS:

A. Section 31 20 00: Earthwork

1.3 REFERENCES

A. Geotechnical Report: As provided with Bid Documents

B. ASTM C136 - Method for Sieve Analysis of Fine and Course Aggregates.

C. ASTM D1556 - Test Method for Density of Soil in Place by the Sand - Cone Method.

D. ASTM D1557 - Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3).

E. ASTM D 2922 - Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

F. ASTM D 3017 - Moisture Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

1.4 QUALITY ASSURANCE:

A. Contractor Qualifications

1. Installing Company: Company specializing in grading and excavation work, with minimum 5 years documented experience in projects of similar scale and scope.

2. Installing Foreman: Individual specializing in grading and excavation work, with minimum 5 years documented experience in projects of similar scale and scope.

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1.5 PROJECT RECORD DOCUMENTS

A. Submit documents under provisions of Section 01300.

B. Accurately record location of utilities remaining, rerouted utilities, new utilities by horizontal dimensions, elevations or inverts, and slope gradients.

1.6 PROTECTION

A. Protect trees, shrubs, lawns, rock outcropping, and other features remaining as portion of final landscaping.

B. Protect benchmarks, existing structures, fences, roads, sidewalks, paving and curbs.

C. Protect above or below grade utilities, which are to remain.

1.7 PUBLIC AGENCY STANDARDS

A. Perform all earthwork and related structures and devices indicated as public agency standards in accordance with the Regional Standards Drawings as indicated on the plans and these specifications.

PART 2 - PRODUCTS

2.1 STRUCTURAL FILL MATERIAL

A. On-Site Fill Materials:

1. On-site soils may be approved for use in structural and non-structural areas (i.e., landscaping and below the 3-foot pavement capping material). Residual fill soils should not be used in required fills. Excavated on-site materials shall be removed from the site at the contractors' expense.

2. Limit maximum dimension of rock to 3 inches in any dimension.

3. Limit maximum dimension of rock to 1 inch in any dimension at all fills located in landscaped areas within 12 inches of surface.

4. Provide soil fill with no more than 30 percent passing the #200 sieve, or otherwise approved by Geotechnical Engineer.

5. Provide soil fill with minimum 40 percent by weight material smaller than 3/4 inch, or otherwise approved by Geotechnical Engineer.

6. Soils that have an expansion index greater than 20 should not be used within the upper 5 feet of finish building pad subgrade, within the upper 2 feet of finish hardscape subgrade, or as retaining wall backfill.

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7. During grading operations, soil types other than those evaluated in the geotechnical report may be encountered. The Geotechnical Engineer should be notified to evaluate the suitability of these soils for use.

8. Oversized materials should be broken down to no greater than 3 inches in largest dimension for use in fill, used as landscape material, or disposed off-site.

B. Import Soils

1. Comply with criteria specified in 2.1.A above, and the following additional requirements.

   a. ASTM D 2487 soil classification groups GC, GW, GP, GM, SW, SP and SM or a combination of these symbols; free of debris waste, frozen materials, vegetation, and other deleterious matter.

   b. Expansion Index: very low to low with a maximum value of 20, as measured by ASTM D 4829.

   c. A minimum resistivity value greater than 1,000 ohm-centimeters, chloride content of less than 500 ppm and sulfate content of less than 1,000 ppm and pH greater than 5.5

2. Agricultural Suitability: Obtain approval of Engineer of all fill materials used in landscaped areas prior to placing, including providing soil test/analysis results.

3. Use of clay or adobe soil is not acceptable.

4. Obtain approval of Geotechnical Engineer of all imported fill materials prior to delivery on site and prior to placement.

C. Aggregate Base Course Material: Provide “Crushed Aggregate Base” as per SSPWC Section 200-2.2

D. Controlled Low-Strength Material (CLSM)

1. CLSM shall be used as fill from bottom of building footings to formational in accordance with 3.2.D. Formational materials shall be undisturbed.

   a. CLSM sand-cement shall comply with Section 201-6 of the Greenbook Specifications, with minimum compressive strength of 150-psi.

   b. Aggregates (sand) shall conform to Section 201-6 and 200-1.5 of the Greenbook Specifications.

   c. CLSM shall have a maximum slump of 5-inches.

   d. A set of test cylinders shall be sampled for each 150-cubic yards or fraction thereof of CLSM placed per ASTM D 5971. Compressive strength testing of CLSM shall be performed in accordance with ASTM D 4832. CLSM shall also be tested for plastic unti weight in accordance with ASTM C 138. The plastic unit weight shall not deviate more and +/-10% of theoretical unit weight shown on approved mix design.

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2.2 PERMEABLE FILL MATERIAL

A. Permeable Backfill at Retaining Walls:

1. Characteristics: Natural river or bank sand; free of silt, clay, loam, friable or soluble materials, or organic matter.

2. Graded within the following limits:

SIEVE SIZE	PERCENT PASSING
1 inch	100
3/4 inch	90 to 100
3/8 inch	40 to 100
No. 4	25 to 40
No. 8	18 to 33
No. 30	5 to 15
No. 50	0 to 7
No. 200	0 to 3

3. Provide material with sand equivalent exceeding 75.

B. Base Material at Interior Building Slabs

1. Characteristics: Clean, fine graded, granular base material, not contaminated with clay, silt, or organic material

2. Graded within the following limits:

SIEVE SIZE PERCENT PASSING No. 100 10 to 30

3. The granular material should be compacted and proof-rolled prior to placement of the vapor barrier. The vapor barrier should be protected from puncture and if damaged be repaired per the manufacturer's recommendations.

2.3 DESIGN CRITERIA

A. General

1. All improvements shall be constructed per the referenced standards, the improvement drawings, and as specified in this section.

2. Where criteria shown on drawings or specified in this specification exceed that of the referenced standards, the more stringent criteria shall apply.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Inspection

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1. Prior to work of this section, carefully inspect previously installed work. Verify all such work is complete to the point where this installation may properly commence.

2. Verify that work of this section may be installed in strict accordance with the original design, all pertinent codes and regulations, and all pertinent portions of the referenced standards.

    a. Verify that survey benchmark and intended elevations for the Work are as indicated.

    b. Identify required lines, levels, contours, and datum.

    c. Identify known utilities. Stake and flag locations.

    d. Maintain and protect existing utilities remaining which pass through work area.

    e. Verify fill materials to be used are acceptable to Geotechnical engineer.

    f. Prior to placement of fill material in areas where formation is not exposed at the bottom of the excavation, verify scarification and compaction of excavated surface is complete. Formational materials should not be scarified or compacted.

3. In the event of discrepancy, immediately notify the Engineer.

4. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

B. Preparation

1. Provide all staking and field engineering required to implement the work as shown on the drawings. The layout of all work shall be performed by a California State licensed land surveyor provided by the Contractor.

2. Protect all stakes and benchmarks. Replace all stakes and benchmarks damaged during the course of construction at no cost to Owner.

3. Set grade stakes using instrument technology, at 25 foot grid interval at areas with gradients greater than 2 percent.

4. Set grade stakes, using instrument technology, at 10 foot grid interval at areas with gradients less than 2 percent.

5. Provide all equipment of such type, function and design as required to achieve specified values. Where necessary, provide rubber tired and vibratory sheepsfoot compaction equipment.

C. When the Geotechnical Engineer determines existing soils in excavated areas do not provide sufficient bearing capacity or are otherwise unacceptable, remove such soils as necessary to expose soils with adequate capacity and characteristics, as approved by the Geotechnical Engineer.

D. Clearing and Grubbing

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1. Where surficial grasses, weeds and other vegetation has grown in areas of work previously cleared under Section 311200, remove such vegetation to a minimum depth of two inches below existing grade under this contract.

2. Discing and mixing of vegetation, trash, debris, and other deleterious materials with surface soils prior to grading is not permitted.

3. Remove all buried debris, rubble, trash, or other material not deemed suitable by the Geotechnical Engineer.

3.2 SUBSOIL EXCAVATION

A. Excavate soil in work areas under this contract as specified in this Section.

1. Stockpile excavated material for reuse. Segregate material complying with specified criteria as suitable for re-use as compacted structural fill.

2. Where approved by Geotechnical Engineer, on-site material that does not comply with structural fill criteria may be used for earthwork that does not support structures or paving.

3. After completion of grading, remove unsuitable and excess soils from site in conformance with the regulations of jurisdictional authority.

B. Excavate subsoil required to accommodate building foundation, slabs-on-grade, paving, landscaped areas, site contouring and site structures.

1. Excavate to sub-grade elevation as required to accommodate spreading of previously removed topsoil in upper 12 inches.

2. Grade top perimeter of excavation to prevent surface water from draining into, or eroding excavation.

C. Grade surfaces to provide positive drainage and prevent water ponding, prevent drainage onto adjoining properties and to implement the work.

1. Provide all field engineering and layout to construct work as shown on drawings, including establishing final grades, slope transitions, drainage paths and swales, and related engineering work.

2. Construct all drainage courses, swales, toes and tops of slopes, and related earthwork operations necessary to maintaining drainage and access as shown on drawings or required by jurisdictional authority.

D. Excavate areas as follows:

1. Structures, including all buildings and isolated footings

a. Excavate and remove existing soils at least 12-inches below existing grade for all areas that will support structures, improvements, or fill. Excavate laterally a minimum of 5 feet beyond the foundation footprint which includes perimeter spread

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footings for canopy or covered walkway structures, and at least 2 feet beyond exterior flatwork areas.

b. Soils having an expansion index (EI) greater than 20 are not allowed within the upper 5-feet of finish building pad subgrade or within the upper 2 feet of finish flatwork subgrade. Removals should extend at least 5 feet beyond the perimieter of building foundations and at least 2 fee beyond exterior flatwork areas.

2. All landscaped areas.

a. Contour site as shown on landscaped drawings and rip existing soils to a minimum depth of 2 feet below existing grade or finished soil grade, whichever is lower.

b. Excavate a minimum of 12” below finish landscape grade and 2 feet beyond landscape edge.

3. Asphalt and Concrete Paving Areas.

a. Exposed pavement subgrade shall be scarified to a depth of 12-inches, brought to approximately optimum moisture content, and compacted to at least 95 percent of the maximum dry density, as determined in general accordance with ASTM D1557.

b. Excavate a minimum of two feet beyond paving edge.

4. Utilize excavation methods adjacent to existing structures that prevent the loss of material from beneath foundations, including concrete underpinning where required.

5. Rock Considerations:

a. Remove all rock of any kind, including material requiring removal by use of heavy earthwork equipment, or hydro-hammers within limits of excavation and within 12inches of all trenching. Blasting is not acceptable.

b. There is no “rock clause”, and no additional compensation for the removal of rock, if encountered.

6. Prior to scarification and compaction, obtain Geotechnical Engineer review and acceptance of excavated surface, and remove additional materials as required.

3.3 COMPACTION OF EXCAVATED SURFACES

A. Prepare areas designated to receive subsequent fill and backfill materials, Portland cement or asphaltic concrete paving as follows:

1. Subsequent to removal of the fill soil layer per 3.2.D, areas to receive fill and/or surface improvements should be scarified to a minimum depth of 8 inches.

2. Water, mix and aerate as necessary to moisture condition to slightly above optimum moisture content.

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3. Compact to a relative compaction of 90 percent minimum based on ASTM D 1557, except as noted in 3.3.A.

4. Compact the upper 12 inches to a relative compaction of 95 percent at paving areas based on ASTM D 1557, except as noted in 3.3.A.

B. Prepare areas designated to receive landscaping as follows:

1. Subsequent to removal of the upper 2 feet of unsuitable fill soil layer, areas to receive fill and/or surface improvements should be scarified to a minimum depth of 8 inches.

2. Water, mix and aerate as necessary to moisture condition to slightly above optimum moisture content.

3. Compact to a relative compaction of 90 percent based on ASTM D 1557.

C. Fill Placement

1. Place fill with specified materials at locations as scheduled below.

a. Provide all cribbing, shoring, and sheathing required to perform work. Comply with all applicable regulations for design, installation, maintenance and removal of such construction products, including obtaining any required permits.

2. Do not place fill over porous, wet, or spongy subgrade.

3. Use equipment and procedures as specified.

a. Place and compact materials in continuous layers not exceeding 8 inches in loose thickness using methods which do not disturb or damage foundations, perimeter drainage and waterproofing systems, or utilities in trenches.

b. Compact all fill material as scheduled in this Section per ASTM D 1557.

c. Overfill all slope banks and compact. After compaction, trim to grade and contour as shown on drawings.

4. Where occurs, place fill concurrently on both sides of foundation elements in maximum 8 inch loose layers. Compact to 90 percent of maximum density per ASTM D 1557 with mechanical tampers per Article 3.3.A above.

5. Compaction by flooding or jetting is prohibited.

6. Maintain moisture content of fill materials at slightly above optimum moisture content and as required to attain required compaction density.

7. Slope grade as shown on drawings.

8. Make grade changes gradual, blending slope into level areas. After completion of grading operation, proof roll earthwork areas. Repair low or spongy spots developed during rolling operation.

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9. Extend compacted fill to design surfaces of slopes and compact surface.

10. Remove all excess soils and dispose off site in a legal manner.

11. Provide all fill material required to achieve grades, slopes and contours as shown on drawings at no additional expense to Owner.

12. The upper 1 foot of pavement subgrade should be compacted to at least 95 percent of maximum dry density just prior to constructing the pavement section. Fills below building slabs may be compacted to 95 percent of maximum dry density to reduce differential settlement between the slab and foundations supported on formational materials. The Geotechnical Engineer shall observe and test subgrade prior to acceptance.

D. Provide dust control as required per this section.

3.4 FIELD QUALITY CONTROL

A. Field inspection will be performed under provisions of Section 014529.

B. Geotechnical Engineer shall verify the suitability of soil materials.

C. Field inspection and testing will be performed under provisions of Section 014529, and conducted by the Owners Geotechnical Engineer.

D. Perform earthwork under the continuous observation of the Owner's Geotechnical Engineer. Earthwork fill operations shall comply with the requirements of Part 2, Title 24, CCR.

E. Tests and analysis of fill material will be performed in accordance with ASTM D1557.

1. The Geotechnical Engineer will review and approve all fill materials, including imported materials.

F. Compaction testing will be performed in accordance with ASTM D1556 and D6938 or other referenced methods.

G. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to Owner.

3.5 TOLERANCES

A. Final elevations shall comply with grades as shown on drawings.

B. Lawn or unimproved areas: Plus or minus 1 inch.

C. Walks: Plus or minus 1/2 inch.

D. Pavement: Plus or minus 1/2 inch.

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E. Not more than one point within any 10 x 10 foot area shall exceed required elevations, measured to a tolerance of plus or minus 0.1 feet.

3.6 PROTECTION

A. Protect excavations by methods required to prevent cave-in or loose soil from falling into excavation.

B. Protect finished Work under provisions of Section 015000.

C. Re-compact fills subjected to vehicular traffic.

3.7 DUST CONTROL

A. Adjacent Streets: Adjacent street frontages shall be swept at least once a day to remove silt and other dirt which is evident from construction activities.

B. Construction Vehicles: The Contractor is responsible for cleaning construction vehicles leaving the site on a daily basis to prevent dust, silt, mud and dirt from being released or tracked offsite. Adjacent streets shall be swept clean daily.

C. Grading Spoils: Dry stockpiles of soil shall be watered to prevent the generation of airborne dust. Trucks transporting dry soil shall be covered with tarpaulins.

D. Water: Water shall be sprayed on all exposed earth surfaces during clearing, grading, earth moving and other site preparation activities. The exposed earth shall be watered throughout the day to minimize dust. The Contractor shall obtain a hydrant permit from the Environmental Utilities Department.

E. Wind Allowances: Grading activities shall be restricted or halted when winds exceed 15 miles per hour as deemed necessary by the Public Works Inspector.

3.8 FILL SCHEDULE

A. Structures

1. Place approved import fill material conforming to Section 2.1- Structural Fill, placed to depth as necessary to achieve required subgrade elevations.

B. Site Contouring areas:

1. Place fill materials as required to achieve site grades and profiles as shown on drawings and as required for drainage.

2. In landscaped areas, place stockpiled topsoil as final 12 inches of fill.

3. Compact the upper 12 inches to a relative compaction of 85 percent and 90 percent for the remainder.

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C. Paving and Deck Areas.

1. Place approved imported fill material, placed to depth as necessary to achieve required subgrade elevations.

D. Fill to Correct Over-excavation:

1. Concrete as specified or fill material as directed by, and at the discretion of, the Geotechnical Engineer.

END OF SECTION

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SECTION 31 10 00

SITE CLEARING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Removal of existing trees and vegetation

B. Clearing vegetation, debris, trash and other materials within limits indicated

C. Grubbing of vegetation within limits indicated

D. Stripping of topsoil within limits indicated

E. Removing above-grade site improvements within limits indicated

F. Disconnecting, capping or sealing, and abandoning site utilities in place

G. Disconnecting, capping or sealing, and removing site utilities

H. Disposing of objectionable material

1.2 RELATED SECTIONS

A. Section 31 20 00, Earth Moving

B. Section 32 13 18, Cement and Concrete for Exterior

1.3 RELATED DOCUMENTS

A. Geotechnical Report: As provided with bid documents.

B. ANSI A300: Industry Standards for Tree Care Practices

C. Applicable Publications
   1. "Trees and Building Sites," official publication of the International Society of Arboriculture.
   2. "Arboriculture," the care of trees and shrubs by Dr. Richard Harris.

1.4 DEFINITIONS

A. ANSI: American National Standards Institute

B. CAL-OSHA: California Occupational Safety and Health Administration.

C. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of weeds, roots, and other deleterious materials.

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1.5 SUBMITTALS

A. Follow submittal procedures outlined in Section 26 05 33 – General Provisions.

B. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.

1.6 QUALITY ASSURANCE

A. Do not remove or prune trees without first securing a permit from the appropriate agency.

B. Prune to the standards of the International Society of Arborists and to ANSI A300.

1.7 PROJECT CONDITIONS

A. Except for materials indicated to be stockpiled or to remain the Owner's property, cleared materials are the Contractor's property. Remove cleared materials from site and dispose of in lawful manner.

B. Salvageable Improvements: Carefully remove items indicated to be salvaged and store where indicated on plans or where designated by the Owner's Representative. Avoid damaging materials designated for salvage.

C. Unidentified Materials;

1. If unidentified materials are discovered, including hazardous materials that will require additional removal other than is required by the Contract Documents, immediately report the discovery to the Owner's Representative.
2. If necessary, the Owner's Representative will arrange for any testing or analysis of the discovered materials and will provide instructions regarding the removal and disposal of the unidentified materials.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. Backfill excavations resulting from demolition operations with on-site or import materials conforming to engineered fill defined in Section 31 20 00, Earth Moving.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect and maintain benchmarks and survey control points during construction.

B. Locate and clearly flag trees and vegetation to remain or to be relocated.

C. Protect existing site improvements to remain during construction.

3.2 TREE REMOVAL

A. Remove trees designated for removal prior to the construction of new improvements in the vicinity:

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1. When demolishing trees indicated to be removed within areas for new pavement or hardscape, remove tree, stump to a depth of two (2) feet below finish grade, and all roots located in the top twelve (12) inches of soil. Remove wood chips created from grinding process down to remaining stump then refill void and re-compact to 80% relative compaction. Use import soil as indicated in specifications for this purpose. Import soil and compaction in future paved areas shall be in accordance with Section 32 12 16, Asphalt Paving and Section 32 13 13, Concrete Pavement.

2. When demolishing trees indicated to be removed within new landscaped areas, removal shall be done in one of the following ways:
   a. For trees located in accessible areas, remove tree and grind stump to four (4) inches below finish grade. Backfill the void and re-compact to 80% relative compaction. Use import soil as indicated in specifications for this purpose. Do not remove existing roots.
   b. For trees located in inaccessible areas, cut stump flush with finish grade, and cover with 3 inches of bark mulch. Do not grind the stump and do not remove existing roots.

B. Perform tree removal work in a safe and proper manner, adhering to CAL-OSHA tree work protection standards and ANSI A300 Standards.

C. All trees to be demolished shall be removed in such a way as to not damage branches, trunks, or root systems of adjacent trees.

3.3 RESTORATION

A. Restore damaged improvements to their original condition, as acceptable to the Owner's Representative.

B. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, as directed by the Owner's Representative.
   1. Employ a qualified arborist, licensed in jurisdiction where the Project is located, to submit details of proposed repairs and to repair damage to trees and shrubs.
   2. Replace trees that cannot be repaired and restored to full-growth status, as determined by the Owner's Representative.

3.4 UTILITIES

A. Contact USA Alert (800) 642-2444 prior to commencement of any demolition or excavation work. Provide a minimum of 48 hours' notice. Verify all utilities entering into and their locations within the project site.

B. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed or abandoned.

C. Arrange to shut off indicated utilities with utility companies or verify that utilities have been shut off.

D. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner's Representative or others unless authorized in writing by the Owner's representative, and then only after arranging to provide temporary utility services according to requirements indicated.

E. Coordinate utility interruptions with utility company affected.

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F. Do not proceed with utility interruptions without the permission of the Owner's Representative and utility company affected. Notify Owner's Representative and utility company affected two working days prior to utility interruptions.

G. Excavate and remove underground utilities that are indicated to be removed.

H. Fill abandoned piping with cement slurry.

I. Securely close ends of abandoned piping with tight fitting plug or cement slurry minimum 6 inches thick.

3.5 CLEARING AND GRUBBING

A. Areas to be graded shall be cleared of existing vegetation, rubbish, existing structures, and debris.

B. Remove obstructions, shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.

C. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.

D. Use only hand methods for grubbing within drip line of remaining trees.

3.6 SITE STRIPPING

A. Strippings and spoils shall be disposed at an off-site location, per geotechnical recommendations.

B. Remove vegetation before stripping soil.

C. Surface soils that contain organic matter should be stripped. In general, the depth of required stripping will be relatively shallow (i.e. less than 2 inches); deeper stripping and grubbing may be required to remove isolated concentrations of organic matter or roots.

D. Remove trash, debris, weeds, roots, and other waste materials.

E. Stockpile soil materials designated to remain on site at a location approved by the Owner's Representative at a location away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.

F. Do not stockpile soil within drip line of remaining trees.

3.7 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.

3.8 BACKFILL

A. Place and compact material in excavations and depressions remaining after site clearing in accordance with Section 31 20 00, Earth Moving.

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3.9 DISPOSAL

A. Remove surplus soil material, unsuitable soil, obstructions, demolished materials, and waste materials, including trash and debris, and legally dispose of them off the Owner's property.

END OF SECTION

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SECTION 31 20 00

EARTH MOVING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Excavation and/or embankment from existing ground to subgrade, including soil sterilant, for roadways, driveways, parking areas, building pads, walks, paths, or trails and any other site improvements called for on the Plans.

1.2 SECTION EXCLUDES

A. Earthwork related to underground utility installation shall be performed in accordance with Sections 31 21 00, Utility Trenching and Backfill.

1.3 RELATED SECTIONS

A. Section 31 10 00, Site Clearing

1.4 RELATED DOCUMENTS

A. Geotechnical Report: As provided with bid documents.

B. ASTM
1. D1557, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort
2. D1586, Method for Penetration Tests and Split-Barrel Sampling of Soils
3. D2487, Classification of Soils for Engineering Purposes
4. D3740, Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
5. D4318. Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils
6. E329, Specification for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction
7. E548, Guide for General Criteria Used for Evaluating Laboratory Competence

C. California Building Code, California Code of Regulations, Title 24, Part 2, Chapter 18, Soils and Foundations, and Chapter 33, Safeguards During Construction

D. Caltrans Standard Specifications, 2015
1. Section 17, General
2. Section 19, Earthwork

E. CAL/OSHA, Title 8.

1.5 DEFINITIONS

A. Borrow: Approved soil material imported from off-site for use as Structural Fill or Backfill.

B. Excavation: Removal of material encountered above subgrade elevations.

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1. Authorized Over-Excavation: Excavation below subgrade elevations or beyond indicated horizontal dimensions as shown on plans or authorized by the Geotechnical Engineer.
2. Unauthorized Over-Excavation: Excavation below subgrade elevations or beyond indicated horizontal dimensions without authorization by the Geotechnical Engineer. Unauthorized excavation shall be without additional compensation.

C. Geotechnical Testing Agency: An independent testing agency qualified according to ASTM E329 to conduct soil materials and rock definition testing, as documented according to ASTM D3740 and ASTM E548.

D. Structural Backfill: Soil materials approved by the Geotechnical Engineer and used to fill excavations resulting from removal of existing below grade facilities, including trees.

E. Structural Fill: Soil materials approved by the Geotechnical Engineer and used to raise existing grades.

F. Rock: Rock material in beds, ledges, unstratified masses, and conglomerate deposits and boulders of rock material ¾ cubic yards or more in volume that when tested by an independent geotechnical testing agency, according to ASTM D1586, exceeds a standard penetration resistance of 100 blows/2 inches.

G. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man made stationary features constructed above or below grade.

H. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, base or topsoil materials.

I. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of weeds, roots, and other deleterious materials.

J. Unsuitable Material: Any soil material that is not suitable for a specific use on the Project. The Geotechnical Engineer will determine if a soil material is unsuitable.

K. Relative Compaction: In-place dry density of soil expressed as percentage of maximum dry density of same materials, as determined by laboratory test procedure ASTM D1557.

L. Utilities: onsite underground pipes, conduits, ducts and cables.

1.6 SUBMITTALS

A. Follow submittal procedure outlined in Section 01 10 00, Supplemental General Requirements.

B. Samples:
1. If required by the Geotechnical Engineer, provide 20-pound samples, sealed in airtight containers, tagged with source locations and suppliers of each proposed soil material from on-site or borrow sources, 72 hours prior to use. Do not import materials to the Project without written approval of the Geotechnical Engineer.

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2. Provide materials from same source throughout work. Change of source requires approval of the Geotechnical Engineer.

C. Classification according to ASTM D2487 of each onsite or borrow soil material proposed for fill and backfill.
1. Laboratory compaction curve in conformance with ASTM D1557 for each onsite or borrow soil material proposed for fill and backfill.

1.7 QUALITY ASSURANCE

A. Provide an independent testing agency qualified according to ASTM E329 to conduct soil materials and rock definition testing, as documented according to ASTM D3740 and ASTM E548.

B. Conform all work and materials to the recommendations or requirements of the Geotechnical Report and meet the approval of the Geotechnical Engineer.

C. Conform all work in accordance with Caltrans Standard Specification Section 17, General and Section 19, Earthwork.

D. Percentage of compaction specified shall be the minimum acceptable. The percentage represents the ratio of the dry density of the compacted material to the maximum dry density of the material as determined by the procedure set forth in ASTM D1557.

E. Perform excavation, filling, compaction and related earthwork under the observation of the Geotechnical Engineer. Materials placed without approval of the Geotechnical Engineer will be presumed to be defective and, at the discretion of the Geotechnical Engineer, shall be removed and replaced at no cost to the Owner. Notify the Geotechnical Engineer at least 24 hours prior to commencement of earthwork and at least 48 hours prior to testing.

F. The Geotechnical Engineer will perform observations and tests required to enable him to form an opinion of the acceptability of the Project earthwork. Correct earthwork that, in the opinion of the Geotechnical Engineer, does not meet the requirements of these Technical Specifications and the Geotechnical Report.

G. Upon completion of the construction work, certify that all compacted fills and foundations are in place at the correct locations, and have been constructed in accordance with sound construction practice. In addition, certify that the materials used are of the types, quality and quantity required by these Technical Specifications and the Geotechnical Report. The Contractor shall be responsible for the stability of all fills and backfills constructed by his forces and shall replace portions that in the opinion of the Geotechnical Engineer have been displaced or are otherwise unsatisfactory due to the Contractor's operations.

H. Finish subgrade tolerance at completion of grading:
1. Building and paved areas: ±0.05 feet
2. Other areas: ±0.10 feet

1.8 PROJECT CONDITIONS

A. Promptly notify the Owner's Representative of surface or subsurface conditions differing from those disclosed in the Geotechnical Report. First notify the Owner's Representative verbally to permit verification and extent of condition and then in writing. No claim for conditions differing from those anticipated in the Contract Documents and disclosed in the Geotechnical Report will be allowed unless the

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Contractor has notified the Owner's Representative in writing of differing conditions prior to the Contractor starting work on affected items.

B. Protect open excavations, trenches, and the like with fences, covers and railings to maintain safe pedestrian and vehicular traffic passage.

C. Prevent erosion of freshly-graded areas during construction and until such time as permanent drainage and erosion control measures have been installed in accordance with the Erosion Control Plan.

D. Temporarily stock-pile fill material in an orderly and safe manner and in a location approved by the Owner's Representative.

E. Environmental Requirements: When unfavorable weather conditions necessitate interrupting earthwork operation, areas shall be prepared by compaction of surface and grading to avoid collection of water. Provide adequate temporary drainage to prevent erosion. After interruption, compaction specified in last layer shall be re-established before resuming work.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: On-site soils are considered suitable for use as fill provided the materials are placed in accordance with Geotechnical Recommendations. Highly expansive soils shall not be used as select structural fill, or used as backfill for trenches located within hardscape areas.

B. Imported fill soils, if required, should be predominantly granular in nature, and should be free of organics, debris, or rocks over 3 inches in size, and shall be approved by the Geotechnical Engineer before importing to the site. Imported non-expansive soils shall have a Plasticity Index less than 15 as determined by ASTM D4318, an R-value of at least 20, and fines content between 15 and 65 percent. Import fill shall be considered non-hazardous per Department of Toxic Substances Control guidelines (DTSC, 2017) and non-corrosive per Caltrans Corrosion Guidelines (Caltrans, 2015).

2.2 SOIL STERILANT

A. Commercial chemical for weed control, registered by EPA. Provide granular, liquid or wet-able powder form.

PART 3 - EXECUTION

3.1 GENERAL

A. Perform work in accordance with Caltrans Standard Specification Section 19, Earthwork.

B. Placement and compaction of material by flooding, ponding, or jetting will not be permitted.

C. The use of explosives will not be permitted.

D. Grading and earthwork operations shall be observed and tested by a representative of the Geotechnical Engineer for conformance with the project plans/specifications and the geotechnical recommendations. This work includes site preparation, selection of

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satisfactory materials, and placement and compaction of the subgrades and fills. Sufficient notification prior to commencement of earthwork is essential to make certain that the work will be properly observed.

3.2 CONTROL OF WATER AND DEWATERING

A. Comply with Section 31 23 19, Dewatering, if dewatering is necessary.

B. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding the site and surrounding area. Provide dewatering equipment necessary to drain and keep excavations and site free from water.

C. Dewater during backfilling operation so that groundwater is maintained a least 1 foot below level of compaction effort.

D. Obtain the Geotechnical Engineer's approval for proposed control of water and dewatering methods.

E. Protect subgrades from softening, undermining, washout and damage by rain or water accumulation.

F. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations.

G. Maintain dewatering system in place until dewatering is no longer required.

3.3 WET WEATHER CONDITIONS

A. Do not prepare subgrade, place or compact soil materials if subgrade or materials are above optimum moisture content.

B. If the Geotechnical Engineer allows work to continue during wet weather conditions, conform to supplemental recommendations provided by the Geotechnical Engineer.

3.4 BRACING AND SHORING

A. Conform to California and Federal OSHA requirements.

B. Place and maintain such bracing and shoring as may be required to support the sides of the excavations for the proper protection of workmen; to facilitate the work; to prevent damage to the facility being constructed; and to prevent damage to adjacent structures or facilities. Remove all bracing and shoring upon completion of the work.

C. Be solely responsible for all bracing and shoring and, if requested by the Owner's Representative, submit details and calculations to the Owner's Representative. The Owner's Representative may forward the submittal to the Geotechnical Engineer, the Consulting Engineer and/or the California Division of Industrial Safety for their review. The Contractor's submittal shall include the basic design, assumed soils conditions and estimation of forces to be resisted, together with plans and specifications of the materials and methods to be used, and shall be prepared by a civil engineer or structural engineer registered in California. No excavations related to the proposed facility shall precede a response to the submittal by the Owner's Representative.

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D. Be solely responsible for installing and extracting the sheathing in a manner which will not disturb the position or operation of the facility being constructed or adjacent utilities and facilities.

3.5 TOPSOIL STRIPPING

A. Remove topsoil in accordance with Section 31 10 00, Site Clearing.

3.6 EXCAVATION

A. Excavate earth and rock to lines and grades shown on plans and to the neat dimensions indicated on the plans, required herein or as required to satisfactorily compact backfill.

B. Remove and dispose of large rocks, pieces of concrete and other obstructions encountered during excavation.

C. Excavation through buried concrete and other unknown obstructions will require specialized techniques for demolition and removal.

D. Where forming is required, excavate only as much material as necessary to permit placing and removing forms.

E. Provide supports, shoring and sheet piles required to support the sides of excavations or for protection of adjacent existing improvements.

3.7 GRADING

A. Uniformly grade the Project to the elevations shown on plans

B. Finish ditches, gutters and swales to the sections, lines and grades indicated and to permit proper surface drainage.

C. Round tops and bottoms of slopes as indicated or to blend with existing contours.

3.8 SUBGRADE PREPARATION

A. Subgrade Preparation: Prior to backfilling depressions created by the removal of old foundations and utility lines, scarify the bottom of the excavation to an approximate depth of 8 inches and uniformly moisture condition the scarified surfaces to a moisture content that is at least 2 percent over optimum. Compact the scarified surfaces to a minimum of 90 percent relative compaction at above optimum moisture content.

B. Over-excavate any remaining soft (pumping) areas down to firm soil and backfill the area.

C. Subgrade shall be maintained in a moist, but not wet, condition by periodically sprinkling water prior to the placement of additional fill or installation of roads. Subgrade that has been permitted to dry out and loosen or develop desiccation cracking should be scarified, moisture conditioned, and re-compacted as recommended above.

D. Install underground utilities and service connections prior to final preparation of subgrade and placement of base materials for final surface facilities. Extend services so that final surface facilities are not disturbed when service connections are made.

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E. Prepare subgrades under the structural section of paved areas, curbs, gutters, walks, structures, other surface facilities and areas to receive structural fill.

F. Protect utilities from damage during compaction of subgrades and until placement of final pavements or other surface facilities.

3.9 LOT FINISH GRADING

A. Blade finish lots to lines and grades indicated.

3.10 FILL PLACEMENT AND COMPACTION

A. Place fill in uniformly moisture conditioned and compacted lifts not exceeding 8 inches in loose thickness. Each lift should be thoroughly moisture conditioned and compacted to 90 percent before successive fill layers are placed.

B. In order to achieve satisfactory compaction in the subgrade and fill soils, it may be necessary to adjust the soil moisture content at the time of soil compaction per geotechnical recommendations. This may require that water be added and thoroughly mixed into any soils which are too dry or that scarification and aeration be performed in any soils which are too wet.

C. Obtain the Geotechnical Engineer's approval of surface to receive structural fill prior to placement of structural fill material.

D. Place structural fill on prepared subgrade.

E. Do not drop fill on structures. Do not backfill around, against or upon concrete or masonry structures until structure has attained sufficient strength to withstand loads imposed and the horizontal structural system had been installed.

F. Do not compact by ponding, flooding or jetting.

G. Perform compaction using rollers, pneumatic or vibratory compactors or other equipment and mechanical methods approved by the Geotechnical Engineer.

H. Compaction requirements (unless specified otherwise by the Geotechnical Engineer):
1. Compact structural fills less than 5 feet thick to 90 percent compaction.
2. Compact structural fill 5 feet thick or greater to 95 percent compaction.
3. Compact the upper 6 inches of subgrade soils beneath pavements, curbs and gutters to 95 percent compaction. Extend compaction 5 feet beyond pavement edges unless specified otherwise by the Geotechnical Engineer.
4. Compact the upper 6 inches of subgrade soils under walks, structures and areas to receive structural fill to 90 percent compaction.

3.11 SOIL STERILIZATION

A. Apply soil sterilant to areas indicated, such as beneath asphalt concrete pavement, brick pavement, concrete pavement and at grade concrete slabs, including sidewalks, curbs and gutters. Also where indicated apply soil sterilant below expansion and control joints and at areas where pipes, ducts or other features penetrate slabs.

B. Apply soil sterilant uniformly and at the rates recommended by the manufacturer.

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C. Apply soil sterilant to prepared subgrade, or after installation of aggregate base as recommended by the manufacturer.

3.12 DISPOSAL

A. Lawfully dispose of all unsuitable and excess or surplus material off-site at no cost to the Owner.

END OF SECTION

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SECTION 31 21 00

UTILITY TRENCHING AND BACKFILL

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Excavation, bedding, and backfill for underground storm drain, sanitary sewer, and water piping, and associated structures.

B. Provide labor, material, equipment, and services necessary to complete the backfilling and compacting as necessary for this project. Section includes, but is not limited to:
   1. Select Backfill Material
   2. Aggregate Base
   3. Detectable Tape
   4. Trench Excavation
   5. Pipe Bedding
   6. Trench Backfill
   7. Trench Surfacing

1.2 SECTION EXCLUDES

A. Underground HVAC piping, electrical conduit, telephone conduit, gas piping, cable TV conduit, etc. and associated structures.

B. Mechanical and plumbing piping associated with pool, pool slide, spray pad, and associated pool equipment.

C. Drainage fill material and placement around subdrains.

1.3 RELATED SECTIONS

A. Section 31 10 00 – Site Clearing

B. Section 31 20 00 – Earth Moving

C. Section 33 41 00 – Storm Utility Drainage Piping

1.4 RELATED DOCUMENTS

A. Geotechnical Report: As provided with bid documents.

B. ASTM
   1. D1557, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort.
   2. D2321, Standard Practice for Underground Installation of Thermoplastic Pipe for Sewer and Other Gravity-Flow Applications.

C. California Administrative Code, Title 24, Part 2 - Basic Building Regulations, Chapter 24, Excavations, Foundations, and Retaining Walls.

D. Caltrans Standard Specifications, 2015
   1. Section 19, Earthwork
   2. Section 26, Aggregate Bases
   3. Section 68, Subsurface Drains

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4. Section 96, Geosynthetics

E. CAL/OSHA, Title 8

1.5 DEFINITIONS

A. AC: Asphalt Concrete

B. ASTM: American Society for Testing and Materials

C. Base: The layer placed between the subgrade and surface pavement in a paving system.

D. Bedding: Material from bottom of trench to bottom of pipe

E. CDF: Controlled Density Fill

F. DIP: Ductile Iron Pipe

G. Engineered Fill:
1. Soil or soil-rock material approved by the Owner and transported to the site by the Contractor in order to raise grades or to backfill excavations.
2. Contractor shall provide sufficient tests, and a written statement that all materials brought onto the project site comply with specification requirements.

H. Excavation: Consists of the removal of material encountered to subgrade elevations

I. Initial Backfill: Material from bottom of pipe to 12 inches above top of pipe

J. PCC: Portland Cement Concrete

K. RCP: Reinforced Concrete Pipe

L. Relative Compaction: In-place dry density of soil expressed as percentage of maximum dry density of same materials, as determined by laboratory test procedure ASTM D1557.

M. Springline of Pipe: Imaginary line on surface of pipe at a vertical distance of ½ the outside diameter measured from the top or bottom of the pipe.

N. Subgrade: The uppermost surface of an excavation or the top surface of a fill or backfill immediately below base.

O. Subsequent Backfill: Material from 12 inches above top of pipe to subgrade of surface material or subgrade of surface facility or to finish grade.

P. Trench Excavation: Removal of material encountered above subgrade elevations and within horizontal trench dimensions.
1. Authorized Trench Over-Excavation: Excavation below trench subgrade elevations or beyond indicated horizontal trench dimensions as shown on plans or authorized by the Geotechnical Engineer.
2. Unauthorized Trench Over-Excavation: Excavation below trench subgrade elevations or beyond indicated horizontal trench dimensions without authorization by the Geotechnical Engineer. Unauthorized excavation shall be without additional compensation.

Q. Utility Structures:
1. Storm drainage manholes, catch basins, drop inlets, curb inlets, vaults, etc.

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2. Sanitary sewer manholes, vaults, etc.
3. Water vaults, etc.

1.6 SUBMITTALS

A. Follow submittal procedures outlined in Section 26 05 33 – General Provisions.

B. Test Reports: Submit the following report for import material directly to the Owner from the Contractor's testing services:
1. Compaction test reports for aggregate base.

C. Samples:
1. If required by the Geotechnical Engineer, provide 20-pound samples of all imported trench bedding and backfill material sealed in airtight containers, tagged with source locations and suppliers of each proposed material. Do not import materials to Project without written approval of the Geotechnical Engineer and the Owner.
2. Provide materials from same source throughout work. Change of source requires approval of the Geotechnical Engineer and the Owner.

1.7 QUALITY ASSURANCE

A. Conform all work and materials to the recommendations or requirements of the Geotechnical Report and meet the approval of the Geotechnical Engineer.

B. Conform all work to the appropriate portion(s) of the Caltrans Standard Specifications, Section 19, Earthwork.

C. Percentage of compaction specified shall be the minimum acceptable. The percentage represents the ratio of the dry density of the compacted material to the maximum dry density of the material as determined by the procedure set forth in ASTM D 1557.

D. The Geotechnical Engineer will perform observations and tests required to enable him to form an opinion of the acceptability of the trench backfill. Correct the trench backfill that, in the opinion of the Geotechnical Engineer, does not meet the requirements of these Technical Specifications and the Geotechnical Report.

E. Soil Testing:
1. Contractor to engage a geotechnical testing agency, to include compaction testing and for quality control testing during fill operations.
2. Test results will be submitted to the Owner.

1.8 PROJECT CONDITIONS

A. Promptly notify the Owner of surface or subsurface conditions differing from those disclosed in the Geotechnical Report. First notify the Owner verbally to permit verification and extent of condition and then in writing. No claim for conditions differing from those anticipated in the Contract Documents and disclosed in the Geotechnical Report will be allowed unless Contractor has notified the Owner in writing of differing conditions prior to contractor starting work on affected items.

B. Barricade open excavations and post with warning lights.
1. Operate warning lights and barricades as required.
2. Protect structures, utilities, sidewalks, pavements, and other facilities immediately adjacent to excavations, from damages caused by settlement, lateral movement, undermining, washout, and other hazards.

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3. Protect open, trenches, and utility structure excavations with fences, covers and railings to maintain safe pedestrian and vehicular traffic passage.

C. Stockpile on-site and imported backfill material temporarily in an orderly and safe manner.

D. Provide dust and noise control in conformance with Section 01 10 00 Supplemental General Requirements.

E. Environmental Requirements:
1. Protect existing storm drainage system from silt and debris resulting from construction activities. If contamination occurs, remove contamination at no cost to the District.
2. Protect existing streams, ditches and storm drain inlets during work on this project.

F. Protection of Subgrade: Do not allow equipment to pump or rut subgrade, stripped areas, footing excavations, or other areas prepared for project.

G. Transport all excess soils materials by legally approved methods to disposal areas.
1. Coordinate with the Engineer.
2. Any additional fill requirements shall be the responsibility of the Contractor.

1.9 EXISTING UTILITIES

A. Prior to excavation or trenching, the Contractor shall contact USA Alert (800) 227-2600 to locate all known utilities a minimum of 48 hours prior to start of work. During the course of construction, the Contractor shall take every precaution to maintain and protect utilities noted to remain. Said utilities shall remain operational at all times, unless otherwise noted on the plans.

B. The existing utilities are shown on the Plans based on the information available at the time of contract document development. The City shall not assume responsibility for any inaccuracies or incompleteness of the Plans based on such information. The Contractor shall immediately notify, upon damage of any pipeline or facility, the Owner and/or its agents and take every action necessary to repair or replace damaged facilities to the satisfaction of the Inspector, and at no additional cost to the City.

C. Locate existing underground utilities in the areas of work. For utilities that are to remain in place, provide adequate means of protection during excavation operations.
1. Locating of existing underground utilities shall include but not be limited to pot-holing prior to the start of construction.

D. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult Owner and/or utility agency immediately for directions.
1. Cooperate with the Owner and public and private utility companies in keeping their respective services and facilities in operation.
2. Repair damaged utilities to the satisfaction of the agency with jurisdiction.

E. Do not interrupt existing utilities serving facilities occupied and used by the Owner or others, except when permitted in writing by the Owner and then only after acceptable temporary utility services have been provided.

PART 2 - PRODUCTS

2.1 GENERAL

A. Import materials will be subject to approval of the Geotechnical Engineer.

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B. For approval of imported fill material, notify the Owner at least 7 days in advance of intention to import material.

2.2 PIPE BEDDING AND INITIAL BACKFILL

A. ASTM D2321, Class IA, IB or II.
   1. Clean and free of clay, silt or organic matter.

B. Permeable Material: In accordance with Section 68-2.02F of Caltrans Standard Specifications, Class 1, Type A or Class 2.

C. Class 2 Aggregate Base: In accordance with Section 26 of Caltrans Standard Specifications, ¾ inch maximum.

D. Sand: In accordance with Section 19-3.02F of Caltrans Standard Specifications.

2.3 SELECT BACKFILL

A. Select backfill material shall be gravel, free of clay or organic matter and shall conform to the following gradation:

Sieve Size	Percentage Passing
1 inch	100
¾ inch	90 – 100
No. 4	35 – 60
No. 200	2 - 9

2.4 WARNING TAPE

A. Polyethylene plastic and metallic core or metallic-faced, acid- and alkali-resistant, polyethylene plastic warning tape manufactured specifically for warning and identification of buried utility lines. Provide tape on rolls, 3 inch minimum width, color coded as specified below for the intended utility with warning and identification imprinted in bold black letters continuously over the entire tape length. Warning and identification to read, "CAUTION, BURIED (intended service) LINE BELOW" or similar wording. Color and printing shall be permanent, unaffected by moisture or soil.
   1. Warning Tape Color Codes
      a. Red: Electric
      b. Yellow: Gas, Oil; Dangerous Materials
      c. Orange: Telephone and Other Communications
      d. Blue: Water Systems
      e. Green: Sewer Systems
      f. White: Steam Systems
      g. Gray: Compressed Air
   2. Warning Tape for Metallic Piping: Acid and alkali-resistant polyethylene plastic tape conforming to the width, color, and printing requirements specified above. Minimum thickness of tape shall be 0.003 inch. Tape shall have a minimum strength of 1500 psi lengthwise, and 1250 psi crosswise, with a maximum 350 percent elongation.
   3. Detectable Warning Tape for Non-Metallic Piping: Polyethylene plastic tape conforming to the width, color, and printing requirements specified above. Minimum thickness of the tape shall be 0.004 inch. Tape shall have a minimum strength of 1500 psi lengthwise and 1250 psi crosswise. Tape shall be manufactured with integral wires, foil backing, or other means of enabling detection by a metal detector when tape is buried up to 3 feet deep. Encase metallic element of the tape in a protective jacket or provide with other means of corrosion protection.

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2.5 DETECTION WIRE FOR NON-METALLIC PIPING

A. Detection wire shall be insulated single strand, solid copper with a minimum of 12 AWG.

2.6 SUBSEQUENT BACKFILL

A. Conform to on-site or imported structural backfill in Section 31 20 00, Earth Moving.

2.7 CONTROLLED DENSITY FILL (CDF) (IN TRENCHES)

A. Provide non-structural CDF, from bottom of trench to finish subgrade of subbase or base material, that can be excavated by hand and produce unconfined compressive 28-day strengths from 50-psi to a maximum of 150-psi. Provide aggregate no larger than 3/8 inch top size. The 3/8 inch aggregate shall not comprise more than 30% of the total aggregate content.

B. Cement: Conform to the standards as set forth in ASTM C150, Type II Cement.

C. Fly Ash: Conform to the standards as set forth in ASTM C618, for Class F pozzolan. Do not inhibit the entrainment of air with the fly ash.

D. Air Entraining Agent: Conform to the standards as set forth in ASTM C260.

E. Aggregates need not meet the standards as set forth in ASTM C33. Any aggregate, producing performances characteristics described herein will be accepted for consideration. The amount of material passing a #200 sieve shall not exceed 12% and no plastic fines shall be present.

F. Provide CDF that is a mixture of cement, Class F pozzolan, aggregate, air entraining agent and water. CDF shall be batched by a ready mixed concrete plant and delivered to the job site by means of transit mixing trucks.

G. The Contractor shall determine the actual mix proportions of the controlled density fill to meet job site conditions, minimum and maximum strengths, and unit weight. Entrained air content shall be a minimum of 4.0%. The actual entrained air content shall be established for each job with the materials and aggregates to be used to meet the placing and unit weight requirements. Entrained air content may be as high as 20% for fluidity requirements.

H. Mix design shall meet the Geotechnical Engineer's approval.

2.8 GEOSYNTHETICS

A. Filter Fabric:
   1. Filter Fabric: Section 96-1.02 of Caltrans Standard Specifications.
   2. Mirafi 140N, Mirafi Inc., or approved equal.

PART 3 - EXECUTION

3.1 GENERAL

A. Comply with the recommendations of the Geotechnical Engineer.

B. Protect existing trees to remain. No grading is permitted under the drip line of protected trees.

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C. Excavations for appurtenant structures, such as, but not limited to, manholes, transition structures, junction structure, vaults, valve boxes, catch basins, thrust blocks, and boring pits, shall be deemed to be in the category of trench excavation.

D. Unless otherwise indicated in the Plans, all excavation for pipelines shall be open cut.

E. Prior to commencement of work, become thoroughly familiar with site conditions.

F. In the event discrepancies are found, immediately notify the Owner in writing, indicating the nature and extent of differing conditions.

G. Backfill excavations as promptly as work permits.

H. Do not place engineered fill or backfill until rubbish and deleterious materials have been removed and areas have been approved by the Owner.

I. Place acceptable soil material in layers to required subgrade elevations, for each area classification listed below.

J. In excavations, use satisfactory excavated or borrow material.

K. Under grassed areas, use satisfactory excavated or borrow material.

3.2 SITE PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities, which are to remain, from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

B. Protect existing storm drainage system from silt and debris resulting from construction activities. If contamination occurs, remove contamination at no cost to the Owner.

3.3 EXISTING UTILITIES

A. Identity the location of existing utilities.
   1. Prior to trenching, the Contractor shall excavate at locations specifically indicated on the Plans, if any, and where new lines cross other utilities of uncertain depth and determine the elevation of the utility in question to ensure that the new line will clear the potential obstruction.
   2. The Contractor shall contact Underground Service Alert (USA) at 1-800-227-2600 for assistance in locating existing utilities.
   3. If, after the excavation, a crossing utility does present an obstruction, then the line and grade of the new line will be adjusted as directed by the Owner to clear the utility.

B. Protect all existing utilities to remain in operation.

C. Movement of construction machinery and equipment over existing pipes and utilities during construction shall be at Contractor's risk.

D. Excavation made with power-driven equipment is not permitted within 2 feet of any known utility or subsurface structure.
   1. Use hand or light equipment for excavating immediately adjacent to known utilities or for excavations exposing a utility or buried structure.
   2. Start hand or light equipment excavation on each side of the indicated obstruction and continue until the obstruction is uncovered or until clearance for the new grade is assured.

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3. Support uncovered lines or other existing work affected by excavation until approval for backfill is obtained.
4. Report damage of utility line or subsurface structures immediately to the Owner.

E. Backfill trenches resulting from utility removal in lifts of 8 inches maximum.

3.4 TRENCH EXCAVATION

A. General
1. Excavation shall include removal of all water and materials that interfere with construction. The Contractor shall remove any water which may be encountered in the trench by pumping or other methods during the pipe laying, bedding and backfill operations. Material shall be sufficiently dry to permit approved jointing.
2. Excavation shall include the construction and maintenance of bridges required for vehicular and pedestrian traffic, support for adjoining utilities.
3. The Contractor shall be responsible to safely direct vehicular and pedestrian traffic through or around his/her work area at all times.
4. The Contractor shall relocate, reconstruct, replace or repair, at his/her own expense, all improvements which are in the line of construction or which may be damaged, removed, disrupted or otherwise disturbed by the Contractor.

B. Existing Paving and Concrete:
1. Existing pavement over trench shall be sawcut, removed, and hauled away from the job. Existing pavement shall be neatly sawcut along the limits of excavations.
2. Existing concrete over the trench shall be sawcut to a full depth in straight lines, at a minimum distance of 12 inches beyond the edge of the trench, either parallel to the curb or a right angles to the alignment of the sidewalk.
3. Boards or other suitable material shall be placed under equipment outrigging to prevent damage to paved surfaces.

C. Trench Width:
1. The maximum allowable trench widths at the top of the all pipe materials outside diameter of barrel pipe plus 18 inches. shall be as follows:
   a. The maximum trench width shall be inclusive of all shoring.
   b. If the maximum trench width is exceeded, the State's representative may direct the Contractor to encase or cradle the pipe in concrete at no additional charge.
2. For pipes 3 inch diameter and larger, the free working space on each side of the pipe barrel shall not be less than 6 inches.

D. Excavation Width at Springline of Pipe:
1. Up to a nominal pipe diameter of 24 inches: Minimum of twice the outside pipe diameter, or as otherwise allowed or required by the Geotechnical Engineer.
2. Nominal pipe diameter of 30 inches through 36 inches: Minimum of the outside pipe diameter plus 2 feet, or as otherwise allowed or required by the Geotechnical Engineer.
3. Nominal pipe diameter of 42 inches through 60 inches: Minimum of the outside pipe diameter plus 3 feet, or as otherwise allowed or required by the Geotechnical Engineer.

E. Open Trench:
1. The maximum length of open trench shall be 300 feet or the distance necessary to accommodate the amount of pipe installed in a single day, whichever is greater. No trench shall be left open at the end of the day.

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2. Provisions for trench crossings and free access shall be made at all street crossings, driveways, water gate valves, and fire hydrants.
3. Excavate by hand or machine. For gravity systems begin excavation at the outlet end and proceed upstream. Excavate sides of the trench parallel and equal distant from the centerline of the pipe. Hand trim excavation. Remove loose matter.
4. Excavation Depth for Bedding: Minimum of 6 inches below bottom of pipe or as otherwise allowed or required by the Geotechnical Engineer, except that bedding is not required for nominal pipe diameters of 2 inches or less.
5. Over-Excavations: Backfill trenches that have been excavated below bedding design subgrade, with approved bedding material.
6. Where forming is required, excavate only as much material as necessary to permit placing and removal of forms.
7. Grade bottom of trench to provide uniform thickness of bedding material and to provide uniform bearing and support for pipe along entire length. Remove stones to avoid point bearing.

F. Excavated Material:
1. All excavated material not required for backfill shall be immediately removed and properly disposed of in a legal manner by the Contractor.
2. Material excavated in streets and roadways shall be laid alongside the trench no closer than 2 feet from the trench edge and kept trimmed to minimize inconvenience to public traffic.
3. Provisions shall be made whereby all storm and wastewater can flow uninterrupted in gutters or drainage channels.

3.5 CONTROL OF WATER AND DEWATERING

A. Contractor attention is directed to Section 31 23 19, Dewatering.

B. Be solely responsible for dewatering trenches and excavations and subsequent control of ground and surface water. Provide and maintain such pumps or other equipment as may be necessary to control ground water and seepage to the satisfaction of the Geotechnical Engineer and the Owner until backfilling is completed.

C. Dewater during backfilling operation so that groundwater is maintained a least one foot below level of compaction effort.

D. Obtain the Geotechnical Engineer's approval for proposed control of water and dewatering methods.

E. Reroute surface water runoff away from open trenches and excavations. Do not allow water to accumulate in trenches and excavations.

F. Maintain dewatering system in place until dewatering is no longer required.

3.6 BRACING AND SHORING

A. Conform to California and Federal OSHA requirements.

B. Place and maintain such bracing and shoring as may be required to support the sides of the excavations for the proper protection of workmen; to facilitate the work; to prevent damage to the pipes and appurtenances being constructed; and to prevent damage to adjacent structures or facilities. Remove all bracing and shoring upon completion of the work.

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C. Be solely responsible for all bracing and shoring and, if requested by the Owner, submit details and calculations to the Owner. The Owner may forward the submittal to the Geotechnical Engineer, the Consulting Engineer and/or the California Division of Industrial Safety for their review. The Contractor's submittal shall include the basic design, assumed soils conditions and estimation of forces to be resisted, together with plans and specifications of the materials and methods to be used, and shall be prepared by a civil engineer or structural engineer registered in California. No excavations in trench section or around structures shall precede a response to the submittal by the Owner.

D. Be solely responsible for installing and extracting the sheathing in a manner which will not disturb the line, grade, or backfill compaction or operation of the utility being installed or adjacent utilities and facilities.

3.7 PIPE BEDDING

A. Obtain approval of bedding material from the Geotechnical Engineer.

B. Accurately shape bedding material to the line and grade called for on the Plans. Carefully place and compact bedding material to the elevation of the bottom of the pipe in layers not exceeding 8 inches in loose thickness. Compact bedding material at optimum water content to 90% relative compaction unless specified otherwise on the Plans or by the Geotechnical Engineer. Compact by pneumatic tampers or other mechanical means approved by the Geotechnical Engineer. Jetting or ponding of bedding material will not be permitted.

C. Stabilization of Trench Bottom: When the trench bottom is unstable due to wet or spongy foundation, trench bottom shall be stabilized with gravel or crushed rock. The State's inspector will determine the suitability of the trench bottom and the amount of gravel or crushed rock needed to stabilize a soft foundation. Soft material shall be removed and replaced with gravel or crushed rock as necessary.

D. Placement of Bedding Material: The trench bottom shall be cleaned to remove all loose native material prior to placing select backfill material. Sufficient select backfill material shall be placed in trench and tamped to bring trench bottom up to grade of the bottom of pipe. The relative compaction of tamped material shall be not less than 90 percent. It is the intention of these requirements to provide uniform bearing under the full length of pipe to a minimum width of 60 percent of the external diameter.

3.8 BACKFILLING

A. Initial Backfill:

1. Obtain approval of backfill material from Geotechnical Engineer.
2. Bring initial backfill up simultaneously on both sides of the pipe, so as to prevent any displacement of the pipe from its true alignment. Carefully place and compact initial backfill material to an elevation of 12 inches above the top of the pipe in layers not exceeding 8 inches in loose thickness. Compact bedding material at optimum water content to 90% relative compaction unless specified otherwise on the Plans or by the Geotechnical Engineer. Compact by pneumatic tampers or other mechanical means approved by the Geotechnical Engineer. Jetting or ponding of initial backfill material will not be permitted.

B. Pipe Detection: In trenches containing pressurized plastic pipes, tracer wire shall be placed directly above the pipe and shall be connected to all valves, existing exposed tracer wires, and other appurtenances as appropriate.

C. Installation of Tracer Wire:

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1. Install a continuous length of tracer wire for the full length of each run of nonmetallic pipe.
2. Attach wire to top of pipe in such manner that it will not be displaced during construction operations.
3. Form a mechanically and electrically continuous line throughout the pipeline, extending to the nearest valve or other pipeline appurtenance. Extend the wire up the outside of the valve box/riser and cut a hole that is 8 inches from the top, extend a 12 inch wire lead to the inside of the box. At other pipeline appurtenances, terminate the 12 inch wire lead inside the enclosure.
4. Splice wire with a splicing device consisting of and electro-tin plated seamless copper sleeve conductor. Install as recommended by the manufacturer. Wrap splices and damaged insulation with electrician's tape.

D. Installation of Warning Tape
1. Install tape approximately 1 foot above and along the centerline of the pipe.
2. Where tape is not continuous lap tape ends a minimum of 2 feet.

E. Subsequent Backfill:
1. Above the level of initial backfill, the trench shall be backfilled with non-expansive native material from trench excavation or with imported select backfill material (Contractor's option). Subsequent backfill shall be free of vegetable matter, stones or lumps exceeding 3 inches in greatest dimension, and other unsatisfactory material.
2. Bring subsequent backfill to subgrade or finish grade as indicated. Carefully place and compact subsequent backfill material to the proper elevation in layers not exceeding 8 inches in loose thickness. Compact bedding material at optimum water content to 90% relative compaction, except that the upper 36 inches in areas subject to vehicular traffic shall be compacted to at least 95% relative compaction, unless specified otherwise on the Plans or by the Geotechnical Engineer. Compact by pneumatic tampers or other mechanical means approved by the Geotechnical Engineer. Jetting or ponding of subsequent backfill material will not be permitted.

F. Do not use compaction equipment or methods that produce horizontal or vertical earth pressures that may cause excessive pipe displacement or damage the pipe. Jetting of trench backfill is not permitted.

G. Utility backfill shall be inspected and tested by the Geotechnical Engineer during placement. Cooperate with the Geotechnical Engineer and provide working space for such tests in operations. Backfill not compacted in accordance with these specifications shall be re-compacted or removed as necessary and replaced to meet the specified requirements, to the satisfaction of the Geotechnical Engineer and the Owner prior to proceeding with the Project.

H. Compaction testing shall be in accordance with California Test Method ASTM D1556 or D1557.

3.9 CLEANUP

A. Upon completion of utility earthwork all lines, manholes catch basins, inlets, water meter boxes and other structures shall be thoroughly cleaned of dirt, rubbish, debris and obstructions of any kind to the satisfaction of the Owner.

END OF SECTION

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SECTION 32 13 13

CONCRETE PAVING

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Forming for cast-in-place concrete associated with swimming pool decks.

B. Reinforcement for cast-in-place concrete associated with swimming pool decks.

C. Cast-in-place concrete for swimming pool decks with Xypex C-500 crystalline waterproofing admixture. Waterproofing admixture for swimming pool decks only.

D. Provide labor, materials and equipment as required to install sealant for all pool deck expansion joints, or any other caulking, as indicated on the aquatic Drawings and herein specified.

1.2 RELATED WORK

A. Section 03 30 00: Site Concrete

1.3 REFERENCES

A. Geotechnical Report: If none available, Contractor to utilize standard specifications where applicable and assume most conservative values.

1.4 SUBMITTALS

A. Product Data: For each type of concrete type indicated.

B. Mock-up

1. Contractor shall provide three mock-up deck samples, minimum 3'x 3', with a wedge anchor installed in one sample. These (3) samples shall be constructed; one with a light broom finish, one (1) with a medium broom finish and one (1) with a heavy broom finish for determination and selection of an appropriate deck finish. Each sample shall be edged on all four sides to demonstrate a 3/4" radius edge. Anchor installation shall demonstrate acceptable interface between anchor and the top of deck. Deck samples shall remain on job site through final inspection for reference.

C. Mix Design

1. Prior to installing concrete paving, and after completion and acceptance of mock-up, provide complete mix design for each approved mock-up, including batch plant source.

2. Mix design shall be prepared by batch plant supplying concrete.

3. Changes in batch plant will require complete resubmittal process.

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4. The Contractor shall submit a separate mix design stamped and signed by a licensed engineer for the swimming pool decks which contains the specified Xypex C-500 crystalline waterproofing admixture for approval by the Owner's Representative prior to any placement of concrete.

D. Quality Assurance

1. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

2. ACI Publications: Comply with ACI 301 (ACI 301M) unless otherwise indicated.

PART 2 - PRODUCTS

2.1 DESIGN CRITERIA

A. All improvements shall be constructed per the referenced standards, the improvement drawings, and as specified in this Section.

2.2 CAST-IN-PLACE CONCRETE

A. General

1. All concrete shall be transit mixed, complying with ASTM C94.

2. All concrete shall be supplied from a single source, using a single cement supplier.

3. All cement shall be Portland cement, Type II, low alkali per ASTM C150, or Type V, and produced within the United States.

B. Product Characteristics: Paving/Flatwork: Integral Color

1. Quality: All concrete shall have the following minimum compressive strengths at twenty-eight (28) days and shall be proportioned within the following limits:

a. 4,000 psi minimum compressive strength.

b. 1" maximum size aggregate.

c. 6.0 minimum sacks of cement per cubic yard.*

d. Maximum water to cement ratio of 0.55.

e. 4" maximum slump.

f. Xypex Admix C-500 2% - 2.5% by weight of cement content. Contact Xypex Technical Services to confirm dosage. (To be used for swimming pool decks only.)

* For estimate only: to be determined by mix design.

2. Cement: All cement shall be Portland Cement conforming to ASTM C 150, Type II or V and shall be the product of one manufacturer.

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3. Aggregates:

a. Shall conform to “Standard Specifications for Concrete Aggregates,” ASTM C33, except as modified herein.

b. Coarse Aggregate: Clean sound washed gravel or crushed rock. Crushing may constitute not more than 30% of the total coarse aggregate volume. Not more than 5% flat, thin, elongated or laminated material nor more than 1% deleterious material shall be present. 1" aggregate graded from 1/4” to 1”, fineness modulus 6.90 to 7.40. 1 1/2” graded from ½” to 1 1/2”, fineness modulus 7.80 to 8.20.

c. Fine Aggregate: Washed natural sand of hard, strong particles and shall contain not more than 1% of deleterious material, fineness modulus 2.65 to 3.05.

d. Aggregate must be certified, non-expansive from a “known” good source.

4. Water: Clean, fresh, free from acid, alkali, organic matter or other impurities liable to be detrimental to the concrete (potable).

5. Admixtures: Admixtures shall be used upon approval of the Owner's Representative.

a. Air-entraining admixture: Conform to ASTM C260.

b. Water-reducing admixture: Conform to ASTM C494.

c. Waterproofing admixture for swimming pool decks only: Xypex Admix C-500, No substitutions permitted. Conform to ASTM C494.

6. Xypex Admix C-500 Dosage: To be used for swimming pool decks only.

a. General: Xypex Admix must be added to concrete mix at time of batching. It is important to obtain a homogeneous mixture of Xypex Admix with the concrete. Do not add dry Admix powder directly to wet mixed concrete as this could cause clumping and thorough dispersion may not occur.

b. Dosage Rate: Under normal conditions, the crystalline waterproofing powder shall be added to the concrete mix at the following rates:

1.) Xypex Admix C-500 2% – 2.5% by weight of cement content

c. Weather Conditions: For mixing, transporting and placing concrete under conditions of high temperature or low temperature, follow concrete practices such as those referred to in ACI 305R (Hot Weather Concreting) and ACI 306R (Cold Weather Concreting) or other applicable standards.

d. Concrete Batching & Mixing Procedures: Procedures for the addition of Xypex admixture will vary according to type of batch plant operation and equipment. Prior to the placement of any concrete, the concrete batch plant and the contractor shall be responsible to consult with the local Xypex representative concerning additional procedures for the addition, mixing and to confirm dosage.

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Note: For enhanced chemical protection or for meeting specific project requirements or where the concrete mix design contains higher than 25% type F fly ash content or includes a Portland cement/slag cement/type C fly ash blend, consult with manufacturer or its authorized representative to determine appropriate dosage rates.

D. Cement Grout and Drypack:

1. Cement Grout: Mix 1 part by volume of Portland Cement, 1/2 part by volume of water and fine aggregate enough to make mixture flow under its' own weight.

2. Drypack: Mix 1 part by volume of Portland Cement, 1/2 part by volume of water and fine aggregate enough to make a stiff mix that will mold into a ball. Mix no more than can be used in 30 minutes.

2.3 PAVING BASE

A. All aggregate base material shall conform to Class 2 aggregate base as defined in Section 26-1.02A of the latest edition of the Caltrans Standard Specifications.

2.4 REINFORCING STEEL

A. All deformed bar shall comply with Standard Specifications and per Drawings. Size per plan.

B. Expansion joint dowels shall be smooth, per ASTM A615.

2.5 EXPANSION JOINT MATERIAL

B. Product Description

1. Series: Flexible foam expansion joint filler.

3. Material: Synthetic foam

4. Thickness: 1/4" minimum thickness.

2.6 JOINT SEALANT MATERIALS

A. Caulking: Multipart, non-sag gun grade polyurethane based sealant meeting the requirements of ASTM C920-02, Type S or M, Mamemco International, Pecora, Sika Corp., Sonneborn Building Products, Tremco or approved equal. Self leveling caulking materials are not allowed.

B. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

C. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

D. Sealant Backer Rod: Provide compressible polyethylene or polyurethane backer rod as recommended by the sealant manufacturer.

E. Bond Breaker Tape: Provide polyethylene tape or other plastic tape as recommended by sealant manufacturer, to be applied to sealant-contact surfaces where bond to substrate or joint filler must be avoided for proper performance of sealant.

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F. Sand: Cover the surface of the caulking with #30 silica sand.

2.7 CONSTRUCTION JOINTS

A. Use keyform for slab pour joints. Either preformed galvanized or PVC construction joint forms of a standard manufacturer may be used. Install per manufacturer's recommendations and tool edges of slabs.

2.8 CURING MATERIALS

A. Liquid Membrane (covered slab): Chlorinated rubber membrane forming, curing-sealing compound conforming to ASTM C309.

B. Liquid Membrane (exposed slab): Clear methyl and butyl methacrylate non-staining, membrane forming, curing-sealing compound conforming to ASTM C309.

2.9 OTHER MATERIALS

A. All other materials not specifically described but required for complete and proper installation of this work, shall be selected by the contractor and subject to the approval of the College's Representative.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Inspection

1. Prior to all work of this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.

2. Verify that concrete pavement may be installed in strict accordance with the original design, all pertinent codes and regulations, and all pertinent portions of the referenced standards.

3. Prior to paving the site, the exposed pavement subgrade should be scarified to a depth of 12 inches, brought to approximately optimum moisture content, and compacted to at least 95 percent of the maximum dry density, as determined in general accordance with ASTM D1557.

B. Discrepancies

1. In the event of discrepancy, immediately notify the Project Manager.

2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.2 FORMWORK

A. General

1. Construct forms accurately to dimensions, plumb and true to line and grade. Use forms that are substantial, mortar tight, braced and tied so as to maintain position and shape during placing of reinforcing and concrete.

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2. Wavy surfaces and bulged walls or slab surfaces resulting from settlement or springing of formwork will be rejected.

3. Carefully verify and check all forms for alignment and level as the work proceeds. Promptly make all needed adjustments or additional bracing.

B. Construction Joints: Construct and assemble forms in such a manner that joints occur at accepted locations. Thoroughly clean forms before pouring concrete.

C. Details: Take extreme care in all details of forming, setting and reinforcing. Except where tooled or radiused corners are indicated, provide all exposed concrete finish work with smooth, even surfaces of dense concrete with clean sharp arises and outside corners.

D. Prior to Pouring Concrete

1. Thoroughly clean out all forms to be used.

2. Thoroughly wet wood forms as required where form coatings are not used.

E. Removal of Forms:

1. Do not remove supporting forms or shoring until concrete has sufficient strength to carry its own weight and other loads upon it.

2. Remove forms only after concrete has properly set and without damaging concrete.

3.3 CAST-IN-PLACE CONCRETE

A. Conveying and Placing Concrete:

1. Before placing concrete, mixing and conveying equipment shall be well cleaned, and the forms and space to be occupied by concrete shall be thoroughly cleaned and wetted. Ground water shall be removed until the completion of the work.

2. No concrete shall be placed in any unit of work until all formwork has been completely constructed, all reinforcement has been secured in place, all items to be built into concrete are in place, and form ties at construction joints tightened.

3. Concrete shall be conveyed from mixer to place of final deposit in such a way to prevent the separation or loss of ingredients. It shall be placed as nearly as practicable in its' final position to avoid rehandling or flowing. Concrete shall not be dropped freely where reinforcing bars will cause segregation, nor shall it be dropped freely more than six (6) feet. Use tremies, spouts and dump boxes in deep sections. Vibrators are not acceptable for facilitating concrete transport.

4. Concrete shall be tamped and spaded to insure proper compaction into all parts of forms and around reinforcement. A mechanical vibrator shall be used to thoroughly compact the concrete. Vibration must be by direct action in the concrete and not against forms or reinforcement.

5. Mixing and transport time as indicated in ASTM C94 is required. If air temperatures are between 85° and 90° F the delivery time is to be reduced to 75 minutes. When air temperatures is in excess of 90° F the delivery time should be reduced to 60 minutes.

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6. Truck mixes without batch certificates will be rejected.

B. Construction Joints / Expansion Joints: Construction joints and expansion joints shall be provided at locations and in the manner shown on the Drawings. With exception of existing concrete / new shotcrete joints, use PVC bulb-type waterstops appropriate for design condition between all concrete pours / lifts to avoid cold joints. Waterstops shall be placed in such a way to protect reinforcing steel from rust and oxidation. All expansion joints must be the full depth of the concrete section in which they are located.

C. Slab Finishes: Concrete slabs shall be compacted and screeded uniformly to grades shown. Push large aggregates below the surface with a screen tamper, screed and bull float. As soon as the surface becomes workable, it shall be wood floated, then finished as indicated on the Drawings to a uniform smooth, true surface in a neat and workmanlike manner. Carefully coordinate slab finish requirements with other trades (ceramic tile, pool plaster) to ensure concrete finish is appropriate substrate for final finish material.

1. Pool Deck Finish: Heavy Wire Broom Finish or to match selected mock up finish

D. Protection and Curing:

1. Concrete shall be protected from injurious action of the elements and defacement of any nature during construction.

2. All forms must be kept wet to prevent drying out of the concrete.

3. All concrete surfaces including footings must be kept wet for at least seven (7) days after concrete is placed.

4. Apply the appropriate curing materials, as specified in 2.03 of this Section, immediately after finishing slabs. Application shall be as specified by the manufacturer.

E. Form Removal:

1. Take care in removing forms so that surfaces are not marred or gouged and that corners are true, sharp and unbroken.

2. No steel spreaders, ties or other metal shall project from or be visible on any concrete surfaces.

F. Defective Work:

1. Should the strength of any concrete for any portion of the work indicated by tests of molded cylinders and core tests fall below minimum 28 days strength specified or indicated, concrete will be deemed defective work and shall be replaced.

2. Concrete work that is not formed as indicated, is not true to intended alignment, not plumb or level where so intended, not true to intended grades or elevations, not true to specified or selected finish, contains sawdust shavings, wood, or embedded debris, which exhibits cracks or contains fine or coarse sulfide particles, or expansive aggregates detrimental to performance or appearance of the concrete shall be deemed defective.

3. Promptly perform work required to replace and properly clean (by sandblasting if necessary) any defective concrete panels (control joint or expansion joint to control joint or expansion joint),

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at Contractor's expense, including all expense of additional inspection, tests, or supervision made necessary as a result of defective concrete.

3.06 EXPANSION JOINTS

A. Temperatures: Do not install sealants when air temperature is less than 40°F.

B. Tooling: Tool exposed joints to a slightly concave surface using slicking materials recommended by the manufacturer. The tooling procedure shall press sealant against the sides of the joint. No materials shall be left “feathered” out or smeared on the abutting materials. Completed joints shall have a uniform professional appearance.

C. Joint Construction: Sealant joint width, thickness and cross-sectional profile to be constructed in strict accordance with the sealant manufacturer’s recommendations.

D. Sand: At the appropriate time cover the sealant with sand to provide a sanded finish.

3.5 FIELD QUALITY CONTROL

A. Inspection and Testing

1. Coordinate taking of concrete cylinders for testing of concrete paving per Divisions 1 and 3.

2. Evaluate surfaces for grade and drainage. Correct all non-conforming surfaces, ponds, and other irregularities to the satisfaction of the Client’s Representative.

3.6 TOLERANCES

A. General: Variations below list the maximum permissible deviations from established lines, grades and dimensions for all exposed concrete paving.

B. Variation from Plumb:

1. In the lines and surfaces of walls and pavements: In 10 feet, maximum 1/4 inch.

2. For exposed corners, control-joint grooves and other conspicuous lines:

a. In any 10 feet, maximum 1/4 inch

b. In any 20 feet or more, 1/2 inch

C. Variation from the Level or from the Grades shown per Drawings:

1. In pavements, walls and tops of curbing: In any 10 feet, 1/4 inch

2. For exposed joints and other conspicuous lines: In any 10 feet, maximum 1/4 inch

D. Variation in Cross-Sectional Thickness of Slabs and Walls, without reducing tolerances established for line, plumb, and level: Minus 1/4 inch; Plus 1/2 inch

E. Variation in Radii

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1. In radii of less than 10 feet:

    a. In any 5 feet, 1/8 inch

    b. In any 10 feet, 1/4 inch

2. In radii of 20 feet:

    a. In any 10 feet, 1/4 inch

    b. In any 20 feet, 3/8 inch

3. In radii of 30 feet or more:

    a. In any 20 feet, 1/2 inch

    b. In any 30 feet, 1 inch

3.07 CLEAN-UP

A. Upon completion of the Work of this Section, immediately remove all swimming pool concrete materials, debris and rubbish occasioned by this Work to the approval of the Project Manager.

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SECTION 32 13 18

CEMENT AND CONCRETE FOR EXTERIOR IMPROVEMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Materials for portland cement concrete

B. Aggregate and aggregate grading for portland cement concrete

C. Water for portland cement concrete

D. Admixtures for portland cement concrete

E. Proportioning for portland cement concrete

F. Mixing and transporting portland cement concrete

G. Formwork for cast in place portland cement concrete

H. Embedded materials for portland cement concrete

I. Steel reinforcement for portland cement concrete

J. Placing and finishing portland cement concrete

K. Curing portland cement concrete

L. Protecting portland cement concrete

1.2 RELATED SECTIONS

A. Section 32 13 13, Concrete Pavement

1.3 RELATED DOCUMENTS

A. ASTM Standards
   1. A615, Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
   2. A1064, Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
   3. C94, Standard Specification for Ready-mixed Concrete
   4. C150, Standard Specification for Portland Cement
   5. C260, Standard Specification for Air-Entraining Admixtures for Concrete
   6. C309, Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
   7. C494, Standard Specification for Chemical Admixtures for Concrete
   8. C618, Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for use in Portland Cement
   9. C1017, Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
   10. D1557, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort

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11. D1751, Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)

B. Caltrans Standard Specifications 2018 or current edition
   1. Section 51: Concrete Structures
   2. Section 73: Concrete Curbs and Sidewalks
   3. Section 90: Concrete

1.4 DEFINITIONS

A. ASTM: American Society for Testing and Materials

1.5 SUBMITTALS

A. Concrete Mix Design: Have all concrete mixes designed by a testing laboratory and approved by the Consulting Engineer. Conform all mixes to the applicable building code requirement, regardless of other minimum requirements listed herein or on the Plans. Submit mix designs for review before use. Show proportions and specific gravities of cement, fine and coarse aggregate, and water and gradation of combined aggregates.

B. Reinforcing Steel Shop-Drawings

1.6 QUALITY ASSURANCE

A. Concrete shall be subject to quality assurance in accordance with Section 90 of the Caltrans Standard Specifications.
   1. Slump tests: Have available, at job site, equipment required to perform slump tests. Make one slump test for each cylinder sample, from same concrete batch. Allowable maximum slump shall be 4 inches for walls and 3 inches for slabs on grade and other work.

B. Certifications:
   1. Provide Owner's Representative at the time of delivery with certificates of compliance signed by both Contractor and Supplier containing the following statements:
      a. Materials contained comply with the requirements of the Contract Documents in all respects.
      b. Proportions and mixing comply with the design mix approved by the Consulting Engineer. Design mix shall have been field tested in accordance with the herein requirements of the Caltrans Standard Specifications and produces the required compressive strength under like conditions.
      c. Statement of type and amount of any admixtures.
   2. Provide Owner's Representative, at time of delivery, with certified delivery ticket stating volume of concrete delivered and time of mixing, or time of load-out in case of transit mixers.

1.7 DESIGNATION

A. General: Whenever the 28 day compressive strength is designated herein or on the Plans is 3,600 psi or greater, the concrete shall considered to be designated by compressive strength. The 28 day compressive strength shown herein or on the plans which are less than 3,600 psi are shown for design information only and are not considered a requirement for acceptance of the concrete. Whenever the concrete is designated by class or as minor concrete herein or on the Plans, the concrete shall

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contain the cement per cubic yard shown in Section 90-2 of the Caltrans Standard Specifications.

B. Unless specified otherwise herein or on the Plans, portland cement concrete for curbs, gutters, sidewalks and their appurtenances such as island paving, curb ramps and driveways, shall be minor concrete as specified in Section 90-2 of the Caltrans Standard Specifications.

PART 2 - PRODUCTS

2.1 PORTLAND CEMENT

A. General: Type II or Type V cement conforming to the requirements of ASTM C150. Contractor may substitute pozzolan for portland cement in amounts up to 15% of the required mix unless high early strength concrete is specified. Pozzolan shall consist of Class F Fly Ash meeting the requirements of ASTM C618.

2.2 AGGREGATE AND AGGREGATE GRADATION

A. General: Fine and coarse aggregates shall be ¾ inch maximum size; clean and crushed aggregate free of materials which may cause staining. Aggregates shall conform to the requirements of section 90-1.02C of the Caltrans Standard Specifications.

B. Aggregate Size and Gradation: Conform to the requirements of section 90-1.02C(4)(d) of the Caltrans Standard Specifications for 1 inch maximum combined aggregate.

2.3 WATER

A. General: Water shall be clean, free from injurious amounts of oil, alkali, organic matter, or other deleterious material, and not detrimental to concrete per ASTM C94. Water shall conform to the requirements of section 90-1.02D of the Caltrans Standard Specifications, for mixing and curing portland cement concrete and for washing aggregates.

2.4 CHEMICAL ADMIXTURES

A. Provide admixtures certified by manufacturer to be compatible with other admixtures and to contain no more than 0.1 percent water-soluble chloride ions by mass of cementitious material. Admixtures shall conform to the requirements of section 90-1.02E of the Caltrans Standard Specifications and as noted herein or on the Plans.

1. Air-Entraining Admixture: ASTM C260/C260M
2. Water-Reducing Admixture: ASTM C494/C494M, Type A
3. Retarding Admixture: ASTM C494/C494M, Type B
4. Water-Reducing and Retarding Admixture: ASTM C494/C494M, Type D
5. High-Range, Water-Reducing Admixture: ASTM C494/C494M, Type F
6. High-Range, Water-Reducing and Retarding Admixture: ASTM C494/C494M Type G
7. Plasticizing and Retarding Admixture: ASTM C1017/C1017M, Type II

2.5 CLASSIFICATION OF PORTLAND CEMENT CONCRETE

A. Unless specified otherwise herein or on the Plans, portland cement concrete for the following items shall be designated as follows:

1. Curbs, Gutters, and Sidewalks: Minor concrete.
2. Cast in Place Concrete Pipe: The concrete shall consist of a minimum of 564 pounds of portland cement per cubic yard of concrete.

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3. Thrust Blocks: The concrete shall have a minimum compressive strength of 3,000 psi.
4. Sign and Fence Footings: The concrete shall consist of a minimum of 376 pounds of portland cement per cubic yard of concrete.
5. Water, Storm, and Sanitary Structures: The concrete shall consist of a minimum of 564 pounds of portland cement per cubic yard of concrete.

2.6 EXPANSION JOINT MATERIAL

A. Material for expansion joints in portland cement concrete improvements shall be premolded expansion joint fillers conforming to the requirements of ASTM D1751. Expansion joint material shall be shaped to fit the cross section of the concrete prior to being placed. Suppliers certificates showing conformance with this specification shall be delivered with each shipment of materials delivered to the job site. Unless specified otherwise herein or on the Plans, expansion joint thickness shall be as follows:
1. Concrete Slope Protection, Gutter Lining, Ditch Lining and Channel Lining: ½ inch
2. Structures: As indicated

2.7 REINFORCEMENT AND DOWELS

A. Bar reinforcement for concrete improvements shall be deformed steel bars of the size or sizes called for on the plans conforming to the requirements of ASTM A615 for Grade 60 bars. Size and shape for bar reinforcement shall conform to the details shown or called for on the Plans. Substitution of wire mesh reinforcement for reinforcing bars will not be allowed.

B. Slip dowels, where noted or called for on the Plans or detail drawings shall be smooth billet-steel bars as designated and conforming to the requirements of ASTM A615 for Grade 60 bars. Ends of bars inserted in new work shall be covered with a cardboard tube sealed with cork; no grease or oil shall be used.

C. Mesh for reinforcement for concrete improvements shall be cold drawn steel wire mesh of the size and spacing called for on the plans conforming to the requirements of ASTM A1064. Size and extent of mesh reinforcement shall conform to the details shown or called for on the plans.

D. Tie wire for reinforcement shall be eighteen (18) gauge or heavier, black, annealed conforming to the requirements of ASTM A1064.

E. Suppliers certificates showing conformance with this specification shall be delivered with each shipment of materials delivered to the job site.

2.8 CURING AND SEALING MATERIALS

A. Curing Compounds:
1. Concrete surface repellent-vertical and/or flatwork: Repello surface treatment, invisible chemical treatment barrier system.

2.9 FORMS

A. Conform to the requirements of Section 73-1.03C and Section 90-1.03B(1) of the Caltrans Standard Specifications.

B. Tolerance: Not to deviate more than ¼ inch in 10 feet in grade and alignment.

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2.10 PRECAST CONCRETE STRUCTURES

A. Conform to the following Sections of Caltrans Standard Specifications:
   1. 51-7, Minor Structures
   2. 70-5.02, Flared End Sections

PART 3 - EXECUTION

3.1 STRUCTURAL EXCAVATION

A. Structural excavation may be either by hand, or by machine and shall be neat to the line and dimension shown or called for on the plans. Excavation shall be sufficient width to provide adequate space for working therein, and comply with CAL-OSHA requirements.

B. Where an excavation has been constructed below the design grade, refill the excavation to the bottom of the excavation grade with approved material and compact in place to 95% of the maximum dry density as determined by ASTM D1557.

C. Remove surplus excavation material remaining upon completion of the work from the job site, or condition it to optimum moisture content and compact it as fill or backfill on the site.

3.2 BRACING AND SHORING

A. Conform to California and Federal OSHA requirements.

B. Place and maintain such bracing and shoring as may be required to support the sides of the excavations for the proper protection of workmen; to facilitate the work; to prevent damage to the facility being constructed; and to prevent damage to adjacent structures or facilities. Remove all bracing and shoring upon completion of the work.

C. Be solely responsible for all bracing and shoring and, if requested by the Owner's Representative, submit details and calculations to the Owner's Representative. The Owner's Representative may forward the submittal to the Consulting Engineer for their review. The Contractor's submittal shall include the basic design, assumed soils conditions and estimation of forces to be resisted, together with plans and specifications of the materials and methods to be used, and shall be prepared by a civil engineer or structural engineer registered in California. No excavations related to the proposed facility shall precede a response to the submittal by the Owner's Representative.

D. Be solely responsible for installing and extracting the sheathing in a manner which will not disturb the position or operation of the facility being constructed or adjacent utilities and facilities.

3.3 PLACING CONCRETE FORMS

A. Form concrete improvements with a smooth and true upper edge. Side of the form with a smooth finish shall be placed next to concrete. Construct forms rigid enough to withstand the pressure of the fresh concrete to be placed without any distortion.

B. Thoroughly clean all forms prior to placement and coat forms with an approved form oil in sufficient quantity to prevent adherence of concrete prior to placing concrete.

C. Carefully set forms to the alignment and grade established and conform to the required dimensions. Rigidly hold forms in place by stakes set at satisfactory intervals. Provide sufficient clamps, spreaders and braces to insure the rigidity of the forms.

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D. Provide forms for back and face of curbs, lip of gutters and edge of walks, valley gutters or other surface slabs that are equal to the full depth of the concrete as shown, noted or called for on the Plans. On curves and curb returns provide composite forms made from benders or thin planks of sufficient ply to ensure rigidity of the form.

3.4 PLACING STEEL REINFORCEMENT

A. Bars shall be free of mortar, oil, dirt, excessive mill scale and scabby rust and other coatings of any character that would destroy or reduce the bond. All bending shall be done cold, to the shapes shown on the plans. The length of lapped splices shall be as follows:

1. Reinforcing bars No. 8, or smaller, shall be lapped at least 45 bar diameters of the smaller bar joined, and reinforced bars Nos. 9, 10, and 11 shall be lapped at least 60 bar diameters of the smaller bars joined, except when otherwise shown on the plans.
2. Splice locations shall be made as indicated on the plans.

B. Accurately place reinforcement as shown on the plans and hold firmly and securely in position by wiring at intersections and splices, and by providing precast mortar blocks or ferrous metal chairs, spacers, metal hangers, supporting wires, and other approved devices of sufficient strength to resist crushing under applied loads. Provide supports and ties of such strength and density to permit walking on reinforcing without undue displacement.

C. Place reinforcing to provide the following minimum concrete cover:

1. Surfaces exposed to water: 4 inches.
2. Surfaces poured against earth: 3 inches.
3. Formed surfaces exposed to earth or weather: 2 inches.
4. Slabs, walls, not exposed to weather or earth: 1 inch.

D. Minimum spacing, center of parallel bars shall be two and one half (2 ½) times the diameter of the larger sized bar. Accurately tie reinforcing securely in place prior to pouring concrete. Placing of dowels or other reinforcing in the wet concrete is not permitted.

3.5 MIXING AND TRANSPORTING PORTLAND CEMENT CONCRETE

A. Transit mix concrete in accordance with the requirements of ASTM Designation C94. Transit mix for not less than ten (10) minutes total, not less than three (3) minutes of which shall be on the site just prior to pouring. Mix continuous with no interruptions from the time the truck is filled until the time it is emptied. Place concrete within one hour of the time water is first added unless authorized otherwise by the Owner's Representative.

B. Do not hand mix concrete for use in concrete structures.

3.6 PLACING PORTLAND CEMENT CONCRETE

A. Thoroughly wet subgrade when concrete is placed directly on soil. Remove all standing water prior to placing concrete.

B. Do not place concrete until the subgrade and the forms have been approved.

C. Convey concrete from mixer to final location as rapidly as possible by methods that prevent separation of the ingredients. Deposit concrete as nearly as possible in final position to avoid re-handling.

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D. Place and solidify concrete in forms without segregation by means of mechanical vibration or by other means as approved by the Owner's Representative. Continue vibration until the material is sufficiently consolidated and absent of all voids without causing segregation of material. The use of vibrators for extensive shifting of fresh concrete will not be permitted.

E. Concrete in certain locations may be pumped into place upon prior approval by the Owner's Representative. When this procedure requires redesign of the mix, such redesign shall be submitted for approval in the same manner as herein specified for approval of design mixes.

3.7 PLACING ACCESSORY MATERIALS

A. Place water stops and other items required to be embedded in of portland cement concrete structures at locations shown or required in accordance with Section 51-2.04 of the Caltrans Standard Specifications unless otherwise specifically noted or called for on the Plans.

B. Curing Compounds:

1. Regular Portland Cement Concrete: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

3.8 FORM REMOVAL

A. Remove forms without damage to the concrete. Remove all shores and braces below the ground surface, before backfilling.

B. Do not backfill against concrete until the concrete has developed sufficient strength to prevent damage.

C. Leave forms for cast-in-place walls in place at least 72 hours after pouring.

D. Leave edge forms in place at least 24 hours after pouring.

3.9 FIELD QUALITY CONTROL

A. Finish subgrade for concrete improvements shall be subject to approval prior to placement of forms.

B. No concrete shall be placed prior to approval of forms.

C. Concrete improvements constructed shall not contain "bird baths" or pond water and shall be smooth and ridge free.

D. Conform the finish grade and cross section of concrete improvements to the design grades and cross sections.

E. Variation of concrete improvements from design grade and cross section as shown or called for on the plans shall not exceed the tolerances ACI 117 and as follows:

1. Elevation: ¼ inch.
2. Thickness: Plus 3/8 inch, minus 1/4 inch.
3. Surface: Gap below 10 foot long, unleveled straightedge not to exceed 1/4 inch.
4. Lateral Alignment and Spacing of Tie Bars and Dowels: 1 inch.
5. Vertical Alignment of Tie Bars and Dowels: 1/4 inch.

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6. Alignment of Tie-Bar End Relative to Line Perpendicular to Pavement Edge: 1/2 inch.
7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Pavement Edge: Length of dowel 1/4 inch per 12 inches.
8. Joint Spacing: 3 inches, unless otherwise indicated.
9. Contraction Joint Depth: Plus 1/4 inch, no minus.
10. Joint Width: Plus 1/8 inch, no minus.

3.10 RESTORATION OF EXISTING IMPROVEMENTS

A. Replace in kind all pavement or other improvements removed or damaged due to the installation of concrete improvements.

B. Remove, landscaping or plantings damaged or disturbed due to the installation of concrete improvements. Replace in kind.

END OF SECTION

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SECTION 32 31 19

ORNAMENTAL METAL FENCES AND GATES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Ornamental metal fence system and associated gates.

1.2 REFERENCES

A. ASTM International (ASTM):

1. A239 Practice for Locating the Thinnest Spot in a Zinc(Galvanized) Coating on Iron or Steel Articles.

2. A653/A653M Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy- Coated (Galvannealed) by the Hot-Dip Process.

3. A1008/A1008M Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High- Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable.

4. A1011/A1011M Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low- Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.

5. B117 Practice for Operating Salt Spray (Fog) Apparatus.

6. D523 Test Method for Specular Gloss.

7. D714 Test Method for Evaluating Degree of Blistering of Paints

8. D1654 Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments.

9. D2244 Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates.

10. D2794 Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).

11. D3359 Test Methods for Measuring Adhesion by Tape Test.

12. E4 Practices for Force Verification of Testing Machines.

13. F2814 Guide for Design and Construction of Ornamental Steel Picket Fence Systems for Security Purposes.

14. F2408 Standard Specification for Ornamental Fences Employing Galvanized Steel Tubular Pickets.

1.3 SUBMITTALS

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A. Product Data: Manufactures information for each type of product indicated.

B. Shop Drawings: Product elevations, sections, and details as necessary.

C. Product Warranty: Pickets, Posts, and Rails standard limited warranty that ornamental fence system is free from defects in material and workmanship including cracking, peeling, blistering and corroding as specified in subsection 1.7.B. Warranty.

1.4 QUALITY ASSURANCE

A. The contractor shall provide laborers and supervisors who are thoroughly familiar with the type of construction involved and the materials and techniques specified.

B. Provide complete fence system and gates, with all components provided by a single manufacturer, including all panels, posts, gates, fittings and hardware.

C. Manufacturer Qualifications: Company specializing in manufacturing of steel ornamental picket fence systems with a minimum of 5 years documented experience.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Panels, gates, posts, and accessories to be delivered to the project site assembled and coated. Upon receipt at the job site, all materials shall be checked to ensure that no damages occurred during shipping.

B. Materials shall be handled and stored properly to protect against damage, weather, vandalism and theft.

1.6 PROJECT CONDITIONS

A. Field Measurements: Take field measurements prior to fabrication of the work and preparation of shop drawings, to ensure proper fitting of the work. Show recorded measurements on final shop drawings. Notify the Project Manager, in writing, of any dimensions found which are not within specified dimensions and tolerances in the Contract Documents, prior to proceeding with the fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the work.

1.7 WARRANTY

A. Warranty: Submit a written warranty, signed by manufacturer, covering failure of the material and/or the factory-applied exterior finish within the specified warranty period and agreeing to repair finish or replace work that shows evidence of finish deterioration. Deterioration of finish includes cracking, checking, or peeling.

1. Warranty Period: 15 years.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Basis-of-Design Product: Subject to compliance with requirements, provide Merchants Metals 'Guardsman Monroe' ornamental metal fencing, or a comparable product by one of the following:

1. Ameristar Fence Products.

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2. Or approved equal.

B. Substitutions: Requests for substitutions will be considered in accordance with provisions of General Conditions.

2.2 MATERIALS

A. Pickets: Galvanized steel tubular members manufactured per ASTM F2408, with a minimum yield strength of 45,000 psi. Minimum picket size: 3/4” square, 16 gauge with pickets spaced 4-5/8” on-center and 3-7/8” face to face of picket.

B. Rails: 1-3/8” x 1-1/2”, 11 gauge galvanized steel “U” channel, shall conform to the requirements F2408 Sect 5.1.2 galvanized prior to forming, with a minimum yield strength of 50,000 psi., the steel shall be hot-dip galvanized to meet A653/A653M with a minimum zinc coating weight of 0.9 oz/ft2, Coating Designation G-90. Punched rails to receive pickets. Attach pickets to rails with industrial rivets. Attach rails to posts with brackets.

C. Posts: Galvanized square steel tubular members manufactured per ASTM F2408, having minimum yield strength of 45,000 psi.

D. Finish: Manufactured in compliance with ASTM F2408 - Corrosion Resistance Salt Spray Test per ASTM B117, Impact Resistance per ASTM D2794, and Adhesion per ASTM D3359 Method B. All primary components shall receive a thorough cleaning and pre-treatment with a 10-step process: Hot alkaline cleaner, clear water rinse, hot iron phosphate application, clear water rinse, reverse Osmosis rinse, dry off oven heat, zinc enriched powder primer coat at 2-4 mils., gel oven heat, Ultra polyester finish T.G.I.C. powder coat at 2-4 mils., and final curing oven.

1. Color: Black

2.3 ACCESSORIES

A. Industrial drive rivets hold pickets to rails and rails to brackets. Rivets must have a sheer strength of 1,500 lbs. and a holding power of 1,100 lbs.

B. Rail/Post Brackets: Universal Bracket - biasable up and down.

C. Post Caps: Cast aluminum or malleable iron or formed steel manufactured to form a weather-tight closure. Choose Cap style: Ball or flat tops - on all posts.

D. Rings: Cast aluminum rings attached to rails by insertion of mounting block into upper rail. Rivet ring to rail. Ring to be secure and un-removable.

E. Finial Tops for Pickets: Cast aluminum, attached to pickets by 1/4" rivet. All Finials extend 6" above rail. Choose one: Fleur-de-lis, Quad Flair with Ball, Triad Spear, or approved equal. Provide for Architect review and approval.

2.4 GATES

A. Gates shall be fabricated using the same components as for the complete fencing system. Walkway gates shall have adjustable self-closing hinges and shall be self-latching. Maintenance access gates shall have drop rod.

1. Model: Double Gate – Basic Flat.

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2. Width: As noted on plans.

3. Height: Match existing adjacent height, verify in field.

4. Finish: Same as fencing.

2.5 SETTING MATERIALS

A. Concrete: Minimum 28 day compressive strength of 3,000 psi.

B. Flanged Post: Provide flanged base plates with 4 holes for surface mounting where indicated. (For wall mount or pad mount situations).

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify areas to receive fencing are completed to final grades and elevations.

B. Property lines and legal boundaries of work to be clearly established by the general contractor or property owner.

3.2 PREPARATION

A. Prepare the grade and remove surface irregularities, if any, which may cause interference with the installation of the fence.

3.3 INSTALLATION

A. Install fence in accordance with site conditions and codes.

B. Space posts uniformly at manufactures standard face to face of post dimension unless instructed otherwise.

C. Set posts in concrete. Dig holes having a diameter 4 times the diameter of the post, and 6" deeper than the bottom of the post. Crown concrete at top to shed water.

D. Attach brackets using 1/4" bolts with lock nuts. Attach panels and place tops on bracket. Rivet top to bracket in 2 places to assure security.

3.4 ADJUSTING AND CLEANING

A. Touch-up, repair, or replace damaged products before Substantial Completion.

B. Clean the work according to manufacturer's written instructions. The Contractor shall clean the job site of excess materials. Post hole excavations shall be scattered uniformly away from the posts. Clean fence with mild household detergent and rinse well with clean water. Mortar shall be removed from exposed posts using a 10 percent solution of muriatic acid followed immediately by several rinses with clean water.

3.5 PROTECTION

A. Provide final protection and maintain conditions in a manner acceptable to the Installer which will ensure that the work shall be without damage at time of Substantial Completion.

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END OF SECTION

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SECTION 33 41 00

STORM UTILITY DRAINAGE PIPING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Site storm drainage system up to five feet of any on-site building

1.2 RELATED SECTIONS

A. Section 31 21 00, Utility Trenching and Backfill

B. Section 32 13 18, Cement and Concrete for Exterior Improvements

1.3 RELATED DOCUMENTS

A. AASHTO
1. M199: Precast Reinforced Concrete Manhole Sections
2. M252: Corrugated Polyethylene Drainage Pipe
3. M294: Corrugated Polyethylene Pipe, 12 to 604 inch Diameter

B. ASTM
1. A74: Cast Iron Soil Pipe and Fittings
2. A615: Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
3. C143: Standard Test Method for Slump of Hydraulic-Cement Concrete
4. C443: Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
5. C478: Circular Precast Reinforced Concrete Manhole Sections
6. C564: Rubber Gaskets for Cast Iron Soil Pipe and Fittings
7. C923: Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals
8. C1173: Flexible Transition Couplings for Underground Piping Systems
9. D1785: Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
10. D2321: Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications
11. D2564: Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems
12. D3034: Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings
13. D4101: Propylene Injection and Extrusion Materials
14. F477: Elastomeric Seals (Gaskets) for Joining Plastic Pipe
15. F656: Primers for Use in Solvent Cement Joints of Poly(Vinyl Chloride) (PVC) Plastic Pipe and Fittings
16. F679: Poly(Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings
17. F1336: Poly(Vinyl Chloride) (PVC) Gasket Sewer Fittings

C. AWWA
1. C104: Cement-Mortar Lining for Ductile-Iron Pipe and Fittings
2. C105: Polyethylene Encasement for Ductile-Iron Pipe Systems
3. C110: Ductile-Iron and Gray-Iron Fittings, 3-In. Through 48-In. for Water
4. C111: Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
5. C115: Flanged Ductile-Iron Pipe With Ductile-Iron or Gray-Iron Threaded Flanges

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6. C116: Protective Fusion-Bonded Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings
7. C150: Thickness design of Ductile Iron Pipe
8. C151: Ductile-Iron Pipe, Centrifugally Cast
9. C153: Ductile-Iron Compact Fittings
10. C219: Bolted, Sleeve-type Couplings for Plain-End Pipe
11. M41: Ductile Iron Pipe and Fittings

D. Caltrans Standard Specifications, 2015
1. Section 51, Concrete Structures
2. Section 52, Reinforcement
3. Section 65, Concrete Pipe
4. Section 66, Corrugated Metal Pipe
5. Section 70, Miscellaneous Drainage Facilities
6. Section 72, Slope Protection
7. Section 75, Miscellaneous Metal
8. Section 90, Concrete

E. Caltrans Standard Plans, 2015
1. Plan D94A: Metal and Plastic Flared End Sections
2. Plan D94B: Concrete Flared End Sections
3. Plan D97A: Corrugated Metal Pipe Coupling Details No. 1, Annular Coupling Band Bar and Strap and Angle Connection
4. Plan D97C: Corrugated Metal Pipe Coupling Details No. 3, Helical and Universal Couplers
5. Plan D97D: Corrugated Metal Pipe Coupling Details No. 4, Hugger Coupling Bands
6. Plan D97E: Corrugated Metal Pipe Coupling Details No. 5, Standard Joint
7. Plan D97F: Corrugated Metal Pipe Coupling Details No. 6, Positive Joint
8. Plan D97G: Corrugated Metal Pipe Coupling Details No. 7, Downdrain
9. Plan D98A: Slotted Corrugated Steel Pipe Drain Details
10. Plan D98B: Slotted Corrugated Steel Pipe Drain Details

1.4 DEFINITIONS

A. AASHTO: American Association of State Highway and Transportation Officials

B. ASTM: American Society for Testing Materials

C. AWWA: American Water Works Association

D. CMP: Corrugated metal pipe

E. DIP: Ductile iron pipe

F. HDPE: High-density polyethylene

G. NPS: Nominal pipe size

H. PE: Polyethylene

I. PVC: Polyvinyl Chloride

J. RCP: Reinforced concrete pipe

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1.5 SUBMITTALS

A. Follow submittal procedures outlined in Section 26 05 33 – General Provisions.

B. Product data for the following:
1. Piping materials and fittings
2. Special pipe couplings
3. Polymer-concrete, channel drainage systems (trench drains)
4. Joint sealants
5. Plastic area drains
6. Cleanout plugs or caps
7. Precast concrete catch basins, inlets, curb inlets, junction structures and area drains, including frames and grates
8. Precast clean out boxes and box covers
9. Concrete, metal and plastic flared end sections

C. Shop drawings: Include plans, elevations, details and attachments for the following:
1. Precast concrete manholes, frames and covers

D. Design Mix Reports and Calculations: For each class of cast in place concrete

E. Field Test Reports: Indicate and interpret test results for compliance with performance.

1.6 DELIVERY, STORAGE AND HANDLING

A. Delivery and Storage
1. Piping: Inspect materials delivered to site for damage; store with minimum of handling. Store materials on site in enclosures or under protective coverings. Store plastic piping and jointing materials and rubber gaskets under cover out of direct sunlight. Do not store materials directly on the ground. Keep inside of pipes and fittings free of dirt and debris.
2. Metal Items: Check upon arrival; identify and segregate as to types, functions, and sizes. Store off the ground in a manner affording easy accessibility and not causing excessive rusting or coating with grease or other objectionable materials.

B. Handling
1. Handle pipe, fittings, and other accessories in such manner as to ensure delivery to the trench in sound undamaged condition. When handling lined pipe, take special care not to damage linings of pipe and fittings; if lining is damaged, make satisfactory repairs. Carry, do not drag, pipe to trench.
2. Handle precast concrete pipe, manholes and other precast structures according to manufacturer's written instructions.
3. Protect imported bedding and backfill material from contamination by other materials.

PART 2 - PRODUCTS

2.1 PVC PIPE AND FITTINGS-SMALLER THAN 4 INCH

A. Pipe shall be in accordance to ASTM D1785, Schedule 40. [Check external load and laying condition, schedule 80 and 120 are also available if stronger pipe is required.]

B. Joints: Solvent Cement, ASTM D2564

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C. Include primer according to ASTM F656

D. Special Pipe Coupling: ASTM C1173. Rubber or elastomeric sleeve and band assembly fabricated to match outside diameters of pipes to be joined.

E. General: Location, configuration bearing area, etc. as indicated

F. Portland Cement Concrete: Section 32 13 18, Cement and Concrete for Exterior Improvements

2.2 AREA DRAINS

A. Grate and Riser: Area drain shall be as manufactured by Nyloplast or approved equal. Riser shall be constructed of 6 inch PVC SDR 35 piping per paragraph 2.1(A) of this section and connected to area drain by a gasket joint. Riser shall be vertical except as otherwise noted in the plans. Riser may include a reducer if necessary to make connection to the storm drain line.

B. Elevation and Grading: Area Drain rim elevation shall be set and area around area drain shall be graded to drain away from any adjacent structures, walks, or roadways and towards area drain.

2.3 METAL, CONCRETE OR PLASTIC FLARED END SECTIONS

A. General: Caltrans Standard Specification Section 70-5.02 and Caltrans Standard Plan D94A and D94B

PART 3 - EXECUTION

3.1 PIPE INSTALLATION

A. General: Install pipe, fittings, and appurtenances utilizing best practices, manufacturer's instructions, and in accordance with Section 6 and 7 of ASTM D 2321 for plastic pipe, Caltrans Standard Specification Section 65-2.03 for reinforced concrete pipe, Caltrans Standard Specification Section 66-1.03 for corrugated metal pipe, and chapter 11.3.3 of AWWA M41 for cast iron and ductile iron pipe.

B. Pipe Depth and Trench Configuration: Conform to typical trench section(s) indicated.

C. Excavation, Bedding, Backfill, and Compaction: Section 31 21 00, Utility Trenching and Backfill

D. Handling: Carefully handle during loading, hauling, unloading and placing operations to avoid breakage or damage. Use strap type slings for lifting and placing; no chains or hooks will be permitted. Comply with the manufacturer's recommendations.

E. Laying: Before lowering pipe into the trench, remove all stakes, debris, loose rock and other hard materials from the bottom of the trench. Lay accurately in conformance with lines and grades indicated. Start laying the pipeline at the low end and proceed upstream. Lay bell and spigot pipe with the bell end facing upstream. Lay pipe on a bed prepared by handwork, dug true to grade. Furnish firm bearing for pipe throughout its entire length with bell holes provided at the ends of each pipe length of sufficient size to permit making up the particular type of joint being used. Adjust pipe to line and grade by scraping away or filling and tamping material under the body of the pipe for the entire pipe length and not by blocking or wedging. After final positioning, hold pipe in place in trench with backfill material placed equally on both sides of the pipe at as many locations as required to hold the pipe section in place.

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F. Curved Alignment: When necessary to conform to the alignment specifically indicated, lay pipe on a curved alignment by means of asymmetrical closure of joints or bending of the pipe barrel. Use shorter lengths of pipe than the standard length if necessary to achieve curvature specified. Do not exceed the recommendations of the pipe manufacture for deflections at the joints or pipe bending.

G. Closure: Close open ends of pipes and appurtenance at the end of each day's work or when work is not in progress.

3.2 POURED-IN-PLACE CONCRETE

A. Concrete shall be mixed in accordance with applicable provisions of Section 90 of Caltrans Standard Specifications.

B. Construction of concrete structures shall conform to applicable provisions of Section 51 of the Caltrans Standards Specifications. Unless otherwise noted herein or in the Plans, exposed surfaces of structures shall be Class 1 surface finish.

C. Curing shall conform to applicable portions in Section 90 of Caltrans Standard Specifications. No pigment shall be used in curing compounds. All work shall be subject to inspection. No concrete shall be placed until the Project Manager has approved the forms and reinforcement.

D. Concrete shall not be cropped freely where reinforcing bars will cause segregation, nor shall it be dropped freely more than six feet. Spouts, elephant trunks, or other approved means shall be used to prevent segregation.

3.3 PIPELINE FLUSHING

A. Newly constructed storm drain pipes shall be flushed with water to clean. A metal screen shall be used to collect and remove any rock, silt and other debris that is flushed out during cleaning.

3.4 DEFLECTION TESTING

A. Upon completion of work, perform a deflection test on entire length of installed plastic pipeline. Completed work includes superimposed loads adjacent to and over the pipeline, such as compacted backfill and earthwork, and does not include paving, concrete curbs and gutters, sidewalks, walkways, and landscaping.

B. Under external loads, deflection of pipe in the installed pipeline shall not exceed 4.5 percent of the average inside diameter of pipe.

C. Determine whether the allowable deflection has been exceeded by use of a pull-through device or a deflection-measuring device.

D. Pull-Through Device:

1. Provide a spherical, spheroidal, or elliptical ball, a cylinder, or circular sections fused to a common shaft.

   a. Circular sections shall be so spaced on the shaft that distance from external faces of front and back sections will equal or exceed diameter of the circular section.

   b. Pull-through device may also be of a design approved by the Uni-Bell Plastic Pipe Association, provided that the device meets the applicable requirements specified in this paragraph, including those for diameter of the device.

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2. Ball, cylinder, or circular sections shall conform to the following:

   a. A diameter, or minor diameter as applicable, of 95 percent of the average inside diameter of the pipe; tolerance of plus 0.5 percent will be permitted.

   b. A homogeneous material throughout, with a density greater than 1.0 as related to water at 39.2 degrees F, and a surface Brinell hardness of not less than 150.

   c. Center bored and through bolted with a ¼ inch minimum diameter steel shaft having a yield strength of not less than 70,000 pounds per square inch, with eyes or loops at each end for attaching pulling cables.

   d. Each eye or loop shall be suitably backed with a flange or heavy washer such that a pull exerted on opposite end of shaft will produce compression throughout remote end.

3. Pull-Through Device:

   a. Pass the pull-through device through each run of pipe, either by pulling it through or flushing it through with water.

   b. If the device fails to pass freely through a pipe run, replace pipe which has the excessive deflection and completely retest in same manner and under same conditions as specified.

E. Deflection measuring Device:

1. Sensitive to 1.0 percent of the diameter of the pipe being tested and accurate to 1.0 percent of the indicated dimension.

2. Obtain approval of deflection measuring device prior to use.

F. Deflection Measuring Device Procedure:

1. Measure deflections through each run of installed pipe.

2. If deflection readings in excess of 4.5 percent of average inside diameter of pipe are obtained, retest pipe by a run from the opposite direction.

3. If retest continues to show a deflection in excess of 4.5 percent of average inside diameter of pipe, remove pipe which has excessive deflections, replace with new pipe, and completely retest in same manner and under same conditions.

G. Warranty Period Test: Pipe found to have a deflection of greater than 5 percent of average inside diameter when deflection test is performed just prior to end of 1 year warranty period shall be replaced with new pipe and tested as specified for leakage and deflection.

3.5 CLEANING

A. Thoroughly clean storm drain lines, manholes, catch basins, field inlets, culverts, and similar structures, of dirt, debris, and obstructions of any kind.

3.6 TELEVISION INSPECTION

A. After completion of the pipe installation, service connections, flushing and cleaning, and prior to placement of pavement, the drain line shall be televised with a color closed-circuit television with tilt-head camera recorded in DVD format. The original disc and log sheets shall be provided to the Owner for review.

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B. The following observations from television inspections will be considered defects in the construction of sewer pipelines and will require correction prior to placement of pavement:

1. Low spot (1 inch or greater - mainlines only)
2. Joint separations (3/4 inch or greater opening between pipe sections)
3. Cocked joints present in straight runs or on the wrong side of pipe curves.
4. Chips in pipe ends
5. Cracked or damaged pipe
6. Dropped joints
7. Infiltration
8. Debris or other foreign objects
9. Other obvious deficiencies
10. Irregular condition without logical explanation

END OF SECTION

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DRAWINGS

Project: _____

Project drawings are issued as a separate plan set titled, "Roseville Aquatics Complex Slide & Sprayground Replacement", dated 08/20/21, as prepared by Jeff Katz Architecture.

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TEXT OF AB 626

Assembly Bill No. 626

CHAPTER 810

An act to add and repeal Section 9204 of the Public Contract Code, relating to public contracts.

[Approved by Governor September 29, 2016. Filed with Secretary of State September 29, 2016.]

LEGISLATIVE COUNSEL'S DIGEST

AB 626, Chiu. Public contracts: claim resolution.

Existing law prescribes various requirements regarding the formation, content, and enforcement of state and local public contracts. Existing law applicable to state public contracts generally requires that the resolution of claims related to those contracts be subject to arbitration. Existing law applicable to local agency contracts prescribes a process for the resolution of claims related to those contracts of $375,000 or less.

This bill would establish, for contracts entered into on or after January 1, 2017, a claim resolution process applicable to any claim by a contractor in connection with a public works project. The bill would define a claim as a separate demand by the contractor for one or more of the following: a time extension for relief from damages or penalties for delay, payment of money or damages arising from work done pursuant to the contract for a public work, or payment of an amount disputed by the public entity, as specified.

This bill would require a public entity, defined to exclude certain state entities, upon receipt of a claim sent by registered or certified mail, to review it and, within 45 days, provide a written statement identifying the disputed and undisputed portions of the claim. The bill would authorize the 45-day period to be extended by mutual agreement. The bill would require any payment due on an undisputed portion of the claim to be processed within 60 days, as specified. The bill would require that the claim be deemed rejected in its entirety if the public entity fails to issue the written statement.

This bill would authorize, if the claimant disputes the public entity's written response or if the public entity fails to respond to a claim within the time prescribed, the claimant to demand to meet and confer for settlement of the issues in dispute. The bill would require any disputed portion of the claim that remains in dispute after the meet and confer conference to be subject to nonbinding mediation, as specified. The bill would provide that unpaid claim amounts accrue interest at 7% per annum. The bill would prescribe a procedure by which a subcontractor or lower tier contractor may make a claim through the contractor.

This bill would require the text of these provisions, or a summary, to be set forth in the plans or specifications for any public work which may give rise to a claim. The bill would specify that a waiver of these rights is void and contrary to public policy, except as specified. The bill would also specify that it does not impose liability on a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

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By increasing the duties of local agencies and officials, this bill would impose a state-mandated local program.

This bill would, on January 1, 2020, repeal the provision establishing the claim resolution process.

This bill would specify that these provisions constitute a matter of statewide concern.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that, if the Commission on State Mandates determines that the bill contains costs mandated by the state, reimbursement for those costs shall be made pursuant to these statutory provisions.

The people of the State of California do enact as follows:

SECTION 1. Section 9204 is added to the Public Contract Code, to read:

9204. (a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.

(b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.

(c) For purposes of this section:

(1) ”Claim” means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

(A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.

(B) Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.

(C) Payment of an amount that is disputed by the public entity.

(2) ”Contractor” means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.

(3) (A) ”Public entity” means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.

(B) ”Public entity” shall not include the following:

(i) The Department of Water Resources as to any project under the jurisdiction of that department.

(ii) The Department of Transportation as to any project under the jurisdiction of that department.

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(iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.

(iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.

(v) The Military Department as to any project under the jurisdiction of that department.

(vi) The Department of General Services as to all other projects.

(vii) The High-Speed Rail Authority.

(4) "Public works project" means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.

(5) "Subcontractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.

(d) (1) (A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.

(B) The claimant shall furnish reasonable documentation to support the claim.

(C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.

(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.

(2) (A) If the claimant disputes the public entity's written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each

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party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

(C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

(E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

(3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

(4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

(5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

(e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.

(f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

(g) This section applies to contracts entered into on or after January 1, 2017.

(h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

(i) This section shall remain in effect only until January 1, 2020, and as of that date is

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repealed, unless a later enacted statute, that is enacted before January 1, 2020, deletes or extends that date.

SECTION 2.
The Legislature finds and declares that it is of statewide concern to require a charter city, charter county, or charter city and county to follow a prescribed claims resolution process to ensure there are uniform and equitable procurement practices.

SECTION 3.
If the Commission on State Mandates determines that this act contains costs mandated by the state, reimbursement to local agencies and school districts for those costs shall be made pursuant to Part 7 (commencing with Section 17500) of Division 4 of Title 2 of the Government Code.

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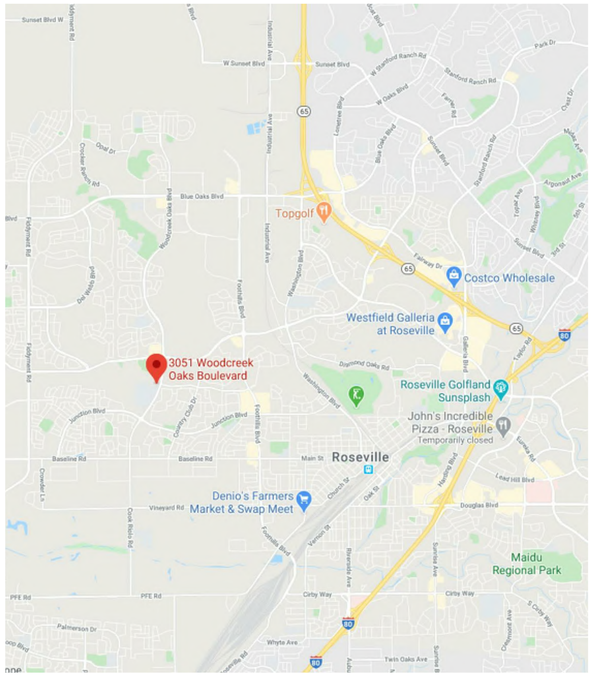
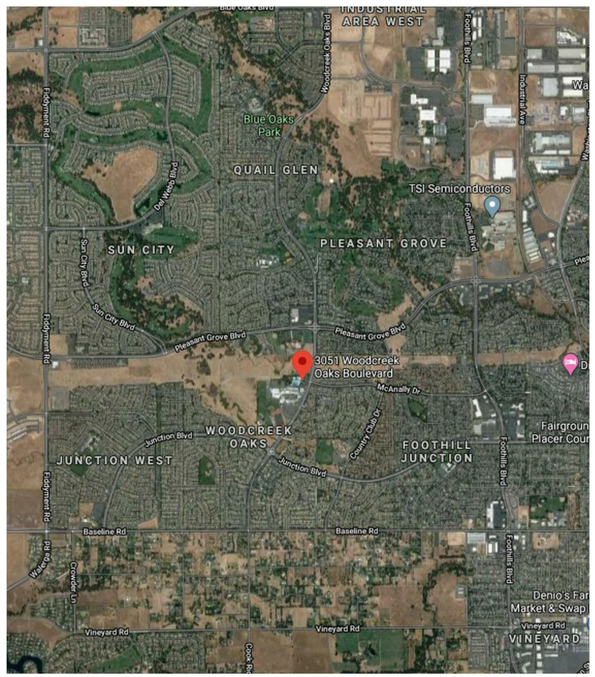
ROSEVILLE AQUATICS COMPLEX
SLIDE & SPRAYGROUND REPLACEMENT

3051 WOODCREEK OAKS BLVD. ROSEVILLE, CA 95747

LOCATION MAP



VICINITY MAP



PROJECT DATA

PROJECT ADDRESS:	3051 WOODCREEK OAKS BLVD. ROSEVILLE, CA 95747
ASSESSOR'S PARCEL NO.	017-370-006-000
OWNER:	PARKS, RECREATION & LIBRARIES ADMIN OFFICE 316 VERNON STREET, SUITE 400 ROSEVILLE, CALIFORNIA 95678 916-772-7529
GOVERNING AGENCY:	CITY OF ROSEVILLE 311 VERNON STREET ROSEVILLE, CA 95678
GOVERNING CODES:	2019 CALIFORNIA BUILDING CODE 2019 CALIFORNIA ENERGY CODE 2019 CALIFORNIA FIRE CODE 2019 CALIFORNIA ELECTRICAL CODE 2019 CALIFORNIA PLUMBING CODE 2019 CALIFORNIA MECHANICAL CODE 2019 CALIFORNIA GREEN BUILDING STANDARD ALL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE CITY OF ROSEVILLE PARKS DESIGN AND CONSTRUCTION STANDARDS
SCOPE OF WORK:	1. REMOVE EXISTING POOL SLIDE AND ASSOCIATED STAIR TOWER, AND REPLACE WITH NEW SLIDE COMPLEX. 2. REPLACE EXISTING PLASTER IN RECREATION POOL 3. MODIFY EXISTING POOL DECK AREA FOR NEW TOWER PLACEMENT. 4. MODIFY AND UPGRADE EXISTING PIPING FOR NEW SLIDE 5. REMOVE EXISTING WATER PLAY TOWER, WALKING SURFACE, AND PERIMETER DRAINAGE GRATING AT CHILDRENS PLAY POOL AREA 6. UPGRADE EXISTING MECHANICAL SYSTEMS FOR NEW SPRAY FEATURE ACCOMMODATION 7. INSTALL NEW WATER PLAY FEATURES, WALKING SURFACE, AND DRAINAGE GRATING AT CHILDRENS PLAY POOL AREA.

BID ALTERNATES:

1. ADDITIVE ALTERNATE FOR ADDITIONAL POOL DECK REPLACEMENT AS SHOWN ON A1.3

2. A. ADDITIVE ALTERNATE FOR REPLACEMENT OF THE PUMP AND MOTOR IN KIND FOR POOL C - REFERENCE AS-BUILTS, AQUATIC CONSULTANT SHEETS D400, AND VERIFY IN FIELD. EXISTING PUMP AND MOTOR MAKE & MODEL: *PACO K.P.V. SPLIT CASE CENTRIFUGAL VERTICAL MOUNTED, TEFC, MODEL 4012-1 OR 2, 4"X5"X12", 1750 RPM, 15HP, 78% EFFICIENT, 460V, 3 PHASE, RATED AT 550 GPM 270 FT. TDH, FUSE COAT EPOXY ALL WET SURFACES.*

   B. ADDITIVE ALTERNATE FOR REPLACEMENT OF THE WATER FILL VALVE IN KIND FOR POOL C - REFERENCE AS-BUILTS, AQUATIC CONSULTANT SHEETS D400, AND VERIFY IN FIELD. EXISTING WATER FILL MAKE & MODEL: *FLOW CONTROL 20-005 WATER LEVEL CONTROL*

   C. ADDITIVE ALTERNATE FOR REPLACEMENT OF THE CO2 DELIVERY SYSTEM IN KIND FOR POOL C - REFERENCE AS-BUILTS, AQUATIC CONSULTANT SHEETS D400, AND VERIFY IN FIELD. EXISTING CO2 DELIVERY SYSTEMMAKE & MODEL: *STRANTROL CO2-9 ADJUSTABLE FEED UNITS (X3) AND ASSOCIATED NALGENE 980 BRAIDED VINYL TUBING # 9200-4435 3/8" TYPICAL*

OCCUPANCY GROUP:	B-2 (UNCHANGED)
CONSTRUCTION TYPE:	VN (UNCHANGED)
ACTUAL AREA:	
RECREATION POOL	6,788 S.F. (UNCHANGED)
SPRAYGROUND	2115 S.F. (UNCHANGED)
SITE AREA:	1,180,247 S.F.(27.09 ACRES) (UNCHANGED)
PARKING:	(UNCHANGED)

LEGAL DESCRIPTION

PARCEL: 017-370-006-000

DEFERRED SUBMITTALS

1. PLANS FOR THE DESIGN AND INSTALLATION OF THE SLIDE COMPLEX AND TOWER ARE A SEPARATE SUBMITTAL AND SHALL BE SUBMITTED AND APPROVED, PRIOR TO ANY INSTALLATION OF WORK.

PROJECT TEAM

ARCHITECTURE
JEFF KATZ ARCHITECTURE
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(707)526-0992
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lukew@zfa.com

ELECTRICAL
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9150 Chesapeake Dr., Suite 220
San Diego, CA 92123
(619) 550-1085
Contact: Anton Nathanson
anathanson@elenconsulting.com

SPECIAL INSPECTIONS

SPECIAL INSPECTIONS AND TESTING SHALL BE PERFORMED BY AN APPROVED AGENCY IN ACCORDANCE WITH CBC CHAPTER 17 AND THE STATEMENT OF SPECIAL INSPECTIONS AS REQUIRED BY CBC SECTIONS 1704.2.3 AND 1704.3 FOR BUILDING STRUCTURAL ELEMENTS SUMMARIZED AS FOLLOWS:

1. **CONCRETE CONSTRUCTION** PER CBC SECTIONS 1705.3, AND TABLE 1705.3 INCLUDING FORMWORK, REINFORCING STEEL, CAST-IN-PLACE BOLTS, CONCRETE SAMPLES, AND PLACEMENT FOR ALL CONCRETE. REINFORCING DOWELS FROM FOOTINGS TO RETAINING WALLS SHALL BE INSPECTED PRIOR TO PLACEMENT OF FOOTING CONCRETE AND WALL GROUT OR CONCRETE. CONTINUOUS OR ISOLATED SPREAD FOOTINGS WITH DESIGN STRENGTH NO GREATER THAN 2500 PSI, NONSTRUCTURAL SLABS ON GRADE, AND EXTERIOR FLATWORK DO NOT REQUIRE SPECIAL INSPECTION PER CBC SECTION 1705.3.

2. **DRILLED CONCRETE PIER FOUNDATIONS** PER CBC SECTION 1705.8, TABLE 1705.8 AND THE APPROVED SOILS REPORT INCLUDING DRILLING OPERATIONS, PIER SIZE AND EMBEDMENT, END BEARING STRATA CAPACITY, AND PLACEMENT OF REINFORCEMENT AND CONCRETE. ADDITIONAL INSPECTIONS OF CONCRETE ARE REQUIRED PER CBC SECTION 1705.3, AND AS NOTED ABOVE.

3. **SPECIAL CASES** PER CBC SECTION 1705.1.1 AND PRODUCT ICC REPORTS FOR ALL STRUCTURAL MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN THE CBC OR REFERENCED STANDARDS, INCLUDING POST-INSTALLED ANCHOR BOLTS IN CONCRETE.

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Not for Building

LICENSED ARCHITECT
JEFFREY A. KATZ
C-18822
REN. 09/10/19
STATE OF CALIFORNIA

JKA jeff katz ARCHITECTURE
6353 DEL CERRO BLVD., SAN DIEGO, CA 92120
619.698.9177 | www.jeffkatzarchitecture.com

PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3051 WOODCREEK OAKS BLVD.
ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
30% CD	04/05/21
75% CD	05/17/21
99% CD	07/13/21
100% CD/BID SET	08/20/21

Project Number:	200204
Approved By:	JK
Checked By:	MK
Drawn By:	ACJ

Sheet Title:

TITLE SHEET

SHEET NUMBER:

T-1

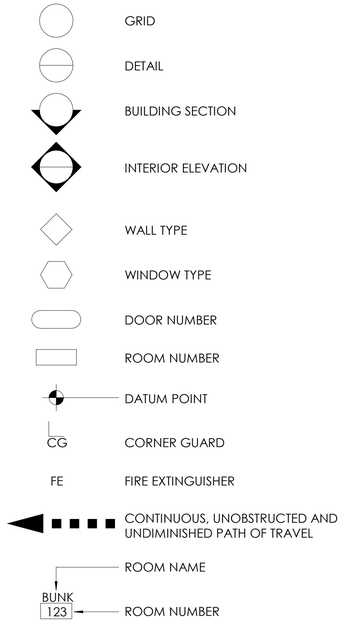
ABBREVIATIONS

&	AND
L	ANGLE
@	AT
℄	CENTERLINE
⌀	DIAMETER OR ROUND
#	POUND OR NUMBER
ACOUS.	ACOUSTICAL
A.D.	AREA DRAIN
ADJ.	ADJUSTABLE
AGGR.	AGGREGATE
ALUM.	ALUMINUM
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
ASPH.	ASPHALT
BD.	BOARD
BITUM.	BITUMINOUS
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BM.	BEAM
BOT.	BOTTOM
CAB.	CABINET
C.B.	CATCH BASIN
CEM.	CEMENT
CER.	CERAMIC
C.I.	CAST-IRON
CJ	CONTROL JOINT
CLG.	CEILING
CLKG.	CAULKING
CLO.	CLOSET
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
CORR.	CORRIDOR
CTSK.	COUNTERSUNK
C.T.	CERAMIC TILE
DBL.	DOUBLE
DET	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DISP.	DISPENSER
DN.	DOWN
DWR.	DRAWER
DS.	DOWNSPOUT
D.S.P.	DRY STANDPIPE
DWG.	DRAWING
E.	EAST
EA.	EACH
E.J.	EXPANSION JOINT
ELE.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EMER.	EMERGENCY
ENCL.	ENCLOSURE
EQ.	EQUAL
EQPT.	EQUIPMENT
EXST.	EXISTING
EXPO.	EXPOSED
EXP.	EXPANSION
EXT	EXTERIOR
F.A.	FIRE ALARM
F.D.	FLOOR DRAIN
FDN	FOUNDATION
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
F.H.C.	FIRE HOSE CABINET
FIN.	FINISH
FL	FLOOR
FLASH	FLASHING
FLUOR.	FLUORESCENT
F.O.B.	FACE OF BLOCK
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.S.	FACE OF STUDS
F.S.	FULL SIZE
FT	FOOT OR FEET
FTG.	FOOTING
FURR.	FURRING
F.F.E.	FINISHED FLOOR ELEVATION
GA.	GAUGE
GALV.	GALVANIZED
G.B.	GRAB BAR
GLASS	GLASS
GR	GRADE
GYP.	GYPSUM
H.B.	HOSE BIB
H.C.	HOLLOW CORE
HDWD.	HARDWOOD
HDW.	HARDWARE
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
H	HEIGHT
I.D.	INSIDE DIAMETER
INSUL.	INSULATION
INT.	INTERIOR
IRRIG.	IRRIGATION
JT.	JOINT
LAM.	LAMINATED
LAV.	LAVATORY
MAX.	MAXIMUM
M.C.	MEDICINE CABINET
MECH.	MECHANICAL
MET.	METAL
MFR.	MANUFACTURER
MIN.	MINIMUM
MISC	MISCELLANEOUS
M.O.	MASONRY OPENING
MTD.	MOUNTED
NO.	NORTH
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
O.A.	OVERALL
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OPNG.	OPENING
OPP.	OPPOSITE
PC.	PRE-CAST
PL.	PLATE
P.LAM.	PLASTIC LAMINATE
PLAS.	PLASTER
PLYWD	PLYWOOD
PR.	PAIR
PT.	POINT
P.T.DISP.	PAPER TOWEL DISPENSER
RECP.	RECEPTACLE
RAD.	RADIUS
R.D.	ROOF DRAIN
REF.	REFERENCE
REFR.	REFRIGERATOR
REINF.	REINFORCED
REQ.	REQUIRED
RM.	ROOM
R.O.	ROUGH OPENING
RS.	RE-SAWN
RWD.	REDWOOD
R.W.L.	RAIN WATER LEADER
SO.	SOUTH
S.C.	SOLID CORE
S.C.DISP.	SEAT COVER DISPENSER
SCHD.	SCHEDULE
S.DISP.	SOAP DISPENSER
SECT.	SECTION
SH.	SHELF OR SHEET
SHR.	SHOWER
SIM	SIMILAR
SPEC.	SPECIFICATION
SQ.	SQUARE
ST.STL.	STAINLESS STEEL
STA.	STATION
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRUC.	STRUCTURAL
SUSP.	SUSPENDED
SYM.	SYMMETRICAL
S.M.	SHEET METAL
T.C.	TOP OF CURB
TEL.	TELEPHONE
TER.	TERRAZZO
TG	TEMPERED GLASS
T&G	TONGUE AND GROOVE
THK.	THICK
T.P.	TOP OF PAVEMENT
T.P.DISP.	TOILET PAPER DISPENSER
T.V.	TELEVISION
TYP.	TYPICAL
T.O.	TOP OF
T.O.F.	TOP OF FRAMING
T.O.M.	TOP OF MASONRY
T.O.P.	TOP OF PARAPET
T.O.S.	TOP OF SHEATHING
U.O.N.	UNLESS OTHERWISE NOTED
UR	URINAL
VERT.	VERTICAL
VEST.	VESTIBULE
V.I.F.	VERIFY IN FIELD
V.T.R.	PLUMBING VENT THRU ROOF
W	WEST
W/	WITH
W.C.	WATER CLOSET
WD.	WOOD
W/O	WITHOUT
WP.	WATERPROOF
WPJ	WEAKENED PLANE JOINT
WSCT	WAINSCOT
WT.	WEIGHT

GENERAL NOTES

1. DIMENSIONS SHOWN ON THE FLOOR PLANS, SECTIONS AND DETAILS ARE TO FACE OF STUDS, COLUMN GRID LINES AND FACE OF CONCRETE AND BLOCK WALLS, UNLESS OTHERWISE NOTED OR SHOWN.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE PROCEEDING WITH CONSTRUCTION.
3. ALL ITEMS ARE BASE BID UNLESS OTHERWISE NOTED OR SPECIFIED.
4. ALL DRAIN LINES WITHIN WALLS ARE TO BE WRAPPED IN SOUND INSULATION BATTS.
5. EVERY EXIT DOOR SHALL BE OPERABLE FROM THE INSIDE WITHOUT USE OF A KEY OR ANY SPECIAL KNOWLEDGE.
6. CONTRACTOR SHALL PROVIDE ACCESS PANELS REQUIRED BY THE PLUMBING, AIR CONDITIONING AND OTHER INSTALLERS, AS REQUIRED BY CODE. ANY ACCESS PANEL IN A FIRE RATED WALL OR CEILING SHALL HAVE THE SAME FIRE RATING AS THE WALL OR CEILING IN WHICH THEY OCCUR.
7. STRUCTURAL AND FIRE RESISTIVE INTEGRITY SHALL BE MAINTAINED AT PENETRATIONS FOR MECHANICAL, PLUMBING, ELECTRICAL, AND COMMUNICATIONS PIPE, DUCT AND CONDUIT AS INDICATED.
8. A FLOOR OR LANDING NOT MORE THE 1/4" BELOW THE THRESHOLD IS REQUIRED AT EACH SIDE OF AN EXIT DOOR.
9. BRAND OR TRADE NAME, SUBSTITUTIONS OF "EQUALS": REQUESTS FOR SUBSTITUTIONS OF AN ITEM AS AN "EQUAL" TO ANY ITEM INDICATED OR SPECIFIED MUST BE SUBMITTED FOR REVIEW DURING THE SUBMITTAL PROCESS. ALONG A LINE BY LINE COMPARISON, AS SPECIFIED IN THE GENERAL CONDITIONS.
10. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC SCALE. DO NOT SCALE DRAWINGS.
11. IT SHOULD BE NOTED THAT WHILE EXISTING UTILITY DRAWINGS ARE AVAILABLE, THERE IS NO ASSURANCE THAT ALL UTILITIES ARE SHOWN. THE CONTRACTOR SHALL PROCEED WITH CAUTION TO INSURE THAT ALL UTILITIES ENCOUNTERED, WHETHER OR NOT OF RECORD, SHALL BE PROTECTED FROM DAMAGE. THE CONTRACTOR SHALL ALSO TAKE PRECAUTIONS NECESSARY TO PROTECT HIMSELF AND ALL EMPLOYEES FROM INJURY WHICH MAY BE CAUSED BY CONTACT WITH UTILITY SERVICES.
12. DOOR HARDWARE SHALL BE LEVER TYPE.
13. MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS.
14. ALL DECORATIVE MATERIALS SHALL BE MAINTAINED IN A FLAME-RETARDANT CONDITION.
15. ALL REQUIRED PERMITS MUST BE OBTAINED FROM FIRE PLAN CHECK BEFORE BUILDING IS OCCUPIED.
16. THE CONSTRUCTION, REMODEL, OR DEMOLITION OF A BUILDING SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF ROSEVILLE.
17. THESE PLANS AND ALL WORK SHALL COMPLY WITH THE CALIFORNIA BUILDING STANDARDS CODE FOUND IN THE STATE OF CALIFORNIA TITLE 24 CCR, AS AMENDED AND ADOPTED BY THE CITY OF ROSEVILLE.
18. CONTRACTOR SHALL THOROUGHLY COORDINATE ALL TRADES AS REQUIRED TO COMPLETE ALL WORK INDICATED AND NECESSARY FOR THE PROJECT.
19. CONTRACTOR SHALL PROTECT EXISTING SITE FEATURES AND SHALL REPAIR OR REPLACE ALL ITEMS DAMAGED DURING CONSTRUCTION.
20. THE CONTRACTOR SHALL ENFORCE ALL SAFETY MEASURES. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATION.
21. CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONUMENTATION AND / OR BENCHMARKS WHICH WILL BE DISTURBED OR DESTROYED BY CONSTRUCTION. SUCH POINTS SHALL BE REFERENCED AND REPLACED WITH APPROPRIATE MONUMENTATION BY A LICENSED LAND SURVEY OR REGISTERED CIVIL ENGINEER AS REQUIRED BY THE LAND SURVEYOR'S ACT.
23. PENETRATION OF FIRE RESISTIVE WALLS, FLOOR - CEILING ASSEMBLIES AND ROOF - CEILINGS SHALL BE PROTECTED AS REQUIRED IN CBC SECTION 712 AND 713.
24. NO HAZARDOUS MATERIALS WILL BE USED OR STORED WITHIN THE BUILDING WHICH EXCEED THE QUANTITIES SHOWN ON CBC TABLE 5003.1.1.
25. WORK NOT SPECIFICALLY INDICATED OR SPECIFIED BUT WHICH IS REQUIRED FOR THE COMPLETION OF THE WORK SHALL BE PROVIDED IN THE SAME MANNER AS SIMILAR WORK WHICH IS REQUIRED OR SPECIFIED WITHOUT ADDITIONAL CHARGE.

SYMBOLS



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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3051 WOODCREEK OAKS BLVD.
ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
30% CD	04/05/21
75% CD	05/17/21
99% CD	07/13/21
100% CD/BID SET	08/20/21

Project Number: 200204
Approved By: JK
Checked By: MK
Drawn By: ACJ

Sheet Title:

TITLE SHEET

SHEET NUMBER:

T-2

For Council Approval
Not for Bidding

CLEAR FLOOR SPACE FOR WHEELCHAIRS

1. MINIMUM CLEAR FLOOR OR GROUND SPACE REQUIRED TO ACCOMMODATE A SINGLE, STATIONARY WHEELCHAIR AND OCCUPANT IS 30" x 48". MINIMUM CLEAR FLOOR OR GROUND SPACE FOR WHEELCHAIRS MAY BE POSITIONED FOR FORWARD OR PARALLEL APPROACH TO AN OBJECT. FLOOR OR GROUND SPACE FOR WHEEL CHAIRS MAY BE PART OF THE KNEE SPACE AND TOE CLEARANCE REQUIRED UNDER SOME OBJECTS. ONE FULL UNOBSTRUCTED SIDE OF THE CLEAR FLOOR OR GROUND SPACE SHALL ADJOIN AN ACCESSIBLE ROUTE OR ADJOIN ANOTHER CLEAR FLOOR SPACE.
2. ALCOVES ARE TO BE 60" WIDE WHEN GREATER THAN 15" DEEP.
3. PROVIDE AN ADDITIONAL 6" WIDTH ON ONE SIDE FOR ALCOVES GREATER THAN 24" DEEP AND DESIGNED FOR FRONT APPROACH.

HAZARDS AND PROTRUDING OBJECTS

1. OBJECTS WITH LEADING EDGES BETWEEN 27" AND 80" ABOVE THE FINISHED FLOOR SHALL PROTRUDE NO MORE THAN 4" INTO CIRCULATION PATH.
2. OBJECTS MOUNTED WITH THEIR LEADING EDGES AT OR BELOW 27" ABOVE THE FINISHED FLOOR MAY PROTRUDE ANY AMOUNT.
3. OBJECTS MOUNTED ON POSTS / PYLONS MAY OVERHANG 12" MAXIMUM FROM 27" TO 80" ABOVE THE GROUND OR FINISHED FLOOR.
4. PROTRUDING OBJECTS SHALL NOT REDUCE THE REQUIRED CLEAR WIDTH OF AN ACCESSIBLE ROUTE OR MANEUVERING SPACE.
5. ANY OBSTRUCTION OVERHANGING A PEDESTRIAN WAY SHALL BE A MINIMUM OF 80" ABOVE THE WALKING SURFACE AS MEASURED TO THE BOTTOM OF THE OBSTRUCTION. GUARDRAILS OR OTHER BARRIERS SHALL BE PROVIDED WHERE THE VERTICAL CLEARANCE IS LESS THAN 80". SUCH GUARDRAILS SHALL BE LOCATED 27" MAX ABOVE FINISHED FLOOR.

PARKING

1. ACCESSIBLE PARKING SPACES SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTE TO AN ACCESSIBLE ENTRANCE.
2. SURFACE SLOPES OF PARKING SPACES FOR THE PHYSICALLY DISABLED SHALL NOT EXCEED 1/4 INCH PER FOOT (2% GRADIENT) IN ANY DIRECTION.
3. DISABLED PARKING SPACES SHALL BE LOCATED SO AS NOT TO REQUIRE USERS TO WHEEL OR WALK BEHIND ANY OTHER NON-DISABLED OR DISABLED PARKING SPACE, OTHER THAN TO PASS BEHIND THE PARKING SPACE IN WHICH THEY PARKED.
4. IN EACH PARKING AREA, A BUMPER OR CURB SHALL BE PROVIDED AND LOCATED TO PREVENT ENCROACHMENT OF CARS OVER THE REQUIRED WIDTH OF ADJACENT ACCESSIBLE ROUTES.
5. PARKING SPACES RESERVED FOR PERSONS WITH DISABILITIES SHALL BE IDENTIFIED BY A REFLECTORIZED SIGN PERMANENTLY POSTED IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH STALL OR SPACE, CONSISTING OF A PROFILE VIEW OF A WHEELCHAIR WITH OCCUPANT, IN WHITE ON DARK BLUE BACKGROUND. THE SIGN SHALL NOT BE SMALLER THAN 70" IN AREA AND, WHEN IN THE PATH OF TRAVEL, SHALL BE POSTED AT A MINIMUM HEIGHT OF 80" FROM THE BOTTOM OF THE SIGN TO THE PARKING SPACE FINISHED GRADE. WHEN NOT IN THE PATH OF TRAVEL SIGNS MAY ALSO BE ON THE WALL AT THE INTERIOR END OF THE PARKING SPACE AT A MIN. HEIGHT OF 60" FROM THE PARKING SPACE FINISHED GRADE, GROUND, OR SIDEWALK MEASURED TO THE BOTTOM OF THE SIGN.
6. ADDITIONAL LANGUAGE OR AN ADDITIONAL SIGN BELOW THE ISA SHALL STATE "MINIMUM FINE $250"
7. VAN ACCESSIBLE SPACES SHOULD BE IDENTIFIED WITH THE ADDITIONAL WORDS "VAN ACCESSIBLE" ON THE SPACE IDENTIFICATION SIGN, ONE IN EVERY SIX ACCESSIBLE SPACES, BUT NEVER LESS THAN ONE, MUST BE VAN ACCESSIBLE.

WALKS AND SIDEWALKS

1. WALKS AND SIDEWALKS SHALL HAVE A CONTINUOUS COMMON SURFACE NOT INTERRUPTED BY STEPS OR BY ABRUPT CHANGES IN LEVEL WHICH EXCEED 1/4", AND SHALL BE A MINIMUM OF 48" IN WIDTH.
2. SURFACE CROSS SLOPES SHALL NOT EXCEED 2%. THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 5%.
3. OPENINGS IN FLOOR OR GROUND SURFACES SHALL NOT ALLOW PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER. ENLONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.
4. WHEN THE SLOPE IN THE DIRECTION OF TRAVEL OF ANY WALK EXCEEDS 1 VERTICAL TO 20 HORIZONTAL, IT SHALL COMPLY WITH THE PROVISIONS OF RAMPS.
5. WHEN ABRUPT CHANGES IN LEVEL NOT EXCEEDING 1/2" OCCUR, THEY SHALL BE BEVELED WITH A SLOPE NO GREATER THE 1 UNIT VERTICAL TO 2 UNITS HORIZONTAL (50%), EXCEPT THAT LEVEL CHANGES NOT EXCEEDING 1/4" MAY BE VERTICAL.
6. ABRUPT CHANGES IN LEVEL ALONG ANY ACCESSIBLE ROUTE EXCEEDING 1/2" SHALL COMPLY WITH THE REQUIREMENTS FOR CURB RAMPS AND RAMPS.
7. WALKS SHALL BE PROVIDED WITH A LEVEL AREA NOT LESS THAN 60" x 60" AT A DOOR OR GATE THAT SWINGS TOWARD THE WALK, AND NOT LESS THAN 48" x 44" DEEP AT A DOOR OR GATE THAT SWINGS AWAY FROM THE WALK.
8. WALKS SHALL EXTEND A MINIMUM OF 24" TO THE SIDE OF THE STRIKE EDGE OF A DOOR OR GATE THAT SWINGS TOWARD THE WALK.
9. WALK AND SIDEWALK SURFACES SHALL BE STABLE, FIRM, AND SLIP-RESISTANT.
10. ABRUPT CHANGES IN LEVEL 4" OR MORE IN A VERTICAL DIMENSION BETWEEN WALKS, SIDEWALKS OR OTHER PEDESTRIAN WAYS AND ADJACENT SURFACES OR FEATURES SHALL BE IDENTIFIED BY A 6" MIN. HIGH CURB ABOVE WALK SURFACE OR GUARDRAIL W/ 2'-4" CENTERED HIGH GUIDE RAIL

ENTRANCES AND DOORS

1. ALL PRIMARY ENTRANCES AND EXTERIOR GROUND FLOOR EXIT DOORS TO BUILDINGS AND FACILITIES SHALL BE MADE ACCESSIBLE TO THE PHYSICALLY DISABLED.
2. ALL ACCESSIBLE ENTRANCES SHALL BE IDENTIFIED WITH ONE STANDARD INTERNATIONAL SYMBOL OF ACCESSIBILITY SIGN AND WITH ADDITIONAL DIRECTIONAL SIGNS IDENTIFYING THE LOCATION OF NEAREST ACCESSIBLE ENTRANCE, AS REQUIRED, VISIBLE FROM APPROACHING PEDESTRIAN WAYS.
3. EVERY REQUIRED ENTRANCE OR PASSAGE DOORWAY SHALL BE OF A SIZE AS TO PERMIT THE INSTALLATION OF A DOOR NOT LESS THAN 36 INCHES IN WIDTH, AND NOT LESS THAN 80" IN HEIGHT. DOORS SHALL BE CAPABLE OF OPENING AT LEAST 90 DEGREES AND SHALL BE MOUNTED SO THAT THE CLEAR WIDTH OF THE DOORWAY IS NOT LESS THAN 32".
4. LATCHING AND LOCKING DOORS THAT ARE HAND ACTIVATED AND WHICH ARE IN A PATH OF TRAVEL, SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE, PANIC BARS, PUSH-PULL ACTIVATING BARS, OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP, PINCH OR TWIST THE OPENING HARDWARE AND MUST BE OPERABLE WITH ONE HAND.
5. THE OPERABLE PARTS OF LEVER HAND ACTIVATED DOOR OPENING HARDWARE SHALL BE MOUNTED BETWEEN 34" MINIMUM AND 44" MAXIMUM ABOVE THE FLOOR AND NOT REQUIRE MORE THAN 5 POUNDS OF FORCE TO OPERATE.
6. THE FLOOR OR LANDING LENGTH ON EACH SIDE OF AN ENTRANCE OR A PASSAGE DOOR SHALL BE LEVEL AND CLEAR AT LEAST 60" IN THE DIRECTION OF THE DOOR SWING AND AT LEAST 48" OPPOSITE THE DIRECTION OF THE DOOR SWING AS MEASURED AT RIGHT ANGLES TO THE FACE OF THE DOOR IN THE CLOSED POSITION. THE WIDTH OF THE LEVEL AND CLEAR AREA ON THE SIDE WHICH THE DOOR SWINGS SHALL EXTEND A MINIMUM OF 24" PAST THE STRIKE EDGE OF THE DOOR FOR DOORS WITH LATCH SIDE APPROACH AND 36" FOR DOORS REQUIRING HINGE SIDE APPROACH. REFER TO DETAIL B3 ON THIS DRAWING FOR ADDITIONAL CLEARANCE REQUIREMENTS.
7. THE FLOOR OR LANDING SHALL NOT BE MORE THAN 1/2" LOWER THAN THE THRESHOLD OF THE DOORWAY. CHANGES IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.
8. THE BOTTOM 10" OF ALL DOORS (EXCEPT SLIDING) SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION WHERE NARROW FRAME DOORS ARE USED. A 10" HIGH SMOOTH PANEL SHALL BE INSTALLED ON THE PUSH SIDE OF THE DOOR, WHICH WILL ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST. SURFACES ALONG THIS AREA MUST BE WITHIN 1/16" OF THE SAME PLANE AS THE OTHER. CAVITIES CREATED BY KICK PLATES MUST BE CAPPED.
9. THE MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 LBS. FOR EXTERIOR DOORS AND 5 LBS. FOR INTERIOR DOORS. SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. WHEN FIRE DOORS ARE REQUIRED, THE MAXIMUM EFFORT TO OPERATE THE DOOR MAY NOT EXCEED 15 LBS.
10. DOOR CLOSERS REQUIRE AT LEAST 5 SECONDS TO CLOSE FROM AN OPEN POSITION OF 90 DEGREES TO 12 DEGREES FROM THE LATCH
11. EACH GRADE-LEVEL EXTERIOR EXIT DOOR SHALL BE IDENTIFIED BY A TACTILE SIGN WITH THE WORD "EXIT". EACH EXIT DOOR THAT LEADS DIRECTLY TO GRADE-LEVEL EXTERIOR EXIT BY MEANS OF STAIRWAY OR RAMP IS IDENTIFIED BY A TACTILE SIGN THAT STATES "EXIT STAIR DOWN," "EXIT RAMP DOWN," "EXIT STAIR UP," OR "EXIT RAMP UP" AS APPROPRIATE. EACH EXIT DOOR THAT LEADS DIRECTLY TO GRADE-LEVEL EXTERIOR EXIT BY MEANS OF AN EXIT ENCLOSURE OR EXIT PASSAGEWAY IS IDENTIFIED BY A TACTILE EXIT SIGN WITH THE WORDS "EXIT ROUTE", EACH ACCESS DOOR FROM AN INTERIOR ROOM OR AREA TO A CORRIDOR OR HALLWAY THAT IS REQUIRED TO HAVE A VISUAL EXIT SIGN IS IDENTIFIED BY A TACTILE EXIT SIGN WITH THE WORDS "EXIT ROUTE". EACH DOOR THROUGH AN HORIZONTAL EXIT IS IDENTIFIED BY A TACTILE EXIT SIGN WITH THE WORDS "TO EXIT".
12. VISION LIGHTS MUST HAVE BOTTOM OF AT LEAST ONE GLAZED PANEL LOCATED 43" MAX. ABOVE FLOOR FINISH.

STAIRS AND STAIRWAYS

1. STAIRWAYS SHALL HAVE HANDRAILS ON EACH SIDE. EVERY STAIRWAY REQUIRED TO BE MORE THAN 88" IN WIDTH SHALL BE PROVIDED WITH NOT LESS THAN ONE INTERMEDIATE HANDRAIL FOR EACH 88" OF REQUIRED WIDTH. INTERMEDIATE HANDRAILS SHALL BE SPACED APPROXIMATELY EQUALLY WITHIN THE ENTIRE WIDTH OF THE STAIRWAY.
2. THE UPPER APPROACH AND THE LOWER TREAD OF EACH INTERIOR STAIR SHALL BE MARKED BY A STRIPE OF CLEARLY CONTRASTING COLOR 2" WIDE MINIMUM & 4"WIDE MAXIMUM AND PLACED PARALLEL TO, AND NOT MORE THAN, 1" FROM THE NOSE OF THE STEP OR LANDING TO ALERT THE VISUALLY IMPAIRED. THE STRIPE IS TO EXTEND THE FULL WIDTH OF THE STEP. THE STRIPE SHALL BE OF A MATERIAL THAT IS AT LEAST AS SLIP RESISTANT AS THE TREADS OF THE STAIR.
3. WHERE STAIRS OCCUR OUTSIDE OF A BUILDING, THE UPPER APPROACH AND ALL TREADS SHALL BE MARKED BY A STRIPE OF CLEARLY CONTRASTING COLOR 2" WIDE MIN & 4" WIDE MAX. AND PLACED PARALLEL TO, AND NOT MORE THAN 1" FROM THE NOSE OF THE STEP OF LANDING TO ALERT THE VISUALLY IMPAIRED. THE STRIPE IS TO EXTEND THE FULL WIDTH OF THE STEP. THE STRIPE SHALL BE OF A MATERIAL THAT IS AT LEAST AS SLIP-RESISTANT AS THE TREADS OF THE STAIR. A PAINTED STRIPE SHALL BE ACCEPTABLE.
4. ALL STAIR TREAD SURFACES SHALL BE SLIP-RESISTANT.

HANDRAILS ON STAIRS

1. HANDRAILS AT STAIRWAYS SHALL BE 34" TO 38" ABOVE THE NOSING OF THE TREADS.
2. HANDRAILS AT THE TOP OF STAIRWAYS SHALL EXTEND A MINIMUM OF 12" OF LEVEL DISTANCE BEYOND THE TOP NOSING. HANDRAILS AT THE BOTTOM OF STAIRWAYS SHALL EXTEND A MINIMUM OF TREAD WIDTH PLUS 12" BEYOND THE BOTTOM NOSING BEFORE THEY ARE RETURNED. AT THE BOTTOM, THE HANDRAIL SHALL CONTINUE TO SLOPE FOR A DISTANCE OF THE WIDTH OF ONE TREAD FROM THE BOTTOM RISER. THE REMAINDER OF THE EXTENSION IS HORIZONTAL (LEVEL).
3. WHERE THE EXTENSION OF THE HANDRAIL IN THE DIRECTION OF THE STAIR RUN WOULD CREATE A HAZARD, THE EXTENSION SHALL BE MADE AT RIGHT ANGLES, ON THE FACE OF A RETURNING WALL. WHERE THE STAIRS ARE CONTINUOUS THE HANDRAIL SHALL BE CONTINUOUS AND NEED NOT EXTEND OUT INTO THE LANDING.
4. HANDRAILS SHALL NOT REDUCE THE REQUIRED WIDTH OF STAIR. WHERE HANDRAIL EXTENSIONS PROTRUDE MORE THAN 4 1/2" INTO AN ADJACENT ROUTE OF TRAVEL, PROVIDE CANE-DETECTABLE RAIL AT 27" ABOVE LANDING.
5. HANDRAILS SHALL BE CONTINIOUS WITHIN THE FULL LENGTH OF EACH STAIR FLIGHT OR RAMP RUN. INSIDE HANDRAILS ON SWITCHBACK OR DOGLEG STAIRS AND RAMPS SHALL BE CONTINUOUS BETWEEN FLIGHTS OR RUNS.

RAMPS

1. ALL RAMPS USED AS EXITS AND ANY PATH OF TRAVEL HAVING A SLOPE GREATER THAN 1:20 SHALL COMPLY WITH THE REQUIREMENTS OF THIS SECTION. RAMPS SHALL HAVE THE LEAST POSSIBLE SLOPE.
2. PEDESTRIAN RAMPS SHALL HAVE A MINIMUM WIDTH OF 48". RAMPS SERVING AN OCCUPANCY LOAD GREATER THAN 300 SHALL HAVE A MINIMUM WIDTH OF 60".
3. ALL RAMPS IN AREAS ACCESSIBLE TO PERSONS WITH DISABILITIES ON A PATH OF TRAVEL OR SERVING EXITS SHALL HAVE A 1:12 MAXIMUM SLOPE WITH CROSS SLOPES NO GREATER THAN 1:50. LANDINGS NOT TO EXCEED 1:50 IN ANY DIRECTION.
4. INTERMEDIATE LANDINGS OCCURRING AT NO DIRECTION CHANGE TO BE 60" LONG, RAMPS W/ INTERMEDIATE LANDING < OR EQUAL TO 30 DEGREES SHALL BE OF 60" LENGTH AND 60" WIDTH. INTERMEDIATE LANDINGS OCCURRING AT > EQUAL TO 30 DEGREES SHALL BE OF 72" LENGTH AND 60" WIDTH.
5. THE LEVEL LANDING WIDTH OF ANY RAMP SHALL EXTEND 24" PAST THE STRIKE EDGE OF ANY EXTERIOR DOOR OR GATE.
6. DOORS STANDING IN ANY POSITION SHALL NOT REDUCE THE MINIMUM DIMENSION OF THE RAMP TO LESS THAN 42" OR THE REQUIRED WIDTH BY MORE THAN 3".
7. HANDRAILS ARE REQUIRED ON RAMPS WHEN THE SLOPE EXCEEDS 1:20 (5%). HANDRAILS AT RAMPS SHALL RUN ALONG BOTH SIDES OF A RAMP, BE CONTINUOUS THE FULL LENGTH, AND EXTENSIONS AT THE TOP AND BOTTOM OF THE RAMP SHALL BE 12" MIN.
8. THE HANDRAIL GRIP SURFACE AT RAMPS SHALL BE MOUNTED BETWEEN 34" AND 38" ABOVE THE RAMP SURFACE.
9. ALL HANDRAIL ENDS SHALL BE RETURNED OR SHALL TERMINATE IN NEWEL POSTS OR SAFETY TERMINALS.
10. ALL HANDRAILS PROJECTED FROM A WALL SHALL BE MOUNTED WITH A MINIMUM 1-1/2 INCHES BETWEEN THE WALL AND THE HANDRAIL.
11. THE HAND GRIP PORTION OF HANDRAILS SHALL BE NOT LESS THAN 1-1/4" NOR MORE THAN 2" IN CROSS-SECTIONAL DIMENSION OR SHAPE AND SHALL PROVIDE AN EQUIVALENT SMOOTH GRIPPING SURFACE WITH NO SHARP CORNERS. HANDRAIL GRIPPING SURFACES WITH A NON-CIRCULAR CROSS SECTION SHALL HAVE A PERIMETER DIMENSION OF 4"MIN. AND 6 1/4" MAX. AND A CROSS SECTION DIMENSION OF 2 1/4" MAX.
12. HANDRAILS CANNOT PROJECT INTO THE REQUIRED CLEAR WIDTH OF THE RAMP MORE THAN 3 1/2" FROM EACH SIDE OF THE RAMP AT THE HANDRAIL HEIGHT.

SANITARY FACILITIES (GENERAL)

1. ALL DOORWAYS LEADING TO SANITARY FACILITIES SHALL HAVE 32" CLEAR, UNOBSTRUCTED OPENINGS.
2. ALL SINKS, FAUCET CONTROLS, AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBS. LEVER-OPERATED, PUSH TYPE, AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.
3. LAVATORIES SHALL BE MOUNTED WITH A MINIMUM DISTANCE OF 18" FROM A WALL OR PARTITION TO THE CENTER OF THE FIXTURE. ACCESSIBLE LAVATORIES SHALL BE MOUNTED WITH THE RIM AND/OR COUNTER SURFACE NO HIGHER THAN 34" ABOVE THE FLOOR.

D1 DISABLED ACCESS REQUIREMENTS
T-3 SCALE: 1/8" = 1'-0"

TOILET ROOM FIXTURES AND ACCESSORIES

1. THE HEIGHT OF ACCESSIBLE WATER CLOSETS SHALL BE A MINIMUM OF 17" AND A MAXIMUM OF 19" MEASURED TO THE TOP OF THE TOILET SEAT.
2. PROVIDE 17" MINIMUM - 18" MAXIMUM FROM THE CENTERLINE OF THE WATER CLOSET TO THE ADJACENT WALL.
3. TOILET AND URINAL FLUSH CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. CONTROLS FOR THE FLUSH VALVES SHALL BE MOUNTED ON THE OPEN (WIDE) SIDE OF THE TOILET STALL. TOILET AND URINAL FLUSH CONTROLS SHALL BE NO MORE THAN 44" ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBS.
4. WHERE URINALS ARE PROVIDED, AT LEAST ONE SHALL HAVE A CLEAR SPACE 30" WIDE BY 48" LONG IN FRONT OF THE URINAL. AT LEAST ONE URINAL WITH 13 1/2" MIN. RIM PROJECTION FROM THE WALL AND A MAXIMUM OF 17" ABOVE THE FLOOR SHALL BE INSTALLED.
5. AMBULATORY STALLS ARE REQUIRED WHERE 6 OR MORE STALLS ARE PROVIDED WITHIN A MULTIPLE ACCOMODATION TOILET ROOM OR WHERE THE COMBINATION OF URINALS AND WATER CLOSETS TOTALS SIX OR MORE FIXTURES. AMBULATORY ACCESSIBLE COMPARTMENTS SHALL BE 60" DEEP MIN. AND 35"MIN - 37" MAX WIDE. COMPARTMENT DOORS SHALL NOT SWING INTO THE MINIMUM REQUIRED COMPARTMENT AREA.
6. A CLEAR FLOOR SPACE 30" WIDE BY 48" LONG SHALL BE PROVIDED IN FRONT OF A LAVATORY TO ALLOW FORWARD APPROACH. SUCH CLEAR SPACE SHALL ADJOIN OR OVERLAP AN ACCESSIBLE ROUTE AND SHALL EXTEND INTO KNEE AND TOE SPACE UNDERNEATH LAVATORY.
7. LAVATORIES SHALL BE MOUNTED WITH A CLEARANCE OF AT LEAST 29" FROM THE FLOOR TO THE BOTTOM OF THE APRON WITH 27" MINIMUM KNEE CLEARANCE UNDER THE FRONT LIP EXTENDING A MINIMUM OF 30" IN WIDTH WITH 8" MINIMUM DEPTH AT THE TOP. TOE CLEARANCE SHALL BE SAME WIDTH AND A MINIMUM OF 9 INCHES HIGH FROM THE FLOOR AND A MINIMUM OF 17"-19"MAXIMUM DEEP FROM THE FRONT OF THE LAVATORY.
8. HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.
9. MIRRORS LOCATED ABOVE LAVATORIES OR COUNTERTOPS SHALL HAVE BOTTOM OF REFLECTIVE SURFACE 40" MAX. ABOVE FINISHED FLOOR; MIRRORS MOUNTED ELSEWHERE SHALL HAVE BOTTOM EDGE OF REFLECTIVE SURFACE 35" MAX. ABOVE FINISHED FLOOR. TOP EDGE OF MIRRORS SHOULD BE 74" HIGH TO BE USEABLE BY AMBULATORY PEOPLE.
10. LOCATE PAPER TOWEL DISPENSERS, SANITARY NAPKIN DISPENSERS, AND WASTE RECEPTACLES WITH ALL OPERABLE PARTS NOT MORE THAN 40" FROM THE FLOOR.
11. LOCATE TOILET TISSUE DISPENSERS ON THE WALL 7-9" FROM THE FRONT OF THE WATER CLOSET TO THE CENTERLINE OF THE DISPENSER. THE OUTLET OF THE DISPENSER SHALL BE 19" MIN. ABOVE FINISHED FLOOR AND SHALL NOT BE LOCATED BEHIND GRAB BARS. DISPENSERS SHALL NOT BE OF A TYPE THAT CONTROLS DELIVERY OR THAT DOES NOT ALLOW CONTINIOUS PAPER FLOW.
12. DOORS CANNOT SWING INTO THE REQUIRED CLEAR FLOOR SPACE AT ANY FIXTURE OTHER THAN THE DOOR TO THE ACESSIBLE WATER CLOSET COMPARTMENT. A DOOR, IN ANY POSITION, MAY ENCROACH INTO THE TURNING SPACE BY 12" MAX
13. CLEARANCE AROUND WATER CLOSET SHALL BE 60" WIDE x 56" DEEP PROVIDED IN FRONT OF THE WATER CLOSET, NO OTHER FIXTURES CAN BE LOCATED WITHIN THIS AREA. A MIN. 60" WIDE AND 48" DEEP MANEUVERING SPACE SHALL BE PROVIDED IN FRONT OF THE WATER CLOSET.
14. SANITARY NAPKIN DISPOSAL UNITS, IF PROVIDED, SHALL COMPLY WITH SECTION 11B-309.4 AND SHALL BE WALL MOUNTED AND LOCATED ON THE SIDE WALL BETWEEN THE REAR WALL OF THE TOILET AND THE TOILET PAPER DISPENSER. ADJACENT TO THE TOILET PAPER DISPENSER. THE DISPOSAL UNIT SHALL BE LOCATED BELOW THE GRAB BAR WITH THE OPENING OF THE DISPOSAL UNIT 19 INCHES MINIMUM ABOVE THE FINISH FLOOR.

MULTIPLE ACCOMMODATION TOILET ROOMS

1. A CLEAR SPACE, MEASURED FROM THE FLOOR TO A HEIGHT OF 27" ABOVE THE FLOOR, WITHIN THE SANITARY FACILITY ROOM, OF SUFFICIENT SIZE TO INSCRIBE A CIRCLE OF A DIAMETER NOT LESS THAN 60 INCHES, OR A T SHAPED SPACE IN ACCORDANCE WITH 11B-304.3.2 SHALL BE PROVIDED.
2. CLEARANCE AROUND A WATER CLOSET SHALL BE 60" MIN. MEASURED PERPENDICULAR FROM THE SIDE WALL AND 56" MIN. MEASURED PERPENDICULAR FROM THE REAR WALL. A 48" LONG CLEAR SPACE IN FRONT OF WATER CLOSET SHALL BE PROVIDED IF THE COMPARTMENT HAS AN END OPENING DOOR (FACING THE WATER CLOSET). A 60" LONG CLEAR SPACE SHALL BE PROVIDED IN COMPARTMENT WHEN DOOR IS LOCATED AT THE SIDE. GRAB BARS SHALL NOT PROJECT MORE THAN 3" INTO CLEAR SPACE SPECIFIED ABOVE.
3. WATER CLOSET COMPARTMENT SHALL BE EQUIPPED WITH DOOR THAT HAS AN AUTOMATIC CLOSING DEVICE, AND A CLEAR UNOBSTRUCTED OPENING WIDTH OF 32" WHEN LOCATED AT THE END, AND 34" WHEN LOCATED AT SIDE. WHEN THE DOOR IS POSITIONED AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION.
4. EXCEPT FOR DOOR OPENINGS, A CLEAR UNOBSTRUCTED ACCESS NOT LESS THAN 44" SHALL BE PROVIDED TO ALL WATER CLOSET COMPARTMENTS DESIGNED FOR USE BY THE DISABLED. THE SPACE IMMEDIATELY IN FRONT OF A WATER CLOSET COMPARTMENT SHALL BE NOT LESS THAN 48" AS MEASURED AT RIGHT ANGLES TO THE COMPARTMENT DOOR IN ITS CLOSED POSITION.
5. THE WATER CLOSET AND DOOR MANEUVERING CLEARANCE CANNOT OVERLAP IN THE ACCESSIBLE STALL.
6. STALL DOORS TO BE HINGED 4" MAXIMUM OPPOSITE THE WATER CLOSET FOR FRONT OR SIDE OPENING DOORS.
7. STALL DOORS CANNOT SWING INTO THE REQUIRED CLEAR AREA AT THE WATER CLOSET.
8. A DOOR PULL SHALL BE PLACED ON BOTH SIDES OF THE DOOR NEAR THE LATCH.

GRAB BARS

1. GRAB BARS SHALL BE LOCATED ON ONE SIDE AND THE BACK OF THE PHYSICALLY DISABLED TOILET STALL OR COMPARTMENT AND SHALL BE SECURELY ATTACHED 33" MINIMUM-36" MAXIMUM, MEASURED TO THE TOP OF GRIPING SURFACE, ABOVE AND PARALLEL TO THE FLOOR.
2. GRAB BARS AT THE SIDE SHALL BE AT LEAST 42" LONG WITH THE FRONT END POSITIONED 54"MINIMUM FROM THE BACK OF THE STALL AND WITH THE FRONT END POSITIONED 24" MINIMUM IN FRONT OF THE WATER CLOSET. THE SIDE GRAB BAR SHALL BE LOCATED 12" MAXIMUM FROM THE REAR WALL. GRAB BARS AT THE BACK SHALL NOT BE LESS THAN 36" LONG AND SHALL EXTEND FROM THE CENTERLINE OF THE WATER CLOSET 12" MINIMUM ON ONE SIDE AND 24"MINIMUM ON THE OTHER SIDE.
3. THE DIAMETER OR WIDTH OF THE GRIPPING SURFACES OF A GRAB BAR WITH CIRCULAR CROSS SECTIONS SHALL HAVE AN OUTSIDE DIAMETER OF 1 1/4"MIN AND 2" MAXIMUM. GRAB BARS WITH NON CIRCULAR CROSS SECTIONS SHALL HAVE A CROSS SECTION DIMENSION OF 2" MAXIMUM AND A PERIMETER DIMENSION OF 4" MIN AND 4.8" MAXIMUM. IF THE GRAB BARS ARE MOUNTED ADJACENT TO A WALL, THE SPACE BETWEEN THE WALL AND THE GRAB BARS SHALL BE 1-1/2".
4. GRAB BARS, AND ANY WALL OR OTHER SURFACE ADJACENT TO IT, SHALL BE FREE OF ANY SHARP OR ABRASIVE ELEMENTS.
5. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.
6. GRAB BARS SHALL BE DESIGNED TO SUPPORT A 250 POUND FORCE.
7. NO OBJECT TO BE MOUNTED WITHIN 1 1/2" BELOW OR 12" ABOVE ANY GRAB BAR.

SIGNAGE

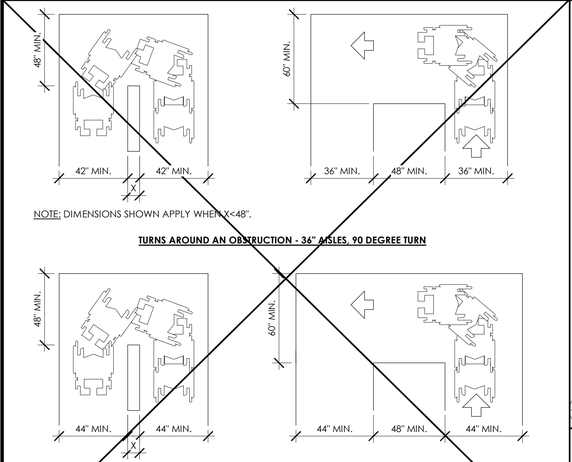
1. BASELINE OF THE HIGHEST LINE OF RAISED CHARACTER TO BE 60" MAXIMUM AND BASELINE OF THE LOWEST BRAILLE CELLS TO BE 48" MINIMUM ABOVE FINISHED FLOOR.
2. TACTILE ROOM IDENTIFICATION SIGNS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18" MIN. x 18" MIN. CENTERED ON SIGN IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING.

TELEPHONES

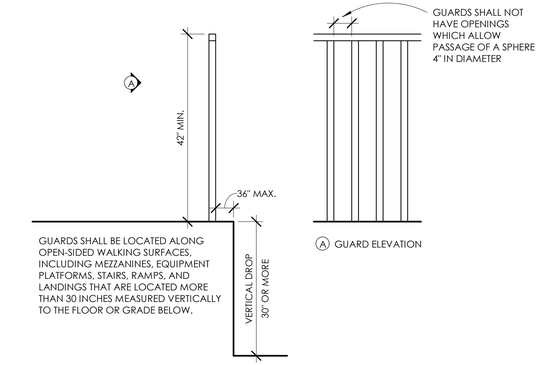
1. PROVIDE A 30" X 48" CLEAR SPACE AT TELEPHONE. THE CLEAR SPACE MAY INCLUDE KNEE SPACE UNDER THE TELEPHONE.
2. THE HIGHEST OPERABLE PART OF THE TELEPHONE SHALL BE 48" MAX.
3. TELEPHONES MOUNTED IN A CORNER THAT REQUIRE WHEELCHAIR USERS TO REACH DIAGONALLY SHALL HAVE THE HIGHEST OPERABLE PART NO HIGHER THAN 48" AFF.
4. THE CORD FROM THE TELEPHONE TO THE HANDSET SHALL BE AT LEAST 29" LONG.
5. ALL PUBLIC TELEPHONES SHALL HAVE VOLUME CONTROL AND BE IDENTIFIED WITH APPROPRIATE SIGNAGE
6. TELEPHONES SHALL HAVE PUSH-BUTTON CONTROLS WHERE SERVICE FOR SUCH EQUIPMENT IS AVAILABLE, ALL OPERABLE PARTS, INCLUDING BUT NOT LIMITED TO COIN RETURN, SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE TO ACTIVATE OPERABLE PARTS SHALL NOT EXCEED 5LBS MAX.

ADDITIONAL REQUIREMENTS

1. THE TOP OF THE BOX OF THE OPERATING HANDLE OF SWITCHES INTENDED TO BE USED BY OCCUPANTS OF A ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES, OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
2. ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL COMPLY WITH SECTION 11B-308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
3. HIGHEST OPERABLE PART OF FIRE ALARM INITIATING DEVICES (BOXES) SHALL BE LOCATED NO LESS THAN 42" AND NOT MORE THAN 48" MEASURED VERTICALLY FROM ABOVE THE LEVEL OF THE ADJACENT FLOOR, WORKING PLATFORM, GROUND SURFACE, OR SIDEWALK TO THE HIGHEST POINT OF THE ACTIVATING HANDLE OR LEVER OF THE BOTTOM.
4. INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE THE STANDARD USED TO IDENTIFY FACILITIES THAT ARE ACCESSIBLE TO AND USABLE BY PHYSICALLY DISABLED PERSONS. THE SYMBOL SPECIFIED ABOVE SHALL CONSIST OF A WHITE FIGURE ON BLUE BACKGROUND. THE BLUE SHALL BE EQUAL TO COLOR NO. 15090 IN FEDERAL STANDARD 595C.
5. ALL CONTROLS TO BE 15" MIN. TO 48" MAX., REGARDLESS OF APPROACH. WHERE A HIGH FORWARD REACH IS OVER AN OBSTRUCTION, THE CLEA



A1 T-4 TURNS AROUND AN OBSTRUCTION
SCALE: NTS

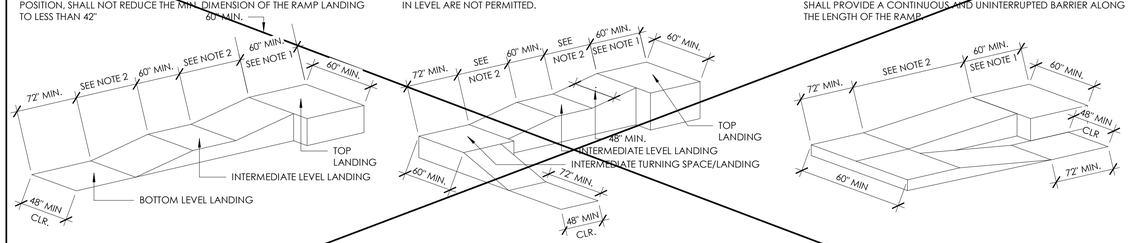


A2 T-4 GUARD DETAIL
SCALE: 3/4" = 1'-0"

NOTE 1: WHERE DOORS ARE LOCATED ADJACENT TO A RAMP LANDING, MANEUVERING CLEARANCES REQUIRED SHALL BE PERMITTED TO OVERLAP THE REQUIRED LANDING AREA. DOORS WHEN FULLY OPEN SHALL NOT REDUCE THE REQUIRED RAMP LANDING WIDTH BY MORE THAN 3". DOORS IN ANY POSITION, SHALL NOT REDUCE THE MIN. DIMENSION OF THE RAMP LANDING TO LESS THAN 42"

NOTE 2: MAXIMUM HORIZONTAL DISTANCE OF EACH RAMP AND RUN VARY
NOTE 3: RAMP RUNS SHALL HAVE A RUNNING SLOPE NOT STEEPER THAN 1:12
NOTE 4: CROSS SLOPE OF RAMPS SHALL NOT BE STEEPER THAN 1:48
NOTE 5: LANDINGS SHALL COMPLY W/ SECTION 11B-405.7 &11B-302. CHANGES IN LEVEL ARE NOT PERMITTED.

NOTE 6: A CURB, 2" HIGH MINIMUM, OR A BARRIER SHALL BE PROVIDED THAT PREVENTS PASSAGE OF A 4" DIAMETER SPHERE, WHERE ANY PORTION OF THE SPHERE IS WITHIN 4" OF THE FINISH FLOOR OR GROUND SURFACE. TO PREVENT WHEEL ENTRAPMENT, THE CURB OR BARRIER SHALL PROVIDE A CONTINUOUS AND UNINTERRUPTED BARRIER ALONG THE LENGTH OF THE RAMP.



NOTE 7: RAMPS THAT CHANGE DIRECTION BETWEEN RUNS AT LANDINGS SHALL HAVE A CLEAR LANDING 72" MINIMUM BY 72" MINIMUM.

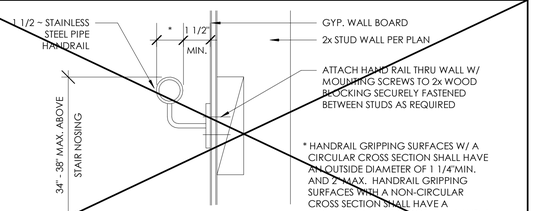
SEE B4/T-7 FOR RAMP HANDRAIL

STRAIGHT RAMP RUN

RAMP WITH TURNING PLATFORM (WHEN DIRECTION OF RAMP CHANGES 30 DEGREES OR MORE)

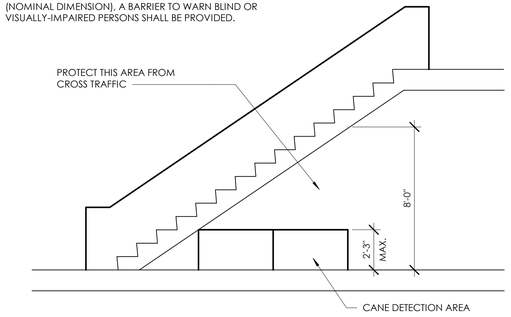
RAMP WITH INTERMEDIATE SWITCH-BACK PLATFORM

A3 T-4 RAMP DETAILS
SCALE: N.T.S.

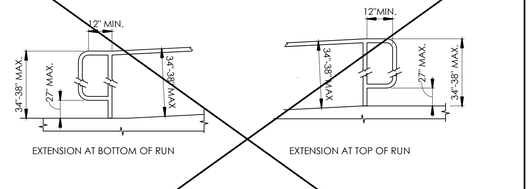


B1 T-4 STAIR HANDRAIL
SCALE: 3" = 1'-0"

IF VERTICAL CLEARANCE OF AN AREA ADJOINING AN ACCESSIBLE ROUTE IS REDUCED TO LESS THAN 80 INCHES (NOMINAL DIMENSION), A BARRIER TO WARN BLIND OR VISUALLY-IMPAIRED PERSONS SHALL BE PROVIDED.

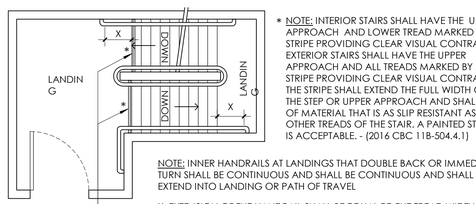


B2 T-4 CANE DETECTION AT OVERHEAD HAZARD
SCALE: 1/4" = 1'-0"



NOTES:
HANDRAILS TO BE PROVIDED AT EACH RAMP RUN. HANDRAILS SHALL RETURN SMOOTHLY TO GUARD, WALL OR LANDING SURFACE, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT RAMP RUN. ALL SURFACES SHALL BE SLIP-RESISTANT.

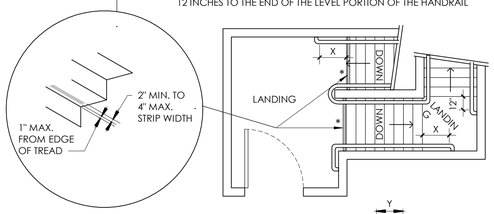
B3 T-4 RAMP HANDRAILS AND HANDRAIL EXTENSIONS
SCALE: NTS

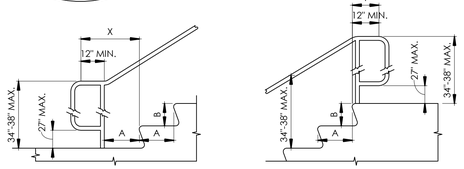


* NOTE: INTERIOR STAIRS SHALL HAVE THE UPPER APPROACH AND LOWER TREAD MARKED BY A STRIPE PROVIDING CLEAR VISUAL CONTRAST. EXTERIOR STAIRS SHALL HAVE THE UPPER APPROACH AND ALL TREADS MARKED BY A STRIPE PROVIDING CLEAR VISUAL CONTRAST. THE STRIPE SHALL EXTEND THE FULL WIDTH OF THE STEP OR UPPER APPROACH AND SHALL BE OF MATERIAL THAT IS AS SLIP RESISTANT AS THE OTHER TREADS OF THE STAIR. A PAINTED STRIPE IS ACCEPTABLE. - (2016 CBC 11B-504.4.1)

NOTE: INNER HANDRAILS AT LANDINGS THAT DOUBLE BACK OR IMMEDIATELY TURN SHALL BE CONTINUOUS AND SHALL BE CONTINUOUS AND SHALL NOT EXTEND INTO LANDING OR PATH OF TRAVEL

X: EXTENSION OF THE HANDRAIL SHALL BE EQUAL TO THE TREAD WIDTH PLUS 12 INCHES TO THE END OF THE LEVEL PORTION OF THE HANDRAIL



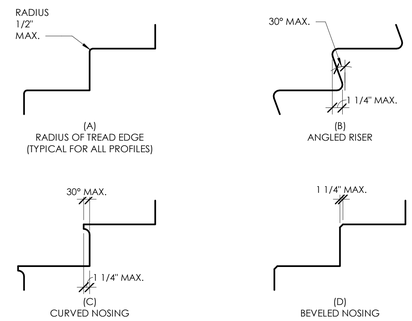


A - TREAD DEPTH (11" MIN.)
B - RISER HEIGHT (4" MIN., 7" MAX.)
X - THE MINIMUM HANDRAIL EXTENSION OF 12 INCHES PLUS THE WIDTH OF TREAD REQUIRED AT EACH BOTTOM RISER

A - TREAD DEPTH (11" MIN.)
B - RISER HEIGHT (4" MIN., 7" MAX.)
Y - THE MINIMUM HANDRAIL EXTENSION REQUIRED AT EACH TOP RISER

NOTES:
HANDRAILS TO BE PROVIDED AT EACH SIDE OF STAIRWAY FLIGHT. HANDRAILS SHALL RETURN SMOOTHLY TO FLOOR, WALL OR POST.
ALL STEPS ON A FLIGHT OF STAIRS SHALL HAVE UNIFORM RISER HEIGHTS AND UNIFORM TREAD DEPTHS.
ALL TREAD SURFACES AND STRIPING MATERIAL SHALL BE SLIP-RESISTANT.
OPEN RISERS ARE NOT PERMITTED.

D1 T-4 STAIRWAY TREADS, RISERS AND HANDRAIL EXTENSIONS
SCALE: NTS



C2 T-4 STAIR NOSINGS
SCALE: NTS

LICENSED ARCHITECT JEFFREY A. KATZ 31883 REN. 09/10/19 STATE OF CALIFORNIA
JKA jeffkatz ARCHITECTURE
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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3051 WOODCREEK OAKS BLVD.
ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

	Description:	Date:
1	30% CD	04/05/21
2	75% CD	05/17/21
3	99% CD	07/13/21
4	100% CD/BID SET	08/20/21

For Council Approval
Not for Bidding

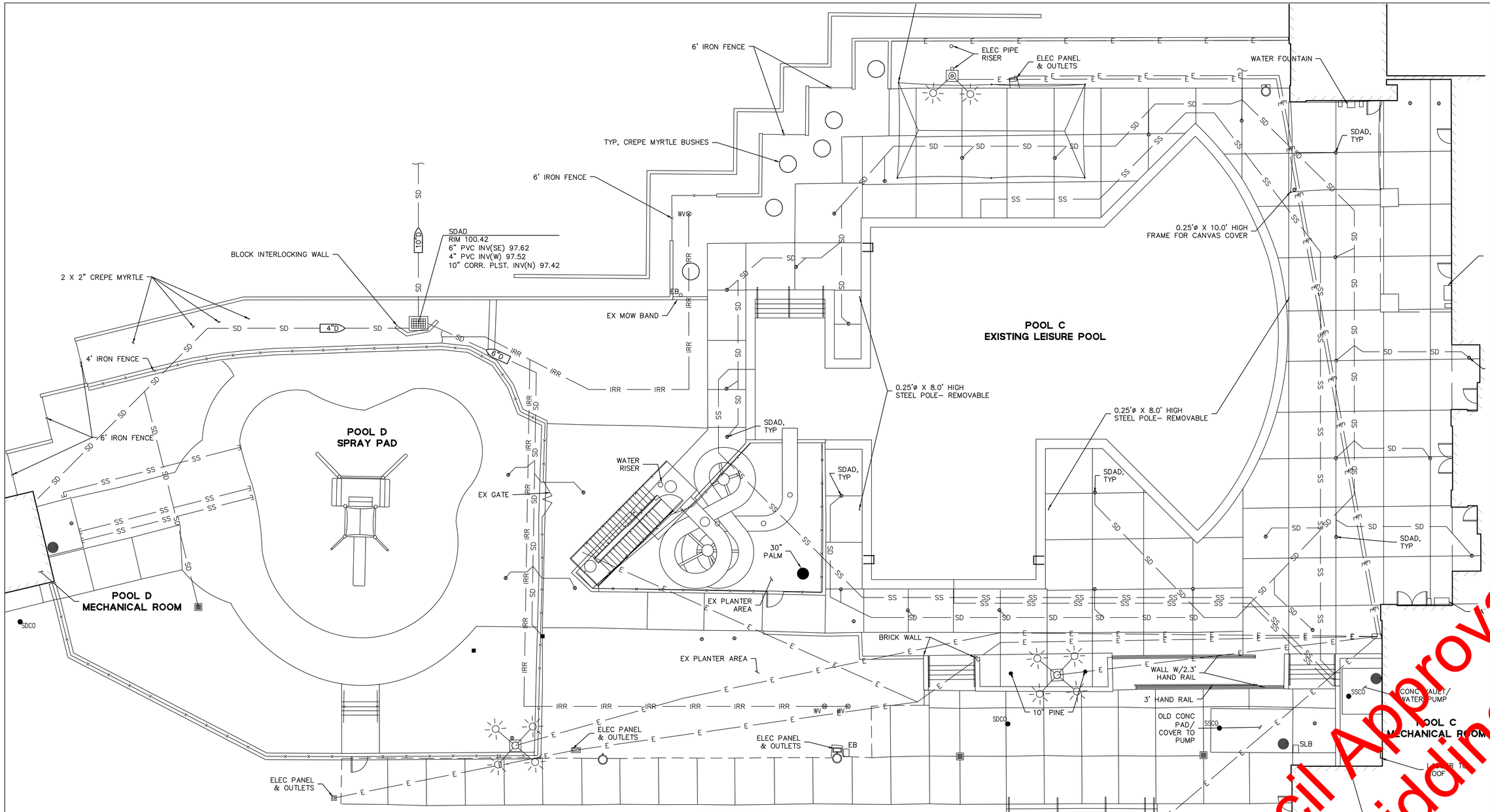
Project Number:	200204
Approved By:	JK
Checked By:	MK
Drawn By:	ACJ

Sheet Title:

ACCESSIBILITY DETAILS

SHEET NUMBER:

T-4



EXISTING CONDITION NOTES

1. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE KNOWN UNDERGROUND UTILITIES. THE TYPES, LOCATIONS, EXTENTS, SIZES AND DEPTHS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND WERE OBTAINED FROM VARIOUS SOURCES, INCLUDING TOPOGRAPHIC FIELD SURVEYS, AND AS–BUILT DRAWINGS PROVIDED BY THE PROPERTY OWNER. ABANDONED UNDERGROUND UTILITIES MAY EXIST, THE LOCATION OF WHICH ARE NOT KNOWN. CONTRACTOR IS CAUTIONED THAT THE TYPES, LOCATIONS, EXTENTS, SIZES AND DEPTHS OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS MAY NOT BE THE TYPES, LOCATIONS, EXTENTS, SIZES AND DEPTHS ENCOUNTERED IN THE FIELD.

2. ONLY EXCAVATION AND PHYSICAL EXPOSURE WILL REVEAL THE ACTUAL TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF EXISTING UNDERGROUND UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING EXISTING UNDERGROUND UTILITIES WITHIN THE AREA OF WORK. CONTRACTOR SHALL RETAIN A PRIVATE UTILITY LOCATOR TO IDENTIFY EXISTING UTILITIES. THE CONTRACTOR SHALL POTHOLE AS NECESSARY AT CONNECTION LOCATIONS AND PROPOSED UTILITY CROSSINGS TO FULLY LOCATE AND IDENTIFY EXISTING UTILITIES. POTHOLING SHALL BE DONE AND THE RESULTS, INCLUDING ANY CONFLICTS IDENTIFIED, REPORTED TO THE ENGINEER PRIOR TO THE START OF WORK.

3. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING HIS WORK TO AVOID CONFLICTS BETWEEN SEWER LATERALS, STORM DRAINS, WATER MAINS, AND ALL OTHER UNDERGROUND UTILITIES.

4. UTILITY INFORMATION IS OBTAINED BY AS–BUILT INFORMATION AS WELL AS SURVEY OBSERVATION. ALL EXISTING UTILITY INFORMATION IN THIS PLAN SET IS IDENTIFIED PER THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD FOR LEVEL OF QUALITY. BELOW IS A LIST OF THE LEVEL OF QUALITY CATEGORIES WITH THE ASSOCIATED DEFINITION PER ASCE STANDARDS.

   (C) – INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE–GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION TO QUALITY LEVEL D INFORMATION.

   (D) – UTILITY LOCATION INFORMATION DERIVED FROM EXISTING RECORDS OR ORAL RECOLLECTIONS.

ABBREVIATIONS

AB	AGGREGATE BASE
ABBREV	ABBREVIATION
AC	ASPHALT CONCRETE
AD	AREA DRAIN
BC	BACK OF CURB
BFP	BACKFLOW PREVENTION DEVICE
BLDG	BUILDING
BOW	BACK OF WALL
BS	BOTTOM OF STEP
CC,CONC	CONCRETE
CO	CLEANOUT
CORR.	CORRUGATED PLASTIC
DW	DOMESTIC WATER
DWG	DRAWING
(E)	EAST
(E), EX	EXISTING
E	ELECTRICAL
EB	ELECTRICAL BOX
ELEV	ELEVATION
FH	FIRE HYDRANT
FW	FIRE WATER
GB	GRADE BREAK
INV	INVERT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
(N)	NORTH
(N)	NEW
(NE)	NORTHEAST
(NW)	NORTHWEST
NO	NUMBER
PCC	PORTLAND CEMENT CONCRETE
POC	POINT OF CONNECTION
PVC	POLYVINYL CHLORIDE
RIM	RIM ELEVATION
(S)	SOUTH
(SE)	SOUTHEAST
(SW)	SOUTHWEST
SAD	SEE ARCHITECTURAL DRAWINGS
SD	STORM DRAIN
SDAD	STORM DRAIN AREA DRAIN
SDCB	STORM DRAIN CATCH BASIN
SDCO	STORM DRAIN CLEANOUT
SDDI	STORM DRAIN DRAIN INLET
SDMH	STORM DRAIN MANHOLE
SED	SEE ELECTRICAL DRAWINGS
SL	STREET LIGHT
SLB	STREET LIGHT BOX
SPD	SEE PLUMBING DRAWINGS
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSD	SEE STRUCTURAL DRAWINGS
SSMH	SANITARY SEWER MANHOLE
STD	STANDARD
TC	TOP OF CURB
TFC	TOP OF FLUSH CURB
TS	TOP OF STEP
TYP	TYPICAL

GRAPHIC SCALE
10 0 10 20

For Council Approval
Not for Bidding

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3051 WOODCREEK OAKS BLVD.
ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
CONCEPT DESIGN	06/25/20
50% CD	08/13/20
75% CD	05/20/21
100% CD	07/14/21

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Checked By:	CM
Drawn By:	MM

Sheet Title:

EXISTING CONDITIONS

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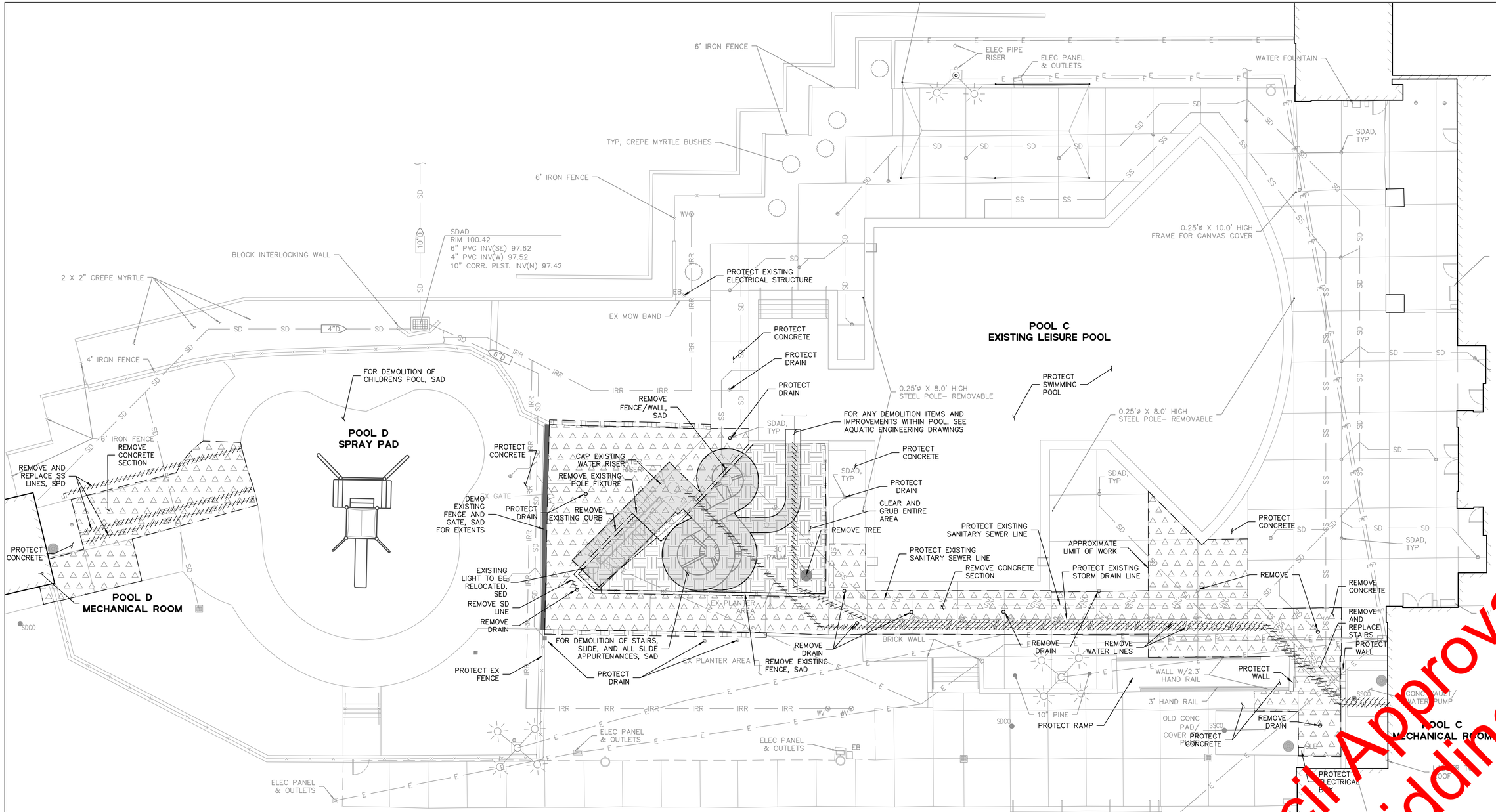
C101



DEMOLITION LEGEND

- REMOVE CONCRETE SECTION
- REMOVE WATER SLIDE AND APPURTENANCES
- CLEAR AND GRUB
- REMOVE CURB
- REMOVE EXISTING UTILITY LINE

DEMOLITION NOTES

1. CONTRACTOR TO USE CAUTION WHEN WORKING ADJACENT TO EXISTING BUILDING.
2. CONTRACTOR TO CLEAR AND GRUB WITHIN THE LIMITS OF PROPOSED WORK, UNLESS OTHERWISE NOTED ON PLANS.
3. RIM ELEVATIONS FOR EXISTING UTILITY STRUCTURES SHALL BE RAISED TO PROPOSED SURFACE ELEVATIONS.
4. THE UTILITY LINES AND STRUCTURES SHOWN ON THESE PLANS ARE DERIVED FROM RECORD DATA AND/OR SURFACE OBSERVATION AND ARE APPROXIMATE ONLY. ACTUAL LOCATION AND SIZE, TOGETHER WITH THE PRESENCE OF ANY ADDITIONAL UTILITY LINES AND STRUCTURES NOT SHOWN ON THIS PLAN, SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS IN THE FIELD AND INFORMATION SHOWN ON THESE PLANS.
5. THE CONTRACTOR IS REQUIRED BY STATE LAW TO ACTIVELY RESEARCH THE WORK AREA PRIOR TO COMMENCEMENT OF CONSTRUCTION, REFERENCE ANY MONUMENTS, AND REPLACE THOSE DAMAGED OR REMOVED DURING CONSTRUCTION.
6. THE LIMITS OF DEMOLITION SHOWN ARE APPROXIMATE ONLY. CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING SURROUNDINGS, LANDSCAPE AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION IN PAVING, CURBS, GUTTERS, AND SIDEWALKS AND AVOIDING ANY ABRUPT OR APPARENT CHANGES IN GRADES OR CROSS SLOPES OR HAZARDOUS CONDITIONS.
7. EXISTING CURB AND SIDEWALK AND LANDSCAPE/IRRIGATION WITHIN THE PROJECT LIMITS THAT ARE DAMAGED OR DISPLACED, EVEN THOUGH THEY WERE NOT TO BE REMOVED, SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST.
8. PROTECT ALL EXISTING UTILITIES AND SITE FEATURES FROM BEING DAMAGED, UNLESS OTHERWISE NOTED. ALL UTILITIES AND IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED AT NO ADDITIONAL COST TO THE OWNER AND TO THE SATISFACTION OF THE ENGINEER.
9. EXISTING CONCRETE SHALL BE REMOVED AT THE NEAREST EXPANSION JOINTS.

GRAPHIC SCALE
10 0 10 20

For Council Approval
Not for Bidding

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DEMOLITION PLAN

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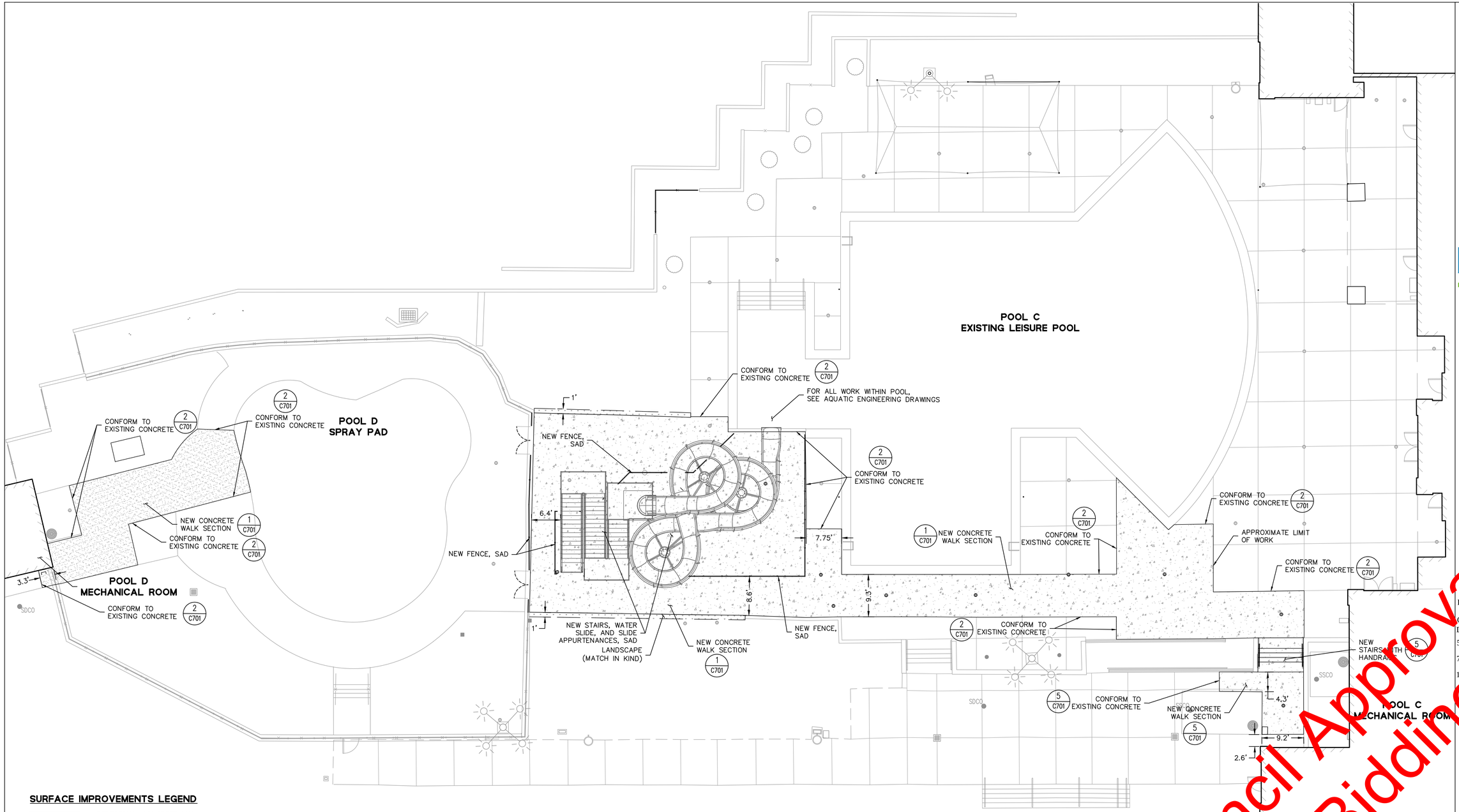
C201



SURFACE IMPROVEMENTS LEGEND

- PEDESTRIAN CONCRETE WALK (5" PCC / 6" CLASS II AB #3 REBAR @ 18" O.C.E.W)
- PEDESTRIAN CONCRETE WALK (5.5" PCC / 6" #3 REBAR @ 18" O.C.E.W)
- LANDSCAPING AND IRRIGATION (MATCH IN KIND)

SURFACE IMPROVEMENTS NOTES

1. THE LIMITS OF WORK ARE APPROXIMATE ONLY. CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING SURROUNDINGS, LANDSCAPE, AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION, AVOIDING ANY ABRUPT OR APPARENT CHANGES IN GRADES OR CROSS-SLOPES OR HAZARDOUS CONDITIONS.
2. ALL NEW CONCRETE SHALL HAVE A MAXIMUM SLOPE OF 2% IN ALL DIRECTIONS, INCLUDING DIAGONAL.
3. EXISTING CONCRETE SHALL BE REMOVED AT THE NEAREST EXPANSION JOINTS.
4. NEW WORK SHALL MATCH EXISTING AS CLOSELY AS POSSIBLE IN FINISH, SCORING, AND COLOR.
5. EXISTING SITE FEATURES (CURBS, CONCRETE WALKS, LANDSCAPE, IRRIGATION, ETC.) DEMOLISHED DURING CONSTRUCTION SHALL BE REPLACED IN KIND.

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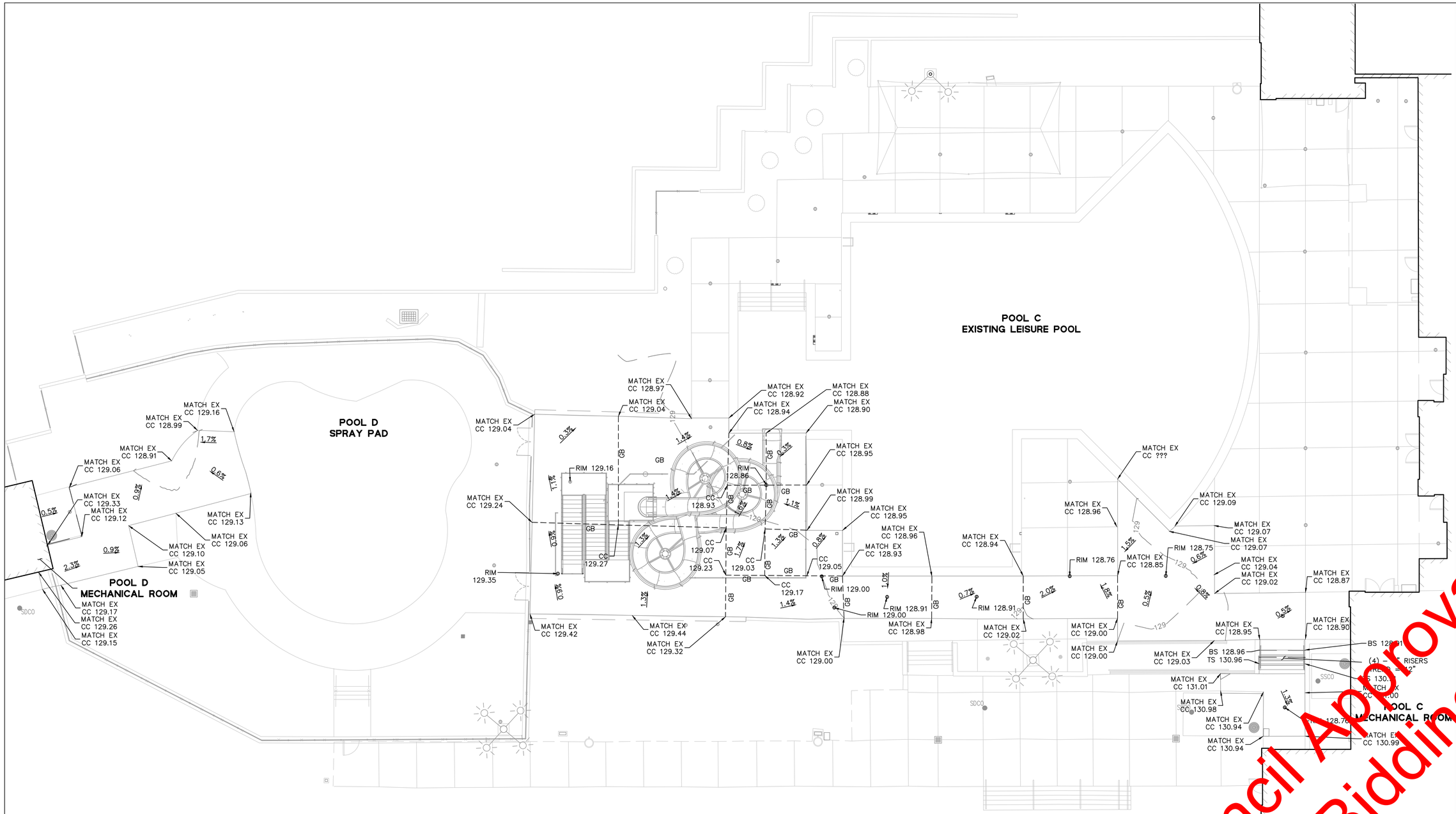
SURFACE IMPROVEMENT PLAN

SHEET NUMBER:

C301



LEGEND

----------	GRADE BREAK
—— ——	MAJOR CONTOUR
—— ——	MINOR CONTOUR
BW XX.XX	ELEVATION LABEL:
	BS BOTTOM OF STEP
	CC CONCRETE
	EX EXISTING ELEVATION
	FL FLOWLINE
	RIM RIM ELEVATION
	TC TOP OF CURB
	TFC TOP OF FLUSH CURB
	TS TOP OF STEP

GRADING NOTES

1. PROPOSED SITE PLAN AND UTILITIES HAS BEEN SCREENED FOR CLARITY.
2. GRADING WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND THE REQUIREMENTS AND RECOMMENDATIONS CONTAINED IN THE PROJECT GEOTECHNICAL REPORT.
3. THE CONTRACTOR SHALL EXERCISE EXTREME CARE TO CONFORM TO THE LINES, GRADES, SECTIONS, AND DIMENSIONS AS SET FORTH ON THESE PLANS. GRADED AREAS SHALL CONFORM TO THE VERTICAL ELEVATIONS SHOWN WITHIN TOLERANCE OF ONE-TENTH OF A FOOT IN LANDSCAPED AREAS AND TWO-HUNDREDTHS OF A FOOT IN HARDSCAPED OR PAVED AREAS. WHERE GRADED AREAS DO NOT CONFORM TO THESE TOLERANCES, THE CONTRACTOR SHALL BE REQUIRED TO DO CORRECTIVE GRADING, AT NO EXTRA COST TO THE OWNER.
4. CONTRACTOR SHALL FIELD VERIFY FINISHED FLOOR ELEVATIONS OF EXISTING BUILDINGS PRIOR TO STARTING CONSTRUCTION.
5. CONTRACTOR SHALL TAKE CAUTION WHEN GRADING ADJACENT TO EXISTING BUILDINGS, TO PROTECT EXISTING FOUNDATIONS AND TO NOT TO COVER EXISTING VENTS.
6. ALL STRUCTURES WITHIN THE PEDESTRIAN PATHWAY SHALL MEET ADA REQUIREMENTS. STRUCTURES WITH GRATES SHALL HAVE OPENINGS 1/2" MAXIMUM WIDE AND ELONGATED IN THE DIRECTION PERPENDICULAR TO THE DIRECTION OF DOMINANT PEDESTRIAN TRAVEL.
7. WHERE IMPROVEMENTS INVOLVE ADA ACCESSIBILITY, CONTRACTOR'S ATTENTION IS DIRECTED TO THE FOLLOWING PARAMETERS THAT NEED TO BE MET WITH THE FINISHED CONSTRUCTION:
   a. WALKWAYS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 4.9% AND A MAXIMUM CROSS SLOPE OF 2%.
   b. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ALL DIRECTIONS, INCLUDING DIAGONAL.
   c. ADA PARKING STALLS AND STRIPED AISLE SHALL HAVE A MAXIMUM SLOPE OF 2% IN ALL DIRECTIONS, INCLUDING DIAGONAL.
   d. TRANSITIONS BETWEEN PROPOSED IMPROVEMENTS AND EXISTING CONDITIONS SHALL BE SMOOTH AND FREE OF ABRUPT CHANGES.

*** CONTRACTOR SHALL FIELD VERIFY EXISTING GRADES AT CONFORMS PRIOR TO FORMING/AC WORK.**

GRAPHIC SCALE
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GRADING PLAN

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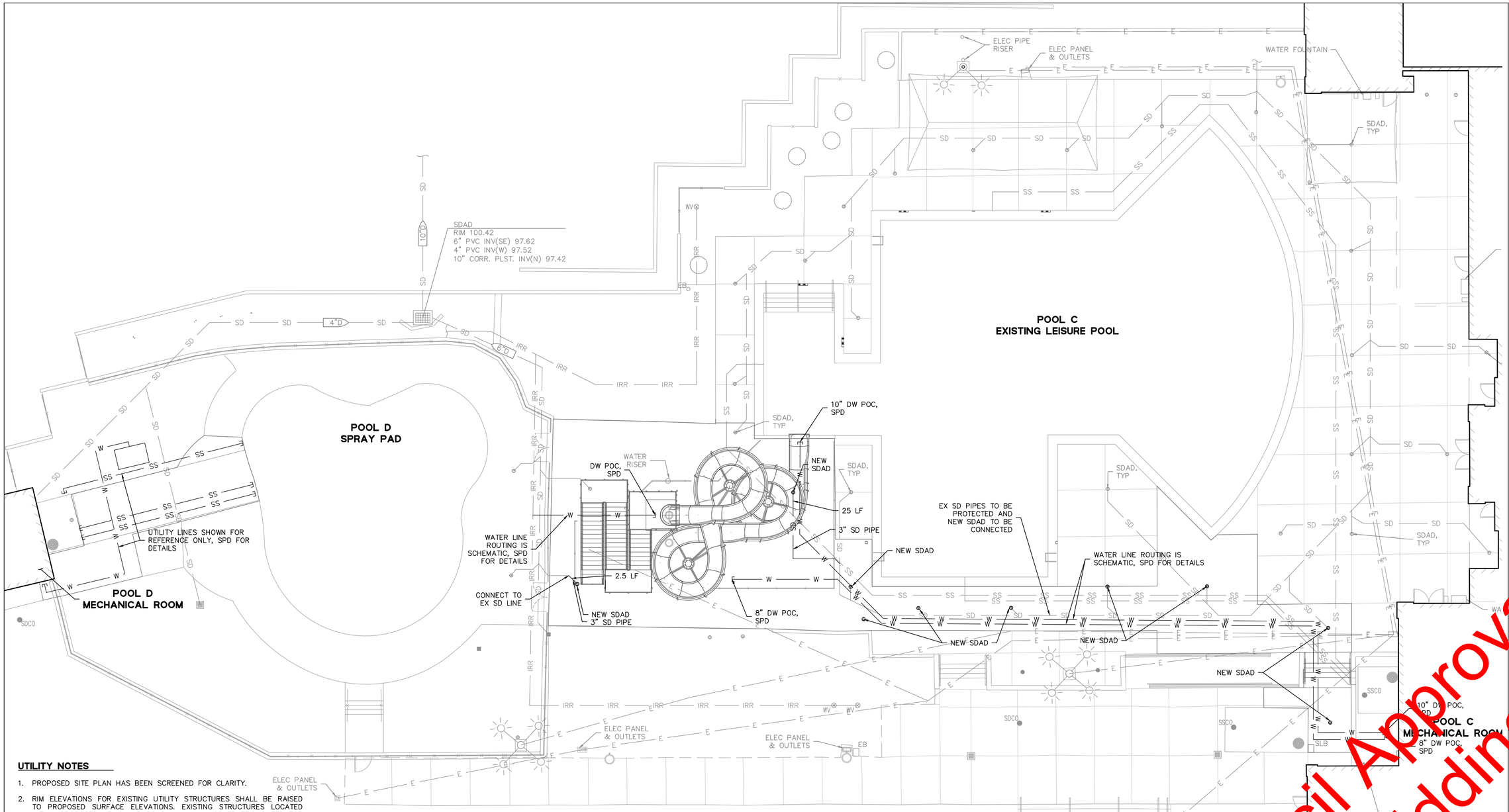
C401



UTILITY NOTES

1. PROPOSED SITE PLAN HAS BEEN SCREENED FOR CLARITY.
2. RIM ELEVATIONS FOR EXISTING UTILITY STRUCTURES SHALL BE RAISED TO PROPOSED SURFACE ELEVATIONS. EXISTING STRUCTURES LOCATED WITHIN PROPOSED VEHICULAR ROADWAY, AN H-20 TRAFFIC-RATED TOP SHALL BE USED TO REPLACE THE EXISTING TOP OF THE ADJUSTED STRUCTURE. ALL STRUCTURES WITHIN THE PEDESTRIAN PATHWAY SHALL MEET ADA REQUIREMENTS. STRUCTURES WITH GRATES SHALL HAVE OPENINGS ½" MAXIMUM WIDE AND ELONGATED IN THE DIRECTION PERPENDICULAR TO THE DIRECTION OF DOMINANT PEDESTRIAN TRAVEL.
3. PROTECT ALL EXISTING UTILITIES AND SITE FEATURES FROM BEING DAMAGED, UNLESS OTHERWISE NOTED. ALL UTILITIES AND IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED AT NO ADDITIONAL COST TO THE OWNER AND TO THE SATISFACTION OF THE ENGINEER.
4. THE EXISTING UTILITY LINES AND STRUCTURES SHOWN ON THESE PLANS ARE DERIVED FROM RECORD DATA, UNDERGROUND UTILITY SURVEY AND/OR SURFACE OBSERVATION AND ARE APPROXIMATE ONLY. ACTUAL LOCATION AND SIZE, TOGETHER WITH THE PRESENCE OF ANY ADDITIONAL UTILITY LINES AND STRUCTURES NOT SHOWN ON THIS PLAN, SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY UPON DISCOVERY OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS IN THE FIELD AND INFORMATION SHOWN ON THESE PLANS.
5. EXISTING UNDERGROUND UTILITIES, INCLUDING THOSE MARKED UNKNOWN, ARE BASED ON SURVEY COMPLETED BY OTHERS AND PROVIDED TO BKF ENGINEERS FOR INCLUSION IN PLANS.
7. EXISTING PIPE LINES MAY HAVE CATHODIC PROTECTION. CONTRACTOR SHALL ENSURE THAT ALL CONNECTIONS TO EXISTING PIPE LINES ARE ELECTRICALLY COMMON WITH THE PIPE LINE.
8. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION.
9. CONTRACTOR SHALL REFER TO CITY OF ROSEVILLE TRENCH BACKFILL DETAIL TB1 AND TB2.

LEGEND

	PROPOSED
WATER	—— W ——
SANITARY SEWER	—— SS ——
STORM DRAIN PVC SCHED 40	—— SD ——
AREA DRAIN NDS ROUND GRATE WITH SPEE-D BASIN, OR APPROVED EQUAL	⊖

GRAPHIC SCALE
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UTILITY PLAN

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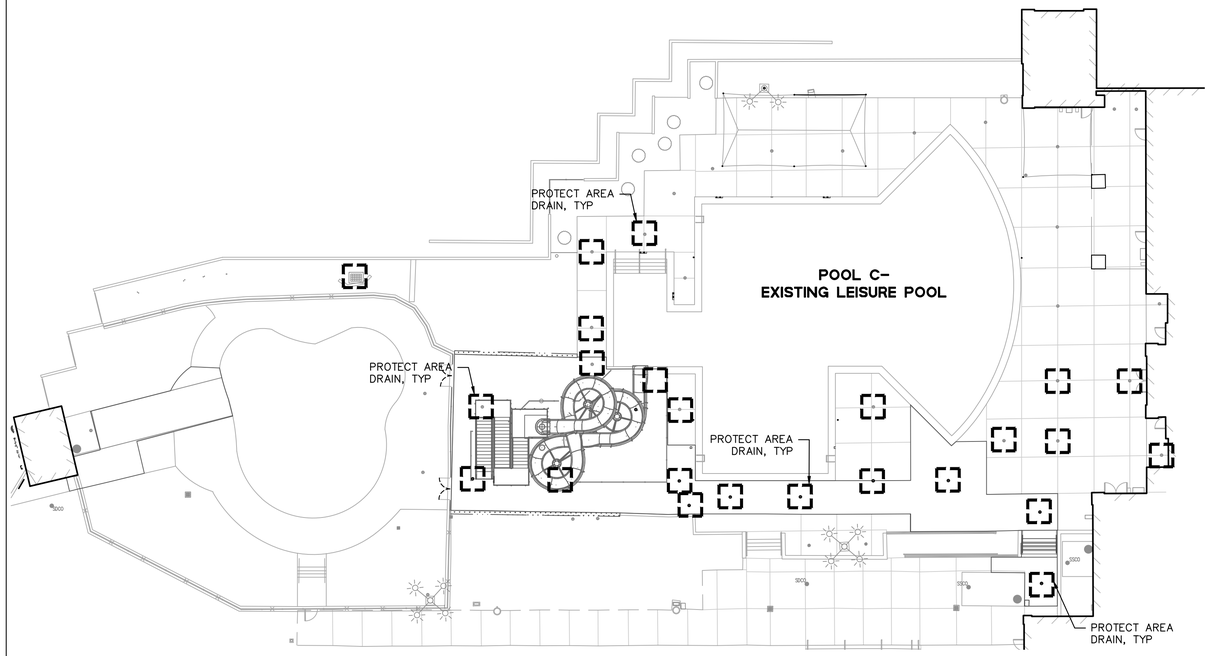
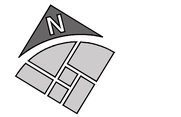
C501





GRAPHIC SCALE

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LEGEND

STORM DRAIN INLET PROTECTION

FIBER ROLL

EROSION CONTROL NOTES:

1. REFERENCE: "CALIFORNIA STORM WATER BEST MANAGEMENT PRACTICE (BMP) HANDBOOK", LATEST EDITION.
2. CONSTRUCTION AREAS SHOWN ARE CONCEPTUAL. ACTUAL PLACEMENT TO BE DETERMINED BY CONTRACTOR BASED ON CURRENT BEST MANAGEMENT PRACTICES. CONTRACTOR SHALL SUBMIT A CONSTRUCTION STAGING PLAN.
3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN EFFECT AND MAINTAINED BY THE CONTRACTOR ON A YEAR-ROUND BASIS UNTIL ALL DISTURBED AREAS ARE STABILIZED UNLESS OTHERWISE PERMITTED BY THE CITY INSPECTOR.
4. AS PART OF THE GRADING OPERATIONS, THE CONTRACTOR SHALL ENSURE THAT THE SITE IS WATERED PRIOR TO THE COMMENCEMENT OF GRADING.
5. ALL INLETS RECEIVING STORM WATER RUNOFF FROM THE PROJECT AREA MUST BE EQUIPPED WITH REQUIRED INLET PROTECTION.
6. ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIALS AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF ENTERING THE STORM DRAIN SYSTEM.
7. ALL CONCRETE SLURRY SHALL BE CONTAINED IN CONCRETE WASH-OUT AREAS DESIGNATED ON-SITE.
8. STOCKPILED EARTHEN MATERIAL SHALL BE EITHER COVERED WITH A TARP OR WATERED SUFFICIENTLY TO ELIMINATE DUST.
9. TEMPORARY EROSION CONTROLS TO STABILIZE ALL DENUDED AREAS UNTIL PERMANENT EROSION CONTROLS ARE ESTABLISHED.
10. DELINEATE WITH FIELD MARKERS CLEARING LIMITS, EASEMENTS, SETBACKS, SENSITIVE OR CRITICAL AREAS, BUFFER ZONES, TREES, AND DRAINAGE COURSES.
11. PERFORM CLEARING AND EARTH MOVING ACTIVITIES ONLY DURING DRY WEATHER.
12. USE SEDIMENT CONTROLS OR FILTRATION TO REMOVE SEDIMENT WHEN DEWATERING AND OBTAIN ALL NECESSARY PERMITS.
13. PROTECT ALL STORM DRAIN INLETS IN VICINITY OF SITE USING SEDIMENT CONTROLS SUCH AS BERMS, FIBER ROLLS, OR FILTERS.
14. TRAP SEDIMENT ON-SITE, USING BMPS SUCH AS SEDIMENT BASINS OR TRAPS, EARTHEN DIKES OR BERMS, SILT FENCES, CHECK DAMS, SOIL BLANKETS OR MATS, COVERS FOR SOIL STOCK PILES, ETC.
15. DIVERT ON-SITE RUNOFF AROUND EXPOSED AREAS; DIVERT OFF-SITE RUNOFF AROUND THE SITE (E.G., SWALES AND DIKES).
16. PROTECT ADJACENT PROPERTIES AND UNDISTURBED AREAS FROM CONSTRUCTION IMPACTS USING VEGETATIVE BUFFER STRIPS, SEDIMENT BARRIERS OR FILTERS, DIKES, MULCHING, OR OTHER MEASURES AS APPROPRIATE.
17. LIMIT CONSTRUCTION ACCESS ROUTES AND STABILIZE DESIGNATED ACCESS POINTS.
18. NO CLEANING, FUELING, OR MAINTAINING VEHICLES ON-SITE, EXCEPT IN A DESIGNATED AREA WHERE WASHWATER IS CONTAINED AND TREATED.
19. STORE, HANDLE, AND DISPOSE OF CONSTRUCTION MATERIALS/WASTES PROPERLY TO PREVENT CONTACT WITH STORMWATER.
20. CONTRACTOR SHALL TRAIN AND PROVIDE INSTRUCTION TO ALL EMPLOYEES/SUBCONTRACTORS RE: CONSTRUCTION BMPS.
21. CONTROL AND PREVENT THE DISCHARGE OF ALL POTENTIAL POLLUTANTS, INCLUDING PAVEMENT CUTTING WASTES, PAINTS, CONCRETE, PETROLEUM PRODUCTS, CHEMICALS, WASHWATER OR SEDIMENTS, RINSE WATER FROM ARCHITECTURAL COPPER, AND NON-STORMWATER DISCHARGES TO STORM DRAINS AND WATERCOURSES.
22. CONTRACTOR SHALL PROVIDE INLET PROTECTION AT THE NEAREST DOWNSTREAM STORM DRAIN ALONG PROJECT SITE.

LOCATION OF CONSTRUCTION ACTIVITIES IS PRELIMINARY AND SHALL BE SUPERSEDED BY FINALIZED CONSTRUCTION ACTIVITY LOCATIONS SHOWN/UPDATED BY CONTRACTOR.

REGULAR FLOW

THE INLET SEDIMENT CONTROL DEVICE WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

PUNCTURE (FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

	PROPERTIES	TEST METHOD	UNITS
FLOW RATE	GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
	GRAB TENSILE ELONGATION	ASTM D-4632	20 %
		ASTM D-4833	120 LBS
	MULLEN BURST	ASTM D-3786	800 PSI
	TRAPEZOID TEAR	ASTM D-4533	120 LBS
	UV RESISTANCE	ASTM D-4355	80 %
	APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
		ASTM D-4491	40 GAL/MIN/SQ FT
	PERMITTIVITY	ASTM D-4491	0.55 SEC -1

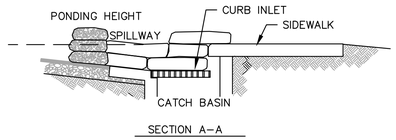
HIGH FLOW

(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

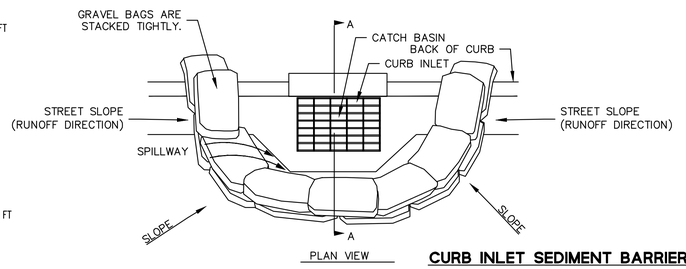
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

NOTE:

1. STORM DRAIN INLET PROTECTION DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE.

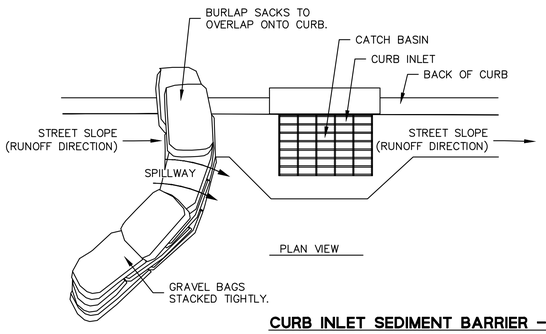


SECTION A-A



PLAN VIEW

CURB INLET SEDIMENT BARRIER - SUMP

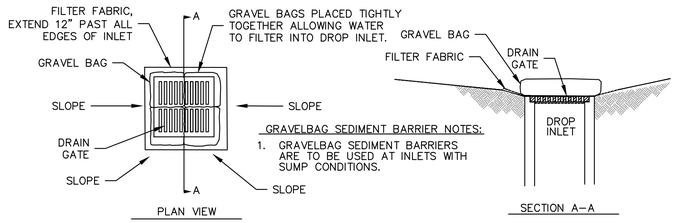


PLAN VIEW

CURB INLET SEDIMENT BARRIER NOTES:

1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREETS, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. BAGS OF EITHER BURLAP OR WOVEN GEOTEXTILE FABRIC ARE FILLED WITH GRAVEL, LAYERED AND PACKED TIGHTLY.
3. LEAVE ONE GRAVELBAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY OVERFLOW. TOP OF SPILLWAY SHALL BE LOWER THAN TOP OF CURB.
4. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT, SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

CURB INLET SEDIMENT BARRIER - CONTINUOUS GRADE



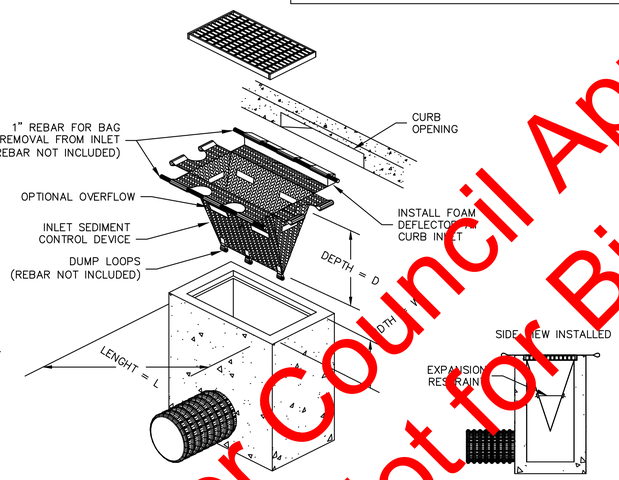
PLAN VIEW

GRAVELBAG SEDIMENT BARRIER NOTES:

1. GRAVELBAG SEDIMENT BARRIERS ARE TO BE USED AT INLETS WITH SUMP CONDITIONS.

SECTION A-A

DRAINAGE INLET GRAVELBAG SEDIMENT BARRIER



CURB INLET PROTECTION - CONTINUOUS GRADE OR SUMP

1 - STORM DRAIN INLET PROTECTION

NOT TO SCALE

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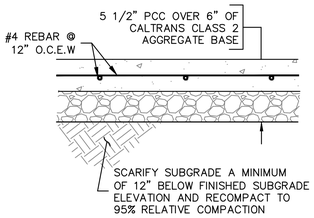
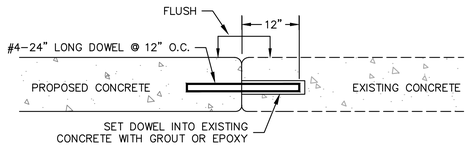
EROSION AND SEDIMENT CONTROL PLAN

SHEET NUMBER:

C601



1 - CONCRETE WALK SECTION
NOT TO SCALE



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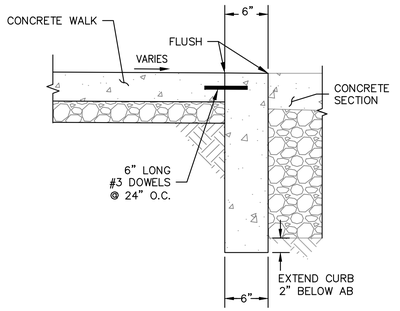

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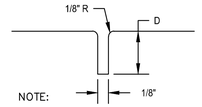
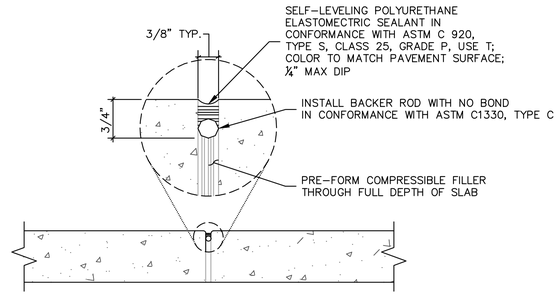
NOT TO SCALE

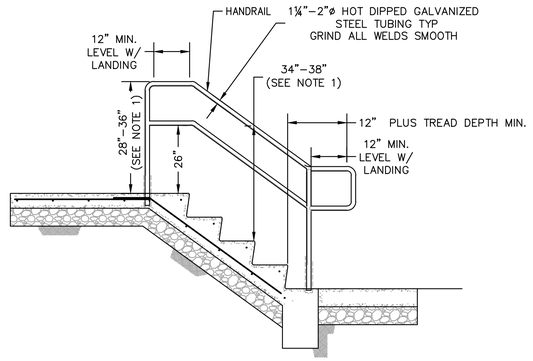


D=1/4" FOR SCORE JOINT

SCORE JOINTS
NOT TO SCALE



4 - SCORE JOINTS AND EXPANSION JOINT
NOT TO SCALE



NOTES:

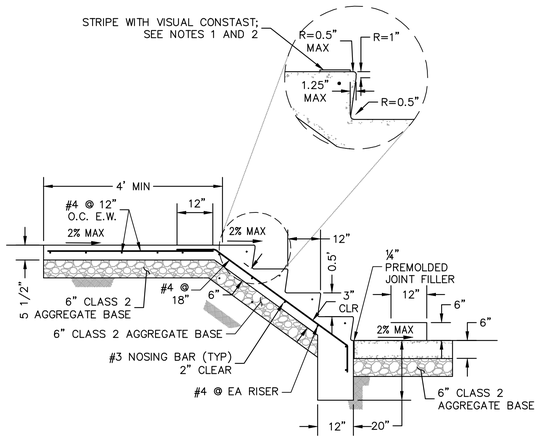
1. TOP OF GRIPPING SURFACES ON HANDRAILS SHALL BE 28 INCHES MINIMUM TO 36 INCHES MAXIMUM VERTICALLY ABOVE WALKING SURFACES AND STAIR NOSINGS. HANDRAILS SHALL BE AT A CONSISTENT HEIGHT ABOVE WALKING SURFACES AND STAIR NOSINGS.

2. HANDRAILS SHALL BE CONTINUOUS WITHIN THE FULL LENGTH.

3. HANDRAIL GRIPPING SURFACES SHALL BE CONTINUOUS ALONG THEIR LENGTH AND SHALL NOT BE OBSTRUCTED ON THEIR TOPS OR SIDES. BOTTOMS OF HANDRAIL GRIPPING SURFACES SHALL NOT BE OBSTRUCTED FOR MORE THAN 20% OF THEIR LENGTH.

4. HANDRAIL GRIPPING SURFACES AND ANY SURFACES ADJACENT TO THEM SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS, AND HAVE ROUNDED EDGES.

5. EXTERIOR STAIRS SHALL HAVE THE UPPER APPROACH AND ALL TREADS MARKED BY A STRIPE PROVIDING CLEAR VISUAL CONTRAST. THE STRIPE SHALL BE A MINIMUM OF 2 INCHES (51 MM) WIDE TO A MAXIMUM OF 4 INCHES (102 MM) WIDE PLACED PARALLEL TO, AND NOT MORE THAN 1 INCH (25 MM) FROM, THE NOSE OF THE STEP OR UPPER APPROACH. THE STRIPE SHALL EXTEND THE FULL WIDTH OF THE STEP OR UPPER APPROACH AND SHALL BE OF MATERIAL THAT IS AT LEAST AS SLIP RESISTANT AS THE OTHER TREADS OF THE STAIR. A PAINTED STRIPE SHALL BE ACCEPTABLE. GROOVES SHALL NOT BE USED TO SATISFY THIS REQUIREMENT.

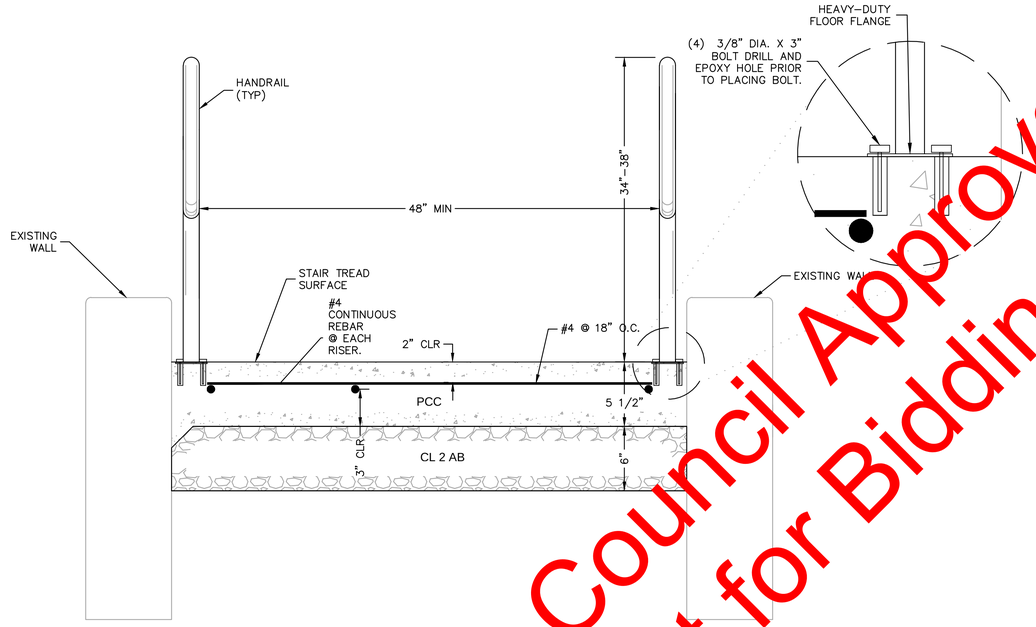


NOTES:

1. ALL TREADS AND THE UPPER APPROACH OF THE STAIR SHALL BE MARKED WITH A STRIPE THAT PROVIDES CLEAR VISUAL CONTRAST. THE STRIPE SHALL BE A MINIMUM OF 2 INCHES WIDE, A MAXIMUM OF 4 INCHES WIDE, AND PLACED PARALLEL TO AND NOT MORE THAN 1 INCH FROM THE NOSE OF THE STEP OR UPPER APPROACH.

2. THE STRIPE SHALL EXTEND THE FULL WIDTH OF THE STEP AND SHALL BE OF A MATERIAL THAT IS AT LEAST AS SLIP–RESISTANT AS THE OTHER TREADS OF THE STAIR. A PAINTED STRIPE SHALL BE ACCEPTABLE. GROOVES ARE NOT ACCEPTABLE.

5 - STAIRS WITH HANDRAILS
NOT TO SCALE



For Council Approval
Not for Bidding

REGISTERED PROFESSIONAL ENGINEER
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C 64858
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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3051 WOODCREEK OAKS BLVD.
ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
CONCEPT DESIGN	06/25/20
50% CD	08/13/20
75% CD	05/20/21
100% CD	07/14/21

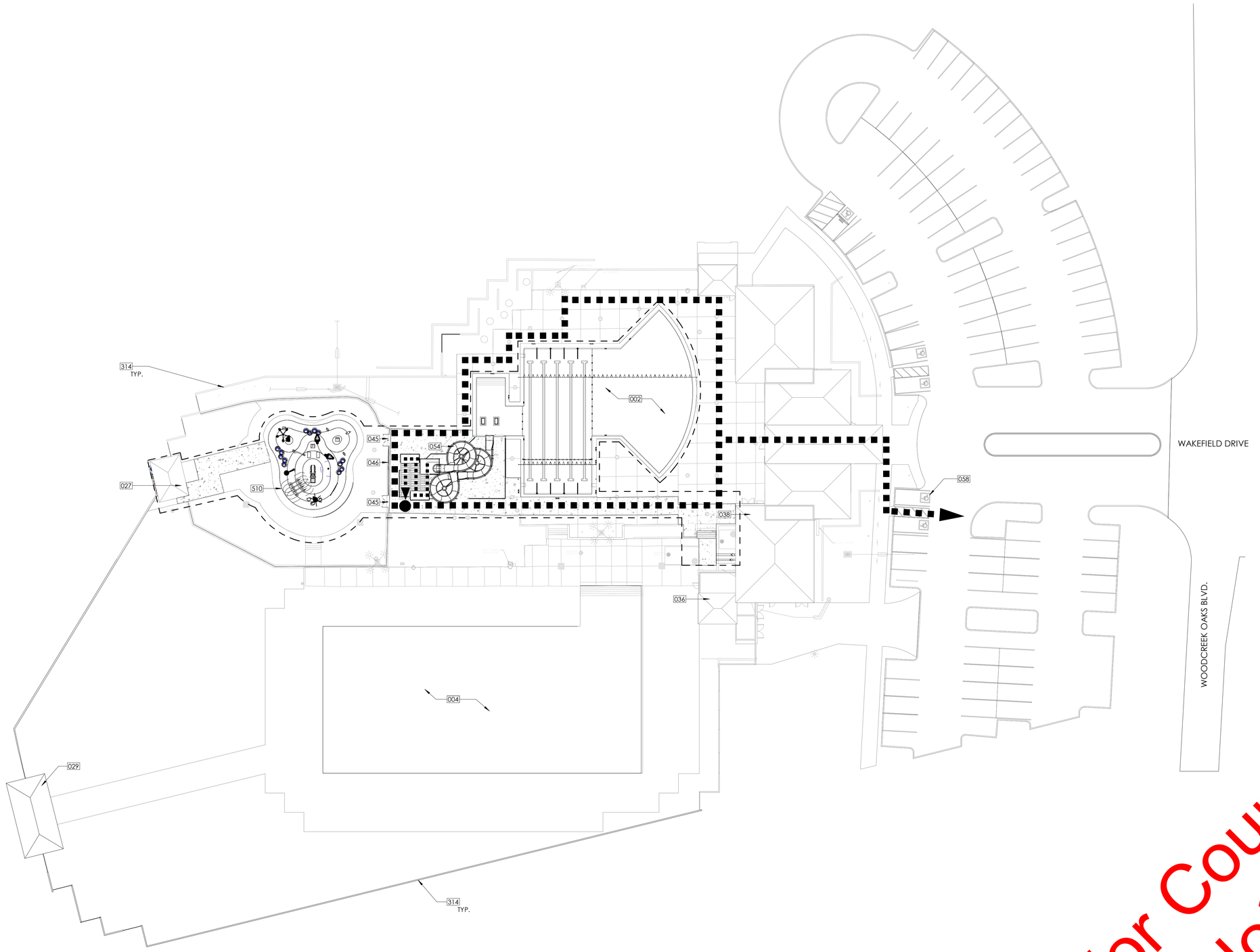
Project Number:	200204
Approved By:	JM
Checked By:	CM
Drawn By:	MM

Sheet Title:

DETAILS

SHEET NUMBER:

C701



D1
A1.1 SITE PLAN - OVERALL
SCALE: 1 : 300

CONSTRUCTION NOTES

002	EXISTING RECREATION POOL
004	EXISTING COMPETITION POOL
027	EXISTING CHILDREN'S POOL MECHANICAL ROOM
029	EXISTING RESTROOM BUILDING
036	EXISTING GENERATOR ROOM
038	EXISTING MECHANICAL ROOM
045	NEW 4'-0" HIGH METAL PICKET SWING GATE TO MATCH EXISTING METAL PICKET FENCE, MATCH POST SPACING. SEE A1/A1.5 FOR DETAILS. REFER TO T-3 FOR ACCESSIBILITY DETAILS
046	NEW 4'-0" HIGH METAL PICKET FENCE TO MATCH EXISTING. VERIFY IN FIELD AND MATCH POST SPACING
054	NEW SLIDE AND STAIR COMPLEX TO BE PROVIDED UNDER SEPARATE CONTRACT. SHOWN FOR REFERENCE ONLY. SEE AQUATIC ENGINEER DRAWINGS
058	EXISTING ACCESSIBLE PARKING SPACE
314	EXISTING 6'-0" PERIMETER WALL AND FENCE
510	NEW SPRAY GROUND AND WATER PLAY EQUIPMENT, SEE AQUATIC DRAWINGS

LEGEND

ACCESSIBLE PATH OF TRAVEL

DENOTES AREA OF WORK

For Council Approval
Not for Bidding

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CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
30% CD	04/05/21
75% CD	05/17/21
99% CD	07/13/21
100% CD/BID SET	08/20/21

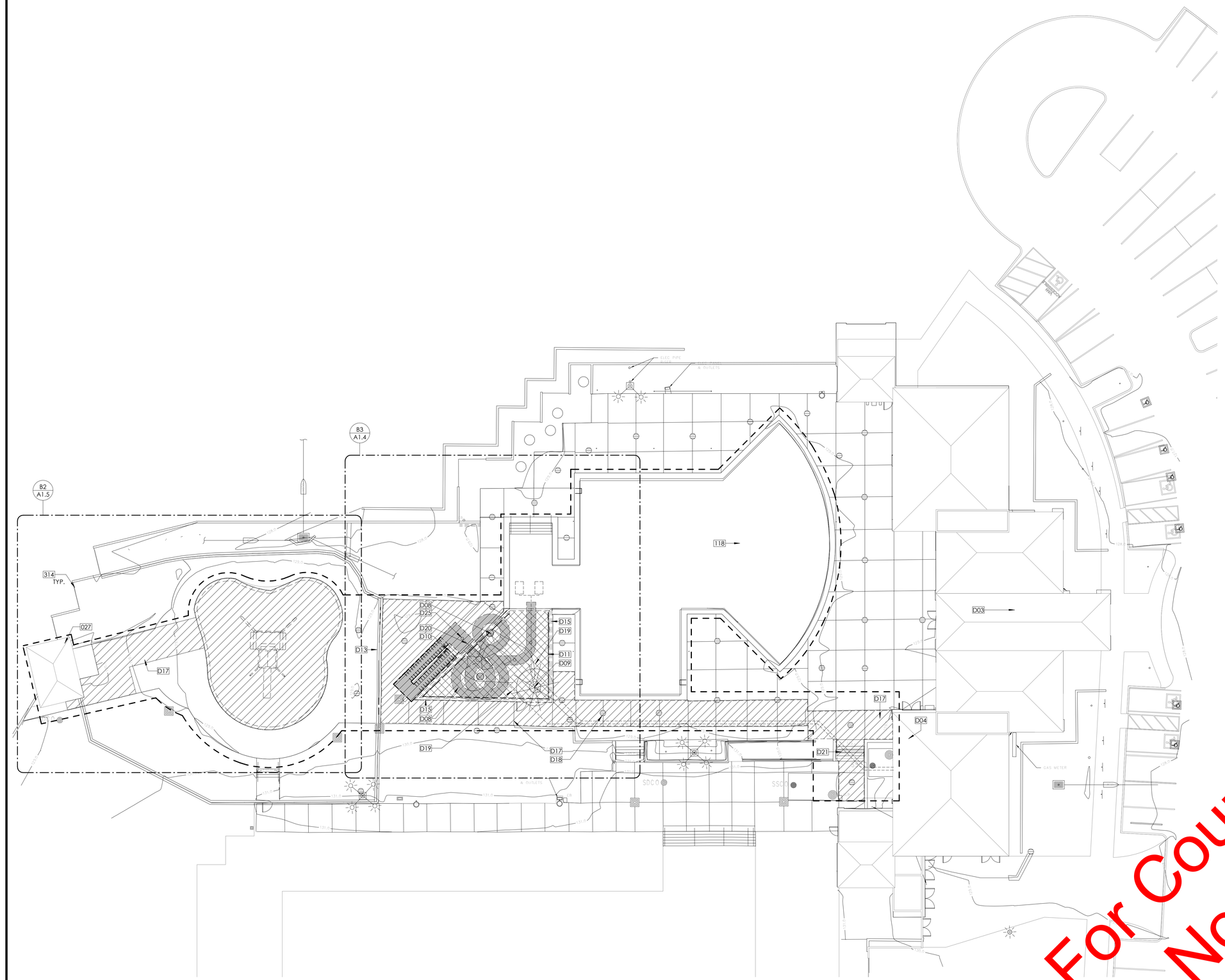
Project Number:	200204
Approved By:	JK
Checked By:	MK
Drawn By:	ACJ

Sheet Title:

SITE PLAN - OVERALL

SHEET NUMBER:

A1.1



A1 SITE PLAN - DEMO
A1.2 SCALE: 1/16" = 1'-0"

CONSTRUCTION NOTES

027	EXISTING CHILDREN'S POOL MECHANICAL ROOM
118	REMOVE ALL EXISTING PLASTER SURFACING AND DRAINAGE GRATING. REPLASTER POOL. SEE AQUATIC ENGINEER DRAWINGS
314	EXISTING 6'-0" PERIMETER WALL AND FENCE
D03	EXISTING AQUATIC COMPLEX BUILDING
D04	EXISTING MECHANICAL ROOM
D08	EXISTING SLIDE TO BE DEMOLISHED; REMOVE METAL STAIRS, RAILING, SUPPORT STRUCTURE, CONCRETE FOUNDATIONS, PLUMBING, AND ELECTRICAL. TERMINATE UTILITIES 12" ABOVE GRADE. SEE RECORD DRAWINGS D1/A1.4 FOR STRUCTURAL CONCRETE QUANTITIES AND SIZING
D09	DEMO AND REMOVE EXISTING PALM TREE
D10	DEMO EXISTING 6'-0" CHAINLINK FENCE AND POSTS AROUND EXISTING SLIDE STAIR
D11	EXISTING CHAINLINK FENCE SURROUNDING LANDSCAPING TO BE REMOVED
D13	REMOVE PORTION OF EXISTING METAL PICKET FENCE AND DOUBLE GATE
D15	DEMO EXISTING CONCRETE CURB
D17	DEMO EXISTING CONCRETE DECK FOR ACCESS TO EXISTING SUPPLY AND RETURN PIPING. DEMO PORTION OF DECK TO ALIGN WITH EXISTING SLAB JOINTS AS INDICATED. VERIFY IN FILED FOR EXACT LOCATION OF CONCRETE DECK DEMO AREA WITH LOCATION OF EXISTING PIPING. EXISTING PIPING TO BE MODIFIED, SEE AQUATIC CONSULTANT
D18	REMOVE AND REPLACE DECK DRAINS AT DECK DEMO AREA, TYP.
D19	DEMO EXISTING LANDSCAPING FOR ACCESS TO EXISTING PIPING. VERIFY IN FIELD FOR EXACT LOCATION OF EXISTING SLIDE PIPING, SEE AQUATIC CONSULTANT.
D20	DEMO PORTION OF EXISTING CONCRETE FOR ACCESS TO EXISTING PIPING. VERIFY IN FIELD FOR EXACT LOCATION OF EXISTING SLIDE PIPING, SEE AQUATIC CONSULTANT.
D21	DEMO PORTION OF EXISTING CONCRETE STAIR FOR ACCESS TO EXISTING PIPING. VERIFY IN FIELD FOR EXACT LOCATION OF EXISTING SLIDE PIPING.
D25	DEMO AND CAP EXISTING WATER RISER FOR EXISTING SLIDE

DEMO LEGEND

- INDICATES EXISTING HARDSCAPE TO BE REMOVED/ DEMOLISHED/ ALTERED
- INDICATES EXISTING LANDSCAPE TO BE REMOVED & PREPPED FOR NEW HARDSCAPE
- INDICATES EXISTING SLIDE TO BE REMOVED & DEMOLISHED
- INDICATES EXISTING PIPING TO BE REMOVED/ DEMOLISHED/ ALTERED
- DENOTES AREA OF WORK
- xxx.x EXISTING GRADING CONTOUR

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CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
30% CD	04/05/21
75% CD	05/17/21
99% CD	07/13/21
100% CD/BID SET	08/20/21

For Council Approval
Not for Bidding

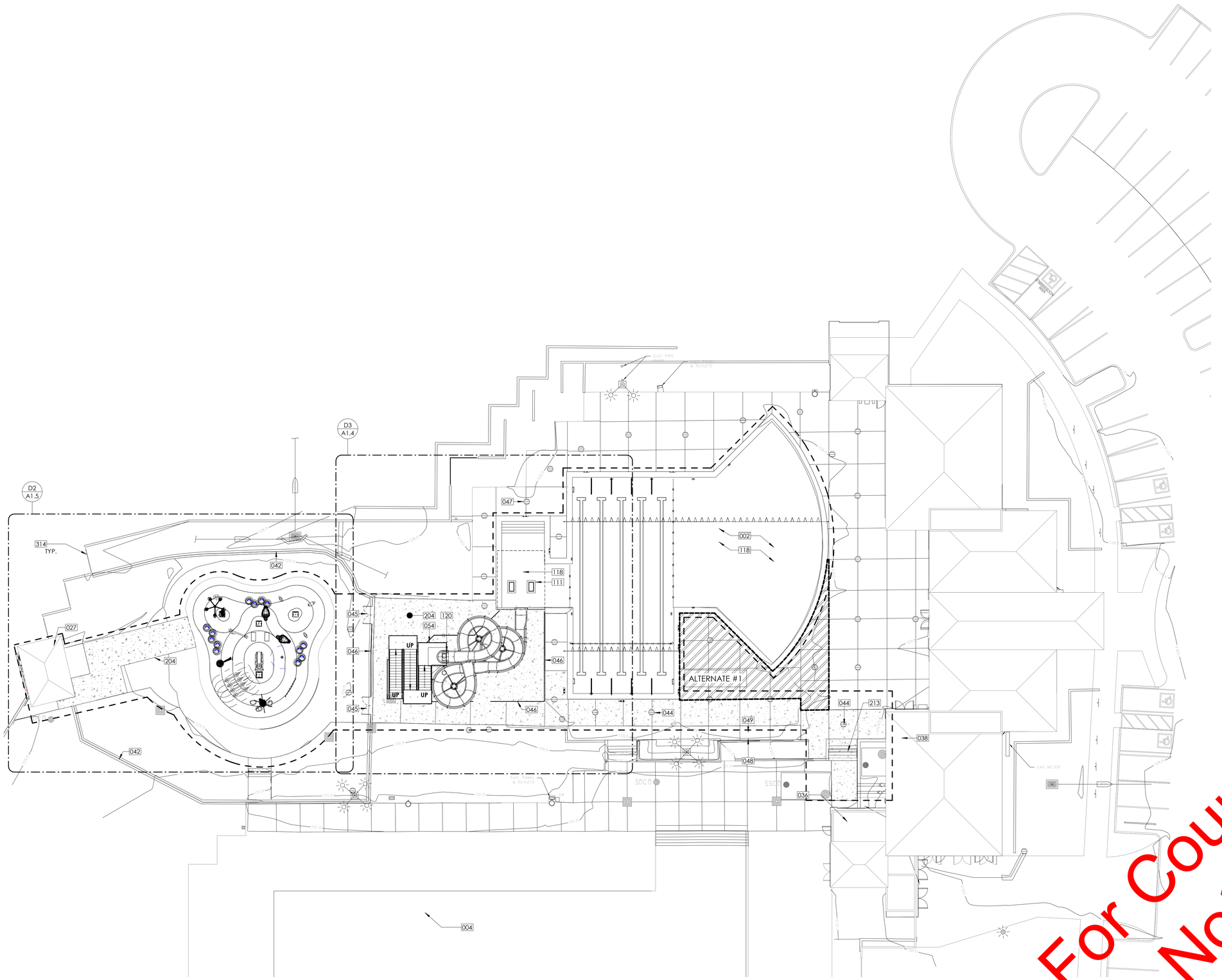
Project Number:	200204
Approved By:	JK
Checked By:	MK
Drawn By:	ACJ

Sheet Title:

SITE PLAN - DEMO

SHEET NUMBER:

A1.2



A1 SITE PLAN
A1.3 SCALE: 1/16" = 1'-0"

CONSTRUCTION NOTES

002	EXISTING RECREATION POOL
004	EXISTING COMPETITION POOL
027	EXISTING CHILDREN'S POOL MECHANICAL ROOM
036	EXISTING GENERATOR ROOM
038	EXISTING MECHANICAL ROOM
042	EXISTING 4'-0" HIGH METAL PICKET FENCE
044	RELOCATE DECK DRAINS AT EXISTING LOCATIONS. REPLACE ANY DECK DRAINS NOT ABLE TO BE SALVAGED OR IN NEED OF REPLACEMENT, TYP.
045	NEW 4'-0" HIGH METAL PICKET SWING GATE TO MATCH EXISTING METAL PICKET FENCE. MATCH POST SPACING. SEE A1/A1.5 FOR DETAILS. REFER TO T-3 FOR ACCESSIBILITY DETAILS
046	NEW 4'-0" HIGH METAL PICKET FENCE TO MATCH EXISTING. VERIFY IN FIELD AND MATCH POST SPACING
047	EXISTING DECK DRAINS, TYP.
048	NEW SUPPLY PIPING FOR NEW SLIDE COMPLEX. SEE AQUATIC ENGINEER DRAWINGS
049	NEW RETURN PIPING FOR NEW SLIDE COMPLEX. SEE AQUATIC ENGINEER DRAWINGS
054	NEW SLIDE AND STAIR COMPLEX TO BE PROVIDED UNDER SEPARATE CONTRACT. SHOWN FOR REFERENCE ONLY. SEE AQUATIC ENGINEER DRAWINGS
111	NEW RETURN PIPING AND DRAIN FOR NEW SLIDE COMPLEX. SEE AQUATIC ENGINEER DRAWINGS
118	REMOVE ALL EXISTING PLASTER SURFACING AND DRAINAGE GRATING. REPLASTER POOL. SEE AQUATIC ENGINEER DRAWINGS
120	NEW WATER RISER FOR SLIDE COMPLEX. VERIFY IN FIELD FOR FINAL LOCATION. SEE AQUATIC ENGINEER DRAWINGS
204	NEW CONCRETE DECK TO MATCH EXISTING. ALIGN JOINTS WITH EXISTING. PROVIDE SLOPE TO DRAIN AS REQUIRED. SEE CIVIL FOR FULL SCOPE OF NEW CONCRETE AREAS
213	REPLACE CONCRETE STAIR TO MATCH EXISTING
314	EXISTING 6'-0" PERIMETER WALL AND FENCE

LEGEND

- INDICATES AREA OF NEW CONCRETE DECK
- INDICATES AREA OF ALTERNATE #1 - REMOVE AND REPLACE ADDITIONAL POOL DECK AREA
- DENOTES AREA OF WORK
- XXXX EXISTING GRADING CONTOUR

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3051 WOODCREEK OAKS BLVD.
ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

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30% CD	04/05/21
75% CD	05/17/21
99% CD	07/13/21
100% CD/BID SET	08/20/21

For Council Approval
Not for Bidding

Project Number:	200204
Approved By:	JK
Checked By:	MK
Drawn By:	ACJ

Sheet Title:

SITE PLAN

SHEET NUMBER:

A1.3

COLUMN TABLE

COL. NO	X COORD (feet)	Y COORD (feet)	COLUMN SIZE/TYPE DIA (in)	WALL (in)	TOP PEDESTAL (feet)	TOP COLUMN (feet)	SUPPORTED SECTION	YOKE GRADE (DEG)	YOKE TYPE
P 1	107.50	88.26	12.00	CONC		0.58	A(3)/A(4)	7.97	PS-1
P 2	101.70	82.25	12.00	CONC		1.85	A(4)/A(5)	7.97	PS-1
P 3	91.96	82.25	18.00	CONC		3.22	A(6)/A(7)	7.97	PS-1
P 4	89.79	76.34	12.75	0.38	1.00	19.64	SEE ARM TABLE		
P 5	93.31	91.59	12.75	0.38	1.00	13.81	SEE ARM TABLE		
P 6	64.70	73.19	10.75	0.37	1.00	9.80	TOWER COLUMN		
P 7	82.06	90.07	12.75	0.38	1.00	21.47	TOWER COLUMN		

FOUNDATION TABLE

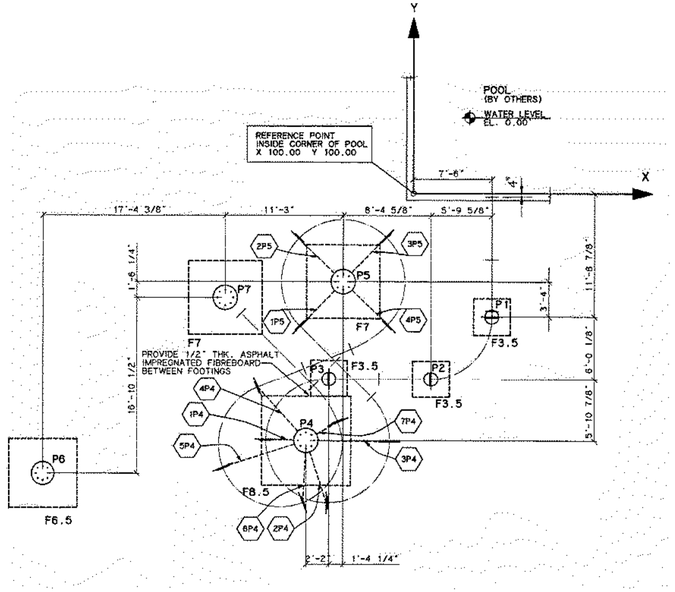
COL NO	MARK	FOOTING SIZE	FOOTING REINFORCEMENT	DOWELS ON FOOTING	EMBEDMENTS TO TOP OF COLUMN OR PEDESTAL	COLUMN OR PEDESTAL REINFORCEMENTS	COLUMN
P1,P2 P3	F3.5	3'-6" X 3'-6" X 12" DP.	4-#5 EA. WAY BOT.	TO MATCH COLUMN REINFORCEMENT	11" DIA x 3/8" PL C/W 4 - 3/4" DIA ANCHORS (SEE DETAIL)	6 - #5 VERT. # 3 @ 8" TIES	12" DIA. CONC COLUMN
P6	F6.5	6'-6" X 6'-6" X 14" DP.	4-#5 EA. WAY TOP 7-#6 EA. WAY BOT.	TO MATCH PEDESTAL REINFORCEMENT	20" DIA X 1" THICK B. PLATE 8 - 1" DIA A. BOLTS BOLT CIRCLE = 16" C/C	26" DIA. CONC. PED. 12 - #7 VERT. # 3 @ 8" TIES	10.75" DIA. X .365 STD PIPE
P5,P7	F7	7'-0" X 7'-0" X 14" DP.	4-#5 EA. WAY TOP 7-#6 EA. WAY BOT.	TO MATCH PEDESTAL REINFORCEMENT	22" DIA X 1" THICK B. PLATE 8 - 1" DIA A. BOLTS BOLT CIRCLE = 18" C/C	28" DIA. CONC. PED. 12 - #7 VERT. # 3 @ 8" TIES	12.75" DIA. X .375 STD PIPE
P4	F8.5	8'-6" X 8'-6" X 14" DP.	4-#5 EA. WAY TOP 9-#6 EA. WAY BOT.	TO MATCH PEDESTAL REINFORCEMENT	22" DIA X 1" THICK B. PLATE 8 - 1" DIA A. BOLTS BOLT CIRCLE = 18" C/C	28" DIA. CONC. PED. 12 - #7 VERT. # 3 @ 8" TIES	12.75" DIA. X .375 STD PIPE

ARM TABLE

COL NO	ARM NO	ARM BEAR (DEG)	ARM ELEV	DIMENSIONS (in feet) A	B	C	D	SUPPORTED SECTION	YOKE GRADE (DEG)	YOKE TYPE	BR
P4	1P4	178.32	4.64	4.00	3.32	2.00	1.40	A(7)/A(8)	7.97	PS-1	DN
P4	2P4	268.27	5.94	6.50	5.68	3.37	2.36	A(8)/A(9)	7.97	PS-1	DN
P4	3P4	358.25	7.24	8.25	7.43	5.43	3.80	A(9)/A(10)	7.97	PS-1	DN
P4	4P4	132.12	15.08	7.00	6.35	4.35	3.05	A(18)/A(19)	7.97	PS-1	DN
P4	5P4	197.76	16.38	8.50	7.82	5.43	3.80	A(19)/A(20)	7.97	PS-1	DN
P4	6P4	267.08	17.68	6.00	5.36	3.37	2.36	A(20)/A(21)	7.97	PS-1	DN
P4	7P4	30.22	18.98	3.75	2.98	2.00	1.40	A(21)/A(22)	7.97	PS-1	DN
P5	1P5	226.00	9.25	6.00	5.38	3.37	2.36	A(12)/A(13)	7.97	PS-1	DN
P5	2P5	136.10	10.55	6.00	5.38	3.37	2.36	A(13)/A(14)	7.97	PS-1	DN
P5	3P5	46.07	11.85	6.00	5.37	3.37	2.36	A(14)/A(15)	7.97	PS-1	DN
P5	4P5	316.01	13.15	6.00	5.37	3.37	2.36	A(15)/A(16)	7.97	PS-1	DN

RECORD DRAWING

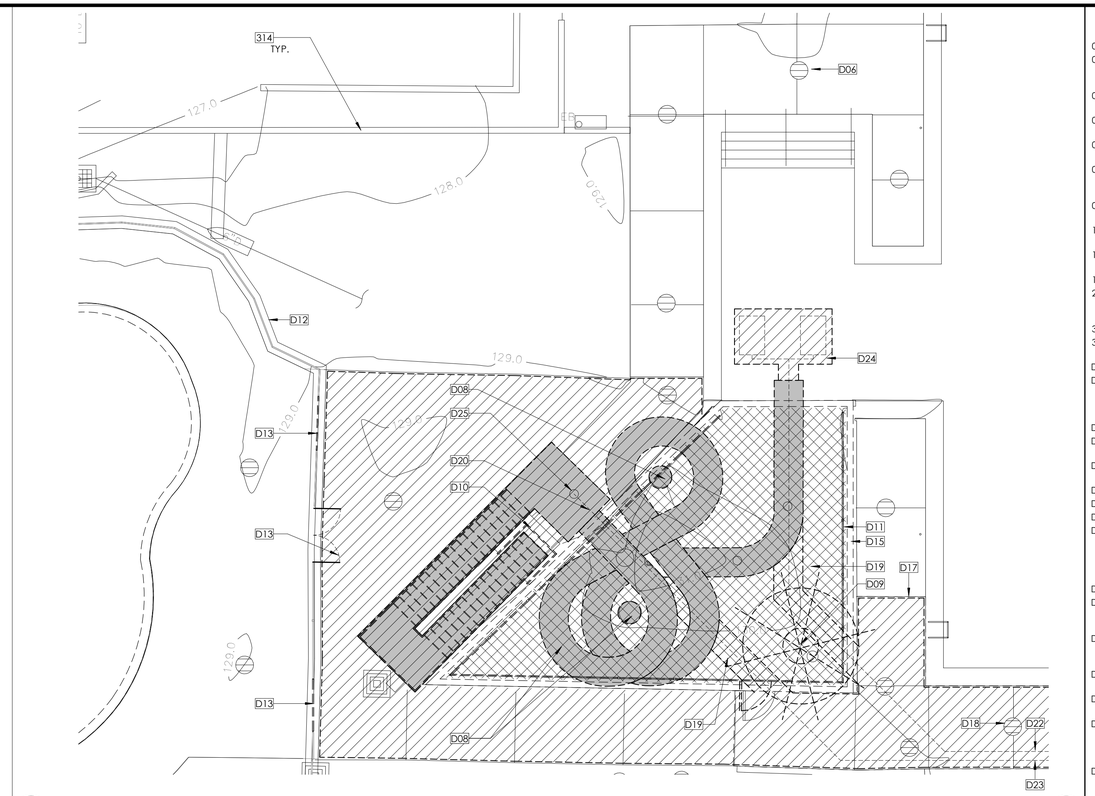
REFERENCE ONLY
VERIFY IN FIELD



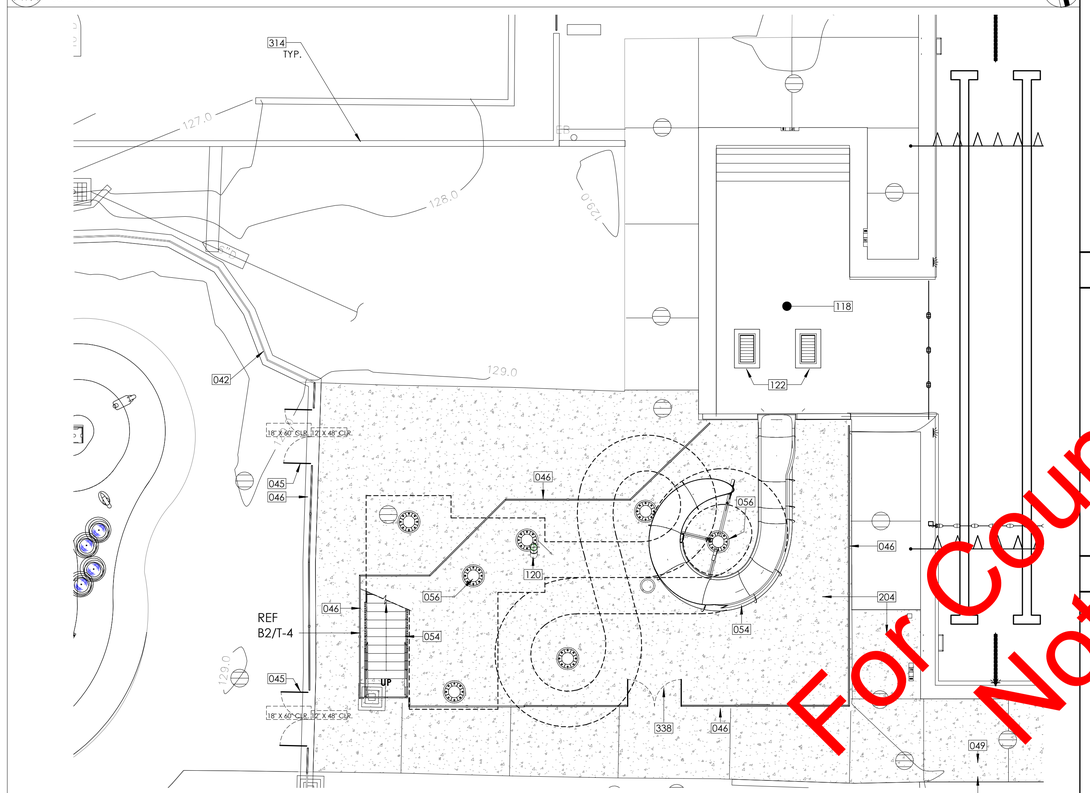
RECORD DRAWING

REFERENCE ONLY
VERIFY IN FIELD

D1 EXISTING SLIDE STRUCTURAL TABLES
A1.4 SCALE: 12" = 1'-0"



B3 POOL C - EXISTING LEISURE POOL ENLARGED DEMO PLAN
A1.4 SCALE: 1/8" = 1'-0"



D3 POOL C - EXISTING LEISURE POOL ENLARGED PLAN
A1.4 SCALE: 1/8" = 1'-0"

CONSTRUCTION NOTES

042 EXISTING 4'-0" HIGH METAL PICKET FENCE

045 NEW 4'-0" HIGH METAL PICKET SWING GATE TO MATCH EXISTING METAL PICKET FENCE, MATCH POST SPACING. SEE A1/A1.5 FOR DETAILS. REFER TO T-3 FOR ACCESSIBILITY DETAILS

046 NEW 4'-0" HIGH METAL PICKET FENCE TO MATCH EXISTING. VERIFY IN FIELD AND MATCH POST SPACING

048 NEW SUPPLY PIPING FOR NEW SLIDE COMPLEX. SEE AQUATIC ENGINEER DRAWINGS

049 NEW RETURN PIPING FOR NEW SLIDE COMPLEX. SEE AQUATIC ENGINEER DRAWINGS

054 NEW SLIDE AND STAIR COMPLEX TO BE PROVIDED UNDER SEPARATE CONTRACT, SHOWN FOR REFERENCE ONLY, SEE AQUATIC ENGINEER DRAWINGS

056 SUPPORT STRUCTURE FOR NEW SLIDE AND STAIR COMPLEX, SHOWN FOR REFERENCE ONLY, SEE AQUATIC ENGINEER DRAWINGS

118 REMOVE ALL EXISTING PLASTER SURFACING AND DRAINAGE GRATING, REPLASTER POOL. SEE AQUATIC ENGINEER DRAWINGS

120 NEW WATER RISER FOR SLIDE COMPLEX. VERIFY IN FIELD FOR FINAL LOCATION, SEE AQUATIC ENGINEER DRAWINGS

122 NEW POOL DRAINS, SEE AQUATIC ENGINEER DRAWINGS

204 NEW CONCRETE DECK TO MATCH EXISTING, ALIGN JOINTS WITH EXISTING, PROVIDE SLOPE TO DRAIN AS REQUIRED. SEE CIVIL FOR FULL SCOPE OF NEW CONCRETE AREAS

314 EXISTING 6'-0" PERIMETER WALL AND FENCE

338 NEW 3'-0" WIDE DOUBLE METAL PICKET SWING GATE TO MATCH NEW FENCE, MATCH POST SPACING

D06 EXISTING DECK DRAINS TO REMAIN, TYP.

D08 EXISTING SLIDE TO BE DEMOLISHED; REMOVE METAL STAIRS, RAILING, SUPPORT STRUCTURE. CONCRETE FOUNDATIONS, PLUMBING, AND ELECTRICAL. TERMINATE UTILITIES 12" ABOVE GRADE. SEE RECORD DRAWINGS D1/A1.4 FOR STRUCTURAL CONCRETE QUANTITIES AND SIZING

D09 DEMO AND REMOVE EXISTING PALM TREE

D10 DEMO EXISTING 6'-0" CHAINLINK FENCE AND POSTS AROUND EXISTING SLIDE STAIR

D11 EXISTING CHAINLINK FENCE SURROUNDING LANDSCAPING TO BE REMOVED

D12 PORTION OF EXISTING METAL FENCE TO REMAIN

D13 REMOVE PORTION OF EXISTING METAL PICKET FENCE AND DOUBLE GATE

D15 DEMO EXISTING CONCRETE CURB

D17 DEMO EXISTING CONCRETE DECK FOR ACCESS TO EXISTING SUPPLY AND RETURN PIPING. DEMO PORTION OF DECK TO ALIGN WITH EXISTING SLAB JOINTS AS INDICATED. VERIFY IN FILED FOR EXACT LOCATION OF CONCRETE DECK DEMO AREA WITH LOCATION OF EXISTING PIPING. EXISTING PIPING TO BE MODIFIED, SEE AQUATIC CONSULTANT

D18 REMOVE AND REPLACE DECK DRAINS AT DECK DEMO AREA, TYP.

D19 DEMO EXISTING LANDSCAPING FOR ACCESS TO EXISTING PIPING. VERIFY IN FIELD FOR EXACT LOCATION OF EXISTING SLIDE PIPING, SEE AQUATIC CONSULTANT.

D20 DEMO PORTION OF EXISTING CONCRETE FOR ACCESS TO EXISTING PIPING. VERIFY IN FIELD FOR EXACT LOCATION OF EXISTING SLIDE PIPING, SEE AQUATIC CONSULTANT.

D22 DEMO AND REMOVE EXISTING 6" SUPPLY PIPE FOR SLIDE. REPLACE WITH NEW INCREASED SIZE PIPE. SEE AQUATIC ENGINEER DRAWINGS.

D23 DEMO AND REMOVE EXISTING 6" RETURN PIPE FOR SLIDE. REPLACE WITH NEW INCREASED SIZE PIPE. SEE AQUATIC ENGINEER DRAWINGS.

D24 DEMO PORTION OF POOL SHELL FOR ACCESS TO RETURN PIPING. DEMO AND REMOVE EXISTING 6" RETURN PIPE FOR SLIDE. REPLACE WITH NEW INCREASED SIZE PIPE AND DRAIN. VERIFY IN FIELD FOR EXACT LOCATION OF PIPING. SEE AQUATIC ENGINEER DRAWINGS.

D25 DEMO AND CAP EXISTING WATER RISER FOR EXISTING SLIDE

DEMO LEGEND

INDICATES EXISTING HARDSCAPE TO BE REMOVED/ DEMOLISHED/ ALTERED

INDICATES EXISTING LANDSCAPE TO BE REMOVED & REPLACED WITH NEW HARDSCAPE

INDICATES EXISTING SLIDE TO BE REMOVED/ DEMOLISHED

INDICATES EXISTING PIPING TO BE REMOVED/ DEMOLISHED/ ALTERED

DENOTES AREA OF WORK

EXISTING GRADING CONTOUR

HARDSCAPE LEGEND

INDICATES AREA OF NEW CONCRETE HARDSCAPE/DECK/SIDEWALK

For Council Approval
Not for Bidding

LICENSED ARCHITECT JEFFREY A. KATZ REN. 09/10/19 STATE OF CALIFORNIA

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3051 WOODCREEK OAKS BLVD.
ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
30% CD	04/05/21
75% CD	05/17/21
99% CD	07/13/21
100% CD/BID SET	08/20/21

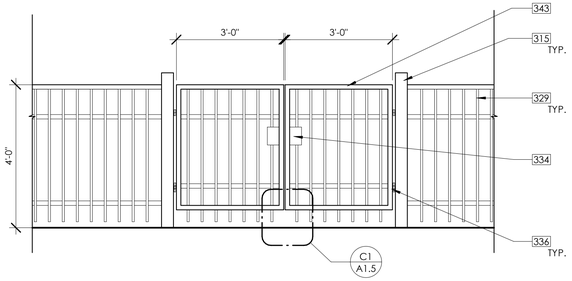
Project Number:	200204
Approved By:	JK
Checked By:	MK
Drawn By:	ACJ

Sheet Title:

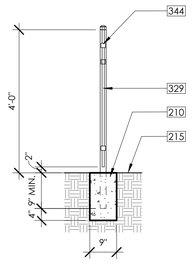
POOL C - EXISTING LEISURE POOL - ENLARGED PLANS

SHEET NUMBER:

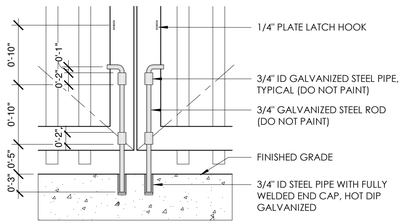
A1.4



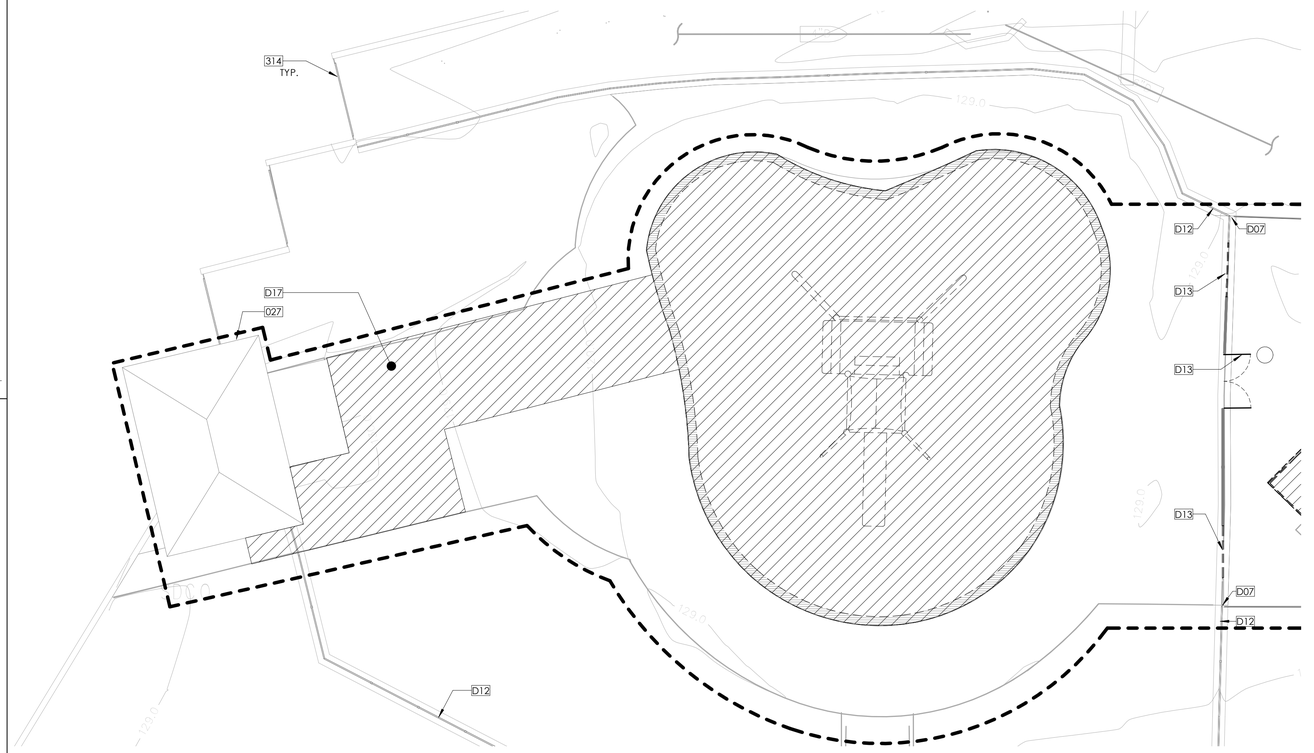
A1 FENCE & GATE DETAIL
A1.5 SCALE: 1/2" = 1'-0"



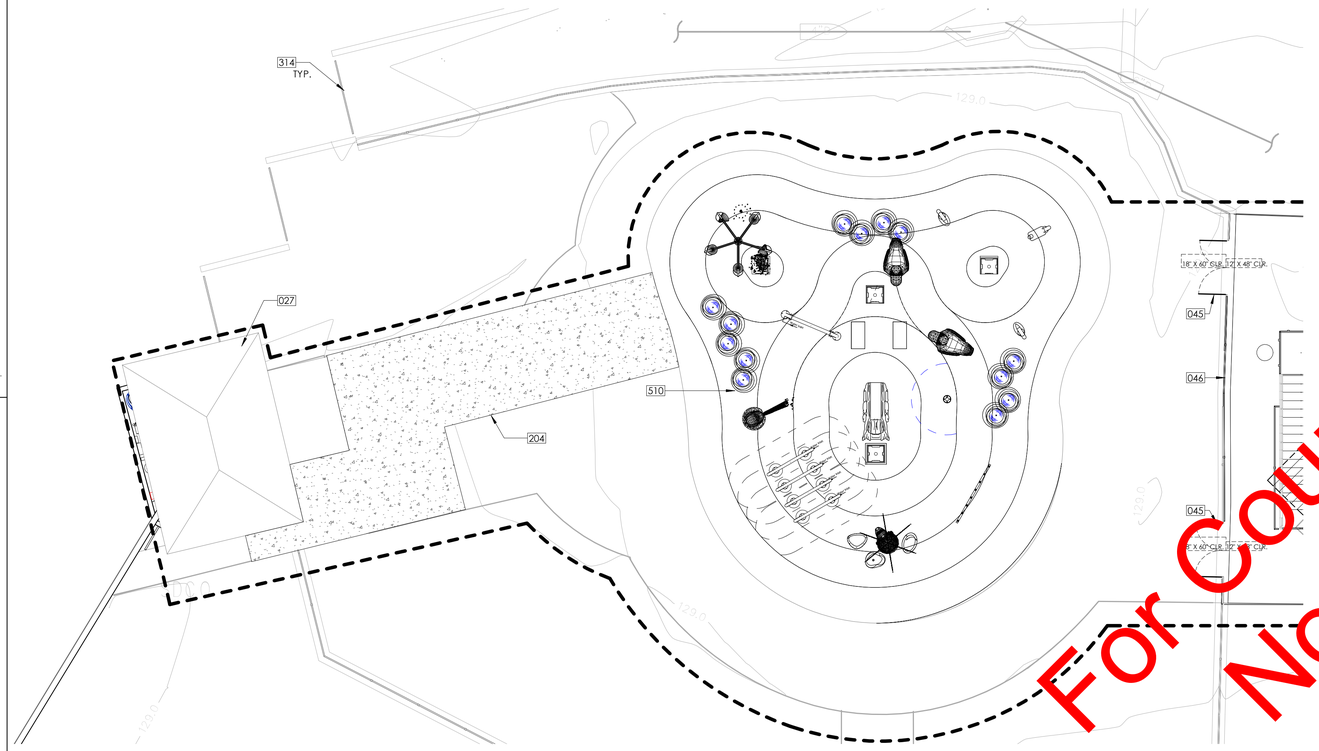
B1 FENCE SECTION DETAIL
A1.5 SCALE: 1/2" = 1'-0"



C1 CANE BOLT DETAIL
A1.5 SCALE: 1" = 1'-0"



B2 POOL D - SPRAY PAD ENLARGED DEMO PLAN
A1.5 SCALE: 1/8" = 1'-0"



D2 POOL D - SPRAY PAD ENLARGED PLAN
A1.5 SCALE: 1/8" = 1'-0"

CONSTRUCTION NOTES

027 EXISTING CHILDREN'S POOL MECHANICAL ROOM
045 NEW 4'-0" HIGH METAL PICKET SWING GATE TO MATCH EXISTING METAL PICKET FENCE. MATCH POST SPACING. SEE A1/A1.5 FOR DETAILS. REFER TO T-3 FOR ACCESSIBILITY DETAILS
046 NEW 4'-0" HIGH METAL PICKET FENCE TO MATCH EXISTING. VERIFY IN FIELD AND MATCH POST SPACING
204 NEW CONCRETE DECK TO MATCH EXISTING. ALIGN JOINTS WITH EXISTING. PROVIDE SLOPE TO DRAIN AS REQUIRED. SEE CIVIL FOR FULL SCOPE OF NEW CONCRETE AREAS
210 CONCRETE FOOTING
215 FINISH GRADE
314 EXISTING 6'-0" PERIMETER WALL AND FENCE
315 3" SQUARE TUBE STEEL POST IN CONCRETE FOOTING
329 0.75" SQUARE 18 GA PICKET
334 PREP FOR LOCK HARDWARE
336 HEAVY DUTY SPRING HINGES WELDED TO FRAME
343 1 1/2" SQ. STEEL TUBE TOP AND BOTTOM
344 1 1/2" SQUARE 14 GA RAIL
510 NEW SPRAY GROUND AND WATER PLAY EQUIPMENT, SEE AQUATIC DRAWINGS
D07 EXISTING END POST TO REMAIN DURING FENCE DEMO WORK
D12 PORTION OF EXISTING METAL FENCE TO REMAIN
D13 REMOVE PORTION OF EXISTING METAL PICKET FENCE AND DOUBLE GATE
D17 DEMO EXISTING CONCRETE DECK FOR ACCESS TO EXISTING SUPPLY AND RETURN PIPING. DEMO PORTION OF DECK TO ALIGN WITH EXISTING SLAB JOINTS AS INDICATED. VERIFY IN FILED FOR EXACT LOCATION OF CONCRETE DECK DEMO AREA WITH LOCATION OF EXISTING PIPING. EXISTING PIPING TO BE MODIFIED, SEE AQUATIC CONSULTANT

DEMO LEGEND

INDICATES EXISTING HARDSCAPE TO BE REMOVED/ DEMOLISHED/ ALTERED
INDICATES EXISTING LANDSCAPE TO BE REMOVED & PREPARED FOR NEW HARDSCAPE
INDICATES EXISTING SLAB TO BE REMOVED/ DEMOLISHED
INDICATES EXISTING PIPING TO BE REMOVED/ DEMOLISHED/ ALTERED
DENOTES AREA OF WORK
xxx.x EXISTING GRADING CONTOUR

HARDSCAPE LEGEND

INDICATES AREA OF NEW CONCRETE HARDSCAPE/DECK/SIDEWALK

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POOL D - SPRAY PAD ENLARGED PLANS

SHEET NUMBER:

A1.5

LIGHTING LEGEND

(COORDINATE THE EXACT MOUNTING AND LOCATION OF ALL LIGHTING, SUPPORTS AND ALL CONDUITS WITH OTHER TRADES PRIOR TO ROUGH-IN. SEE ARCH PLANS FOR EXACT GRID, FLUSH AND SURFACE MOUNTING LOCATIONS.)

LIGHTING FIXTURES. SEE FIXTURE SCHEDULE FOR MODEL/PART NUMBERS AND ADDITIONAL DETAILS.

EMERGENCY LIGHTING FIXTURES. SEE FIXTURE SCHEDULE FOR MODEL/PART NUMBERS AND ADDITIONAL DETAILS.

LUMINAIRE(S) POLE MOUNTED WITH ARM. TYPE AS NOTED.

LUMINAIRE(S) POLE MOUNTED ON TOP. TYPE AS NOTED.

SUBSCRIPT ADJACENT TO LIGHTING FIXTURE INDICATES:

1,2,3 etc. = BRANCH CIRCUIT NUMBERS
a,b,c etc. = SWITCH-LEG REFERENCE
NL = NIGHT/SECURITY LIGHTING FIXTURE

EMERGENCY UNIT BATTERY FIXTURE.

LIGHTED EXIT SIGN. TOP MOUNTED ON CEILING OR STEM MOUNTED. SHADED SIDE INDICATES FACE. PROVIDE ARROWS WHERE SHOWN TO INDICATE DIRECTION OF TRAVEL.

DOUBLE SIDED EXIT SIGN. PROVIDE ARROWS WHERE SHOWN TO INDICATE DIRECTION OF TRAVEL.

TOGGLE SWITCH. SEE BELOW FOR NOTATION.
2 = DOUBLE POLE
3 = THREE WAY
4 = FOUR WAY
D = DIMMER
K = KEY SWITCH
OS = OCCUPANCY SENSOR
a,b,c = INDICATES MULTIPLE SWITCHES IN GANGED BOX WITH COMMON COVERPLATE.

LV — LOW VOLTAGE OVERRIDE SWITCH

M — OCCUPANCY SENSOR - CEILING MOUNTED.

PC — PHOTOCELL - CEILING OR ROOF MOUNTED.

DS — DAYLIGHT SENSOR - CEILING MOUNTED.

SITE SYMBOLS LEGEND

OHP — NEW OVERHEAD ELECTRICAL LINE.

UP — NEW UNDERGROUND ELECTRICAL LINE AS INDICATED. "UP" INDICATES UNDERGROUND PRIMARY.

X — OHE — X — EXISTING OVERHEAD ELECTRICAL LINE TO BE DEMOLISHED.

X — UP — X — EXISTING UNDERGROUND ELECTRICAL LINE TO BE DEMOLISHED, AS INDICATED. "UP" INDICATES UNDERGROUND PRIMARY.

OHE — EXISTING OVERHEAD ELECTRICAL LINE TO REMAIN.

UP — EXISTING UNDERGROUND ELECTRICAL LINE TO REMAIN AS INDICATED. "UP" INDICATES UNDERGROUND PRIMARY.

TYPICAL DESIGNATIONS TO BE USED IN CONJUNCTION WITH CONDUIT SYMBOLS

UP = UNDERGROUND PRIMARY
US = UNDERGROUND SECONDARY
UC = UNDERGROUND COMMUNICATIONS
USL = UNDERGROUND STREET LIGHTING

NEW HANDHOLE

NEW MANHOLE

EXISTING MANHOLE

EXISTING MANHOLE

POWER LEGEND

DUPLEX RECEPTACLE, NON-LOCKING TYPE, GROUNDING, 120V - 20A. MOUNTED AT +18 AFF UNO. SHADED REPRESENTS ABOVE COUNTER.

QUAD RECEPTACLE, NON-LOCKING TYPE, GROUNDING, 120V - 20A. MOUNTED AT +18 AFF UNO. SHADED REPRESENTS ABOVE COUNTER.

DUPLEX RECEPTACLE WITH GFCI, NON-LOCKING TYPE, GROUNDING, 120V - 20A. MOUNTED AT +18 AFF UNO. SHADED REPRESENTS ABOVE COUNTER.

SPECIAL RECEPTACLE MOUNTED AT +18" AFF UNO.
SPECIAL RECEPTACLE CEILING MOUNTED.
TYPE DESIGNATIONS:
NONE = L5-30R
A = L6-30R
B = L6-20R
C = L21-20R
D = L15-30R

CEILING MOUNTED DUPLEX OR QUAD RECEPTACLE, NON-LOCKING TYPE, GROUNDING.

POWER FLOOR BOX.

CONTROLLED RECEPTACLE NON-LOCKING TYPE 120V-20A. TO BE LOCATED WITHIN 6' OF AN UNCONTROLLED RECEPTACLE. CONNECT SWITCH LEG BETWEEN RELAY POWER PACK AND OCCUPANCY CONTROLS FOR AUTOMATIC SHUT OFF. CONTROLLED RECEPTACLES SHALL HAVE PERMANENT MARKING TO DIFFERENTIATE THEM FROM UNCONTROLLED RECEPTACLES. (CEC TITLE 24 SECTION 130.5(D)). PROVIDE FACEPLATE PER NEC 406.3(E).

M P M P — WALL OR FLOOR POWER CONNECTION TO MODULAR FURNITURE. VERIFY EXACT LOCATION WITH FURNITURE SUPPLIER.

J — JUNCTION BOX

J — WALL MOUNTED JUNCTION BOX

T — TRANSFORMER

SWITCHBOARD OR MCC

PANEL BOARD (SURFACE)

PANEL BOARD (FLUSH)

LOW VOLTAGE PANEL

LCP — LIGHTING CONTROL PANEL

TELEPHONE BACKBOARD. 3/4" PLYWOOD, LENGTH AND WIDTH AS NOTED.

COMMUNICATION LEGEND

COMBINATION VOICE/DATA OUTLET MOUNTED AT 18" UNO. PROVIDE 3/4" C.O. TERMINATE IN ACCESSIBLE CEILING WITH INSULATED BUSHING.

WALL MOUNTED VOICE OUTLET AT +18" UNO. PROVIDE 3/4" C.O. TERMINATE IN ACCESSIBLE CEILING WITH INSULATED BUSHING.

WALL MOUNTED DATA OUTLET AT +18" UNO. PROVIDE 3/4" C.O. TERMINATE IN ACCESSIBLE CEILING WITH INSULATED BUSHING.

CEILING MOUNTED DATA OR VOICE/DATA OUTLET.

FLOOR DATA OR VOICE/DATA OUTLET. VERIFY EXACT LOCATION WITH ARCHITEC.

M M — WALL OR FLOOR VOICE/DATA CONNECTION TO MODULAR FURNITURE. VERIFY EXACT LOCATION WITH FURNITURE SUPPLIER.

S — SPEAKER - CEILING MOUNTED

12" WIDE MONO-TRAY, 4" DEEP (NOMINAL), 6" RUNG SPACING. TYPICAL UNO

12" WIDE CABLE TRAY, 4" DEEP (NOMINAL) TYPICAL UNO

COORDINATE THE EXACT MOUNTING OF ALL CABLE TRAY SUPPORTS AND ALL CONDUITS WITH OTHER TRADES PRIOR TO ROUGH-IN.

ELECTRICAL ABBREVIATIONS

A	AMPERES
ADA	AMERICANS WITH DISABILITIES ACT
A.F.F.	ABOVE FINISHED FLOOR
AIC	AMPS INTERRUPTING CURRENT
ALT.	ALTERNATE
ATS	AUTOMATIC TRANSFER SWITCH
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFL	COMPACT FLUORESCENT LAMP
CKT	CIRCUIT
C.O.	CONDUIT ONLY
CONC.	CONCRETE
CX	CONNECT TO EXISTING CIRCUIT
CU	COPPER
dBA	DECIBELS
DIST.	DISTRIBUTION
DWG.	DRAWING
EM	EMERGENCY SERVICE
ETC	ET CETERA
EG	EQUIPMENT GROUND
EPO	EMERGENCY POWER OFF BUTTON
EWC	ELECTRIC WATER COOLER
EXIST. (E)	EXISTING
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
GD	GARBAGE DISPOSAL
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
HORIZ.	HORIZONTALLY MOUNTED
HP	HORSEPOWER
KCMIL	THOUSAND CUBIC MILLIMITERS
KVA	KILOVOLT-AMPERES
KW	KILOWATTS
JB	JUNCTION BOX
LTG	LIGHTING
MCA	MINIMUM CIRCUIT AMPS
MCC	MOTOR CONTROL CENTER
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MIC	MICROWAVE
MIN	MINIMUM
MOP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
MTG. HT.	MOUNTING HEIGHT
NIC	NOT IN CONTRACT
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NL	NIGHT LIGHT
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
P	POLE
PB	PULL BOX
PH	PHASE
PIV	POST INDICATOR VALVE
PNL	PANEL
POC	POINT OF CONNECTION
PVC	POLYVINYL CHLORIDE
RCP	REFLECTED CEILING PLAN
RECEPT	RECEPTACLE
REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL
SEC	SECURITY
SHT	SHEET
S.N.	SOLID NEUTRAL
SPD	SURGE PROTECTION DEVICE
SS	STAINLESS STEEL
SWGR	SWITCHGEAR
TC	TERMINAL CABINET
TEL	TELEPHONE
T.I.	TENANT IMPROVEMENT
T.R.	TAMPER RESISTANT
TV	TELEVISION
TYP	TYPICAL
U.C.	UNDER COUNTER
UL	UNDERWRITERS LABORATORY
U.N.O.	UNLESS NOTED OTHERWISE
V	VOLTS
WH	WATER HEATER
W	WATTS
WP	WEATHERPROOF
XFMR	TRANSFORMER
X	EXISTING TO REMAIN
XD	EXISTING TO BE DEMOLISHED
XR	EXISTING TO BE RELOCATED
XL	NEW LOCATION OF EXISTING ITEM

GENERAL SYMBOLS LEGEND

1 — SHEET NOTE REFERENCE

3 / E1 — DETAIL NUMBER DESIGNATION; SHEET ON WHICH DETAIL IS LOCATED

CONDUIT STUBOUT

CONDUIT RISING UP

CONDUIT CONCEALED IN WALLS OR CEILING.

CONDUIT DROP DOWN

CONDUIT CONCEALED IN FLOOR, UNDERFLOOR, OR BELOW GRADE

CONDUIT RUN EXPOSED

FLEXIBLE CONDUIT

#8 — CROSSMARKS DENOTE QUANTITY OF NEUTRAL (LONG), PHASE (SHORT), AND GROUND (DOT) CONDUCTORS IN BRANCH CIRCUIT CONDUIT. NO CROSSMARKS DENOTES PHASE, NEUTRAL, AND GROUND WIRES. NUMBER ADJACENT TO CROSSMARKS DENOTES WIRE SIZE OTHER THAN #12 FOR ALL CONDUCTORS UNO.

A-1 — HOMERUN TO PANEL AND CIRCUITS INDICATED.

GENERAL NOTES

1. ALL GROUNDING PER NEC.
2. ELECTRICAL CONTRACTOR TO VERIFY EXACT LOCATION OF RECEPTACLES IN TEL/COM ROOMS PRIOR TO ROUGH-IN.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER DOCUMENTATION. COORDINATE WITH ALL OTHER TRADES FOR EQUIPMENT LOCATIONS.
4. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHT OF ALL RECEPTACLES AND DEVICES.
5. COORDINATE WITH EQUIPMENT MANUFACTURER FOR LOCATIONS AND CONNECTIONS.
6. VERIFY ALL MECHANICAL EQUIPMENT LOCATIONS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
7. EACH BRANCH CIRCUIT THAT SUPPLIES NON-LINEAR LOADS INCLUDING COMPUTERS, COMMUNICATION RACKS, ETC. MUST HAVE A DEDICATED NEUTRAL.
8. MULTI-WIRE BRANCH CIRCUITS FOR GENERAL LOADS CAN INCLUDE UP TO THREE PHASE CONDUCTORS WITH A SHARED NEUTRAL IN A RACEWAY IF A MULTI-POLE BREAKER IS PROVIDED TO SIMULTANEOUS DISCONNECT ALL SINGLE POLE CIRCUIT BREAKERS THAT SUPPLY INDIVIDUAL PHASE CONDUCTORS OF THE MULTI-WIRE CIRCUIT.

ELECTRICAL SHEET INDEX

SHEET NUMBER	SHEET NAME
E0.1	LEGEND NOTES AND ABBREVIATIONS
E0.2	SINGLE LINE DIAGRAM
E0.4	PANEL SCHEDULES
E1.1	SITE PLAN OVERALL
E1.2	SITE POWER PLAN DEMO
E1.3	SITE POWER PLAN
E5.1	DETAILS

SINGLE LINE LEGEND

GROUND

CIRCUIT BREAKER

CURRENT TRANSFORMERS

TRANSFORMER DELTA PRIMARY, WYE SECONDARY WITH kVA RATING

SPD — SURGE PROTECTION DEVICE

GFP — GROUND FAULT PROTECTION

CB — ENCLOSED CIRCUIT BREAKER

TC — TIME CLOCK

M — KILOWATT-HOUR METER

M — EXTERNALLY MOUNTED METER

FUSED SWITCH

NON-FUSIBLE DISCONNECT SWITCH (RATINGS AS NOTED)

FUSIBLE DISCONNECT SWITCH (RATINGS AS NOTED)

2 — MOTOR STARTER (NEMA SIZE AS NOTED)

2 — COMBINATION FUSIBLE DISCONNECT SWITCH AND MOTOR STARTER, (NEMA SIZE AS NOTED), 3P, 600 VAC MAXIMUM RATING.

T — TOGGLE TYPE FRACTIONAL HP MANUAL MOTOR STARTER WITH THERMAL OVERLOADS (DELETED IF FOR DISCONNECT USE ONLY) AND HANDLE GUARD/LOCK-OFF, 2 POLES (VERIFY WITH BRANCH CIRCUIT).

EPO - EMERGENCY POWER OFF BUTTON

MOTOR

AUTOMATIC TRANSFER SWITCH

PANEL BOARD

CIRCUIT BREAKER CALLOUT

175 - TRIP SIZE
225 - FRAME
3 - POLE/TRIP TYPE

FUSE CALLOUT

150 - FUSE SIZE
200 - DISCONNECT SIZE
RK1 - POLE/FUSE TYPE

005-106

REGISTERED PROFESSIONAL ENGINEER — JEFFREY A. WADSWORTH — ELECTRICAL — STATE OF CALIFORNIA

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Approved By:	Approver
Checked By:	Checker
Drawn By:	Author

Sheet Title:

LEGEND NOTES AND ABBREVIATIONS

SHEET NUMBER:

E0.1

For Council Approval
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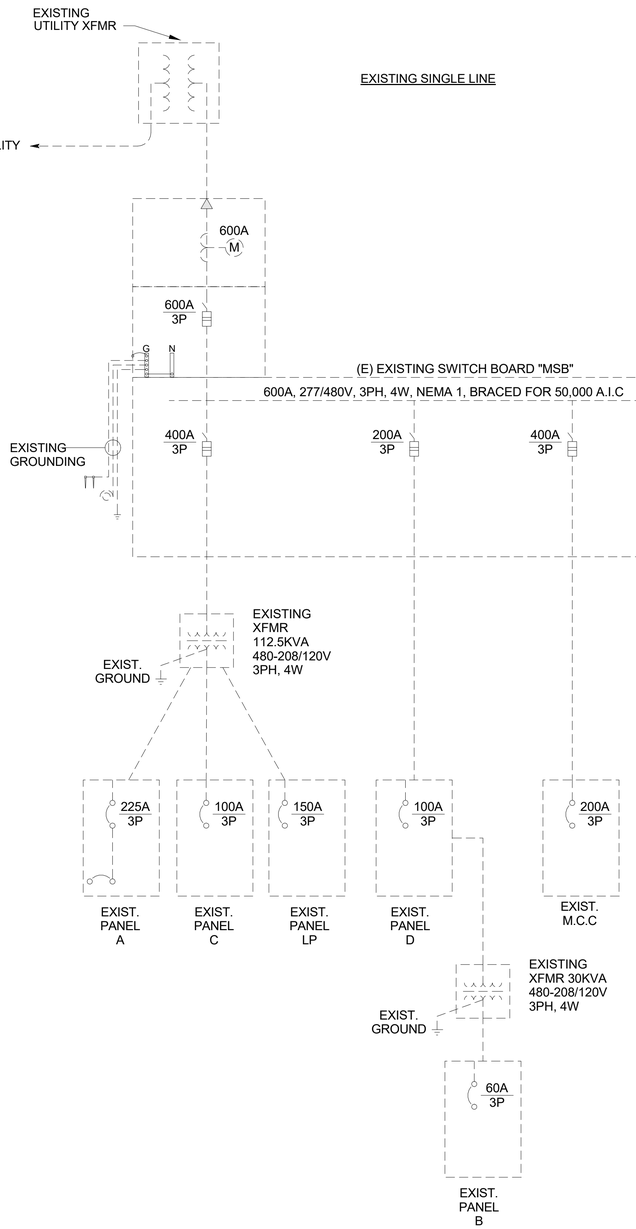

1 E0.2 SINGLE LINE DIAGRAM
SCALE: 1/2" = 1'-0"

EXISTING SINGLE LINE

SINGLE LINE NOTES:

1. ALL ELECTRICAL DISTRIBUTION, CONDUIT AND CONDUCTORS ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.

Switchboard: MSB

Location: ELEC ROOM
Supply From: UTILITY
Mounting: SURFACE
Enclosure: NEMA 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 50000
Mains Type: CB
Mains Rating: 600 A
MCB Rating: 600 A

Notes:

CKT	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	T1	3	200 A	175 A	100382 VA	
2	MCC	3	200 A	200 A	126000 VA	
3	PANEL D	3	100 A	100 A	52017 VA	
4						
5						
6						
7						
8						
9						
10						
				Total Conn. Load:	278399 VA	
				Total Amps:	335 A	

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	29937 VA	118.74%	35546 VA		
Receptacle	3300 VA	100.00%	3300 VA	**Total Conn. Load:**	278399 VA
Spare	100202 VA	100.00%	100202 VA	**Total Est. Demand:**	320248 VA
Power	144960 VA	125.00%	181200 VA	**Total Conn.:**	335 A
				Total Est. Demand:	385 A

Notes:
ALL BREAKERS ARE EXISTING TO REMAIN.

Switchboard: MCC

Location:
Supply From: MSB
Mounting: FLOOR
Enclosure: Type 12

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 50000
Mains Type: CB
Mains Rating: 200 A
MCB Rating: 200 A

Notes:

CKT	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	EXISTING	3	100 A	100 A	25000 VA	
2	EXISTING	3	100 A	100 A	25000 VA	
3	EXISTING	3	100 A	100 A	25000 VA	
4	EXISTING	3	100 A	100 A	25000 VA	
5	EXISTING	3	100 A	100 A	25000 VA	
* 6	P2C	3	100 A	100 A	1000 VA	
7						
8						
9						
				Total Conn. Load:	126000 VA	
				Total Amps:	152 A	

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	1000 VA	125.00%	1250 VA		
Power	125000 VA	125.00%	156250 VA	**Total Conn. Load:**	126000 VA
				Total Est. Demand:	157500 VA
				Total Conn.:	152 A
				Total Est. Demand:	189 A

Notes:
* - PROVIDE NEW BREAKER IN EXISTING PANEL. MATCH EXISTING PANEL BREAKER TYPE, MANUFACTURER AND AIC RATING.

LOAD SUMMARY

EXISTING PANEL 'A'

EXISTING LOAD = 152A

ADDITIONAL LOAD = 3VA
3VA @ 120/208V, 3PH, 4W = 1.3A

TOTAL LOAD ADDED = 1.3 A

TOTAL REVISED LOAD = 154 A

CONCLUSION: ALL EXISTING BREAKERS AND EXISTING 225 AMP PANEL BUS AND EXISTING 225 AMP FEEDER TO PANEL REMAIN ADEQUATE

EXISTING PANEL 'B'

EXISTING LOAD = 12.96[illegible]

REMOVED LOAD = 5.2[illegible]
ADDITIONAL LOAD = 5.5[illegible]VA
5.5KVA @ 120/208V, 3PH, 4W = 15.4A

TOTAL ADDED LOAD = 15.4A

TOTAL REVISED LOAD = 60 A

CONCLUSION: ALL EXISTING BREAKERS AND EXISTING 100 AMP PANEL BUS AND EXISTING 60 AMP FEEDER TO PANEL REMAIN ADEQUATE.
PROVIDE 30 DAY METER DEMAND TO VERIFY THAT THE EXISTING LOAD [illegible]2.96 KVA.

EXISTING PANEL 'D'

EXISTING LOAD = 70A
REMOVED LOAD = 29.6A
ADDITIONAL LOAD = 28.7KVA
28.7KVA @ 277/480V, 3PH, 4W = 35 A

TOTAL LOAD ADDED = 35 A

TOTAL REVISED LOAD = 76 A

CONCLUSION: ALL EXISTING BREAKERS AND EXISTING 100 AMP PANEL BUS AND NEW 100 AMP FEEDER TO PANEL WILL BE ADEQUATE. PROVIDE 30 DAY METER DEMAND TO VERIFY THAT THE EXISTING LOAD

EXISTING SWITCHBOARD 'MSB'

EXISTING LOAD = 318 A

LOAD REMOVED = [illegible] A

TOTAL [illegible] ADDED = 51.7A

TOTAL REVISED LOAD = 335 A

CONCLUSION: ALL EXISTING BREAKERS AND EXISTING 600 AMP PANEL BUS AND EXISTING 600 AMP FEEDER TO PANEL REMAIN ADEQUATE

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3051 WOODCREEK OAKS BLVD.
ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
30%CD	04/05/21
75%CD	05/20/21
100% CD/Bid Set	08/20/21

Project Number: 200204
Approved By: Approver
Checked By: Checker
Drawn By: Author

Sheet Title:

SINGLE LINE DIAGRAM

SHEET NUMBER:

E0.2

Branch Panel: A

Location:
Supply From: T
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10000
Mains Type: MLO
Mains Rating: 225 A
MCB Rating:

Notes:

	CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
*	1	HEATER WATER FANS	20 A	1	1392...	180 VA					1	20 A	FM1C - FLOW METER	2 *
	3	LIGHTS - COMMUNITY RM	20 A	1			1875...	0 VA			--	--	Space	4
	5	LIGHTS - GUARDS, CASH, LOBBY	20 A	1					1789...	0 VA	--	--	Space	6
	7	LIGHTS - MENS LOCKER	20 A	1	1775...	900 VA					1	20 A	RECEPTS - COMMUNITY RM	8
	9	LIGHTS - WOMENS LOCKER	20 A	1			1525...	720 VA			1	20 A	RECEPTS - COMMUNITY RM	10
	11	LIGHTS - MECH ROOM	20 A	1					1250...	720 VA	1	20 A	RECEPTS - COMMUNITY RM	12
	13	LIGHTS - MECH ROOM	20 A	1	1408...	2300...					1	20 A	J-BOX - HAND DRYER	14
	15	J-BOX - HAIR DRYER	20 A	1			2300...	2300...			1	20 A	J-BOX - HAND DRYER	16
	17	J-BOX - HAIR DRYER	20 A	1					2300...	540 VA	1	20 A	RECEPTS	18
	19	J-BOX - HAIR DRYER	20 A	1	2300...	1500...					1	20 A	RECEPTS - CASHIER, LOBBY	20
	21	RECEPTS - CO2 & E.F.	20 A	1			875 VA	1200...			1	20 A	RECEPTS - E.D.F.	22
	23	RECEPTS - T.M.B	20 A	1					180 VA	1000...	1	20 A	RECEPTS - PAY PHONE	24
	25	RECEPTS - CHLORINE RM	20 A	1	420 VA	540 VA					1	20 A	RECEPTS - GUARDS	26
	27	RECEPTS - CO2 ROOM	20 A	1			180 VA	360 VA			1	20 A	RECEPTS - GUARDS	28
	29	CU-1/FC-1/EF-2	30 A	3					2544...	360 VA	1	20 A	RECEPTS - GUARDS	30
	31	--	--	--	2544...	540 VA					1	20 A	RECEPTS - RESTROOMS, EXTERIOR	32
	33	--	--	--			2544...	2300...			1	20 A	J-BOX - HAND DRYER	34
	35	SIGN J-BOX - SITE	20 A	1					1500...	2300...	1	20 A	J-BOX - HAND DRYER	36
	37	LIGHTS - EXTERIOR & SOFFIT	20 A	1	375 VA	1767...					3	20 A	EF-1/EF-4/EF-6	38
	39	LIGHTS - SITE	20 A	1			1750...	1767...			--	--	--	40
	41	LIGHTS - SITE	20 A	1					1750...	1767...	--	--	--	42
				Total Load:	17941 VA		19696 VA		18000 VA					
				Total Amps:	150 A		164 A		150 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Spare	55457 VA	100.00%	55457 VA		
Power	180 VA	125.00%	225 VA	**Total Conn. Load:**	55637 VA
				Total Est. Demand:	55682 VA
				Total Conn.:	154 A
				Total Est. Demand:	155 A

Notes:
* PROVIDE NEW BREAKER IN EXISTING PANEL. MATCH EXISTING PANEL BREAKER TYPE, MANUFACTURER AND AIC RATING.

Branch Panel: D

Location:
Supply From: MSB
Mounting: Surface
Enclosure: EXIST

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

	CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
*	1	P1D	15 A	3	2167...	7479...					3	50 A	P2D	2 *
	3	--	--	--			2167...	7479...			--	--	--	4
	5	--	--	--					2167...	7479...	--	--	--	6
	7	T2	175 A	3	5570...	0 VA					--	--	Space	8
	9	--	--	--			7370...	0 VA			--	--	Space	10
	11	--	--	--					5570...	0 VA	--	--	Space	12
	13	EXISTING LOAD	20 A	3	1523...	0 VA					--	--	Space	14
	15	--	--	--			1523...	0 VA			--	--	Space	16
	17	--	--	--					1523...	0 VA	--	--	Space	18
	19	EXISTING LOAD	--	--	0 VA	0 VA					--	--	Space	20
	21	Space	--	--			0 VA	0 VA			--	--	Space	22
	23	Space	--	--					0 VA	0 VA	--	--	Space	24
	25	Space	--	--	0 VA	0 VA					--	--	Space	26
	27	Space	--	--			0 VA	0 VA			--	--	Space	28
	29	Space	--	--					0 VA	0 VA	--	--	Space	30
	31	Space	--	--	0 VA	0 VA					--	--	Space	32
	33	Space	--	--			0 VA	0 VA			--	--	Space	34
	35	Space	--	--					0 VA	0 VA	--	--	Space	36
	37	Space	--	--	0 VA	0 VA					--	--	Space	38
	39	Space	--	--			0 VA	0 VA			--	--	Space	40
	41	Space	--	--					0 VA	0 VA	--	--	Space	42
				Total Load:	16739 VA		18539 VA		16739 VA					
				Total Amps:	60 A		67 A		60 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	28937 VA	119.38%	34546 VA		
Receptacle	3300 VA	100.00%	3300 VA	**Total Conn. Load:**	52017 VA
Power	19780 VA	125.00%	24725 VA	**Total Est. Demand:**	62571 VA
				Total Conn.:	63 A
				Total Est. Demand:	75 A

Notes:
* - PROVIDE NEW BREAKER IN EXISTING PANEL. MATCH EXISTING PANEL BREAKER TYPE, MANUFACTURER AND AIC RATING.

Branch Panel: B

Location:
Supply From: T2
Mounting: Surface
Enclosure: EXIST

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 42000
Mains Type: CB
Mains Rating: 100 A
MCB Rating: 60 A **

Notes:

	CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
	1	EXISTING CIRCUITS	20 A	1	0 VA	0 VA					1	20 A	EXISTING CIRCUITS	2
	3	EXISTING CIRCUITS	20 A	1			0 VA	0 VA			1	20 A	EXISTING CIRCUITS	4
	5	EXISTING CIRCUITS	20 A	1					0 VA	0 VA	1	20 A	EXISTING CIRCUITS	6
	7	EXISTING CIRCUITS	20 A	1	0 VA	0 VA					1	20 A	EXISTING CIRCUITS	8
	9	EXISTING CIRCUITS	20 A	1			0 VA	0 VA			1	20 A	EXISTING CIRCUITS	10
	11	EXISTING CIRCUITS	20 A	1					0 VA	0 VA	1	20 A	EXISTING CIRCUITS	12
	13	EXISTING CIRCUITS	20 A	1	0 VA	0 VA					1	20 A	EXISTING CIRCUITS	14
	15	EXISTING CIRCUITS	20 A	1			0 VA	0 VA			2	30 A	EXISTING CIRCUITS	16
	17	EXISTING CIRCUITS	20 A	2					0 VA	0 VA	--	--	--	18
	19	--	--	--	0 VA	0 VA					3	15 A	EXISTING CIRCUITS	20
*	21	UV1D - UV CHAMBER	20 A	2			750 VA	0 VA			--	--	--	22
	23	--	--	--					750 VA	0 VA	--	--	--	24
*	25	CP1D - CHLORINATOR	30 A	1	750 VA	0 VA					--	--	Space	26
*	27	C1D - CHEM CONTROL	20 A	1			1800...	0 VA			--	--	Space	28
*	29	FM1D - FLOW METER	20 A	1					500 VA	0 VA	--	--	Space	30
*	31	AF1D - WATER LEVEL CONTROL	20 A	1	500 VA	0 VA					--	--	Space	32
*	33	AP1D - ACID CHEM FEED PUMP	20 A	1			500 VA	0 VA			--	--	Space	34
	35	Space	--	--					0 VA	0 VA	--	--	Space	36
	37	EXISTING LOAD	20 A	3	4320...	0 VA					--	--	Space	38
	39	--	--	--			4320...	0 VA			--	--	Space	40
	41	--	--	--					4320...	0 VA	--	--	Space	42
				Total Load:	5570 VA		7370 VA		5570 VA					
				Total Amps:	46 A		61 A		46 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	3300 VA	100.00%	3300 VA		
Power	15210 VA	125.00%	19013 VA	**Total Conn. Load:**	18510 VA
				Total Est. Demand:	22313 VA
				Total Conn.:	51 A
				Total Est. Demand:	62 A

Notes:
* PROVIDE NEW BREAKER IN EXISTING PANEL. MATCH EXISTING PANEL BREAKER TYPE, MANUFACTURER AND AIC RATING. ** PROVIDE NEW MAIN 100A BREAKER IN EXISTING BUCKET

For Council Approval
Not for Bidding

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3051 WOODCREEK OAKS BLVD.
ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
30%CD	04/05/21
75%CD	05/20/21
100% CD/Bid Set	08/20/21

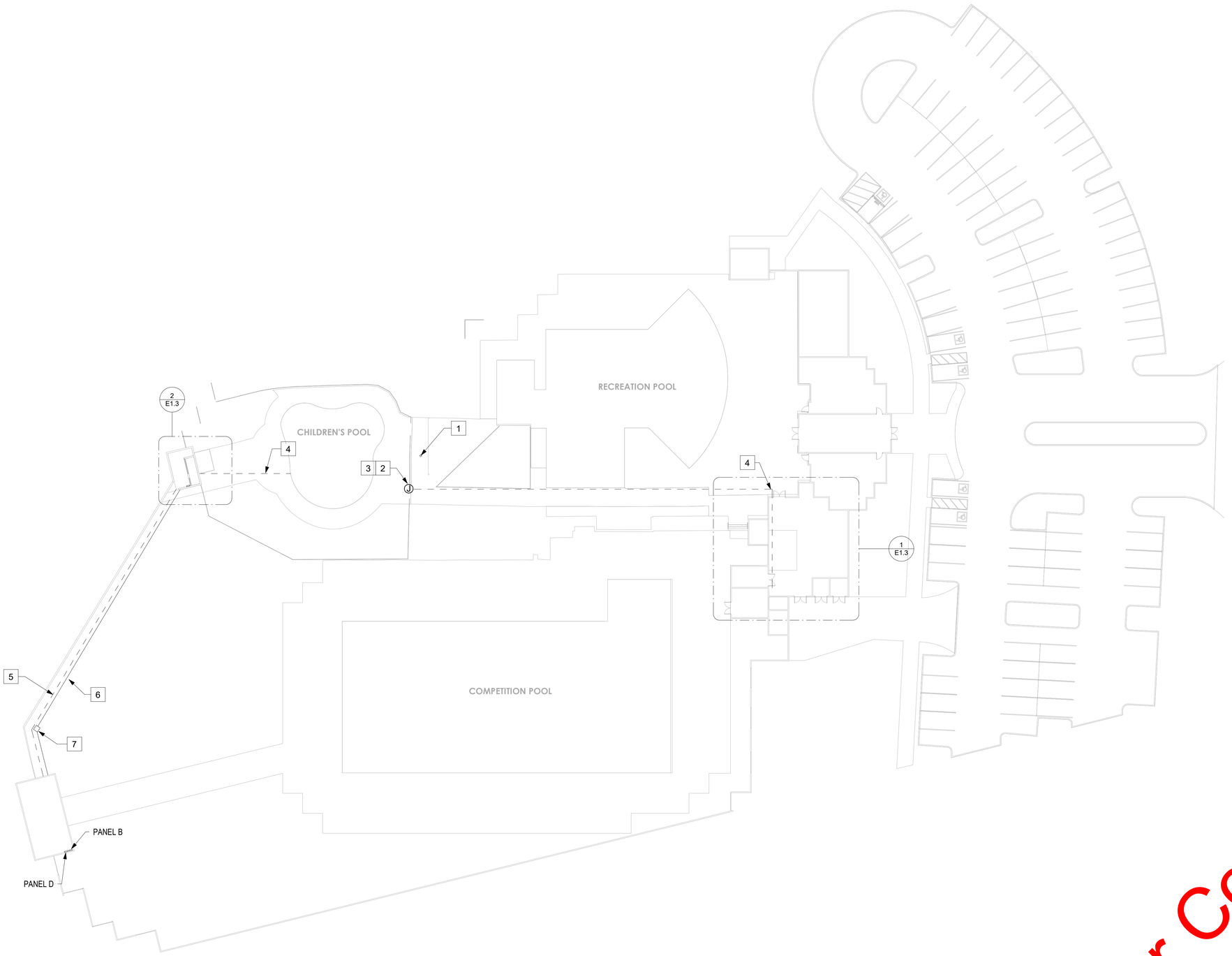
Project Number: 200204
Approved By: Approver
Checked By: Checker
Drawn By: Author

Sheet Title:

PANEL SCHEDULES

SHEET NUMBER:

E0.4



1 E1.1 FLOOR POWER PLAN
SCALE: 1 : 300

SHEET NOTES

Key Value	Keynote Text
1	INTERCEPT AND EXTEND EXISTING CONDUIT AND CONDUCTORS TO NEW POLE LIGHT LOCATION. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH IN. SEE POLE BASE DETAIL SHEET E5.1
2	INTERCEPT AND EXTEND EXISTING CONDUIT AND CONDUCTORS TO NEW PLATFORM LIGHT LOCATION. COORDINATE EXACT LOCATION WITH ARCHITECT AND AQUATIC PLANS PRIOR TO ROUGH IN.
3	PROVIDE EMERGENCY SHUTDOWN BUTTON FOR SLIDE PUMPS AT TOWER PLATFORM. COORDINATE EXACT PLACEMENT WITH ARCHITECT PRIOR TO ROUGH IN.
4	RE-USE EXISTING UNDERGROUND CONDUITS BACK TO ELECTRICAL ROOM. CONTRACTOR SHALL COORDINATE EXISTING CONDUIT LOCATION PRIOR TO COMMENCEMENT OF WORK
5	EXISTING UNDERGROUND CONDUITS BACK TO ELECTRICAL ROOM. CONTRACTOR SHALL COORDINATE EXISTING CONDUIT LOCATION PRIOR TO COMMENCEMENT OF WORK
6	PROVIDE (7)1/2" AND (1)3/4" CONDUITS UNDERGROUND BACK TO MECH ROOM. SEE SHEET E1.3 FOR CONDUIT AND CONDUCTORS SIZE. CONTRACTOR SHALL COORDINATE ROUTING WITH ARCHITECT AND CIVIL PRIOR TO ROUGH IN.
7	PROVIDE NEW CONCRETE HANDHOLE. COORDINATE PLACMENT WITH ARCHITECT PRIOR TOR ROUGH IN.

GENERAL NOTES:

A	ELECTRICAL CONTRACTOR TO VERIFY ALL EXISTING FIELD CONDITIONS PRIOR TO COMMENCMENT OF WORK.
B	ALL PANELS LOACTED ON SITE ARE EXISTING TO REMAIN.

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100% CD/Bid Set	08/20/21

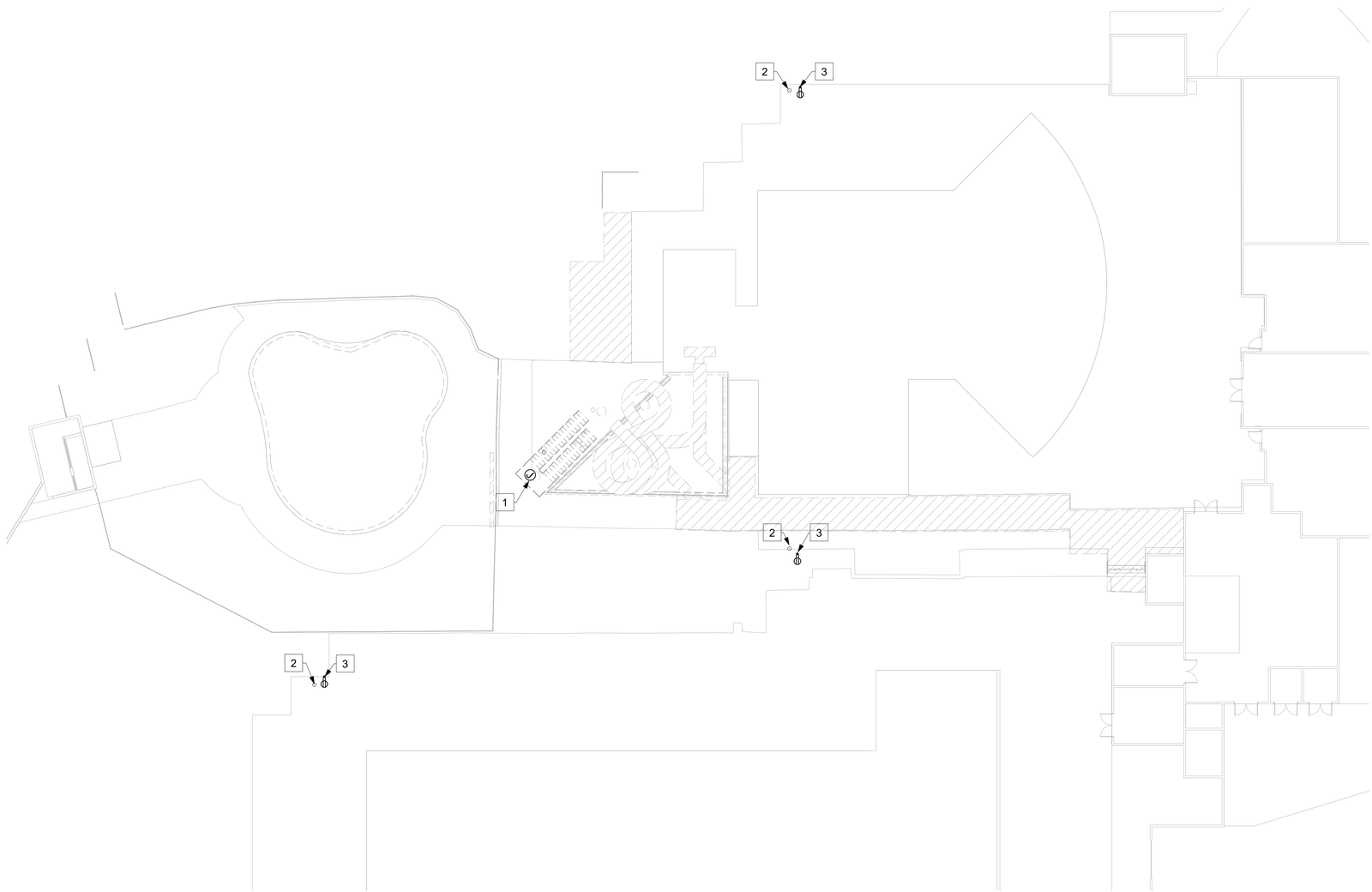
Project Number:	200204
Approved By:	AN
Checked By:	AN
Drawn By:	KS

Sheet Title:

SITE PLAN OVERALL

SHEET NUMBER:

E1.1



1 SITE DEMO PLAN POWER
E1.2 SCALE: 1/16" = 1'-0"

SHEET NOTES

Key Value	Keynote Text
1	EXISTING PLATFORM LIGHTS TO BE RELOCATED.
2	LIGHT POLE FIXTURES ARE TO REMAIN UNO.
3	EXTERIOR RECEPTACLES ARE TO REMAIN UNO.

GENERAL NOTES:

A	ELECTRICAL CONTRACTOR TO VERIFY ALL EXISTING FIELD CONDITIONS PRIOR TO COMMENCMENT OF WORK.
B	ELECTRICAL CONTRACTOR SHALL VERFIY EXACT DEMO AREA OF WATERSLIDE WITH ARCHITECT PRIOR TO COMMENCMENT OF WORK.
C	ALL CIRCUITS ON PANEL SCHEDULES REFERENCED BUT NOT ON PLAN ARE TO REMAIN.

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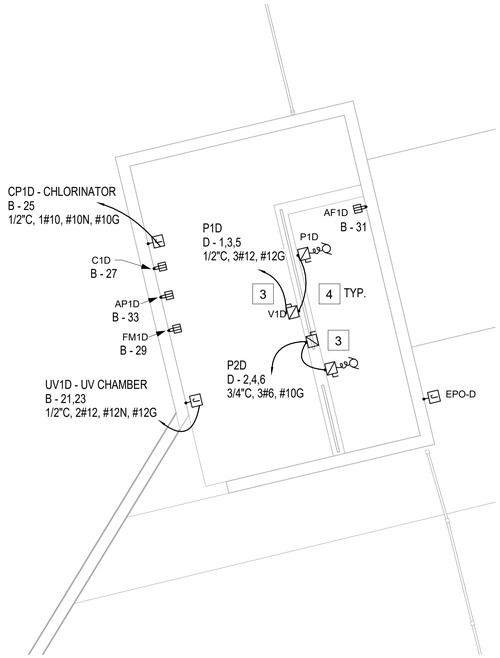
Project Number:	200204
Approved By:	AN
Checked By:	AN
Drawn By:	KS

Sheet Title:

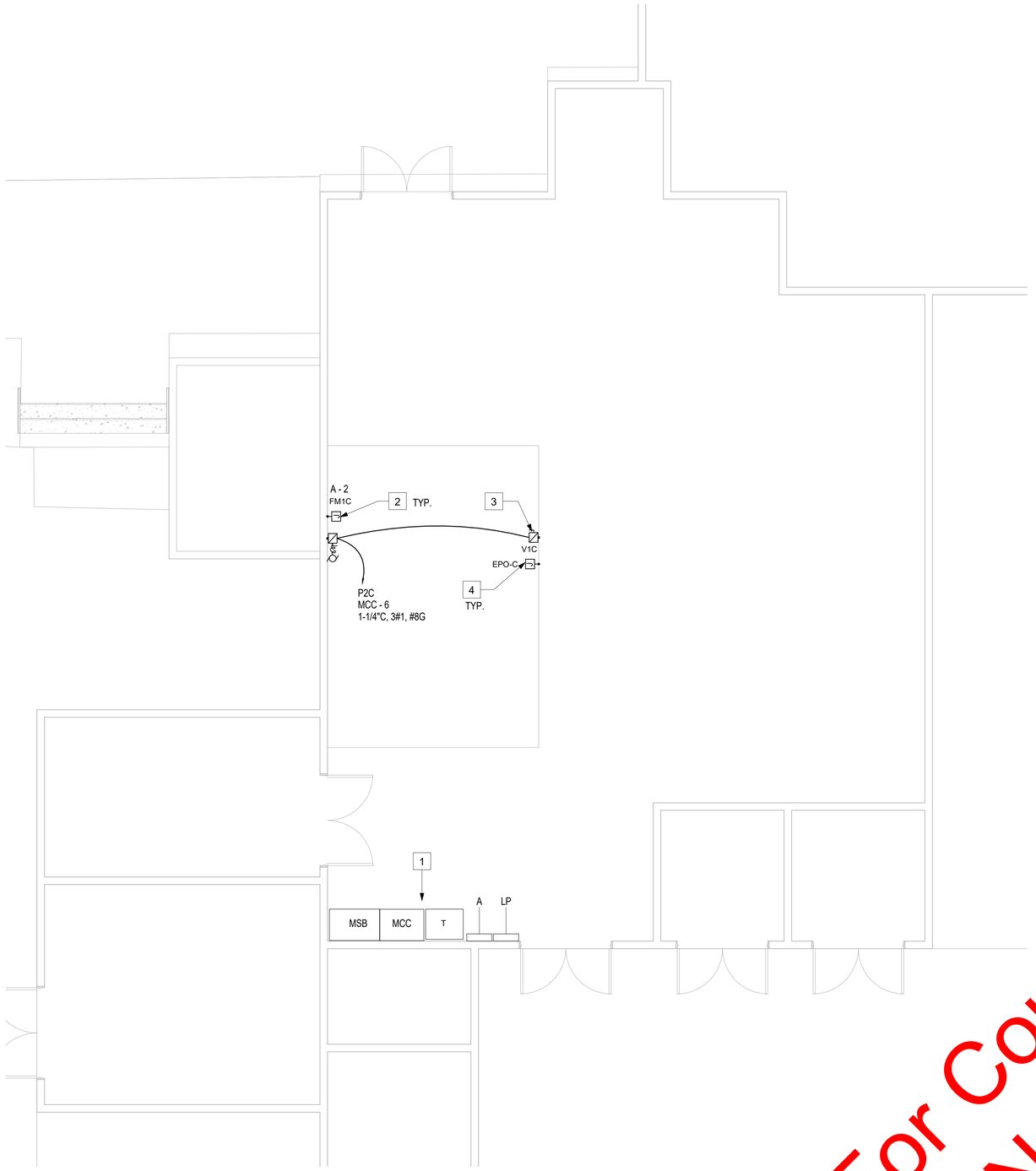
SITE POWER PLAN DEMO

SHEET NUMBER:

E1.2



2 E1.3 MECH PLAN
SCALE: 1/4" = 1'-0"



1 E1.3 SITE PLAN POWER - BLDG
SCALE: 1/4" = 1'-0"

SHEET NOTES

Key Value	Keynote Text
1	ALL PANELS IN THIS ROOM ARE EXISTING TO REMAIN AS IS UNLESS OTHERWISE SPECIFIED.
2	COORDINATE EXACT LOCATION OF POOL EQUIPMENT WITH POOL DRAWINGS PRIOR TO ROUGH IN.
3	PUMP POWERED FROM VFD. COORDINATE LOCATION AND CONNECTION OF VFD WITH POOL VENDOR PRIOR TO ROUGH IN.
4	REFER TO POOL CONSULTANT DRAWINGS PL400 AND PL510. PROVIDE 1/2"C WITH PULL STRING FOR ALL LOW VOLTAGE WIRE INDICATED.

GENERAL NOTES:

A	COORDINATE POWER CONNECTIONS WITH MANUFACTURER RECOMMENDATIONS PRIOR ROUGH IN.
B	ALL CIRCUITS ON PANEL SCHEDULES REFERENCED BUT NOT ON PLAN AS EXISTING TO REMAIN OR REUSED.
C	ELECTRICAL CONTRACTOR SHALL VERIFY LOCATIONS AND PLACEMENT OF ELECTRICAL CONNECTIONS FOR SLIDE EQUIPMENT WITH DIAMATIC PLANNER PRIOR TO ROUGH IN.

GENERAL POOL NOTE:

A	IN ADDITION TO ALL OTHER GROUNDING AND BONDING REQUIREMENTS PROVIDE EQUIPOTENTIAL BONDING THROUGHOUT THE POOL AREA AS REQUIRED BY CEC 680.26. BONDING CONDUCTORS SHALL BE #8 AWG SOLID BARE COPPER. EQUIPOTENTIAL BONDING REQUIREMENTS INCLUDE BONDING PERIMETER SURAFCES WITHIN 3 FEET HORIZONTALLY BEYOND THE INSIDE WALL OF THE POOL TO THE STRUCTURAL REINFORCING STEEL OF THE POOL SHELL AT A MINIMUM OF FOUR POINTS SPACED EQUAL DISTANCE AROUND THE PERIMETER OF THE POOL. EQUIPONTENTIAL BONDING REQUIREMENTS ALSO INCLUDES BONDING OF METALLIC POOL COMPONENTS, METALLIC FORMING SHELLS FOR UNDERWATER LIGHTING, METAL PARTS OF ELECTRICAL EQUIPMENT ASSOCIATED WITH THE POOL WATER CIRCULATING SYSTEM, FIXED METAL PARTS WITH 5 FEET HORIZONTALLY OR 12 FEET VERITCALLY OF THE POOL, AND THE POOL WATER ITSELF. REFER TO CEC 680.026 FOR DETAIULED REQUIREMENTS AND EXCEPTIONS REGUARDING REQUIREMENTS AND EXCEPTIONS REGUARDING EQUIPOTENTIAL BONDING.

For Council Approval
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PROJECT:

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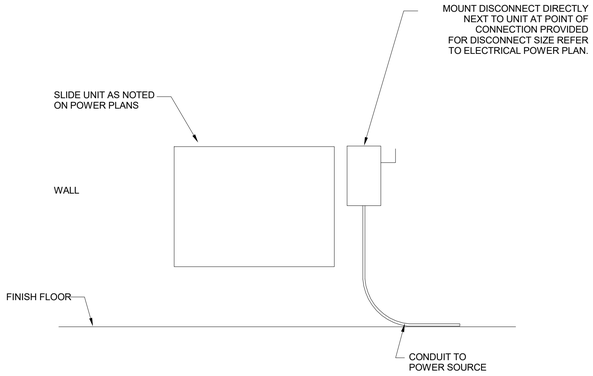
Drawn By:	Author

Sheet Title:

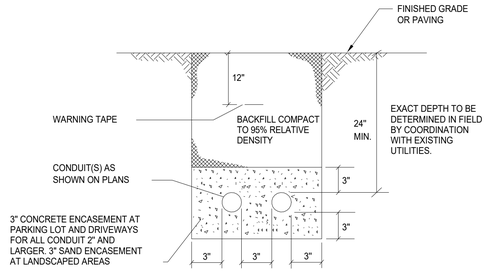
SITE POWER PLAN

SHEET NUMBER:

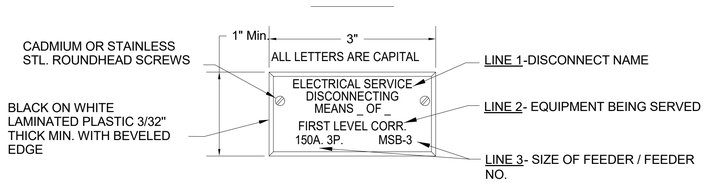
E1.3



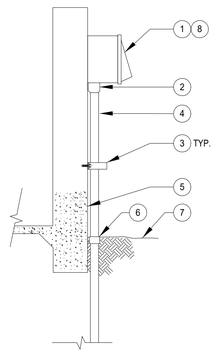
1 E5.1 DISCONNECT MOUNTING DETAIL
SCALE: 12" = 1'-0"



3 E5.1 TRENCHING DETAIL
SCALE: 12" = 1'-0"



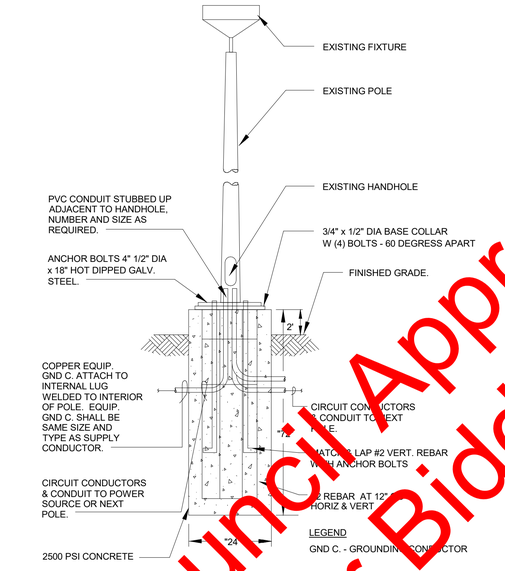
2 E5.1 DISCONNECT NAMEPLATE DETAIL
SCALE: 12" = 1'-0"



NOTES:

1. WEATHERPROOF BOX. JUNCTION BOX SIZED PER NEC.
2. THREADED HUB.
3. GALVANIZED PIPE STRAP, TYP.
4. RGS CONDUIT.
5. STRUCTURE WALL OR UNISTRUT.
6. TRANSITION COUPLING.
7. FINISH GRADE.
8. WHERE NECESSARY.
9. PAINT CONDUITS AND JUNCTION BOX TO MATCH SURFACE.

4 E5.1 RECEPTACLE MOUNT DETAIL
SCALE: 12" = 1'-0"



5 E5.1 POLE BASE DETAIL
SCALE: 1" = 1'-0"

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Checked By:	Checker
Drawn By:	Author

Sheet Title:

DETAILS

SHEET NUMBER:

E5.1

GENERAL DEMOLITION NOTES:

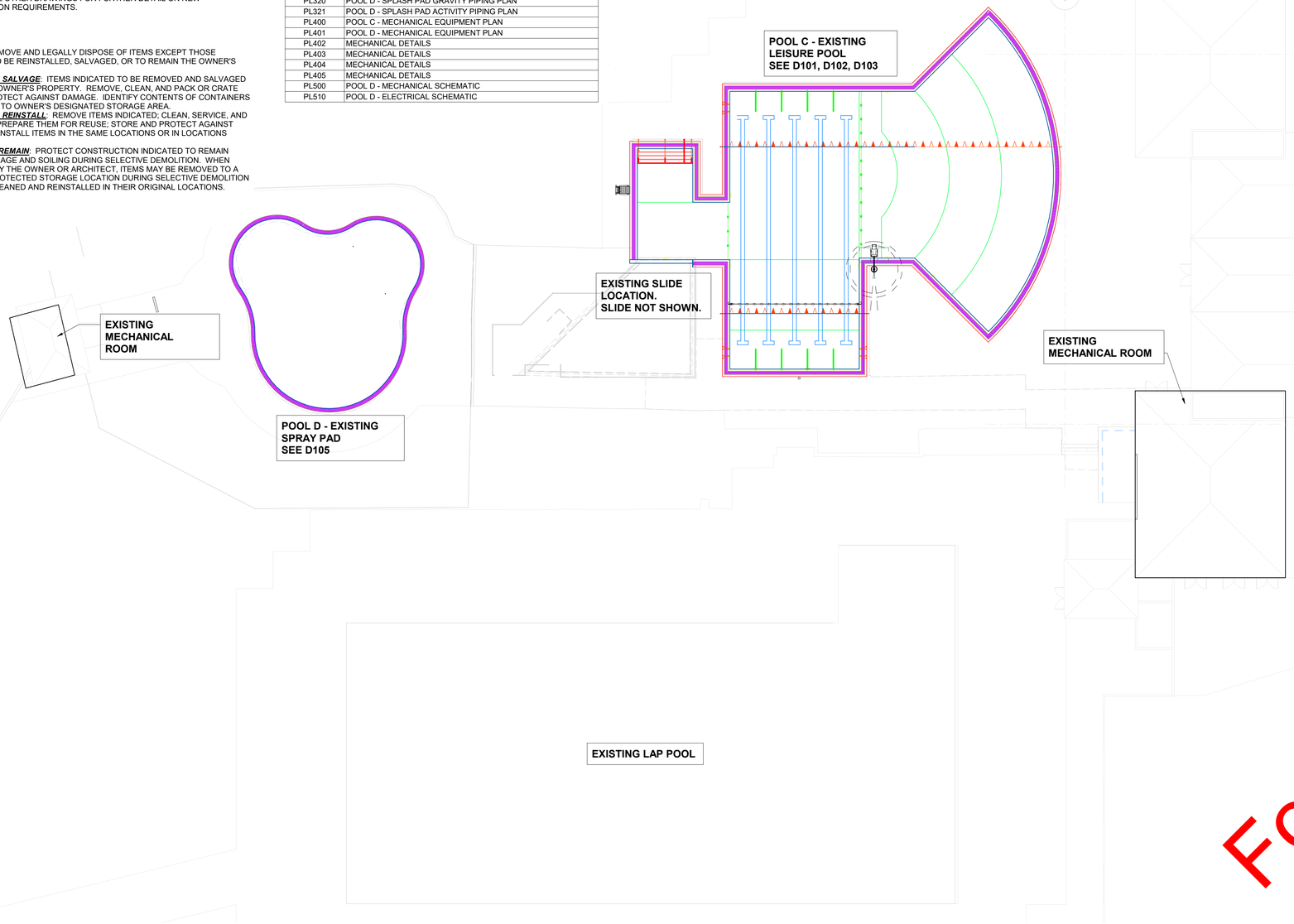
1. ALL CONDITIONS SHOWN ON THIS DRAWING ARE EXISTING. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR ACCURACY OR COMPLETENESS OF INFORMATION SHOWN. ORIGINAL CONSTRUCTION DOCUMENTS FOR EXISTING FACILITY ARE ON FILE WITH JKA ARCHITECTECTS. CONTRACTORS ARE RESPONSIBLE TO VISIT THE SITE AND REVIEW ALL DOCUMENTS PRIOR TO SUBMITTING THEIR BID TO COMPLETELY FAMILIARIZE THEMSELVES WITH ALL CONDITIONS.
2. DEMOLITION DRAWINGS ARE INTENDED TO BE SCHEMATIC IN NATURE, AND MAY NOT DESCRIBE ALL MISCELLANEOUS WORK NECESSARY TO COMPLETE THE DEMOLITION AND NEW WORK. CONTRACTOR SHALL INCLUDE THIS MISCELLANEOUS NECESSARY WORK IN BASE BID.
3. CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING POOL EQUIPMENT WITHIN THE LIMITS INDICATED WITH HATCHING ( ). SEE DRAWING NOTES FOR EQUIPMENT THAT SHALL BE REUSED IN PLACE AND EQUIPMENT THAT SHALL BE RELOCATED AND REUSED.
4. CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING ABOVE GRADE POOL RECIRCULATION SYSTEM PIPING, VALVES, FITTINGS, PIPING SUPPORTS, AND SUPPORT FASTENING HARDWARE. THIS SYSTEM PIPING TO INCLUDE BUT IS NOT LIMITED TO: POOL FILTRATION SUPPLY AND RETURN, POOL CHEMICAL TREATMENT SUPPLY AND RETURN, POOL HEATER SUPPLY AND RETURN, ACTIVITY PUMP SUPPLY AND RETURN, SLIDE PUMP SUPPLY AND RETURN.
5. CONTRACTOR SHALL DISCONNECT AND REMOVE ALL FILTRATION PUMP SUCTION PIPING, VALVES, FITTINGS, PIPING SUPPORTS, AND SUPPORT FASTENING HARDWARE LOCATED INSIDE THE SURGE TANK.
6. CONTRACTOR TO VERIFY ASBESTOS TEST REQUIREMENTS AND CONDUCT ANY REQUIRED TESTING PRIOR TO CONSTRUCTION.
7. UNLESS NOTED OTHERWISE ON THE PLAN, CONTRACTOR SHALL DISPOSE OF ALL REMOVED EQUIPMENT AND MATERIALS IN A LEGAL MANNER OFF SITE. COPIES OF ALL MANIFESTS SHALL BE GIVEN TO THE OWNER SHOWING FINAL DISPOSAL LOCATION OF ALL MATERIALS.
8. CONTRACTOR SHALL PROTECT ALL CATCH BASINS, SEWER INLETS, ETC., FROM DEBRIS AND SEDIMENTATION DURING DEMOLITION.
9. CONTRACTOR SHALL LIMIT THE EXTENT OF HIS DISRUPTION TO THE INDICATED WORK AREA, AND TAKE CARE NOT TO DISRUPT THE SURROUNDING AREA.
10. CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND TERMINATING EXISTING ELECTRICAL POWER, WATER, AND GAS LINES WITH LOCAL UTILITIES.
11. REFER TO STRUCTURAL SD SERIES DRAWINGS, MECHANICAL MD SERIES DRAWINGS, ELECTRICAL ED SERIES DRAWINGS, AND PLUMBING PD SERIES DRAWINGS FOR ADDITIONAL DEMOLITION SCOPE OF WORK.
12. REFER TO ALL OTHER DRAWINGS FOR FURTHER DETAIL ON NEW CONSTRUCTION REQUIREMENTS.

DEFINITIONS:

A. ***REMOVE***: REMOVE AND LEGALLY DISPOSE OF ITEMS EXCEPT THOSE INDICATED TO BE REINSTALLED, SALVAGED, OR TO REMAIN THE OWNER'S PROPERTY.
B. ***REMOVE AND SALVAGE***: ITEMS INDICATED TO BE REMOVED AND SALVAGED REMAIN THE OWNER'S PROPERTY. REMOVE, CLEAN, AND PACK OR CRATE ITEMS TO PROTECT AGAINST DAMAGE. IDENTIFY CONTENTS OF CONTAINERS AND DELIVER TO OWNER'S DESIGNATED STORAGE AREA.
C. ***REMOVE AND REINSTALL***: REMOVE ITEMS INDICATED; CLEAN, SERVICE, AND OTHERWISE PREPARE THEM FOR REUSE; STORE AND PROTECT AGAINST DAMAGE. REINSTALL ITEMS IN THE SAME LOCATIONS OR IN LOCATIONS INDICATED.
D. ***EXISTING TO REMAIN***: PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY THE OWNER OR ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTIVE DEMOLITION AND THEN CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS.

SCHEDULE - SHEET LIST

SHEET NO.	SHEET NAME
D100	OVERALL EXISTING POOLS
D101	EXISTING LEISURE POOL DEMOLITION PLAN
D102	EXISTING LEISURE POOL DEMOLITION PLAN
D103	EXISTING LEISURE POOL DEMOLITION DETAILS
D104	EXISTING LEISURE POOL DEMOLITION DETAILS
D105	DEMOLITION OF EXISTING SPRAY PAD PLAN WITH STRUCTURE
D400	MECHANICAL DEMOLITION PLAN
PL100	OVERALL AQUATIC PLAN
PL101	GENERAL DETAILS AND SCHEDULES
PL110	POOL C - EXISTING LEISURE POOL WITH NEW SLIDE PLAN
PL111	POOL C - EXISTING LEISURE POOL WITH NEW SLIDE PLAN
PL112	POOL C - EXISTING LEISURE POOL WITH NEW SLIDE DETAILS
PL113	POOL C - EXISTING LEISURE POOL WITH NEW SLIDE DETAILS
PL114	POOL C - EXISTING LEISURE POOL WITH NEW SLIDE DETAILS
PL120	POOL D - SPRAY PAD PLANS, SCHEDULE, AND DETAILS
PL121	POOL D - SPRAY PAD DIMENSION PLAN AND SECTION
PL122	POOL D - SPRAY PAD SURFACE PLAN
PL123	POOL D - SPRAY PAD DETAILS
PL124	POOL D - SPRAY PAD DETAILS
PL125	POOL D - SPRAY PAD DETAILS
PL126	POOL D - SPRAY PAD DETAILS
PL127	POOL D - SPRAY PAD DETAILS
PL200	STRUCTURAL NOTES, PLAN(S) AND SCHEDULE
PL201	STRUCTURAL DETAILS
PL300	OVERALL PIPING PLAN
PL301	GENERAL PIPING DETAILS
PL310	POOL C - PIPING PLAN
PL311	POOL C - PIPING PLAN
PL312	3D - PIPING VIEWS
PL320	POOL D - SPLASH PAD GRAVITY PIPING PLAN
PL321	POOL D - SPLASH PAD ACTIVITY PIPING PLAN
PL400	POOL C - MECHANICAL EQUIPMENT PLAN
PL401	POOL D - MECHANICAL EQUIPMENT PLAN
PL402	MECHANICAL DETAILS
PL403	MECHANICAL DETAILS
PL404	MECHANICAL DETAILS
PL405	MECHANICAL DETAILS
PL500	POOL D - MECHANICAL SCHEMATIC
PL510	POOL D - ELECTRICAL SCHEMATIC



1 D100 EXISTING AQUATIC PLAN VIEW
1/16" = 1'-0"

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT C-20535 11/30/2023 Renewal Date STATE OF CALIFORNIA

5/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

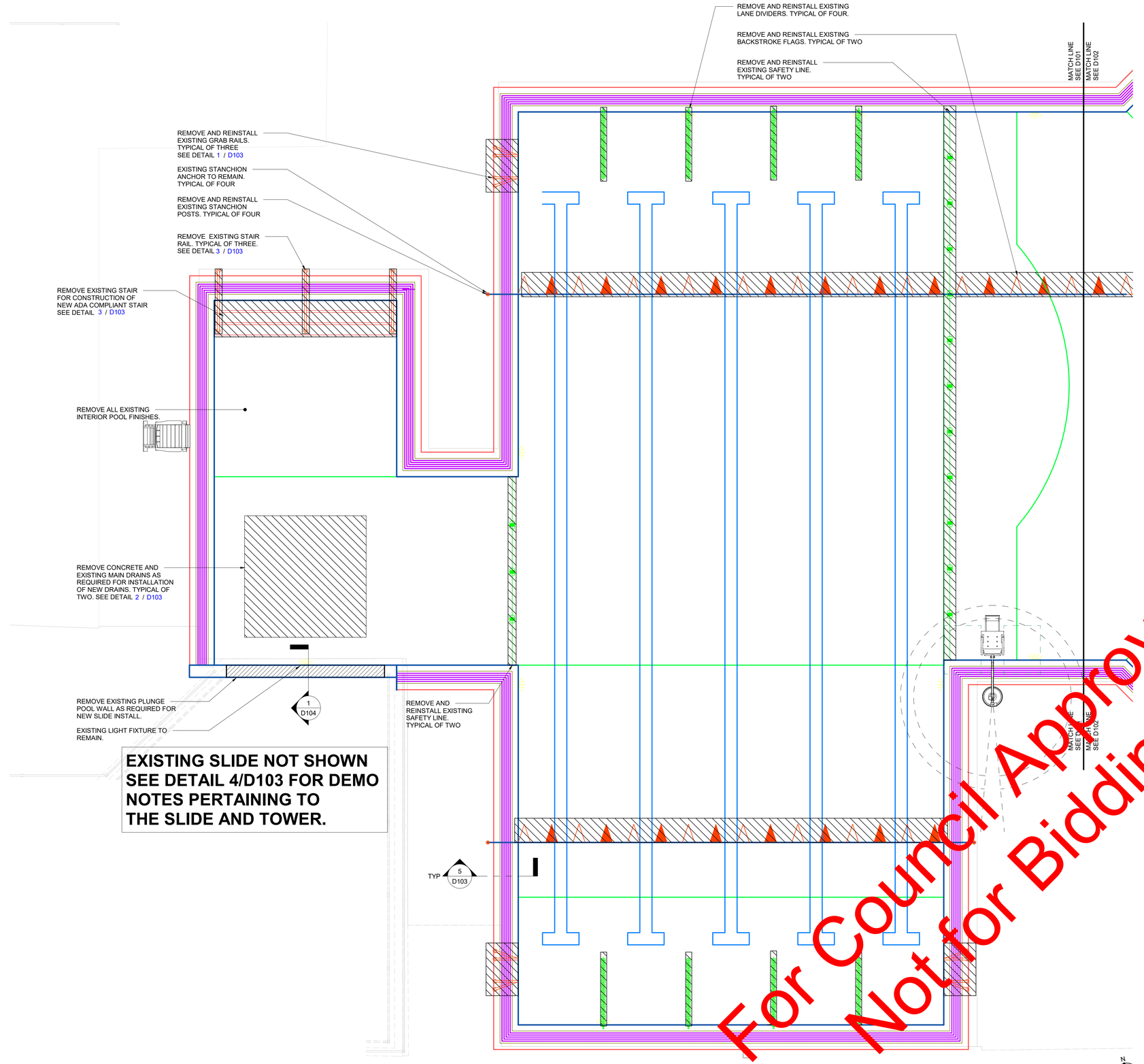
Sheet Title:

OVERALL EXISTING POOLS

SHEET NUMBER:

D100

For Council Approval
Not for Bidding



1 D101 POOL C -DEMOLITION PLAN OF EXISTING LEISURE POOL
PLAN VIEW
1/4" = 1'-0"

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PROJECT:

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CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT C-20536 4/30/2023 Renewal Date STATE OF CALIFORNIA

5/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

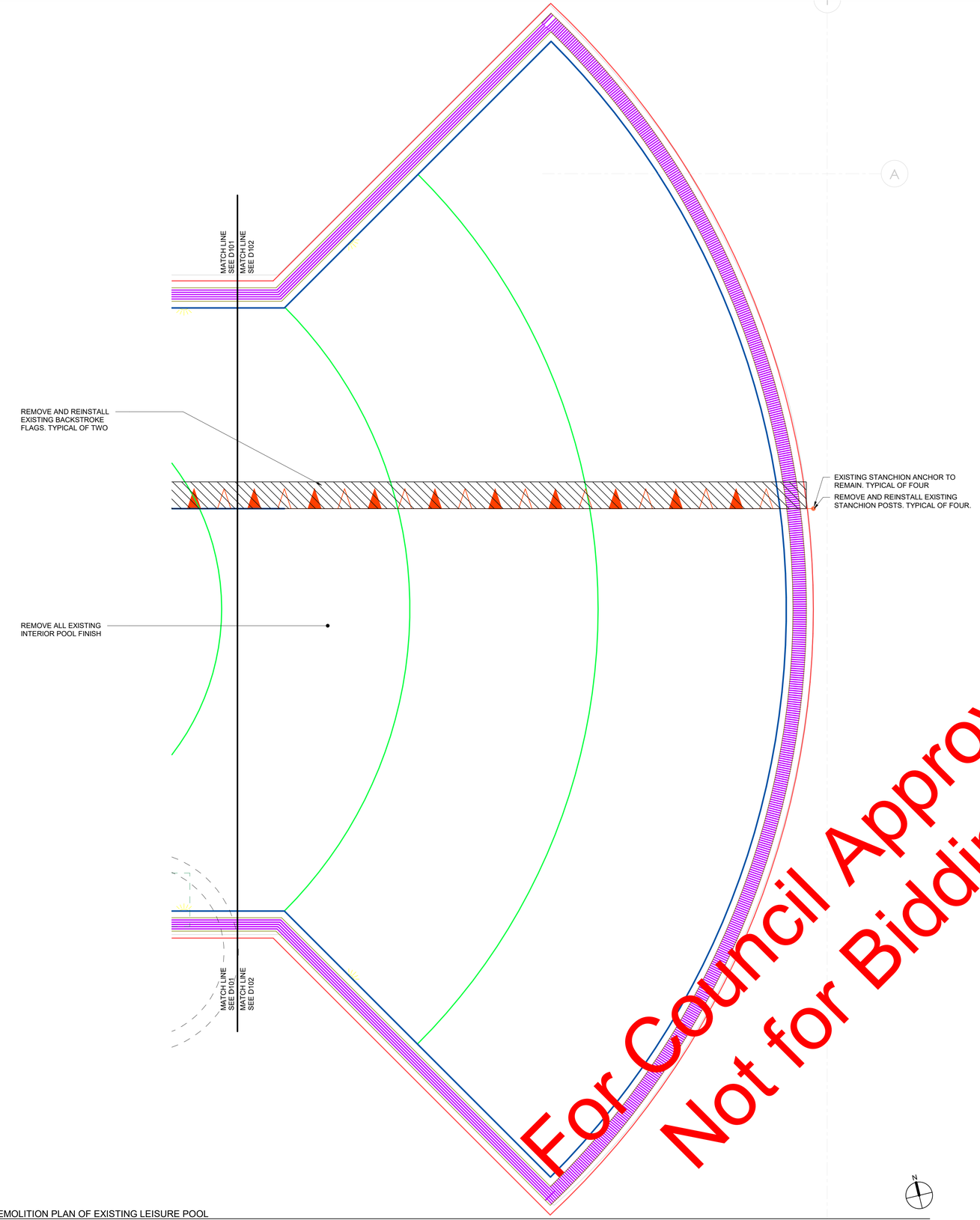
Sheet Title:

EXISTING LEISURE POOL DEMOLITION PLAN

SHEET NUMBER:

D101

For Council Approval
Not for Bidding



1 | D102 POOL C - DEMOLITION PLAN OF EXISTING LEISURE POOL
PLAN VIEW
1/4" = 1'-0"

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CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
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REGISTERED ARCHITECT
C-20538
4/30/2023
Renewal Date
STATE OF CALIFORNIA

5/20/2021

Project Number:	19285
Approved By:	Approver
Checked By:	Checker
Drawn By:	Author

Sheet Title:

EXISTING LEISURE POOL DEMOLITION PLAN

SHEET NUMBER:

D102

For Council Approval
Not for Bidding

REMOVE EXISTING SLIDE AND TOWER.

REMOVE AND REINSTALL EXISTING GRAB RAILS. TYPICAL OF THREE.

REMOVE AND REINSTALL EXISTING SAFETY LINE. TYPICAL OF TWO

REMOVE ALL EXISTING INTERIOR POOL FINISH

REMOVE AND REINSTALL EXISTING STAIR RAIL. TYPICAL OF THREE

EXISTING DEPTH MARKER. TO BE REMOVED AND REPLACED. TYPICAL OF NINETEEN.

REMOVE POOL DECK AS NEEDED TO PROVIDE PROPER MOUNTING PAD FOR NEW SLIDE TOWER. SEE STRUCTURAL FOUNDATION DETAIL 1 / PL114

SAW CUT AND REMOVE WALL SECTION AS NEEDED FOR INSTALLATION OF NEW SLIDE FLUME.

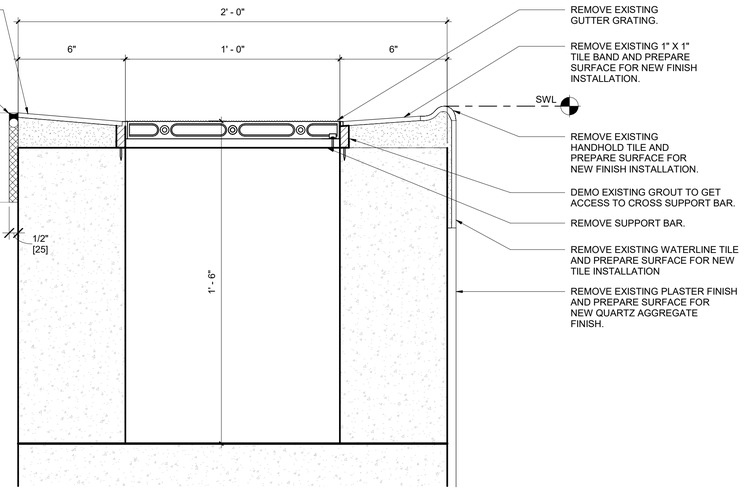
4 D103 | EXISTING CONDITION DETAIL VIEW
NOT TO SCALE

NOTE:
DIMENSIONS SHOWN BASED ON EXISTING AQUA DESIGN GROUP DRAWINGS PROVIDED BY ARCHITECT. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS FOR ACCURACY.

EXISTING 1" X 1" TILE BAND. REMOVE AND PREPARE SURFACE FOR NEW FINISH INSTALLATION.

EXPANSION JOINT

DECK



REMOVE EXISTING GUTTER GRATING.

REMOVE EXISTING 1" X 1" TILE BAND AND PREPARE SURFACE FOR NEW FINISH INSTALLATION.

REMOVE EXISTING HANDHOLD TILE AND PREPARE SURFACE FOR NEW FINISH INSTALLATION.

DEMO EXISTING GROUT TO GET ACCESS TO CROSS SUPPORT BAR.

REMOVE SUPPORT BAR.

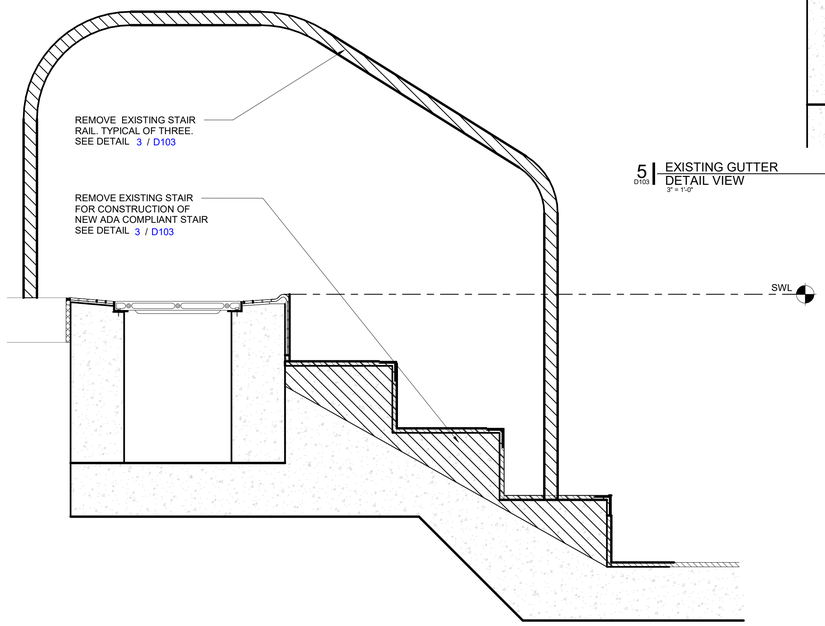
REMOVE EXISTING WATERLINE TILE AND PREPARE SURFACE FOR NEW TILE INSTALLATION

REMOVE EXISTING PLASTER FINISH AND PREPARE SURFACE FOR NEW QUARTZ AGGREGATE FINISH.

5 D103 | EXISTING GUTTER DETAIL VIEW
3" = 1'-0"

REMOVE EXISTING STAIR RAIL. TYPICAL OF THREE. SEE DETAIL 3 / D103

REMOVE EXISTING STAIR FOR CONSTRUCTION OF NEW ADA COMPLIANT STAIR SEE DETAIL 3 / D103



6 D103 | EXISTING STAIRS- DEMO PLAN VIEW
1 1/2" = 1'-0"

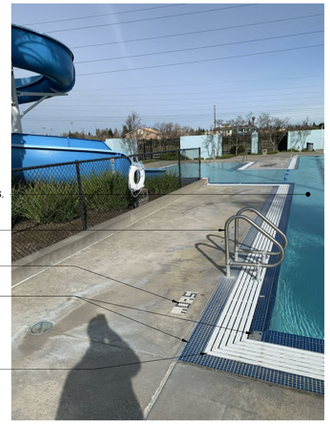
REMOVE ALL EXISTING INTERIOR POOL FINISHES.

EXISTING GRAB RAILS, TYPICAL OF THREE. REMOVE AND REINSTALL.

EXISTING DEPTH MARKER. TO BE REMOVED AND REPLACED, TYPICAL OF NINETEEN.

EXISTING PERIMETER TILE. TO BE REMOVED AND PREPARE SURFACE FOR NEW FINISH.

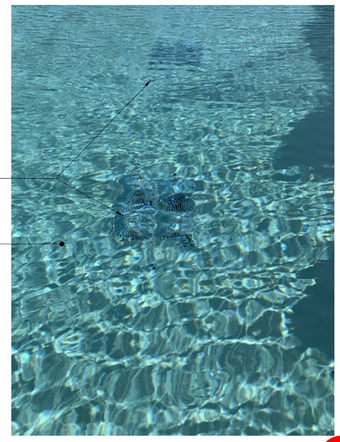
EXISTING GUTTER GRATING. TO BE REMOVED AND DISPOSED OF.



1 D103 | EXISTING CONDITION DETAIL VIEW
NOT TO SCALE

REMOVE EXISTING MAIN DRAINS AND CONCRETE AS REQUIRED FOR INSTALLATION OF NEW DRAINS.

REMOVE EXISTING POOL FINISH AND PREPARE SURFACE FOR NEW FINISH.



2 D103 | EXISTING CONDITION DETAIL VIEW
NOT TO SCALE

REMOVE AND REINSTALL EXISTING SAFETY LINE, TYPICAL OF TWO

REMOVE EXISTING POOL FINISH AND PREPARE SURFACE FOR NEW FINISH.

REMOVE EXISTING POOL FINISH AND PREPARE SURFACE FOR NEW FINISH.

EXISTING GRAB RAILS, TYICAL OF THREE. REMOVE AND REINSTALL.

EXISTING DEPTH MARKER. TO BE REMOVED AND REPLACED, TYPICAL OF NINETEEN.

REMOVE EXISTING STAIR RAIL. TYPICAL OF THREE

EXISTING PERIMETER TILE. TO BE REMOVED AND REPLACED.

EXISTING GUTTER GRATING TO BE REMOVED AND DISPOSED OF.

REMOVE EXISTING STAIR FOR CONSTRUCTION OF NEW ADA COMPLIANT STAIR

3 D103 | EXISTING CONDITION 4 DETAIL VIEW
NOT TO SCALE

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Not for Bidding

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT JEFFREY BRUCE KATZ C-20536 8/30/2023 STATE OF CALIFORNIA

8/20/2021

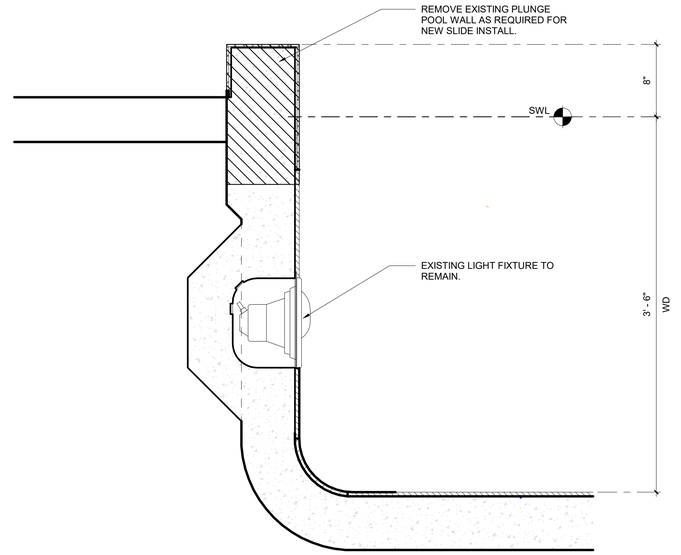
Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

Sheet Title:

EXISTING LEISURE POOL DEMOLITION DETAILS

SHEET NUMBER:

D103



1 D104 EXISTING POOL WALL - AT SLIDE WALL DETAIL VIEW
1 1/2" = 1'-0"

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Not for Bidding

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PROJECT:

CITY OF ROSEVILLE

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CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
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REGISTERED ARCHITECT C-20535 Renewal Date 8/31/2023 STATE OF CALIFORNIA

8/20/2021

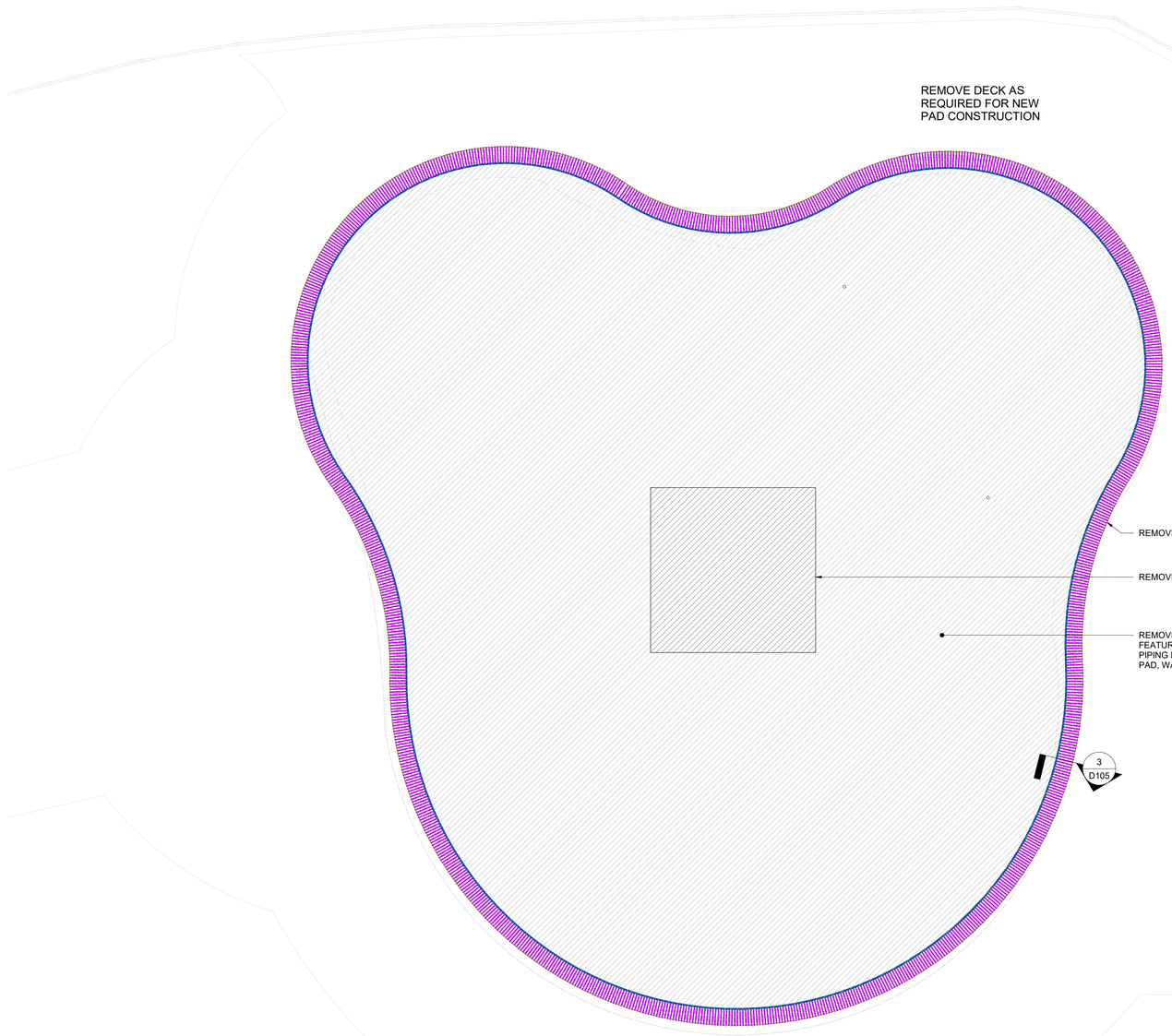
Project Number:	19285
Approved By:	Approver
Checked By:	Checker
Drawn By:	Author

Sheet Title:

EXISTING LEISURE POOL DEMOLITION DETAILS

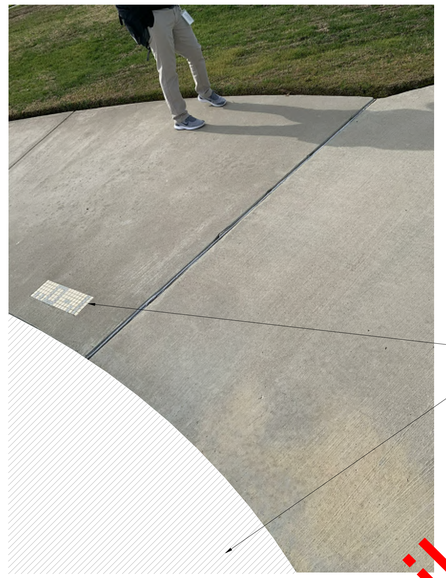
SHEET NUMBER:

D104

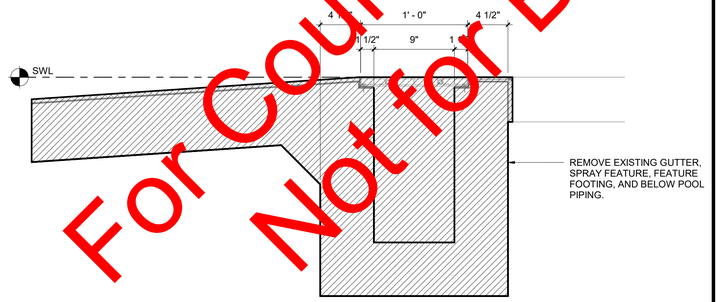


4 | POOL D - EXISTING SPRAY PAD DEMOLITION PLAN VIEW
D105 1/4" = 1'-0"

1 | EXISTING CONDITION DETAIL VIEW
D105 NOT TO SCALE



2 | EXSITING CONDITION DETAIL VIEW
D105 NOT TO SCALE



3 | EXISTING SPRAY PAD GUTTER DETAIL VIEW
D105 1 1/2" = 1'-0"

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ROSEVILLE AQUATICS COMPLEX

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CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
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REGISTERED LANDSCAPE ARCHITECT
C-20536
8/30/2021
Renewal Date
STATE OF CALIFORNIA

8/20/2021

For Council Approval
Not for Bidding

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

Sheet Title:

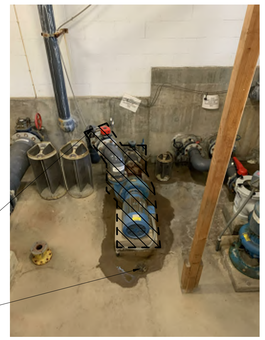
DEMOLITION OF EXISTING SPRAY PAD PLAN WITH STRUCTURE

SHEET NUMBER:

D105

REMOVE FILTRATION PUMP, STRAINER, AND ASSOCIATED PIPING.

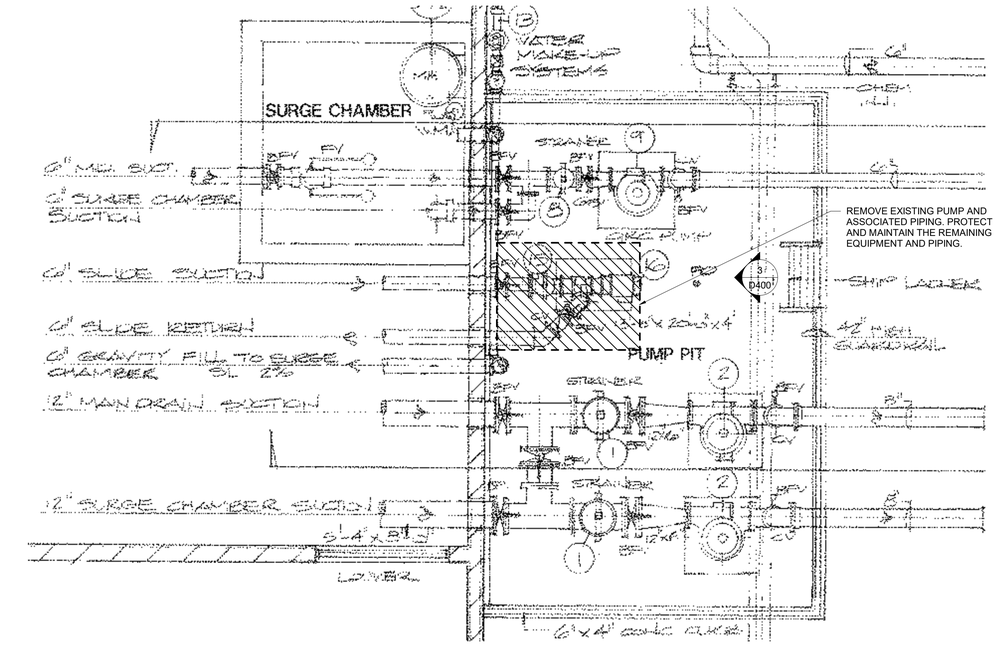
8 D400 | POOL D - EXISTING CONDITION 1
DETAIL VIEW
NOT TO SCALE



REMOVE SLIDE PUMP AND ASSOCIATED PIPING.

PROTECT AND MAINTAIN EXISTING FLOOR DRAIN AND ALL OTHER EQUIPMENT/PIPING.

3 D400 | POOL C - EXISTING CONDITION
DETAIL VIEW
NOT TO SCALE



1 D400 | POOL C - EXISTING MECHANICAL ROOM
PLAN VIEW
NOT TO SCALE

REMOVE ALL CHEMICAL STORAGE CONTAINERS, CHEMICAL FEED PUMPS, VALVES, AND ASSOCIATED PIPING.

COVER FLOOR DRAINS TO PREVENT DAMAGE OR FOREIGN MATERIAL OBSTRUCTIONS DURING DEMOLITION.

9 D400 | POOL D - EXISTING CONDITION 4
DETAIL VIEW
NOT TO SCALE

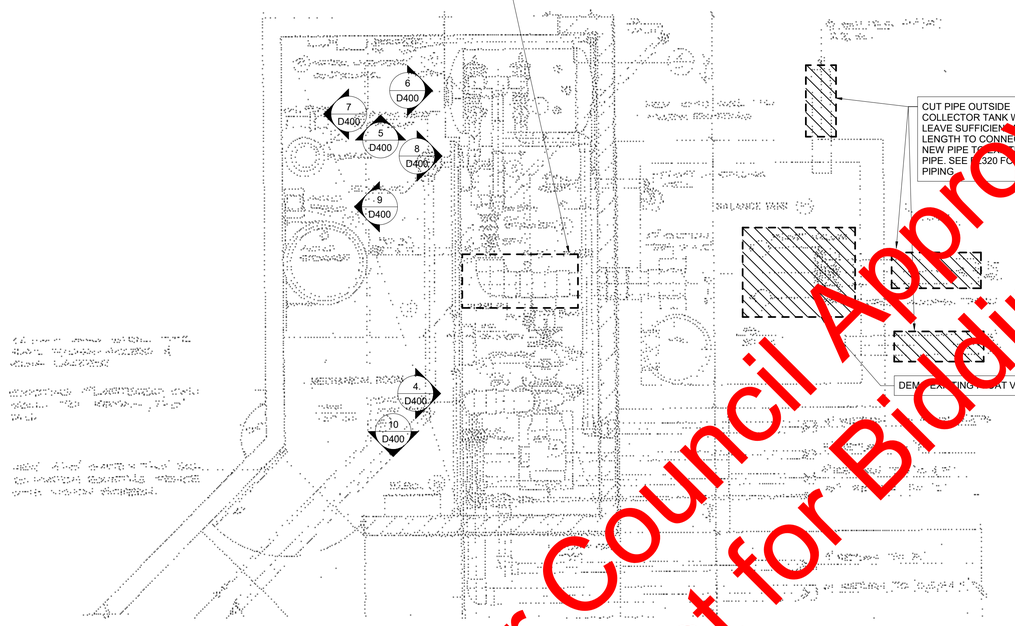
REMOVE FILTER, VALVES, AND ASSOCIATED PIPING.

6 D400 | POOL D - EXISTING CONDITION 3
DETAIL VIEW
NOT TO SCALE

REMOVE FEATURE PUMP, STRAINER, AND ASSOCIATED PIPING.

4 D400 | POOL D - EXISTING CONDITION 2
DETAIL VIEW
NOT TO SCALE

FIELD VERIFY IF EXISTING PIPING CAN BE REUSED; REMOVE PIPE IF CANNOT BE REUSED.



2 D400 | POOL D - EXISTING MECHANICAL ROOM
PLAN VIEW
NOT TO SCALE

REMOVE AND SALVAGE MOTOR STARTERS.

10 D400 | POOL D - EXISTING CONDITION 5
DETAIL VIEW
NOT TO SCALE

REMOVE AND SALVAGE MOTOR STARTERS.

7 D400 | POOL D - EXISTING CONDITION 6
DETAIL VIEW
NOT TO SCALE

REMOVE CHEMICAL CONTROLLER, CHEMICAL SENSOR MANIFOLD, AND ASSOCIATED TUBING AND WIRING.

5 D400 | POOL D - EXISTING CONDITION 7
DETAIL VIEW
NOT TO SCALE

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT JAMES R. BOTHWELL C-26538 Professional Design 4/30/2023 STATE OF CALIFORNIA

5/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	KMD

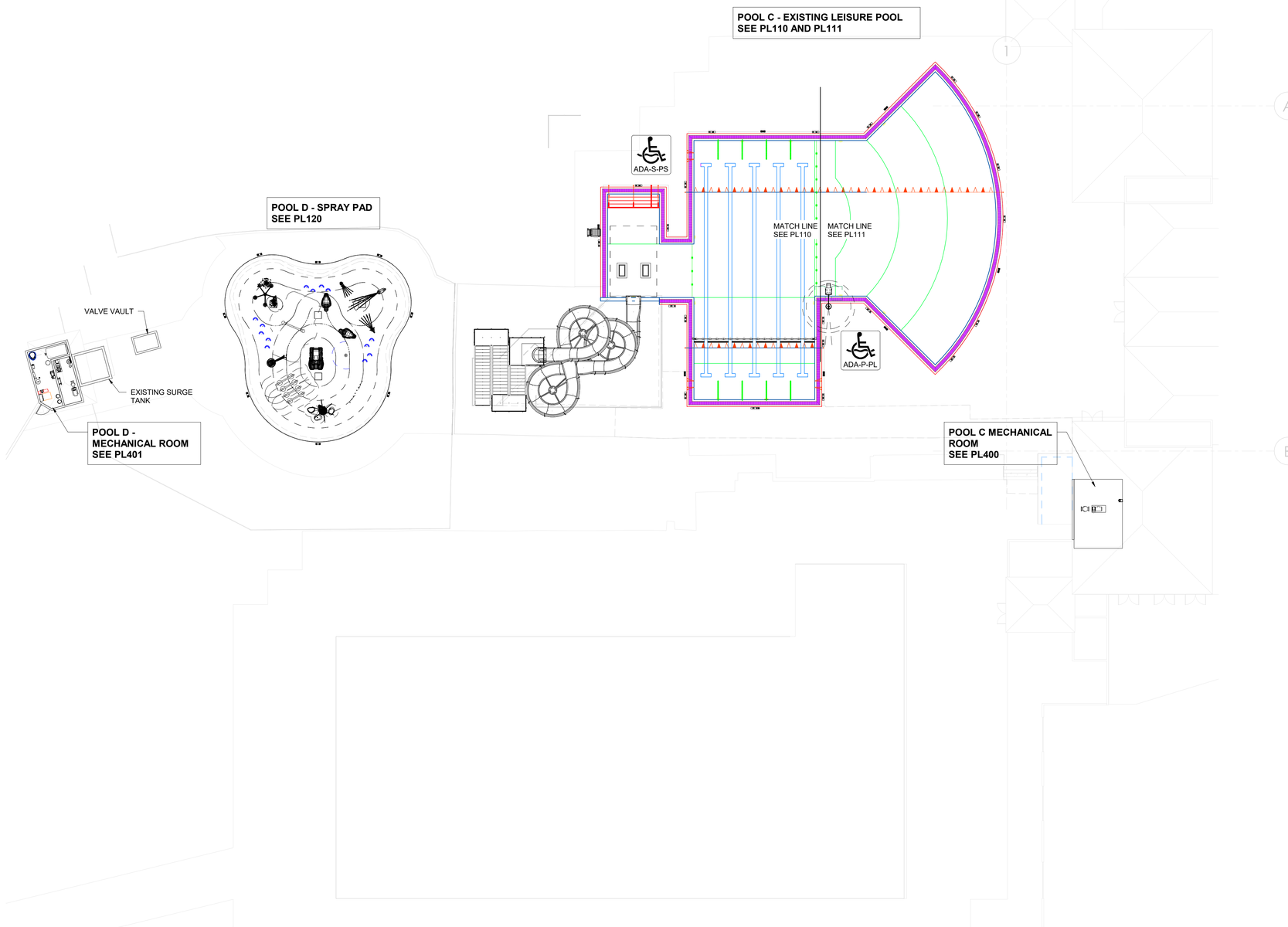
Sheet Title:

MECHANICAL DEMOLITION PLAN

SHEET NUMBER:

D400

For Council Approval
Not for Bidding



1 PL100 OVERALL AQUATICS PLAN VIEW
1/16" = 1'-0"

GENERAL NOTES:

1. LOCATE LIFEGUARD CHAIRS AS REQUIRED PER STATE AND LOCAL CODES AND PER OWNER'S SAFETY CONSULTANT.
2. SCHEDULE QUANTITIES ARE SHOWN FOR VALUE ENGINEERING PURPOSES. IT IS THE INSTALLING CONTRACTORS RESPONSIBILITY TO VERIFY QUANTITIES REQUIRED.
3. CONTRACTOR SHALL CONTACT ENGINEER FOR ELECTRONIC DRAWING FILES PRIOR TO COMMENCING POOL STAKING WORK.
4. ENGINEER WILL PROVIDE ELECTRONIC PLAN VIEW OF ALL POOLS IN AUTOCAD DRAWING FORMAT FOR CONTRACTOR'S USE TO LOCATE STRUCTURES AND RELATED POOL DECK EQUIPMENT.
5. REFER TO PL100 SERIES DRAWINGS FOR ALL POOL PLAN INFORMATION, RELATED EQUIPMENT, AND DETAILS.
6. REFER TO PL200 SERIES DRAWINGS FOR ALL POOL STRUCTURAL PLANS, RELATED INFORMATION, AND DETAILS.
7. REFER TO PL300 SERIES DRAWINGS FOR ALL POOL AND DRAIN PIPING AND RELATED INFORMATION AND DETAILS.
8. REFER TO PL400 SERIES DRAWINGS FOR ALL MECHANICAL EQUIPMENT INFORMATION AND RELATED DETAILS.
9. REFER TO PL500 SERIES DRAWINGS FOR ELECTRICAL SCHEMATICS AND P&IDs.
10. POOL CONTRACTOR IS RESPONSIBLE FOR ALL WORK NOT IN SLIDE VENDOR'S CONTRACT.

CODES, STANDARDS AND REGULATIONS:
CONTRACTOR SHALL BE FAMILIAR WITH ALL CODES AND STANDARDS LISTED BELOW AND ALERT THE ARCHITECT/ENGINEER TO CONFLICTS IN THE DRAWINGS

CODE JURISDICTION
ROSEVILLE, CA, PLACER COUNTY

HEALTH & SAFETY CODE:
CALIFORNIA ASSOCIATION OF ENVIRONMENTAL HEALTH ADMINISTRATORS 2018

ACCESSIBILITY STANDARDS AND REGULATIONS:

UNITED STATES:
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

BATHER CAPACITY

BATHER CAPACITY IS CALCULATED IN ACCORDANCE WITH SECTION 3120B.2.2 OF THE CALIFORNIA ASSOCIATION OF ENVIRONMENTAL HEALTH ADMINISTRATORS JULY 1, 2018 CODE AS FOLLOWS:

1. POOL C:
   a. 6,228 (SF) WATER / 20(SF/BATHER) = 311 BATHERS.
2. POOL D:
   a. 2240 (SF) SPRAY PAD / 20 (SF/BATHER) = 112 BATHERS.

SCHEDULE - SHEET LIST

SHEET NO.	SHEET NAME
D100	OVERALL EXISTING POOLS
D101	EXISTING LEISURE POOL DEMOLITION PLAN
D102	EXISTING LEISURE POOL DEMOLITION PLAN
D103	EXISTING LEISURE POOL DEMOLITION DETAILS
D104	EXISTING LEISURE POOL DEMOLITION DETAILS
D105	DEMOLITION OF EXISTING SPRAY PAD PLAN WITH STRUCTURE
D400	MECHANICAL DEMOLITION PLAN
PL100	OVERALL AQUATIC PLAN
PL101	GENERAL DETAILS AND SCHEDULES
PL110	POOL C - EXISTING LEISURE POOL WITH NEW SLIDE PLAN
PL111	POOL C - EXISTING LEISURE POOL WITH NEW SLIDE PLAN
PL112	POOL C - EXISTING LEISURE POOL WITH NEW SLIDE DETAILS
PL113	POOL C - EXISTING LEISURE POOL WITH NEW SLIDE DETAILS
PL114	POOL C - EXISTING LEISURE POOL WITH NEW SLIDE DETAILS
PL120	POOL D - SPRAY PAD PLANS, SCHEDULE, AND DETAILS
PL121	POOL D - SPRAY PAD DIMENSION PLAN AND SECTION
PL122	POOL D - SPRAY PAD SURFACE PLAN
PL123	POOL D - SPRAY PAD DETAILS
PL124	POOL D - SPRAY PAD DETAILS
PL125	POOL D - SPRAY PAD DETAILS
PL126	POOL D - SPRAY PAD DETAILS
PL127	POOL D - SPRAY PAD DETAILS
PL200	STRUCTURAL NOTES, PLAN(S) AND SCHEDULE
PL201	STRUCTURAL DETAILS
PL300	OVERALL PIPING PLAN
PL301	GENERAL PIPING DETAILS
PL310	POOL C - PIPING PLAN
PL311	POOL C - PIPING PLAN
PL312	3D - PIPING VIEWS
PL320	POOL D - SPLASH PAD GRAVITY PIPING PLAN
PL321	POOL D - SPLASH PAD ACTIVITY PIPING PLAN
PL400	POOL C - MECHANICAL EQUIPMENT PLAN
PL401	POOL D - MECHANICAL EQUIPMENT PLAN
PL402	MECHANICAL DETAILS
PL403	MECHANICAL DETAILS
PL404	MECHANICAL DETAILS
PL405	MECHANICAL DETAILS
PL500	POOL D - MECHANICAL SCHEMATIC
PL510	POOL D - ELECTRICAL SCHEMATIC

NOTE:
1. SLIDE CONTRACTOR TO FURNISH AND INSTALL ALL EQUIPMENT AND OFFERED BY SLIDE SUPPLIER, INCLUDING STRUCTURAL FOOTINGS.

2. POOL CONTRACTOR IS RESPONSIBLE FOR REMAINING SCOPE OF RENOVATION, INCLUDING SLIDE PUMP AND PIPING. PIPING SHALL BE PROVIDED AND INSTALLED UP TO THE SLIDE START TUB. POOL CONTRACTOR IS RESPONSIBLE FOR POOL WALL REPLACEMENT AND FINISH APPLICATION REQUIRED TO MOUNT THE NEW SLIDE FLUME EXIT.

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

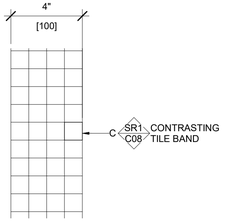
REGISTERED ARCHITECT Jeffrey R. Bell C-20535 8/30/2021 Renewal Date STATE OF CALIFORNIA

8/20/2021

Project Number: 19285
Approved By: JRB
Checked By: JRB
Drawn By: JVH

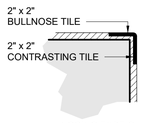
Sheet Title:
OVERALL AQUATIC PLAN

SHEET NUMBER:
PL100



NOTES:
1. 4" CONTRASTING TILE BAND @ 4'-6" WD CONTINUOUS ON POOL FLOOR AND WALLS; COLOR CONTRASTING TO POOL FINISH.

2 | PL101 CONTRASTING TILE BAND DETAIL VIEW
3" = 1'-0"



NOSING TYPE C

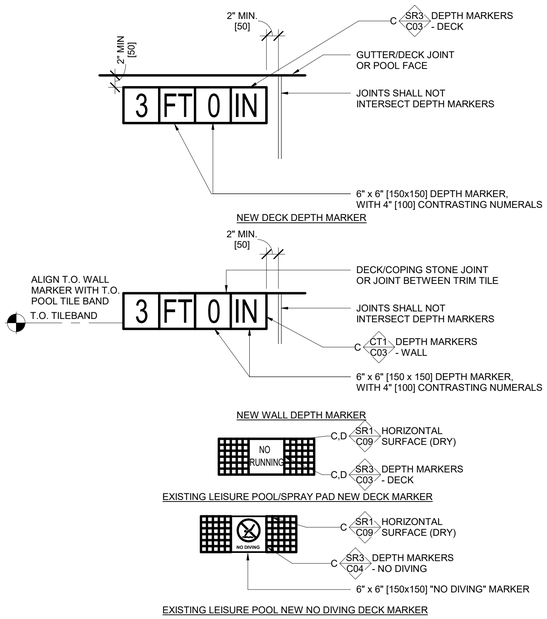
NOTES:

1. NOSING TYPE C: 2" MIN. CONTRASTING TILE BAND REQUIRED ON TREAD NOSING AND TOP OF RISER UNLESS OTHERWISE NOTED.

FINISH NOTES:
1. FINISHES PER SCHEDULE UNLESS OTHERWISE INDICATED.
2. VERTICAL SURFACE (WET) AND HORIZONTAL SURFACE (WET) SHALL BE AT LEAST 6.5 ON THE MUNSELL COLOR VALUE SCALE.
3. ALL HORIZONTAL SURFACES MUST BE SLIP RESISTANT AND COMPLY WITH THE ANSI A137.1 STANDARD USING THE DCOF ACUTEST METHODOLOGY:
3A. ON WET LEVEL SURFACES, PROVIDE DYNAMIC COEFFICIENT OF FRICTION OF =/> 0.42.
3B. ON WET SLOPED SURFACES, PROVIDE DYNAMIC COEFFICIENT OF FRICTION OF =/> 0.65.
4. DESIGN WATERLINE SHALL HAVE A MAXIMUM CONSTRUCTION TOLERANCE WHEN FINISHED OF +/- 1/4" FOR POOLS AND SPAS WITH ADJUSTABLE SURFACE SKIMMING, AND +/- 1/8" FOR POOLS AND SPAS WITH NONADJUSTABLE SURFACE SKIMMING.

SCHEDULE - SAFETY & MAINTENANCE EQUIPMENT

QTY	PRODUCT NAME	MANUFACTURER	NOTES
1	25 PERSON AQUATIC FIRST AID KIT	WATER SAFETY PRODUCTS	25 PERSON OSHA FIRST AID KIT TO INCLUDE BIOHAZARD COMPLIANCE RESPONSE AND CPR MICROMASK WITH NITRILE GLOVES (OWNER PROVIDED)
1	AUTOMATIC VACUUM CLEANING SYSTEM	AQUAPRODUCTS ULTRAMAX GEMINI	AUTOMATIC CLEANER, RADIO REMOTE CONTROL, ULTRAKART CADDY, DIGITAL TIMER DISPLAY, 120 FT CORD (OWNER PROVIDED)
4	LIFE BUOY	WATER SAFETY PRODUCTS	30" DIA, MADE OF UNICELL SOFT FOAM WITH HARD SHELL COVERING. (OWNER PROVIDED)
2	LIFE HOOK & RESCUE POLE	WATER SAFETY PRODUCTS	ANODIZED ALUMINUM POLE, WITH DOUBLE LIFE HOOK. 2 - 8 FEET SECTIONS WITH CONNECTOR & RUBBER END CAP. (OWNER PROVIDED)
1	MANUAL VACUUM CLEANING SYSTEM	WILDCAT E.1	SELF CONTAINED, PORTABLE SWIMMING POOL VACUUM SYSTEM. PROVIDE WITH LARGE MARINE BATTERY BOX, STANDARD DEBRIS BAG, SUPERFINE DEBRIS BAG (HH1508) MK POWER DEEP CYCLE, VLRA MARINE GEL BATTERY, SERIES SIZE 27. PROVIDE NOCO G7200 BATTERY CHARGER (HH1900) (OWNER PROVIDED)
8	RESCUE TUBE	WATER SAFETY PRODUCTS	50" LONG x 6" WIDE x 4" THICK. NO CLIPS, NO RINGS. 2" WIDE ADJUSTABLE SHOULDER STRAP , CONNECTED TO TUBE BY 1" STRAPPING. STRAPPING EXTENDS COMPLETELY THROUGH LENGTH OF TUBE. (OWNER PROVIDED)
2	SPINEBOARD W/ HEAD IMMOBILIZER	WATER SAFETY PRODUCTS	X-RAY TRANSLUCENT BACKBOARD WITH HEAD IMMOBILIZER AND BODY STRAPS. (OWNER PROVIDED)
4	THROW LINE	WATER SAFETY PRODUCTS	60' MARINE POLYPRO LINE, WITH 3" x 5" LEMON FLOAT. (OWNER PROVIDED)
1	WATER TEST KIT	TAYLOR "SERVICE COMPLETE"	FAS DPD CHLORINE KIT. (OWNER PROVIDED)



NOTES:
1. ▬ - WALL DEPTH MARKER AT LOCATIONS AS INDICATED ON PLAN BY THIS SYMBOL.
2. EXCLUDE "NO DIVING" MARKER TILES AT POOL WALL DEPTH MARKER LOCATIONS AND AT POOL DEPTHS GREATER THAN 5'-0".
3. DEPTH MARKERS SHALL BE LEGIBLE FROM INSIDE THE POOL AND FROM THE POOL DECK.
4. THE POOL CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING MARKINGS ACCURATE TO WITHIN ONE INCH OF THE CONSTRUCTED WATER DEPTHS AT LOCATIONS INDICATED ON PLAN AT A MAX. 25'-0" SPACING AND IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.
5. DEPTH MARKER TEXT SHALL INDICATE THE ACTUAL POOL DEPTH WITHIN 3" AT NORMAL OPERATING WATER LEVEL WHEN MEASURED 3'-0" FROM POOL WALL. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING PROPER TEXT FOR EACH MARKER LOCATION.
6. MARKINGS SHALL BE INSTALLED FLUSH WITH SURROUNDING SURFACES AND RECESSED IF NECESSARY.
7. ALL MARKINGS INSTALLED ON HORIZONTAL SURFACES SHALL HAVE A SLIP RESISTANT FINISH.
8. WHERE EXISTING "NO DIVING" TILES ARE REPLACE WITH NO DIVING SYMBOL, FILL REMAINING RECESS WITH TILES INDICATED.

1 | PL101 DEPTH MARKER DECK & WALL DETAIL VIEW
NONE

TAG LEGEND

PIPE TAG: P1-20A — LINE TYPE IDENTIFIER, SYSTEM IDENTIFIER, PIPE IDENTIFIER, POOL IDENTIFIER

POOL EQUIPMENT TAG: A01 — POOL IDENTIFIER, EQUIPMENT IDENTIFIER

MECHANICAL EQUIPMENT TAG: P1A — EQUIPMENT IDENTIFIER, SYSTEM IDENTIFIER, POOL IDENTIFIER

DIMENSION TAG: ⌀ 100 — POINT LOCATION, POINT IDENTIFIER

WATER FEATURE TAG: F01 — FEATURE DESIGNATOR, EQUIPMENT IDENTIFIER

ELEVATION TAG: ELEVATION, 100.00 REFERENCE, LOCATION

CUSTOM RAILGOODS TAG: A01 — POOL IDENTIFIER, RAILGOODS IDENTIFIER

POOL STRUCTURAL TAG: AH1 — POOL IDENTIFIER, WALL TYPE IDENTIFIER

POOL FIXTURE TAG: A-PF1 — POOL IDENTIFIER, POOL FIXTURE DESIGNATOR, EQUIPMENT IDENTIFIER

REVISION TAG: 1 — REVISION NUMBER

POOL FINISH TAG: FINISH TYPE ID, POOL IDENTIFIER, FINISH COLOR ID, FINISH DESCRIPTION — A-QA, C01, WATERLINE TILE

DIMENSIONAL UNITS: IMPERIAL UNITS 7/8", METRIC UNITS (mm) [25]

POOL ACCESSIBILITY TAG: ADA-P-SE — P = PRIMARY, S = SECONDARY, MEANS OF ACCESS

POOL FLOOR ELEVATION RELATIVE TO (SWL): ELEVATION -5'-0" WD

EQUIPMENT IDENTIFIER KEY

AC	-	AIR COMPRESSOR	HX	-	HEAT EXCHANGER
AF	-	AUTOFILL	P	-	PUMP
AHJ	-	AUTHORITY HAVING JURISDICTION	PV	-	PNEUMATIC MAIN DRAIN VALVE
AOP	-	ADVANCED OXIDATION PROCESS	S	-	STRAINER
AP	-	pH CONTROL PUMP	SC	-	CONTAINMENT PALLETE
AS	-	pH CONTROL STORAGE	SV	-	SURGE TANK FAN
BP	-	BOOSTER PUMP	UV	-	ULTRA-VIOLET DISINFECTION
C	-	CHEMICAL CONTROLLER	V	-	VARIABLE FREQUENCY DRIVE
CP	-	CHLORINE FEED PUMP	WC	-	WATER CHILLER
CS	-	CHLORINE STORAGE			
EV	-	ELECTRONIC MAIN DRAIN VALVE			
F	-	FILTER			
FM	-	FLOW METER			
FP	-	FLOW METER POWER SUPPLY			
H	-	HEATER			

ABBREVIATIONS

BO	- BOTTOM OF	P&ID	- PIPING & INSTRUMENTATION DIAGRAM
CJ	- CONTROL JOINT	PL	- POOL LIFT
DIA	- DIAMETER	PS	- POOL STAIRS
EJ	- EXPANSION JOINT	SCH	- SCHEDULE
EW	- EACH WAY	SE	- SLOPED ENTRY
FFE	- FINISH FLOOR ELEVATION	SS	- STAINLESS STEEL
ID	- INSIDE DIAMETER	SWL	- STATIC WATER LEVEL
MAX	- MAXIMUM	TO	- TOP OF
MIN	- MINIMUM	TS	- TRANSFER SYSTEM
NC	- NORMALLY CLOSED	TUBC	- TRUE UNION CHECK VALVE
NO	- NORMALLY OPEN	TUBV	- TRUE UNION BALL VALVE
NPS	- NOMINAL PIPE SIZE	TW	- TRANSFER WALL
OC	- ON CENTER	TYP	- TYPICAL
OD	- OUTSIDE DIAMETER	WD	- WATER DEPTH
OWE	- OPERATING WATER ELEVATION		

LEGEND - FINISHES & COLOR CODES - POOL C - EXISTING LEISURE POOL WITH NEW SLIDE AND TOWER

AREA	FINISHES: FINISH ID	FINISHES: FINISH	COLORS: COLOR ID	COLORS: COLOR	NOTES
CONTRASTING TILE BAND	SR1	1"x1" SLIP RESISTANT TILE	C08	CONTRASTING TO POOL FINISH - AS SELECTED BY ARCHITECT	
DECK BAND	SR1	1"x1" SLIP RESISTANT TILE	C01	AS SELECTED BY ARCHITECT	
DEPTH MARKERS - DECK	SR3	6"x6" SLIP RESISTANT TILE	C03	BLACK ON WHITE	
DEPTH MARKERS - NO DIVING	SR3	6"x6" SLIP RESISTANT TILE	C04	BLACK AND RED ON WHITE	
DEPTH MARKERS - WALL	CT1	6"x6" CERAMIC TILE	C03	BLACK ON WHITE	
FINISHED CONCRETE	LB	LIGHT BROOM	C01	AS SELECTED BY ARCHITECT	
HORIZONTAL SURFACE (DRY)	SR1	1"x1" SLIP RESISTANT TILE	C09	WHITE	
HORIZONTAL SURFACE (WET)	QA	QUARTZ AGGREGATE	C09	WHITE	
LANE MARKERS - FLOOR	SR1	1"x1" SLIP RESISTANT TILE	C08	CONTRASTING TO POOL FINISH - AS SELECTED BY ARCHITECT	GALAXY BLUE OR BLACK
LANE MARKERS - WALL	SR1	1"x1" SLIP RESISTANT TILE	C08	CONTRASTING TO POOL FINISH - AS SELECTED BY ARCHITECT	GALAXY BLUE OR BLACK
TILE - DRY	KT1	1"x1" KEYSTONE TILE	C01	AS SELECTED BY ARCHITECT	
TILE - DRY	SR1	1"x1" SLIP RESISTANT TILE	C01	AS SELECTED BY ARCHITECT	
TILE - WATERLINE	KT1	1"x1" KEYSTONE TILE	C01	AS SELECTED BY ARCHITECT	
TRIM TILE - BULLNOSE	S862	1"x1" S-862 BULLNOSE TRIM TILE	C01	AS SELECTED BY ARCHITECT	
TRIM TILE - BULLNOSE	S886	2"x2" S-886 BULLNOSE TRIM TILE	C08	CONTRASTING TO POOL FINISH - AS SELECTED BY ARCHITECT	
TRIM TILE - HANDHOLD	C701	1"x1" C-701 HANDHOLD TRIM TILE	C01	AS SELECTED BY ARCHITECT	
VERTICAL SURFACE (WET)	QA	QUARTZ AGGREGATE	C09	WHITE	

LEGEND - FINISHES & COLOR CODES - NEW POOL D - SPRAY PAD

AREA	FINISHES: FINISH ID	FINISHES: FINISH	COLORS: COLOR ID	COLORS: COLOR	NOTES
DEPTH MARKERS - DECK	SR3	6"x6" SLIP RESISTANT TILE	C03	BLACK ON WHITE	
HORIZONTAL SURFACE (DRY)	LB	LIGHT BROOM	C01	AS SELECTED BY ARCHITECT	SEE PL122 FOR COLOR SELECTIONS
HORIZONTAL SURFACE (DRY)	SR1	1"x1" SLIP RESISTANT TILE	C09	WHITE	

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT Jeffrey Katz C-22926 Licensed Design Professional 4/30/2023 STATE OF CALIFORNIA

8/20/2021

Project Number: 19285
Approved By: JRB
Checked By: JRB
Drawn By: JVH

Sheet Title:
GENERAL DETAILS AND SCHEDULES

SHEET NUMBER:
PL101

POOL C-SLIDE DATA		
DESCRIPTION	QTY	UNITS
POOL PERIMETER	441	FEET
WATER SURFACE AREA	6,228	SQUARE FEET
POOL VOLUME	129,200	GALLONS
REQUIRED SURGE CAPACITY VOLUME	6,228.0	GALLONS
SURGE IN PERIMETER GUTTER	4007.0	GAL
SURGE IN GUTTER PIPING	692	GAL
SURGE IN SURGE CHAMBER	2,636	GAL
TOTAL SUPPLIED	7,335	GAL
TURNOVER/VOLUME/FLOW	240 MIN.	129,200 GAL.

SCHEDULE - BASIS OF DESIGN - POOL C

POOL ID	EQUIPMENT ID	EQUIPMENT	QTY	MANUFACTURER	DESCRIPTION
C	01	CUP ANCHOR	2	PARAGON AQUATICS, SPECTRUM AQUATICS, SR SMITH OR EQUAL	4" SQUARE 304L SS ANCHOR AND 304L SS EYE BOLT
C	02	SAFETY ROPE	1	PARAGON AQUATICS	3/4" POLYETHYLENE ROPE WITH 5"x9" HANDI-LOCK FLOAT, VERIFY LENGTH WITH PLANS
C	03	POOL LIFT	1	S.R. SMITH OR EQUAL	SPLASH! EXTENDED REACH POOL LIFT WITH 300LB LIFTING CAPACITY. MUST MEET ALL APPLICABLE ADA REQUIREMENTS. PACKAGE TO INCLUDE ARMRESTS, ANCHOR, LIFT COVER, BATTERY CHARGER, EXTRA BATTERY, CADDY AND SPINE BOARD
C	04	LIFEGUARD CHAIR			OWNER PROVIDED
C	05	HANDRAIL	4	PARAGON AQUATICS, SPECTRUM AQUATICS, SR SMITH OR EQUAL	CUSTOM FABRICATED, 316L SS 1.50" OD X .120 WALL THICKNESS, 500 GRIT FINISH MIN
C	06	WEDGE ANCHOR	12	PARAGON AQUATICS, SPECTRUM AQUATICS, SR SMITH OR EQUAL	CAST BRONZE, 4-1/4" LONG, ACCEPTS 1.500" OD TUBING
C	07	ESCUTCHEON PLATE	12	PARAGON AQUATICS, SPECTRUM AQUATICS, SR SMITH OR EQUAL	STAINLESS STEEL ROUND ESCUTCHEON FOR 1.50" OD RAILS

SLIDE INFORMATION:

SLIDE TYPE: 42" OPEN FLUME BODY SLIDE
SLIDE LENGTH: 168.66'
SLIDE HEIGHT: 25.08'
SLIDE FLOW: 1000 GPM

TOWER INFORMATION:

TOWER HEIGHT: 35.66'

TOWER MATERIAL: PAINTED HOT DIP GLAVANIZED STEEL TOWER INCLUDING UPPER PLATFORM, LANDING, COLUMNS, STAIRWAYS, GUARDRAILS, HANDRAILS, AND GATE DESIGNED FOR BOLT-UP INSTALLATION.

RAILING INFORMATION:

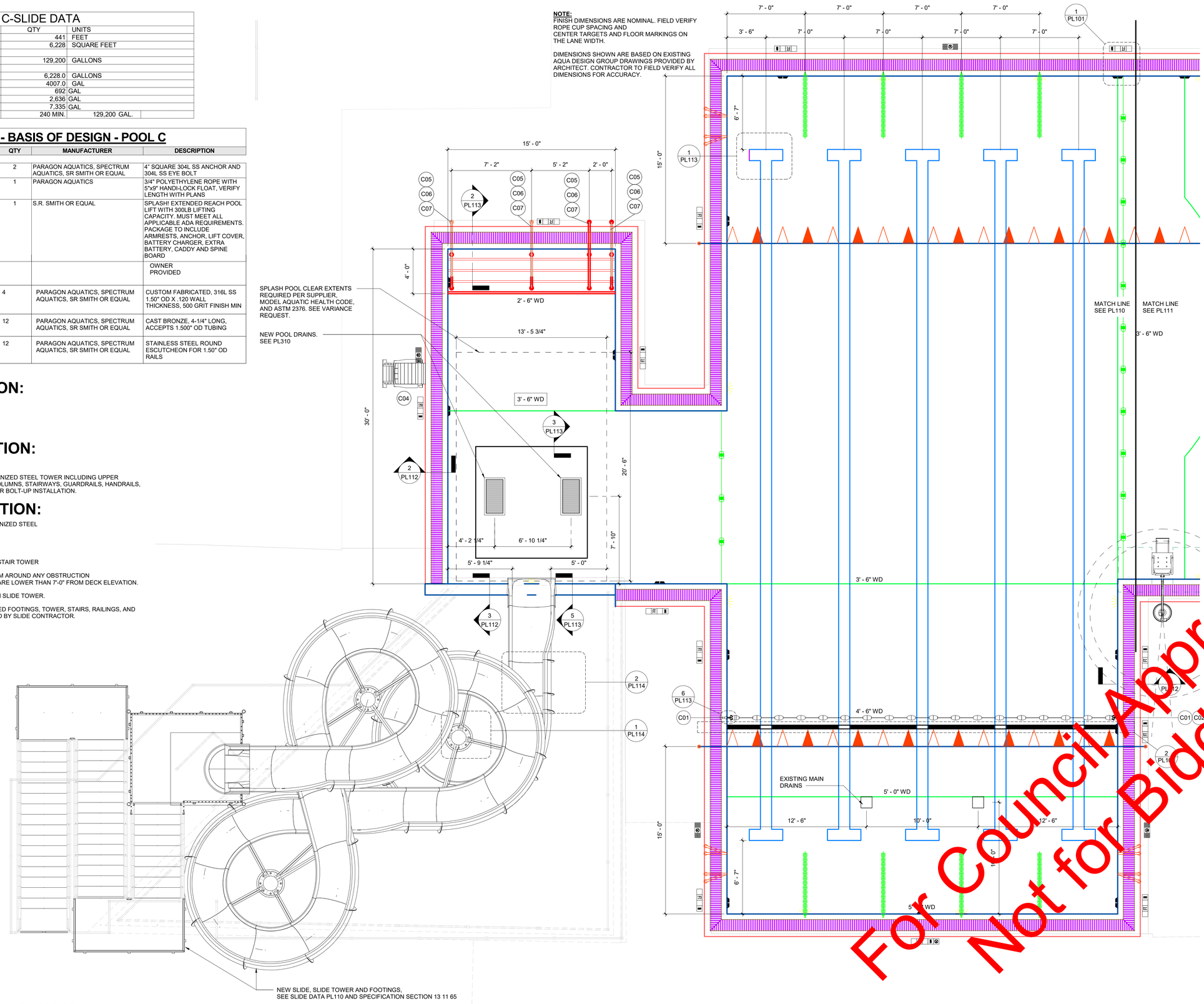
RAILING TYPE: PAINTED HOT DIPPED GALVANIZED STEEL

NOTES:

1. INCLUDE A LOCKING GATE AT ENTRY TO STAIR TOWER
2. PROVIDE DECK MOUNTED RALING SYSTEM AROUND ANY OBSTRUCTION FROM SLIDE OR SUPPORT SYSTEM WHICH ARE LOWER THAN 7'-0" FROM DECK ELEVATION.
3. PROVIDE SHADE CANOPY INTEGRAL WITH SLIDE TOWER.
4. SLIDE FLUME, SUPPORTS AND ASSOCIATED FOOTINGS, TOWER, STAIRS, RAILINGS, AND SHADE CANOPY FURNISHED AND INSTALLED BY SLIDE CONTRACTOR.

NOTE:
FINISH DIMENSIONS ARE NOMINAL. FIELD VERIFY ROPE CUP SPACING AND CENTER TARGETS AND FLOOR MARKINGS ON THE LANE WIDTH.

DIMENSIONS SHOWN ARE BASED ON EXISTING AQUA DESIGN GROUP DRAWINGS PROVIDED BY ARCHITECT. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS FOR ACCURACY.



1 PL110 POOL C - EXISTING LEISURE POOL WITH NEW SLIDE PLAN VIEW
1/4" = 1'-0"

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LICENSED ARCHITECT JEFFREY B. KATZ C-20535 8/30/2023 Expiration Date STATE OF CALIFORNIA

8/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

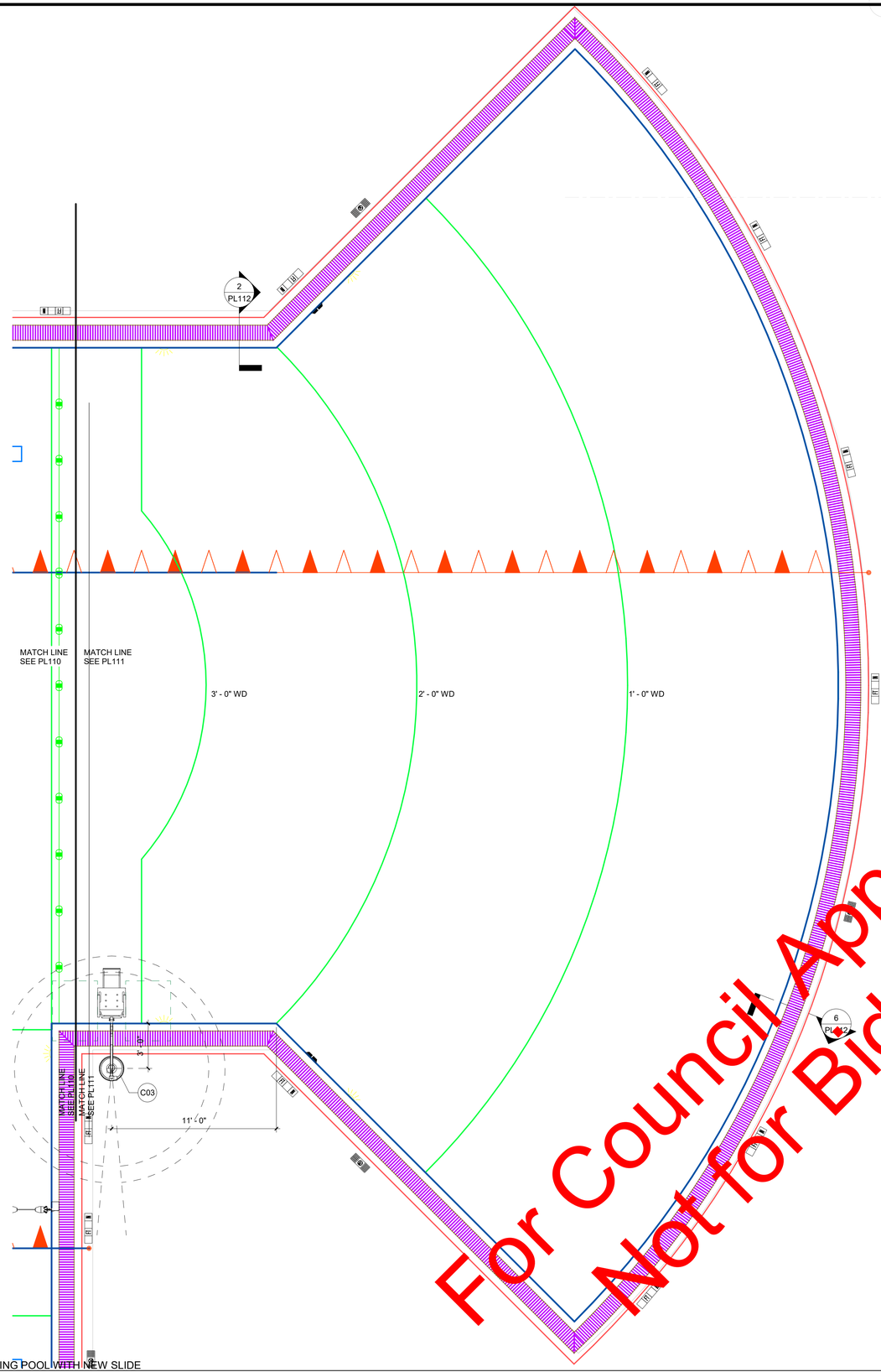
Sheet Title:

POOL C - EXISTING LEISURE POOL WITH NEW SLIDE PLAN

SHEET NUMBER:

PL110

For Council Approval
Not for Bidding



1 POOL C - EXISTING POOL WITH NEW SLIDE
PL111 PLAN VIEW
1/4" = 1'-0"

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3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT JEFFREY KATZ C-20538 4/30/2023 RENEWAL DATE STATE OF CALIFORNIA

5/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

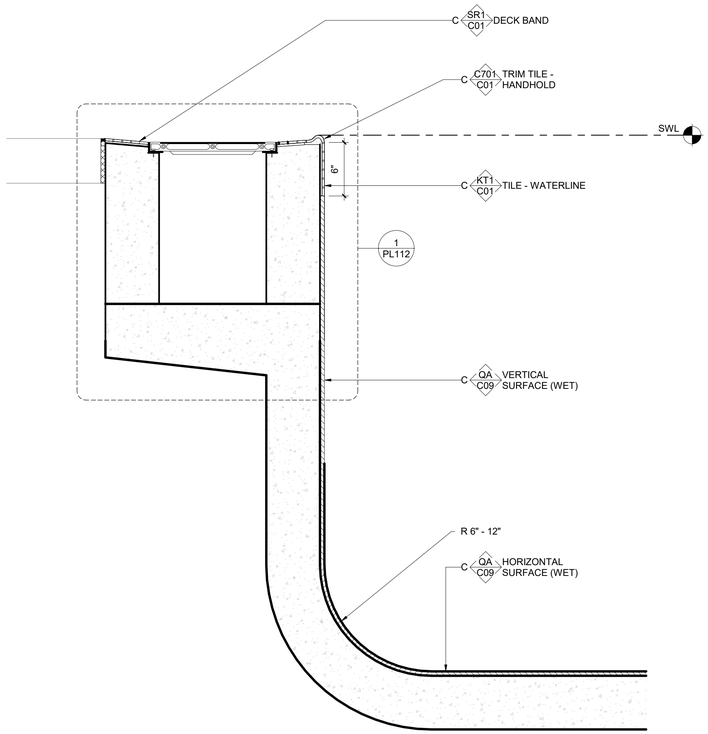
Sheet Title:

POOL C - EXISTING LEISURE POOL WITH NEW SLIDE PLAN

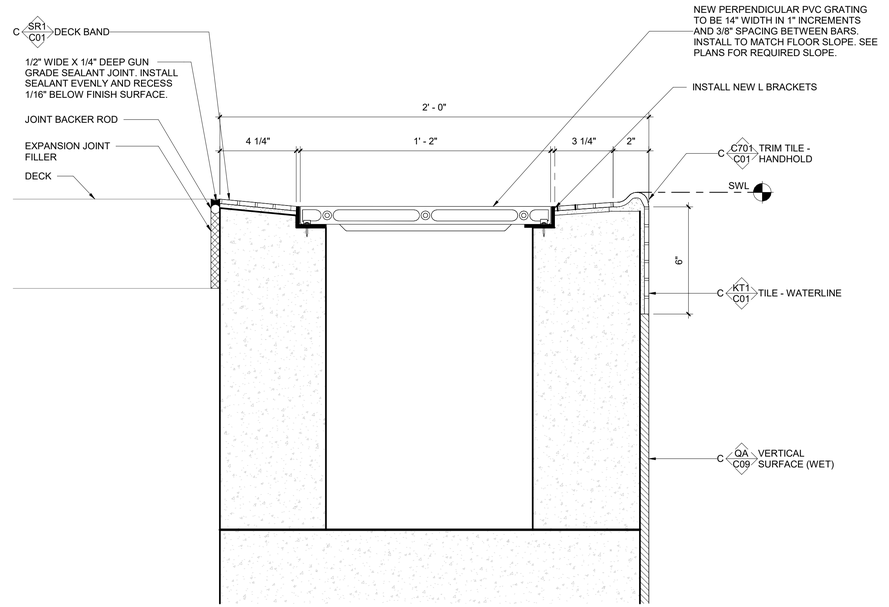
SHEET NUMBER:

PL111

NOTE:
DIMENSIONS SHOWN ARE BASED ON EXISTING AQUA DESIGN GROUP DRAWINGS PROVIDED BY ARCHITECT. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS FOR ACCURACY.

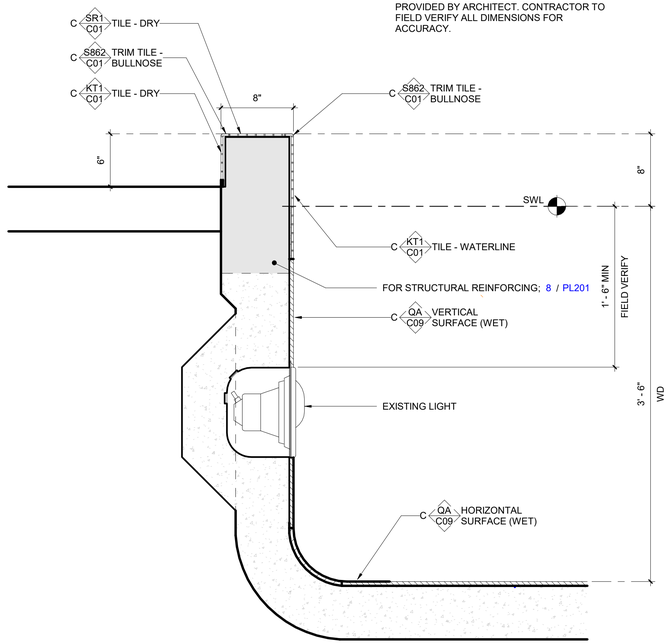


2 PL112 EXISTING GUTTER WALL - NEW FINISH DETAIL VIEW
1 1/2" = 1'-0"

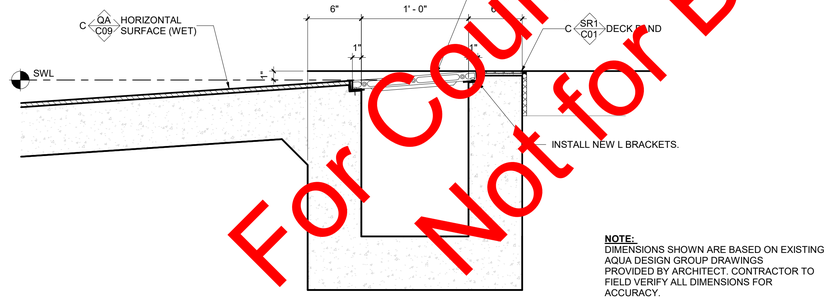


1 PL112 EXISTING GUTTER - NEW FINISH DETAIL VIEW
3" = 1'-0"

NOTE:
DIMENSIONS SHOWN ARE BASED ON EXISTING AQUA DESIGN GROUP DRAWINGS PROVIDED BY ARCHITECT. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS FOR ACCURACY.



3 PL112 POOL WALL - AT SLIDE WALL DETAIL VIEW
1 1/2" = 1'-0"



NOTE:
DIMENSIONS SHOWN ARE BASED ON EXISTING AQUA DESIGN GROUP DRAWINGS PROVIDED BY ARCHITECT. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS FOR ACCURACY.

6 PL112 ZERO DEPTH ENTRY DETAIL DETAIL VIEW
1 1/2" = 1'-0"

For Council Approval
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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT C-20538 4/30/2023 Renewal Date STATE OF CALIFORNIA

5/20/2021

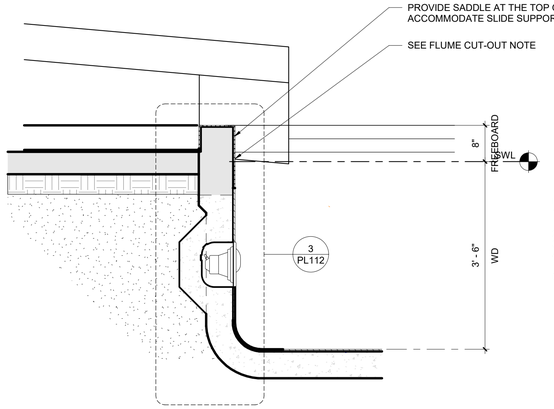
Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

Sheet Title:

POOL C - EXISTING LEISURE POOL WITH NEW SLIDE DETAILS

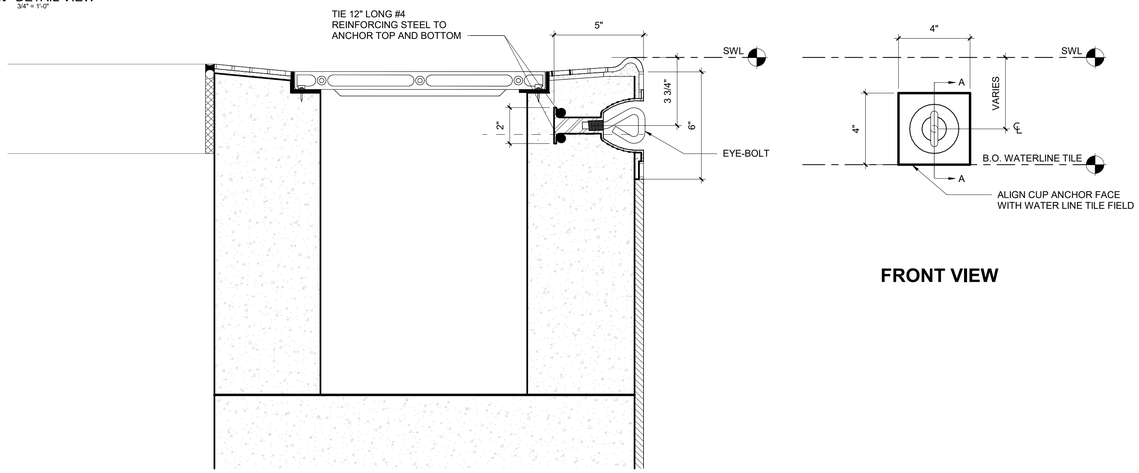
SHEET NUMBER:

PL112



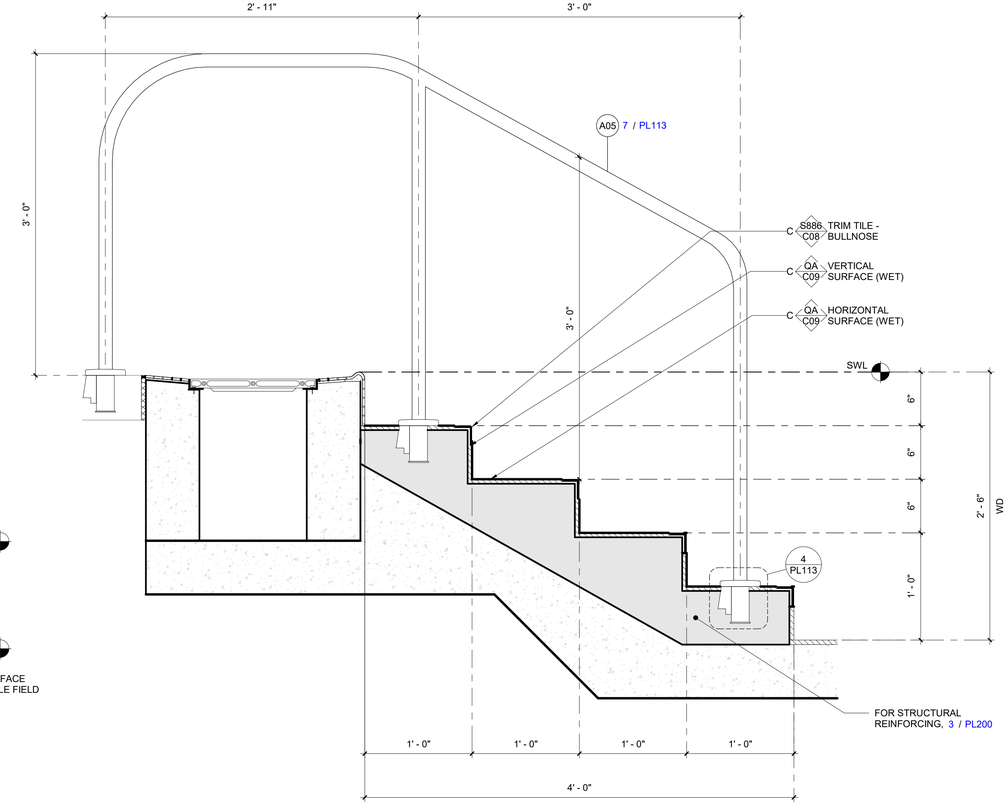
NOTES:
1. PATCH-IN WATERPROOFING OF ENTRY SECTION OF SLIDE OF SLIDE INTO PLUNGE AREA SHALL BE DONE PER SPECIFICATIONS AFTER INSTALLATION OF SLIDE.
2. VERIFY CUT-OUT AND DIMENSIONS WITH SLIDE MANUFACTURER.
3. SLIDE SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
4. POOL CONCRETE CONTRACTOR SHALL VERIFY ACTUAL DIMENSIONS WITH SLIDE MANUFACTURER.
5. INSTALL COMPRESSIBLE WATERSTOP PER MANUFACTURER INSTALLATION BEFORE GROUTING ALONG CUTOUT PERIMETER.

5 PL113 | SLIDE ENTRY DETAIL VIEW
3/4" = 1'-0"

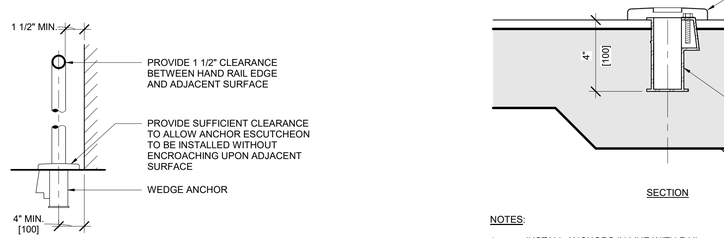


FRONT VIEW

SECTION A-A

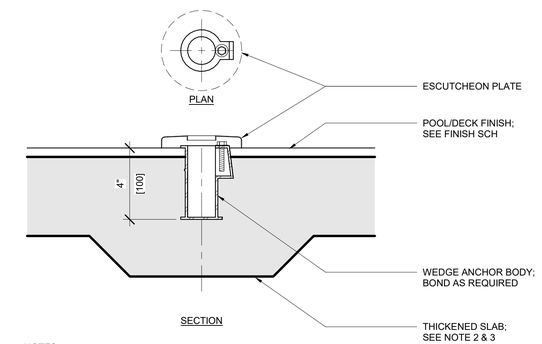


2 PL113 | EXISTING STAIRS- NEW FINISH DETAIL VIEW
1 1/2" = 1'-0"



NOTES:
1. CONTRACTOR TO PURCHASE AND INSTALL RAIL GOODS IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS OF PARTIES HAVING JURISDICTION.
2. CONTRACTOR TO VERIFY HANDRAIL DIMENSIONS PRIOR TO FABRICATION.

7 PL113 | RAILING OFFSET TO ADJACENT SURFACE DETAIL VIEW
3/4" = 1'-0"



NOTES:
1. INSTALL ANCHORS IN LINE WITH RAIL.
2. CONCRETE CLEAR COVER AT ANCHOR SHALL BE 3" MINIMUM. THICKEN SLAB IF NECESSARY TO ACHIEVE MIN COVER.
3. WHEN SECOND LAYER OF CONCRETE IS LOCATED DIRECTLY BELOW SLAB IN WHICH ANCHOR IS PLACED (I.E. STAIRS), CLEAR COVER OF CONCRETE AT ANCHOR IN UPPER SLAB SHALL BE 2" MIN.

4 PL113 | ANCHOR DETAIL - WEDGE DETAIL VIEW
3" = 1'-0"

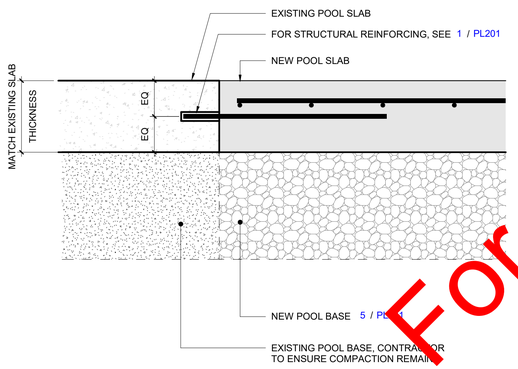
6 PL113 | ANCHOR DETAIL - ROPE CUP DETAIL VIEW
3" = 1'-0"

NOTE:
1. CONFIGURATION OF EXISTING CONSTRUCTION MAY VARY FROM WHAT IS SHOWN.

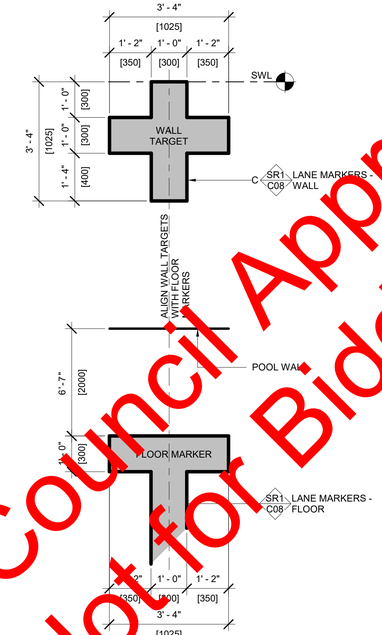
2. SCARIFY CONCRETE INTERFACE AND APPLY BONDING AGENT.

3. CONTRACTOR OPTION: SALVAGE EXISTING REINFORCEMENT AND LAP WITH NEW REINFORCEMENT (1'-8" MIN LAP)

4. NEW CONCRETE SHALL CONTAIN SHRINKAGE REDUCING ADMIXTURE AND SHALL BE WET CURED PER SPECIFICATIONS.



3 PL113 | EXISTING TO NEW POOL FLOOR TRANSITION DETAIL VIEW
1 1/2" = 1'-0"



NOTES:
1. TILES SHALL BE INSTALLED SO THAT FINISHED FACE OF TILE IS FLUSH WITH FINISHED SURFACE OF POOL SURFACE
2. ALL TILES SHALL BE IN A CONTRASTING COLOR TO POOL FINISH, BOTH FLOOR AND WALL. CONFIRM TILE COLOR WITH OWNER/ARCHITECT

1 PL113 | FINISH DETAIL - FLOOR MARKER AND WALL TARGET - USA SWIMMING DETAIL VIEW
1/2" = 1'-0"

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT JEFFREY BRUCE KATZ C-22555 Exp. Date 8/31/2023 STATE OF CALIFORNIA

8/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

Sheet Title:

POOL C - EXISTING LEISURE POOL WITH NEW SLIDE DETAILS

SHEET NUMBER:

PL113

For Council Approval
Not for Bidding

SLIDE INFORMATION:

SLIDE TYPE: 42" OPEN FLUME BODY SLIDE
SLIDE LENGTH: 168.66'
SLIDE HEIGHT: 25.08'
SLIDE FLOW: 1000 GPM

TOWER INFORMATION:

TOWER HEIGHT: 35.66'

TOWER MATERIAL: PAINTED HOT DIP GLAVANIZED STEEL TOWER INCLUDING UPPER PLATFORM, LANDING, COLUMNS, STAIRWAYS, GUARDRAILS, HANDRAILS, AND GATE DESIGNED FOR BOLT-UP INSTALLATION.

RAILING INFORMATION:

RAILING TYPE: PAINTED HOT DIPPED GALVANIZED STEEL

NOTES:

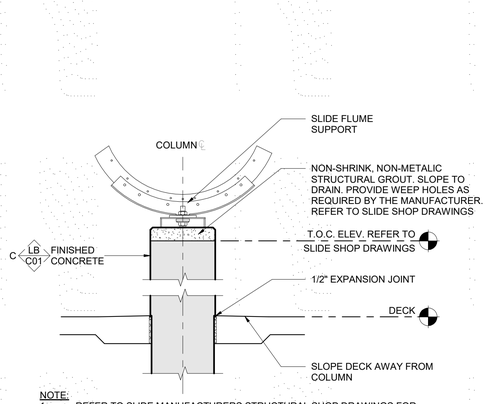
1. INCLUDE A LOCKING GATE AT ENTRY TO STAIR TOWER

2. PROVIDE DECK MOUNTED RALING SYSTEM AROUND ANY OBSTRUCTION FROM SLIDE OR SUPPORT SYSTEM WHICH ARE LOWER THAN 7'-0" FROM DECK ELEVATION.

3. PROVIDE SHADE CANOPY INTEGRAL WITH SLIDE TOWER.

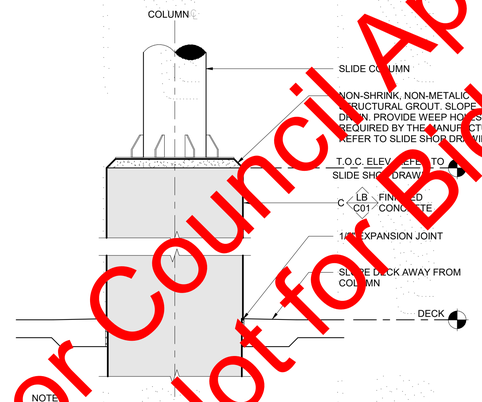
4. SLIDE FLUME, SUPPORTS AND ASSOCIATED FOOTINGS, TOWER, STAIRS, RAILINGS, AND SHADE CANOPY FURNISHED AND INSTALLED BY SLIDE CONTRACTOR.

3 | PL114 3D - SLIDE



NOTE:
1. REFER TO SLIDE MANUFACTURERS STRUCTURAL SHOP DRAWINGS FOR STRUCTURAL DESIGN OF SLIDE COLUMN AND FOUNDATIONS
2. CONTRACTOR TO COORDINATE WITH SLIDE MANUFACTURER
3. SLIDE FLUME SUPPORT BY SLIDE CONTRACTOR.

2 | PL114 SLIDE FLUME SUPPORT DETAIL VIEW
3/4" = 1'-0"



NOTE:
1. REFER TO SLIDE MANUFACTURERS STRUCTURAL SHOP DRAWINGS FOR STRUCTURAL DESIGN OF SLIDE COLUMN AND FOUNDATIONS
2. CONTRACTOR TO COORDINATE WITH SLIDE MANUFACTURER
3. SLIDE COLUMN SUPPORT BY SLIDE CONTRACTOR

PL114 | SLIDE COLUMN SUPPORT DETAIL VIEW
3/4" = 1'-0"

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ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT JEFFREY KATZ C-20535 Expiration Date 8/30/2023 STATE OF CALIFORNIA

8/20/2021

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Checked By:	JRB
Drawn By:	JVH

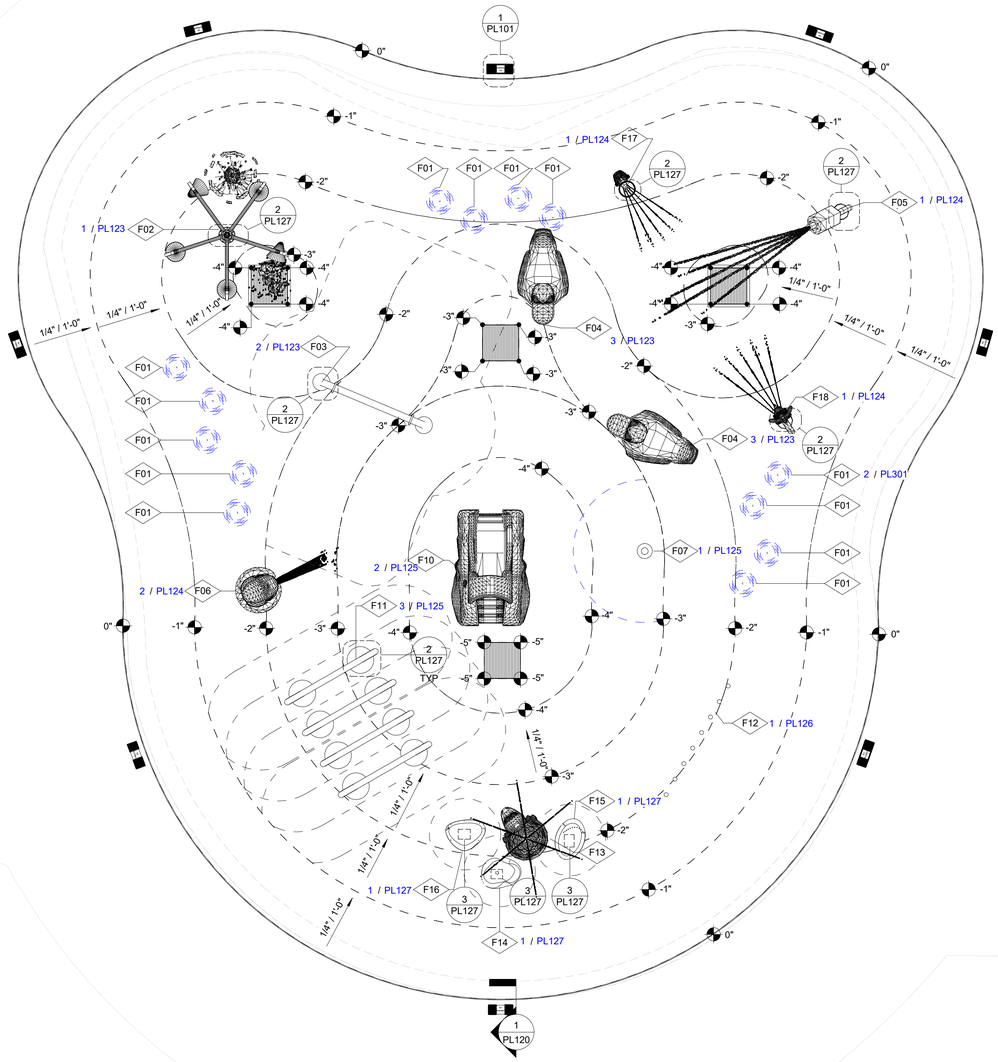
Sheet Title:

POOL C - EXISTING LEISURE POOL WITH NEW SLIDE DETAILS

SHEET NUMBER:

PL114

For Council Approval
Not for Bidding



2 PL120 POOL D - NEW SPRAY PAD PLAN VIEW
1/4" = 1'-0"

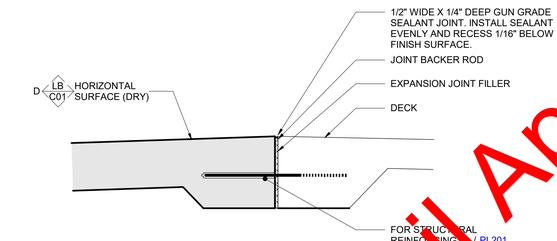
N

POOL D-SPLASH PAD DATA

DESCRIPTION	QTY	UNITS
SPLASH PAD PERIMETER	177' 10"	FEET
WET SLAB SURFACE AREA	2,241	SQUARE FEET
WATER FEATURE STORAGE VOLUME	2,513	GALLONS
SURGE TANK OPERATING VOLUME	1,676	GALLONS
TOTAL VOLUME OF WATER	4,189	GALLONS
CIRCULATION RATE	220	GPM
TURNOVER/VOLUME/FLOW	19 MIN.	4,189 GAL. 220 GPM
FILTRATION RATE	12.74	GPM/FT²
BACKWASH RATE	260	GPM

SCHEDULE - WATER FEATURE - POOL D

POOL ID	FEATURE ID	FEATURE	QTY	MANUFACTURER	DESCRIPTION	GPM (ea)	GPM (Total)
D	F01	WATER GEYSER	13	CUSTOM	FIELD FABRICATED WATER GEYSER	15	195
D	F02	FILL N' SPILL	1	WATER ODYSSEY	W103 WATER ODYSSEY FIL N SPILL AQUATIC PLAY ACTIVITY	15	15
D	F03	ROLL-A-RAIL	1	WATER ODYSSEY	W080 WATER ODYSSEY ROLL - A - RAIL SPRAY ACTIVITY	45	45
D	F04	DEION DUCK	2	WATER ODYSSEY	F2112 WATER ODYSSEY DEION DUCK AQUATIC PLAY FEATURE	13	26
D	F05	CATTAILS TOO	1	WATER ODYSSEY	W351-A WATER ODYSSEY STREAMS ON CATTAIL	9	9
D	F06	FELIPE FROG	1	WATER ODYSSEY	F3029 WATER ODYSSEY FELIPE FROG AQUATIC PLAY ACTIVITIES	13	13
D	F07	MUSHROOM MAZE	1	WATER ODYSSEY	W010 WATER ODYSSEY MUSHROOM MAZE AQUATIC PLAY ACTIVITIES	40	40
D	F10	HOLLOW LOG SLIDE	1	WATER ODYSSEY	F1130 WATER ODYSSEY HOLLOW LOG SLIDE	8	8
D	F11	WATER RINGS	4	WATER ODYSSEY	W238-1 WATER ODYSSEY WATER RINGS SPRAY FEATURE	10	40
D	F12	OVER N' UNDER	1	WATER ODYSSEY	W097-8 WATER ODYSSEY OVER N' UNDER GROUND SPRAY	24	24
D	F13	BILLY BOX TURTLE	1	WATER ODYSSEY	F3032 WATER ODYSSEY BILLY BOX TURTLE AQUATIC PLAY ACTIVITY	4	4
D	F14	SURF STONE #1	1	WATERPLAY	WATERPLAY SURF STONE 1 WATER SPRAY FEATURE	5	5
D	F15	SURF STONE #2	1	WATERPLAY	WATERPLAY SURF STONE 2 WATER SPRAY FEATURE	5	5
D	F16	SURF STONE #3	1	WATERPLAY	WATERPLAY SURF STONE 3 WATER SPRAY FEATURE	5	5
D	F17	GRASS BLADE WITH GRASSHOPPER	1	WATER ODYSSEY	W351-B - WATER ODYSSEY B - FUN FORM GRASSHOPPER	7.5	7.5
D	F18	GRASS BLADE WITH BEE	1	WATER ODYSSEY	W351-C WATER ODYSSEY C- FUN FOAM BEE	7.5	7.5



1 PL120 SPRAY PAD EDGE DETAIL VIEW
1" = 1'-0"

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT C-20538 Professional Engineer STATE OF CALIFORNIA
4/30/2023

5/20/2021

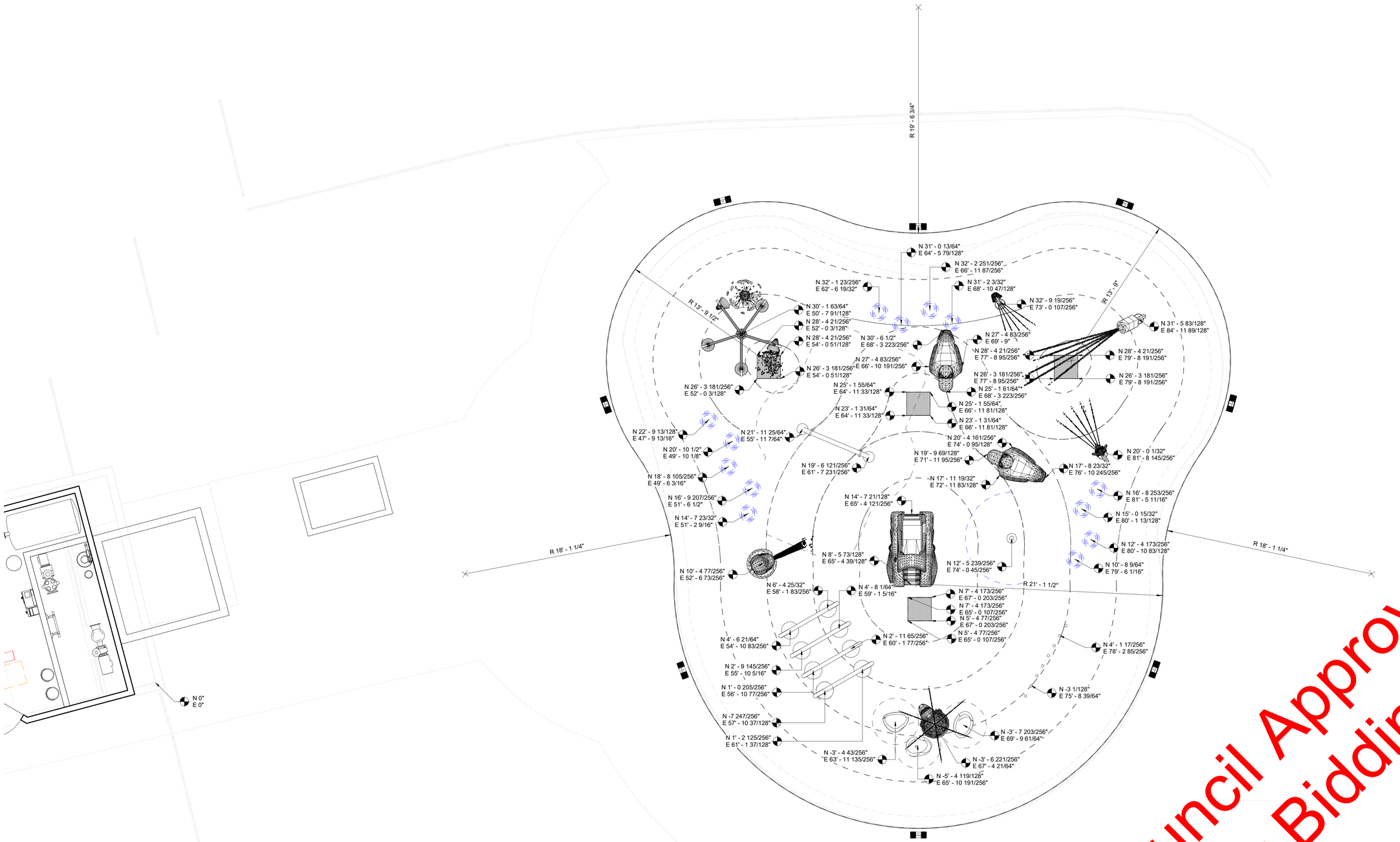
Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

Sheet Title:

POOL D - SPRAY PAD PLANS, SCHEDULE, AND DETAILS

SHEET NUMBER:

PL120



1 PL121 POOL D - NEW SPRAY PAD DIMENSION PLAN VIEW
1/4" = 1'-0"

For Council Approval
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REGISTERED LANDSCAPE ARCHITECT JEFFREY KATZ C-20536 4/30/2023 RENEWAL DATE STATE OF CALIFORNIA

5/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

Sheet Title:

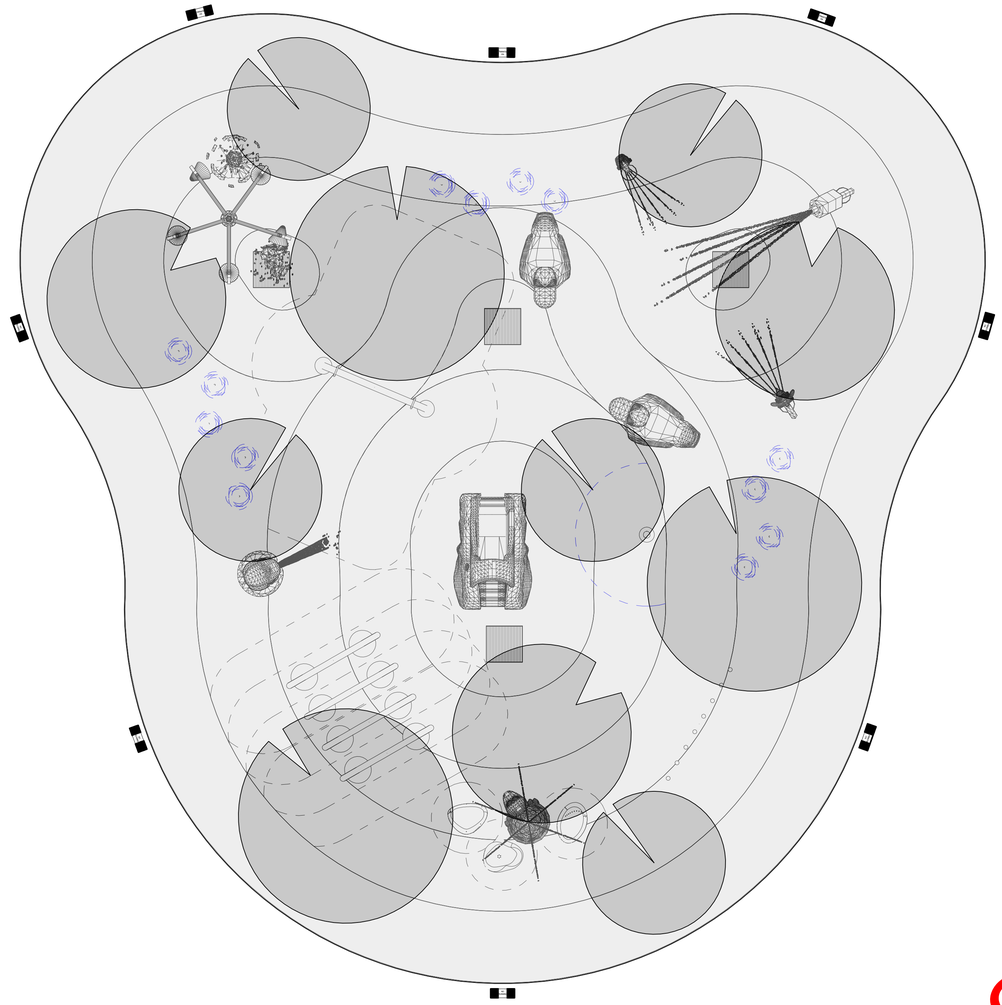
POOL D - SPRAY PAD DIMENSION PLAN AND SECTION

SHEET NUMBER:

PL121

COLOR KEY

- LILY PAD #1 (LITHOCHROME COLOR HARDENER - SCOFIELD A-65 LANDMARK GRAY)
- SPRAY PAD (LITHOCHROME COLOR HARDENER - SCOFIELD A-78 STONE GRAY)



1 PL122 POOL D - SPRAY PAD SURFACING PLAN VIEW
1/4" = 1'-0"

For Council Approval
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REGISTERED ARCHITECT JEFFREY B. KATZ C-20538 4/30/2023 RENEWAL DATE STATE OF CALIFORNIA

8/20/2021

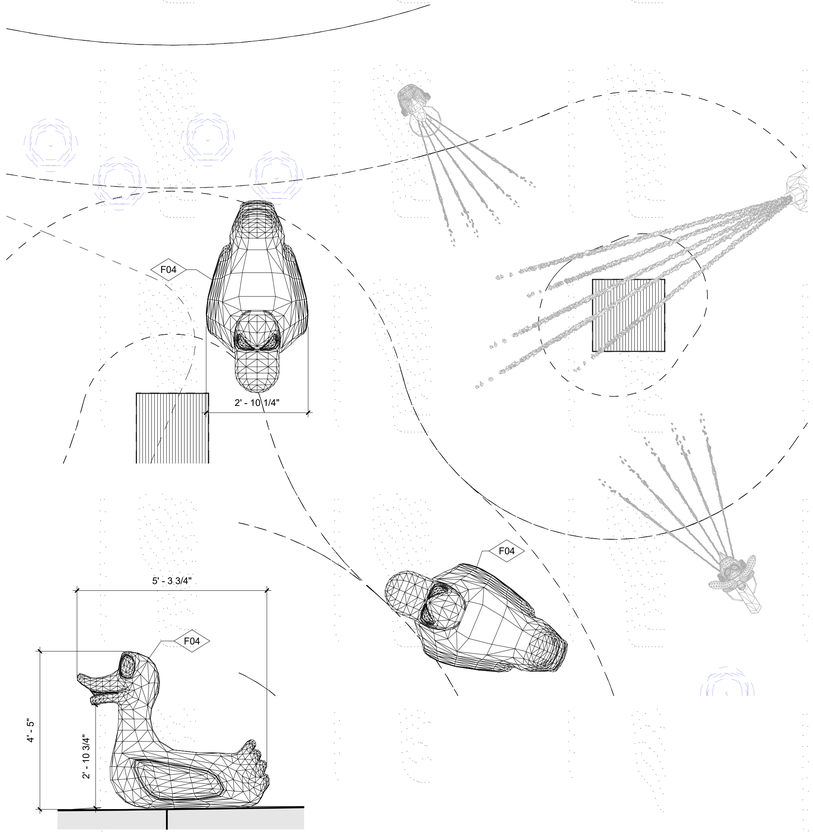
Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

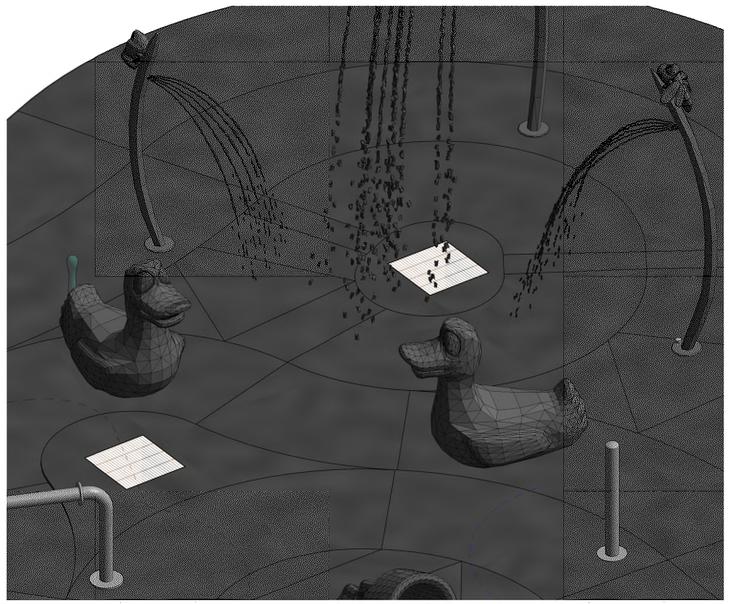
Sheet Title:

POOL D - SPRAY PAD SURFACE PLAN

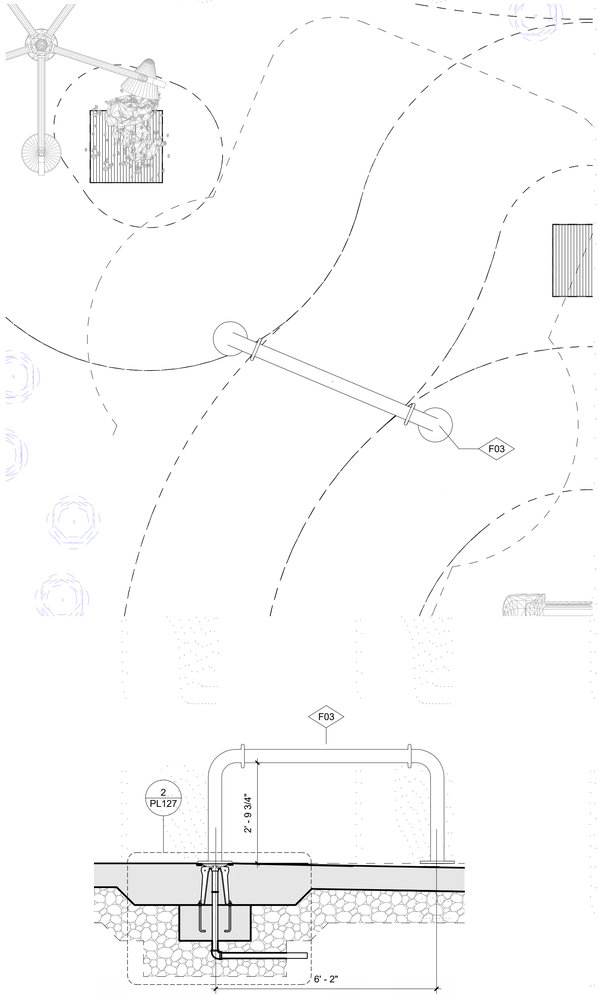
SHEET NUMBER:

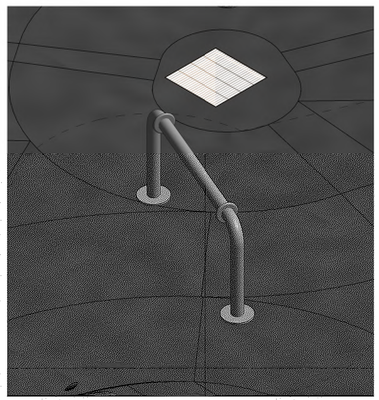
PL122



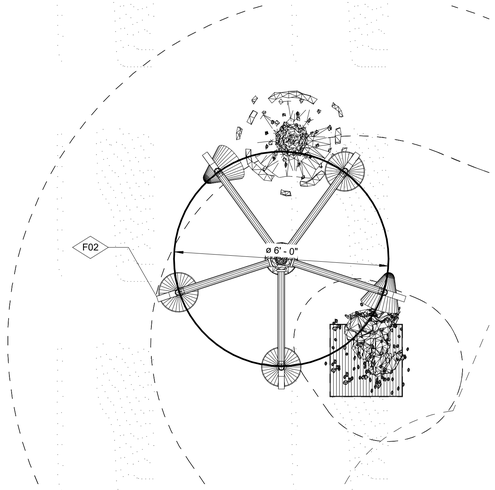


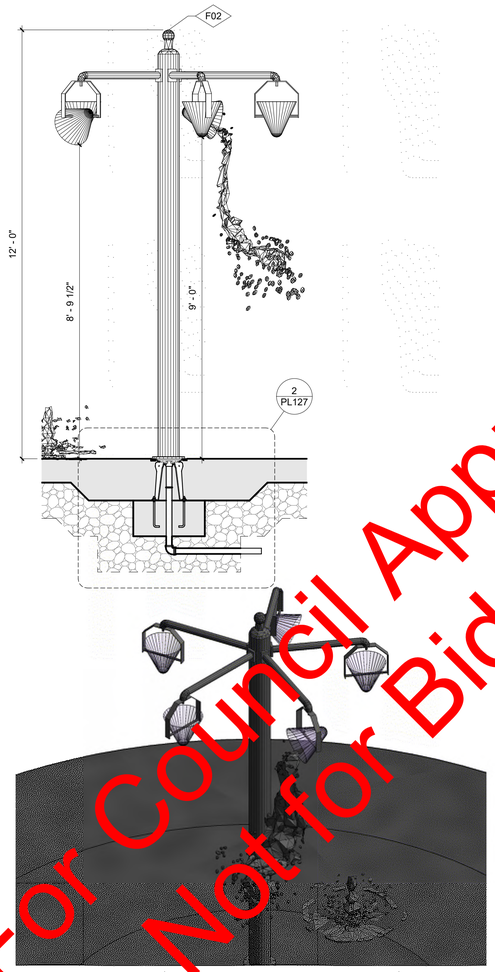
3 | PL123 DEION DUCK DETAIL VIEW
1/2" = 1'-0"





2 | PL123 ROLL A RAIL DETAIL VIEW
1/2" = 1'-0"





1 | PL123 FILL N SPILL PLAN DETAIL VIEW
1/2" = 1'-0"

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT Jeffrey Katz C-20536 Expires 08/31/2023 STATE OF CALIFORNIA

8/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

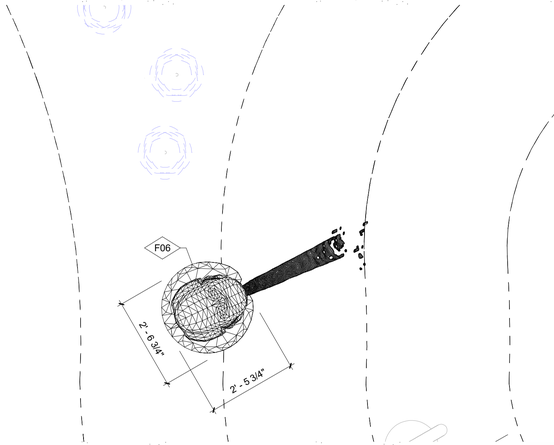
Sheet Title:

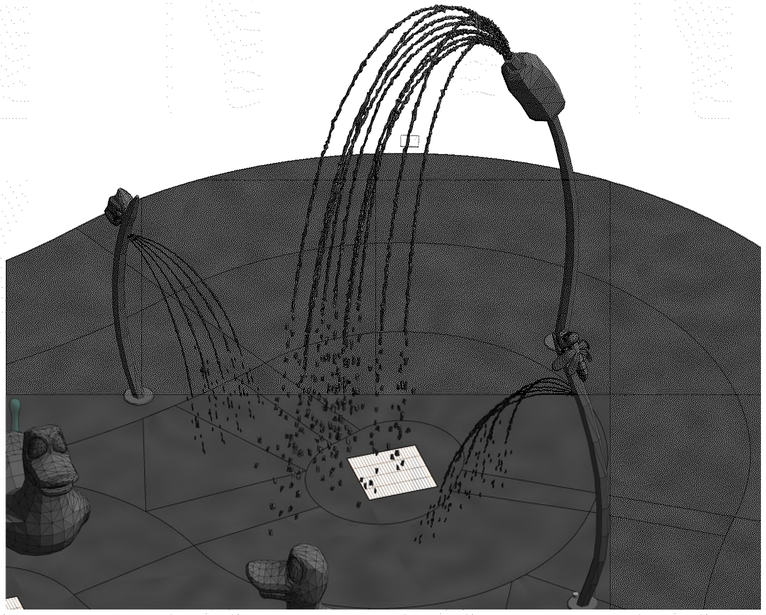
POOL D - SPRAY PAD DETAILS

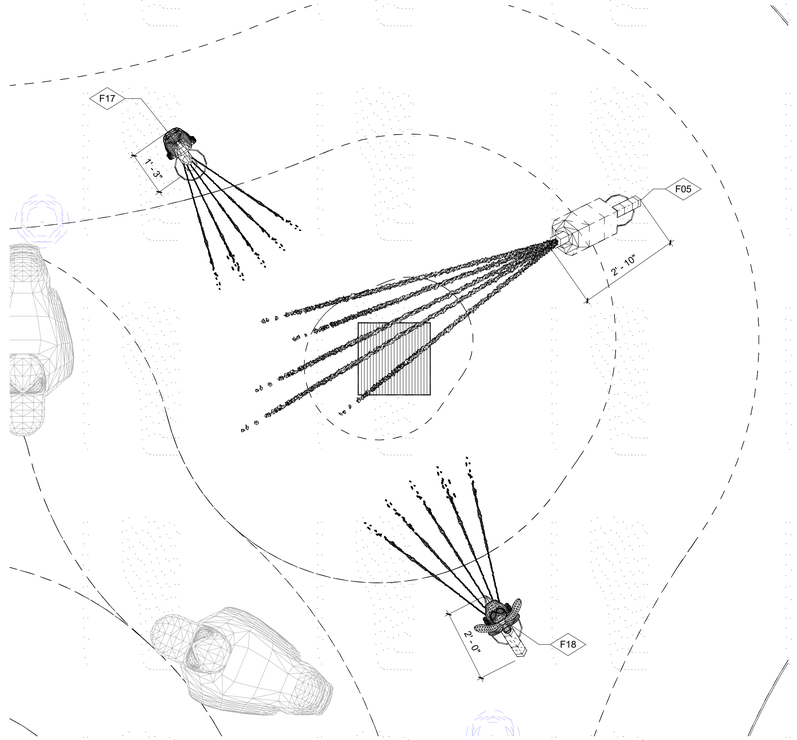
SHEET NUMBER:

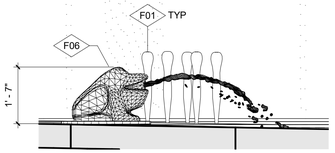
PL123

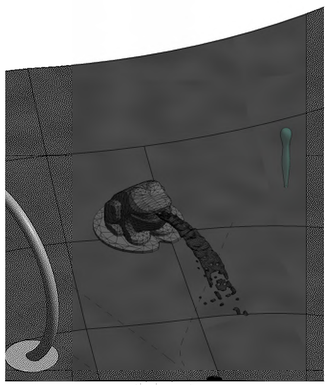
For Council Approval
Not for Bidding

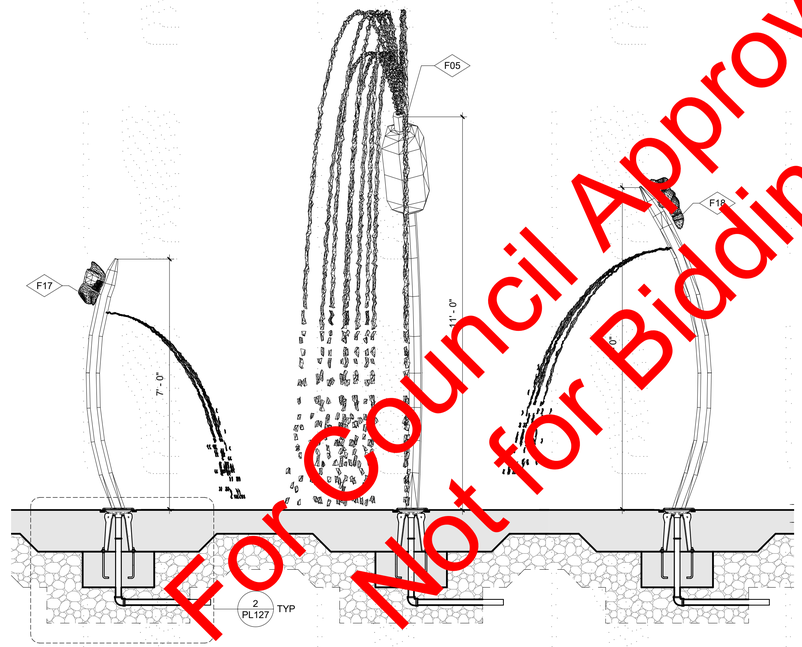












2 | PL124 FELIPE FROG AQUA SPOUT DETAIL VIEW
1/2" = 1'-0"

1 | PL124 CATTAIL TOO DETAIL VIEW
1/2" = 1'-0"

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT JEFFREY BRUCE KATZ C-20535 8/30/2023 Renewal Date STATE OF CALIFORNIA

8/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

Sheet Title:

POOL D - SPRAY PAD DETAILS

SHEET NUMBER:

PL124

For Council Approval
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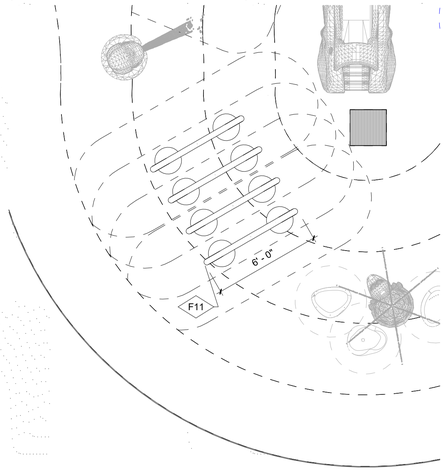

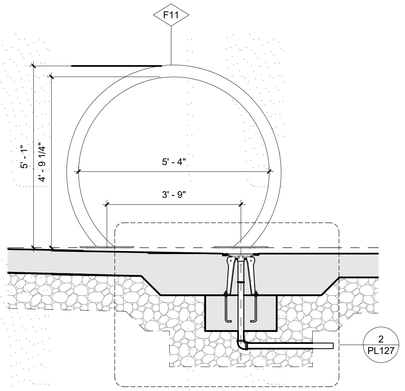

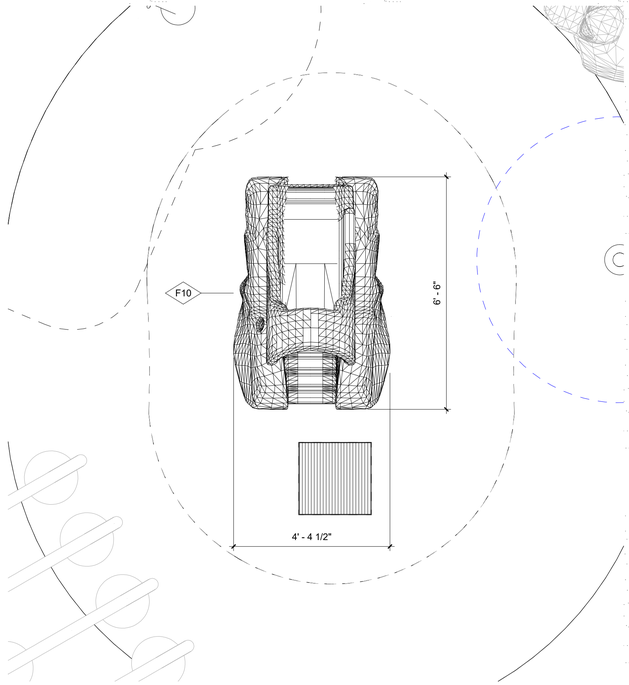

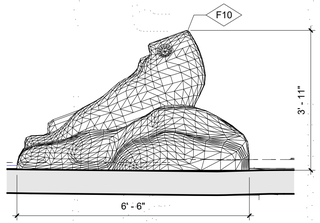

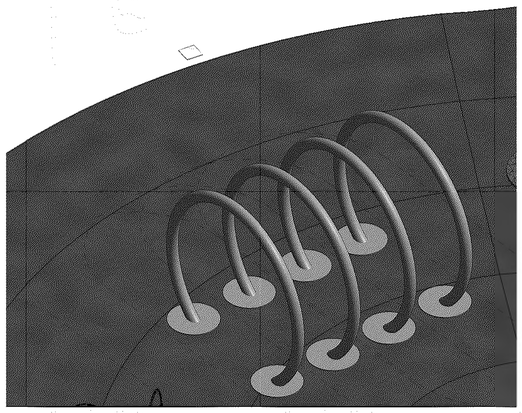

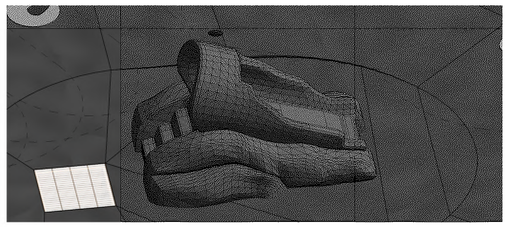

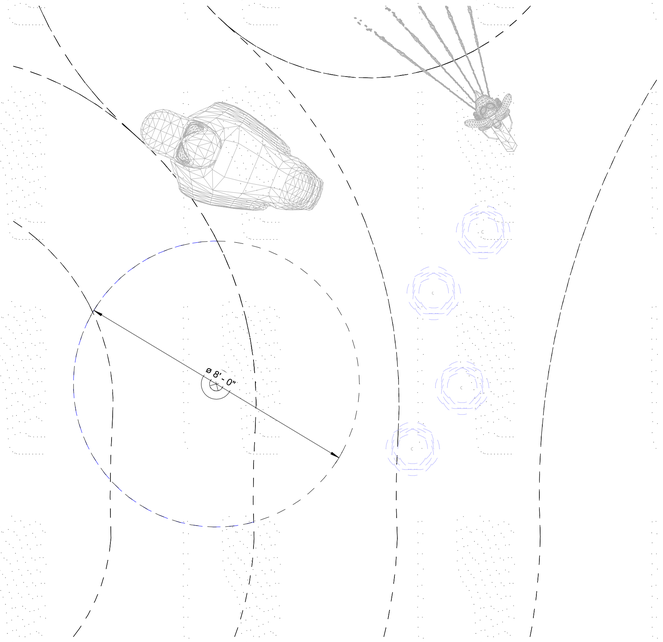

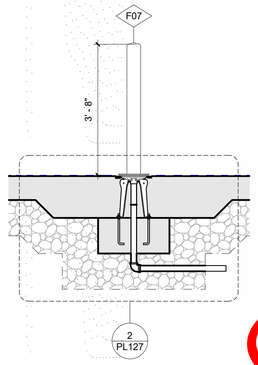

3 | PL125 SINGLE WATER RING DETAIL VIEW
1/4" = 1'-0"

2 | PL125 HOLLOW LOG SLIDE DETAIL VIEW
1/2" = 1'-0"

1 | PL125 MUSHROOM MAZ DETAIL VIEW
1/2" = 1'-0"

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT JEFFREY R. BRAY C-20538 Renewal Date 8/30/2023 STATE OF CALIFORNIA

5/20/2021

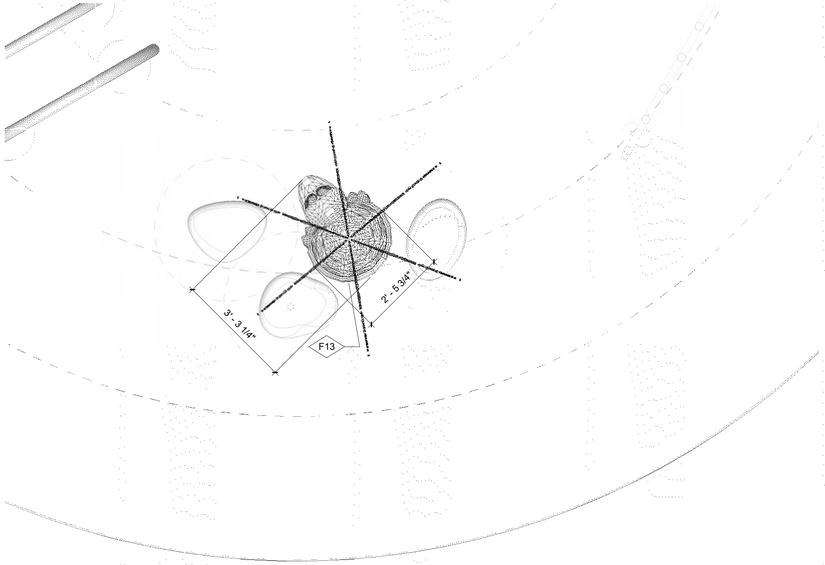
Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

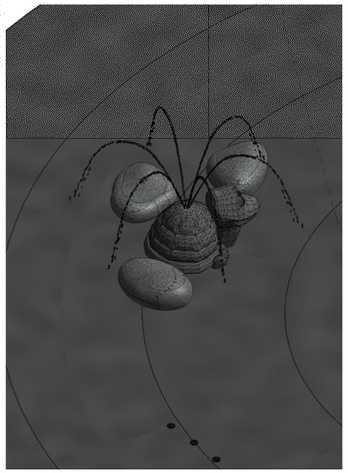
Sheet Title:

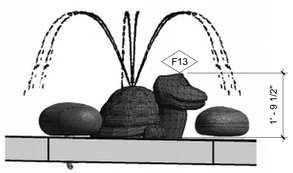
POOL D - SPRAY PAD DETAILS

SHEET NUMBER:

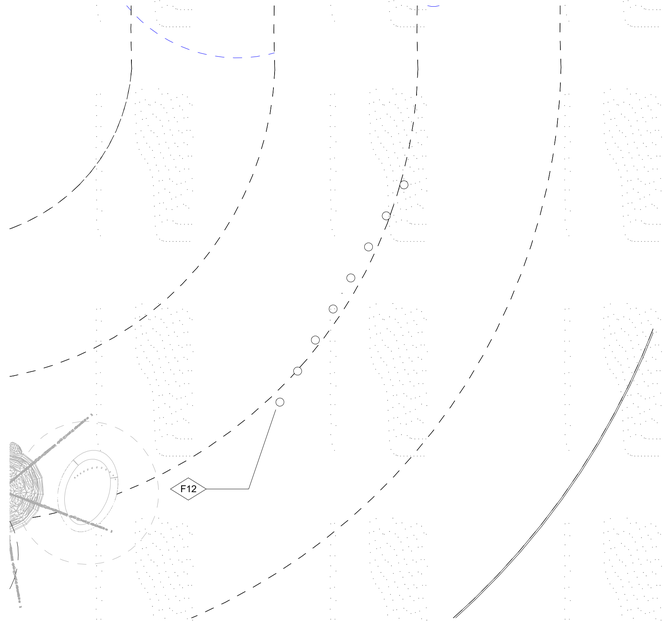
PL125

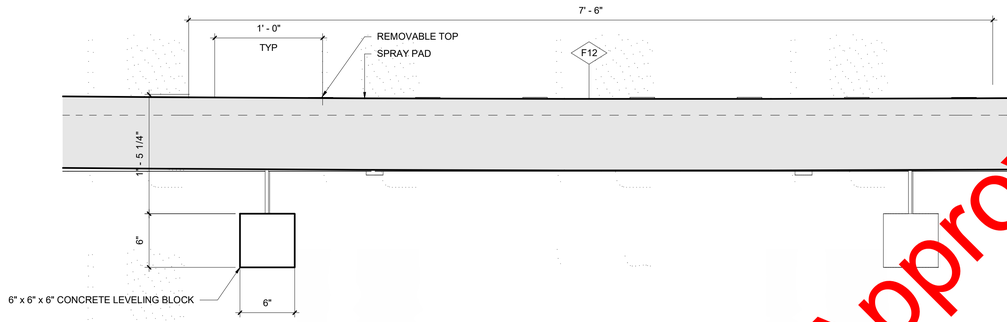


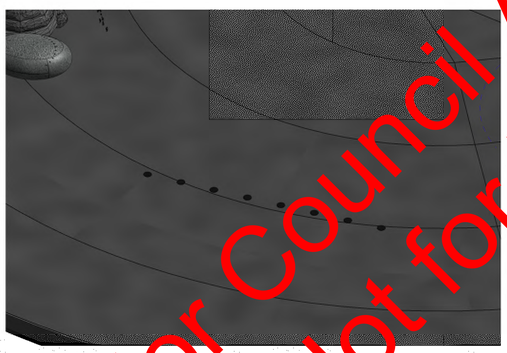




2 PL126 BILLY BOX TURTLE DETAIL VIEW
1/2" = 1'-0"







1 PL126 OVER N' UNDER DETAIL VIEW
1/2" = 1'-0"

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT JAMES R. BRETZ C-30538 4/30/2023 RENEWAL DATE STATE OF CALIFORNIA

5/20/2021

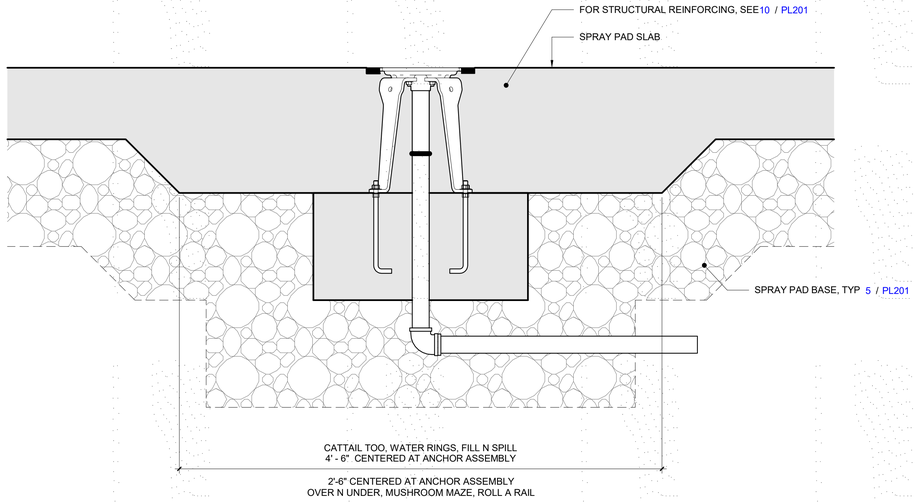
Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

Sheet Title:

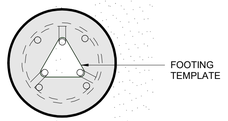
POOL D - SPRAY PAD DETAILS

SHEET NUMBER:

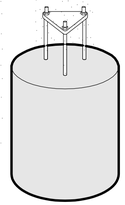
PL126



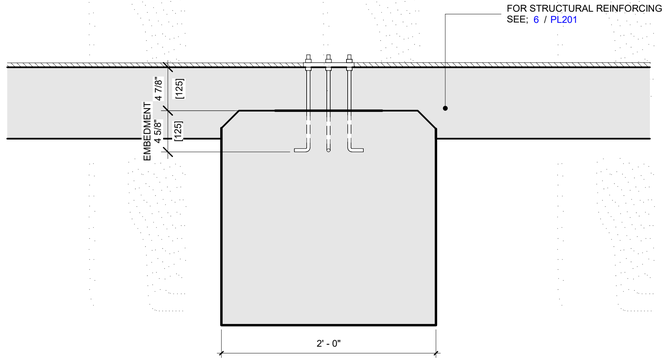
2 | ACTIVITY LEVELING FOOTING DETAIL VIEW
PL127 1 1/2" = 1'-0"



PLAN VIEW



ISOMETRIC VIEW

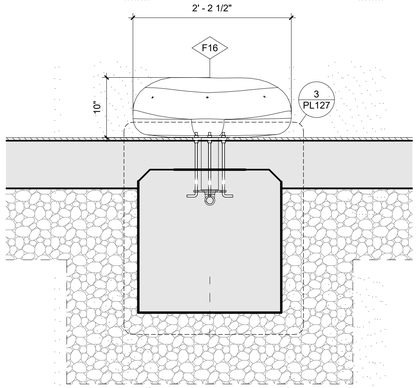


SECTION VIEW

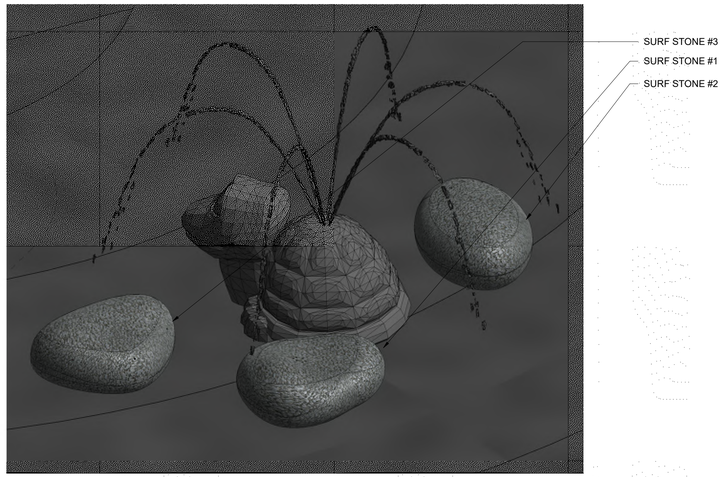
NOTES:

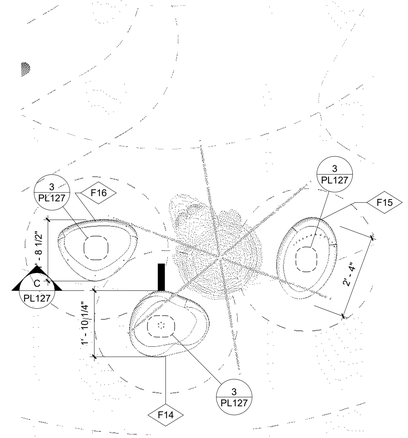
1. FOR COMPLETE INSTALL DETAILS REFER TO WATERPLAY ASSEMBLY DOCUMENTS.

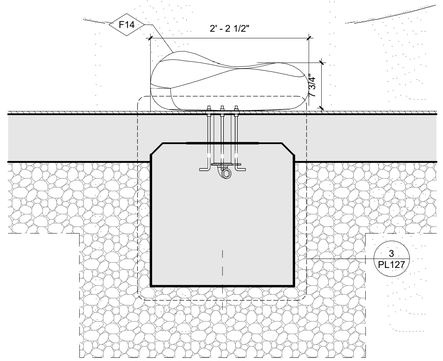
3 | ACTIVITY INSTALLATION - 'F' FOUNDATION DETAIL VIEW
PL127 1 1/2" = 1'-0"



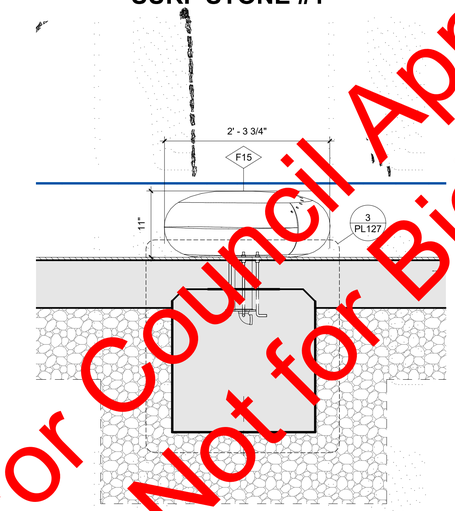
SURF STONE #3







SURF STONE #1



SURF STONE #2

1 | SURF STONE #1 #2 #3 DETAIL VIEW
PL127 1/2" = 1'-0"

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

For Council Approval
Not for Bidding

REGISTERED ARCHITECT JEFFREY KATZ C-20536 4/30/2023 Renewal Date CALIFORNIA

5/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

Sheet Title:

POOL D - SPRAY PAD DETAILS

SHEET NUMBER:

PL127

NOTE

STRUCTURAL DRAWINGS AND POOL DRAWINGS MUST BE USED IN CONJUNCTION WITH EACH OTHER. POOL DRAWINGS DICTATE ALL FINAL CONDITIONS OF POOL, FEATURES, AND DIMENSIONS OF POOL SHELL, INCLUDING POOL FINISH. UNLESS OTHERWISE INDICATED, STRUCTURAL DIMENSIONS ARE CONCRETE TO CONCRETE, AND DICTATE REQUIRED THICKNESSES FOR STRUCTURAL INTEGRITY ONLY.

GEOTECHNICAL PARAMETERS

ASSUMED SOIL PARAMETERS FOR POOL STRUCTURAL DESIGN

1. POOL DESIGNED FOR THE EMPTY CONDITION (CONTROLLING CASE)
2. IF ANY OF THE CRITERIA LISTED BELOW ARE NOT MET THEN THE POOL'S STRUCTURAL DESIGN SHOULD BE RE-EVALUATED BY THE POOL STRUCTURAL ENGINEER.

- SOIL BEARING CAPACITY 2,500 PSF MINIMUM
- AT-REST EQUIVALENT FLUID PRESSURE 55 PSF/FT MAXIMUM
- SOIL GROUNDWATER TABLE ELEVATION BELOW BOTTOM OF POOL FLOOR
- SETTLEMENT AND/OR PVR DOES NOT EXCEED 1/2" TOTAL MOVEMENT AND 1/4" DIFFERENTIAL MOVEMENT

SEISMIC FACTORS ASCE 7-16:
Ss = 0.451 g
S1 = 0.225 g
SITE CLASS D - ASSUMED
SEISMIC DESIGN CATEGORY D
Sms = 0.649 g
Sm1 = 0.439 g
Sds = 0.433 g
Sd1 = 0.293 g

LIVE LOAD SURCHARGE = 100 PSF

STRUCTURAL AND REINFORCEMENT NOTES

STRUCTURAL NOTES

1. REINFORCEMENT AT WALL CORNERS AND WALL BENDS SHALL BE DETAILED PER THE ASSOCIATED TYPICAL DETAILS. CORNER AND BEND BARS SHALL BE THE SAME SIZE AND SPACING AS THE TYPICAL HORIZONTAL WALL REINFORCING OF THE ASSOCIATED WALLS.
2. UNLESS OTHERWISE INDICATED, ALL WALL REINFORCEMENT BARS SHALL BE CONTINUOUS AROUND CORNERS. REINFORCEMENT SHALL BE EXTENDED INTO CONNECTING WALLS. UNLESS OTHERWISE INDICATED, CONTRACTOR MAY SPLICE CONTINUOUS SLAB BARS AT LOCATIONS OF THEIR CHOOSING, EXCEPT THAT TOP BAR SPLICES SHALL BE LOCATED AT MID-SPAN AND BOTTOM BAR SPLICES SHALL BE LOCATED AT SUPPORTS. ALL REINFORCEMENT BENDS AND LAPS, UNLESS OTHERWISE INDICATED, SHALL SATISFY THE MINIMUM REQUIREMENTS IN LAP SCHEDULE.
3. FOR REINFORCEMENT AT WALL OR FLOOR SLAB PENETRATIONS, SEE 4 / PL200
4. ALL NEW CONCRETE FOR POOL C SHALL CONTAIN SHRINKAGE REDUCING ADMIXTURE.
5. POURED CONCRETE SHALL BE 4500 PSI, SHOTCRETE SHALL BE 5000 PSI.

REINFORCEMENT NOTES: 60KSI, A615, DEFORMED BARS

1. REINFORCEMENT SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI "MANUAL OF CONCRETE PRACTICE", LATEST EDITION, UNLESS OTHERWISE NOTED.
2. ALL LAPS SHALL BE CLASS "B" PER ACI 318 UNLESS OTHERWISE NOTES ON THE DESIGN DRAWINGS OR UNLESS THE DETAILER TAKES SPECIAL CARE TO PROVIDE STAGGERED LAPS. USE TOP BAR LAP LENGTHS FOR ALL HORIZONTAL WALL BARS AND FOR TOP BARS IN SLABS AND BEAMS OVER 14" DEEP
3. LAP LENGTH SHALL BE SPECIFICALLY NOTED ON PLACING DRAWINGS WHERE MORE THAN ONE BAR MAKES UP A CONTINUOUS STRING.
4. TIE POOL REINFORCING STEEL WITH 18-GAUGE ANNEALED WIRE AS SPECIFIED IN THE CRSI 63 RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS. ALL TIE WIRES SHALL BE "MADE TIGHT" FOR ELECTRICAL BONDING PURPOSES, AS REQUIRED BY NEC, ARTICLE 680.
5. ALL HOOKS SHALL BE STANDARD HOOKS UNLESS NOTED OTHERWISE.

REINFORCING STEEL MINIMUM CLEAR COVER REQUIREMENTS
COORDINATE WITH REINFORCEMENT STEEL PLACING REQUIREMENTS

3" FOR CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH
2" TYPICAL ALL ELSE, UNLESS NOTED OTHERWISE ON DETAILS

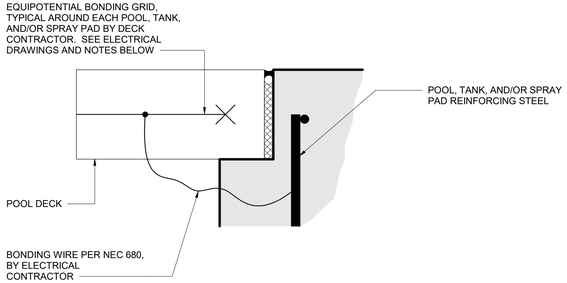
REINFORCEMENT CLASS "B" LAP LENGTHS
TABLE BASED UPON 4500 PSI CONCRETE AND 60 KSI REINFORCING STEEL

BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
GR-60 TOP BAR	1'-11" [584]	2'-7" [787]	3'-2" [965]	3'-10" [1168]	5'-7" [1702]	6'-4" [1930]	7'-1" [2159]	7'-11" [2413]	8'-8" [2642]
GR-60 OTHER BAR	1'-6" [457]	2'-0" [610]	2'-6" [762]	2'-11" [889]	4'-3" [1295]	4'-11" [1499]	5'-6" [1676]	6'-1" [1854]	6'-8" [2032]

STANDARD HOOK DIMENSION

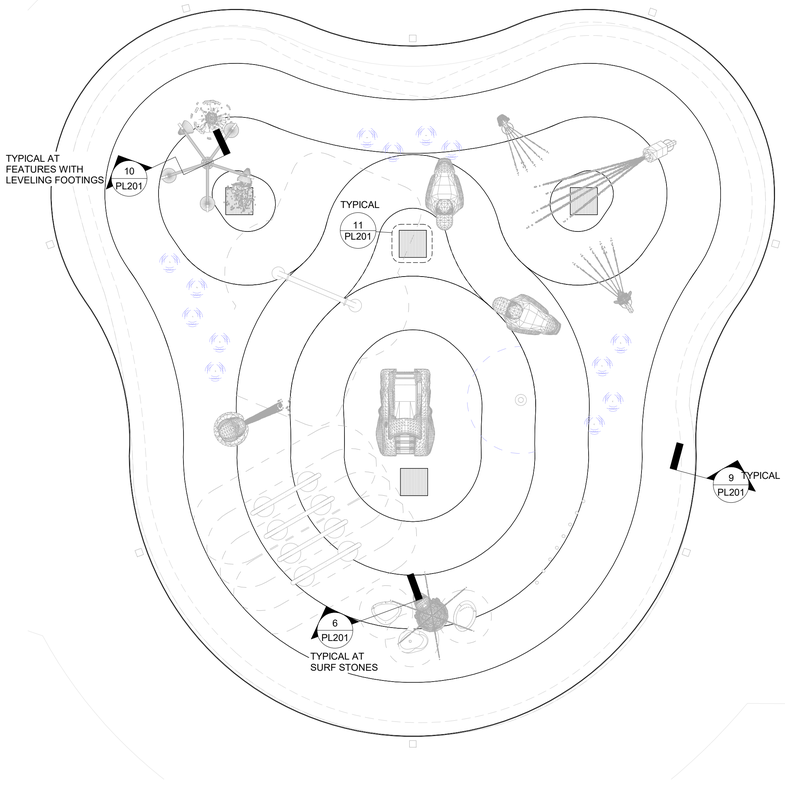
BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
HOOK LENGTH	7" [178]	9" [229]	1'-0" [305]	1'-2" [356]	1'-4" [406]	1'-6" [457]	1'-11" [587]	2'-2" [661]	2'-5" [736]

TYPICAL STANDARD DETAILS

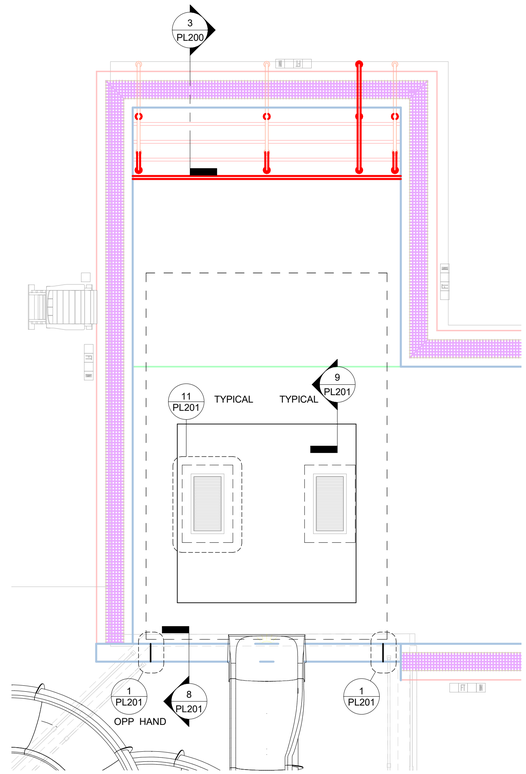


NOTES:
1. THIS DETAIL IS INTENDED TO ILLUSTRATE THE EQUIPOTENTIAL BONDING GRID AROUND EACH POOL, TANK, AND/OR SPRAY PAD AS REQUIRED BY NEC 680.
2. THE GRID SHALL CONFORM TO ALL NEC 680 REQUIREMENTS.
3. PER NEC 680, THE GRID SHALL:
   3.a. COMPLETELY SURROUND THE PERIMETER OF THE POOL, TANK, AND/OR SPRAY PAD AND EXTEND 3 FEET HORIZONTALLY FROM THE INSIDE WALLS OF THE POOL, AND/OR TANK, OR PERIMETER EXPANSION JOINT AT SPRAY PADS.
   3.b. BE ARRANGED IN A 12" X 12" (OR LESS) NETWORK OF CONDUCTORS IN A UNIFORMLY SPACED PATTERN.
   3.c. BE BONDED TO THE POOL, TANK, AND/OR SPRAY PAD REINFORCING STEEL.
4. THIS DETAIL IS NOT INTENDED TO DETAIL THE WALLS, SLABS, OR THE DECKS. THE ABOVE DETAIL IS SCHEMATIC. SEE POOL, TANK, AND/OR SPRAY PAD SECTIONS AND DECK SECTIONS FOR ADDITIONAL CONSTRUCTION REQUIREMENTS.
5. SEE POOL, TANK, AND/OR SPRAY PAD ELECTRICAL DRAWINGS FOR ADDITIONAL BONDING & GROUNDING REQUIREMENTS.

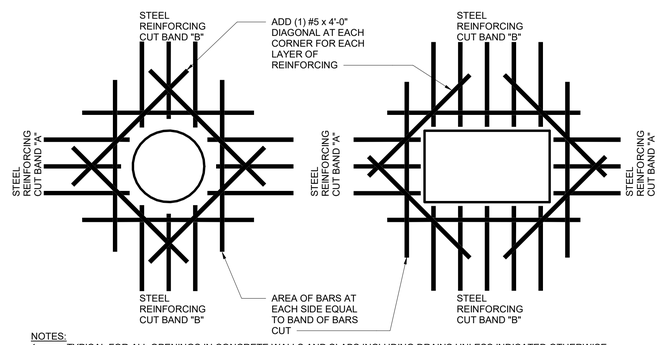
5 PL200 | EQUIPOTENTIAL BONDING GRID SCHEMATIC DETAIL
DETAIL VIEW
NTS



2 PL200 | POOL D - NEW SPRAY PAD STRUCTURAL
PLAN VIEW
3/16" = 1'-0"

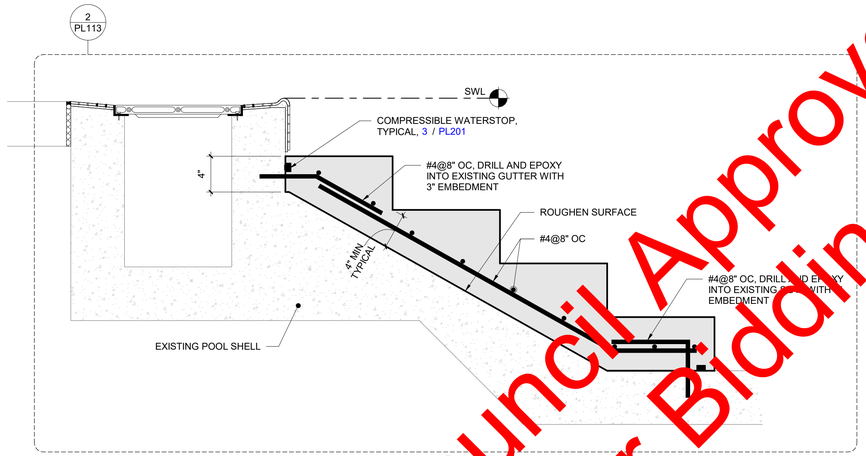


1 PL200 | POOL C -EXISTING LEISURE POOL - PARTIAL STRUCTURAL PLAN
PLAN VIEW
1/4" = 1'-0"



NOTES:
1. TYPICAL FOR ALL OPENINGS IN CONCRETE WALLS AND SLABS INCLUDING DRAINS UNLESS INDICATED OTHERWISE ON PLANS.
2. DO NOT WELD REINFORCEMENT TO PIPE SLEEVES AND INSERTS.
3. ALL OPENINGS THROUGH WATERTIGHT TANK REQUIRE WATERSTOPS.
4. PROVIDE MIN LAP AS NOTED OR SHOWN ON PLANS (TYP)

4 PL200 | REINFORCING - REINFORCEMENT AT OPENINGS
DETAIL VIEW
NTS



3 PL200 | REINFORCING - STAIRS
SECTION VIEW
NOT TO SCALE

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

PREPARED BY:
GRÄEF
Project Number 2020-2000.46
Phone 414 / 259 1500

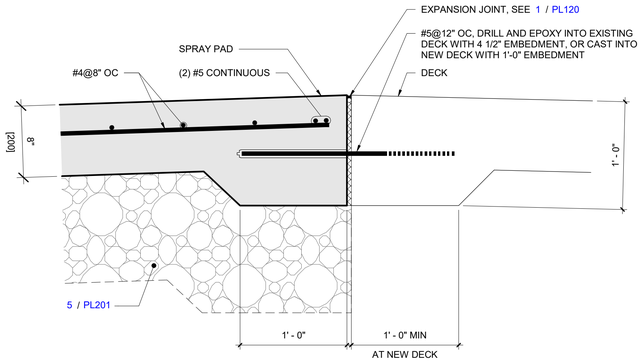
REGISTERED PROFESSIONAL ENGINEER BEAU M. SANDERS 5736 EXP 6/30/23 STRUCTURAL STATE OF CALIFORNIA
6/30/21
"Structural Scope of Work"

For Council Approval
Not for Bidding

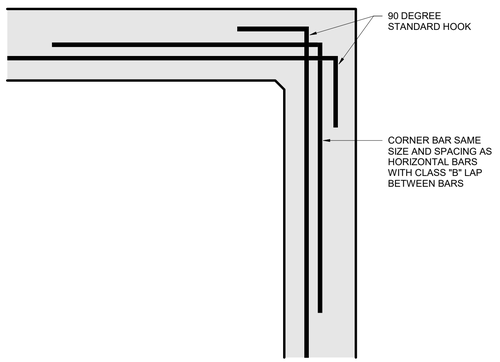
Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

Sheet Title:
STRUCTURAL NOTES, PLAN(S) AND SCHEDULE

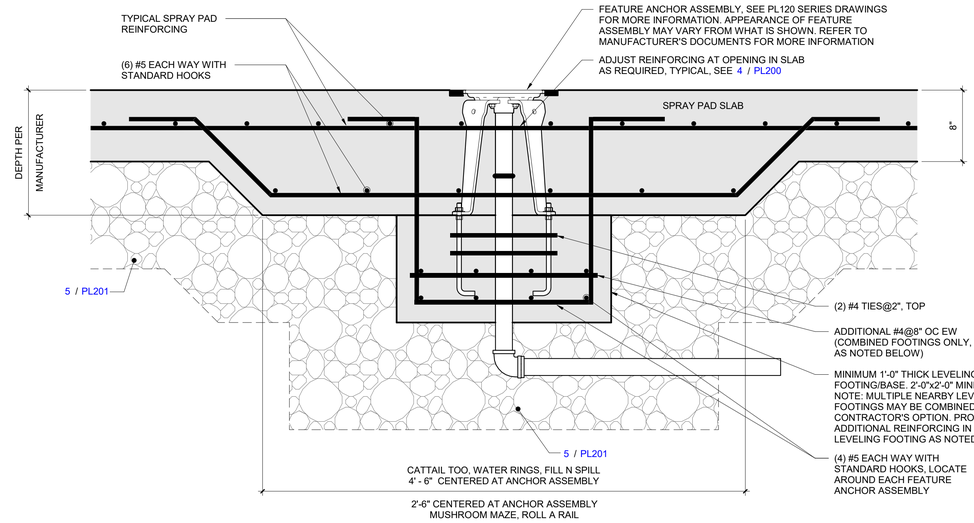
SHEET NUMBER:
PL200



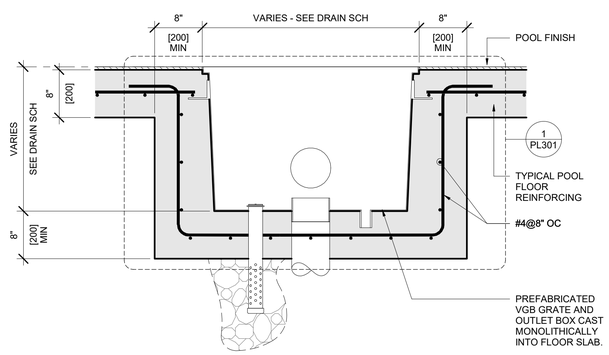
9 PL201 REINFORCING - SPRAY PAD EDGE DETAIL VIEW
NOT TO SCALE



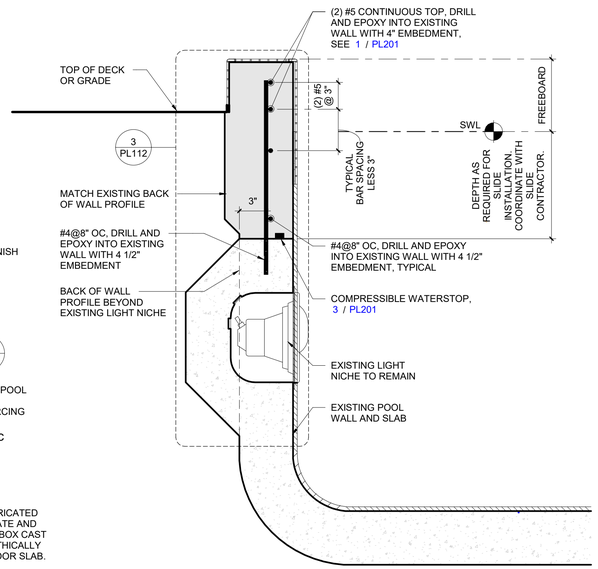
7 PL201 REINFORCING - SINGLE MAT REINFORCING AT CORNER DETAIL VIEW
NOT TO SCALE



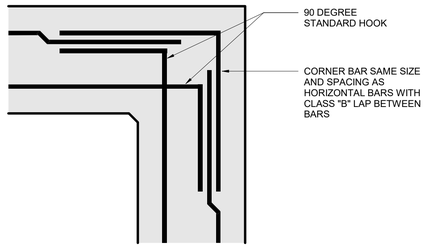
10 PL201 REINFORCING - ACTIVITY LEVELING FOOTING SECTION VIEW
NOT TO SCALE



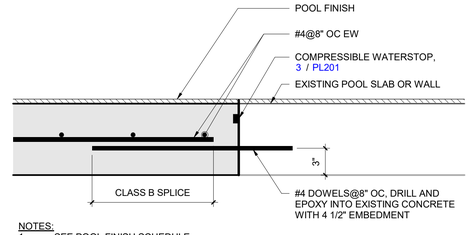
11 PL201 REINFORCING - FLOOR OUTLET DETAIL VIEW
NOT TO SCALE



8 PL201 POOL WALL - AT SLIDE WALL SECTION VIEW
1 1/2" = 1'-0"

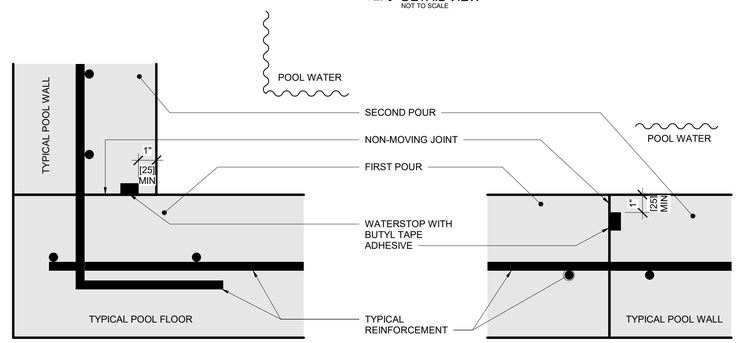


2 PL201 REINFORCING - DOUBLE MAT REINFORCING AT CORNER DETAIL VIEW
NOT TO SCALE



NOTES:
1. SEE POOL FINISH SCHEDULE
2. SEE 4 / PL201 AND 5 / PL201 FOR POOL BASE AND BACKFILL.

1 PL201 REINFORCING - NEW TO EXISTING CONCRETE DETAIL VIEW
NOT TO SCALE

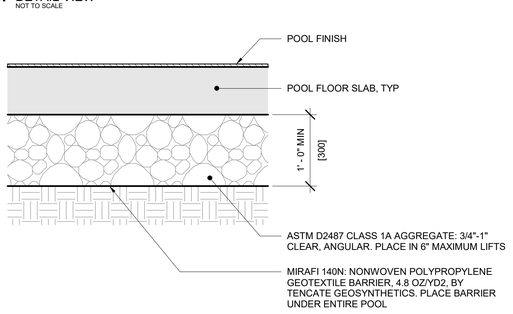


SECTION B-B FLOOR / WALL JOINT

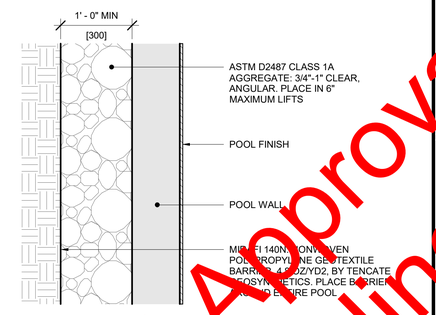
SECTION A-A: WALL / WALL JOINT OR FLOOR/FLOOR JOINT

NOTE:
1. DETAIL IS SCHEMATIC AND INDICATES CLEARANCES AND INSTALLATION INFORMATION ONLY. FOR APPLICABLE INSTALLATION LOCATIONS SEE POOL STRUCTURAL DETAILS.
2. BASIS OF DESIGN IS TYPE KBA-1510FP WATERSTOP BY ADEKA. SUBSTITUTIONS MUST BE APPROVED BY ENGINEER. NOTE THAT CLEARANCES FOR SUBSTITUTIONS MAY DIFFER. REFER TO MANUFACTURER REQUIREMENTS.
3. INSTALL WATERSTOP ON WET SIDE(S) OF REINFORCEMENT.
4. DIMENSION ABOVE IS A MIN FOR CONCRETE COVERAGE AND DOES NOT INCLUDE THE POOL FINISH. PROVIDE ADDITIONAL CONCRETE COVERAGE IF POSSIBLE.
5. PROTECT WATERSTOP FROM WATER, DIRT, DEBRIS, AND DAMAGE PRIOR TO COVERING WITH CONCRETE.
6. SEE SPECIFICATION SECTION 131120 FOR ADDITIONAL WATERSTOP REQUIREMENTS.

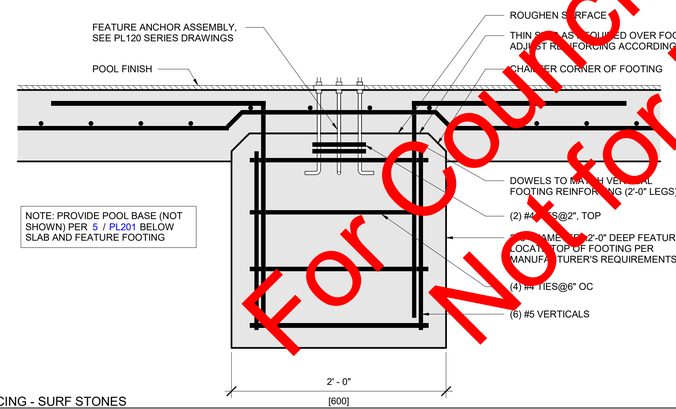
3 PL201 WATERSTOP - COMPRESSIBLE NON-MOVING JOINT - ADEKA DETAIL VIEW
NOT TO SCALE



5 PL201 FLOOR SUB BASE DETAIL VIEW
NOT TO SCALE



4 PL201 POOL WALL BACKFILL DETAIL VIEW
NOT TO SCALE



NOTE: PROVIDE POOL BASE (NOT SHOWN) PER 5 / PL201 BELOW SLAB AND FEATURE FOOTING

6 PL201 REINFORCING - SURF STONES SECTION VIEW
NOT TO SCALE

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Description:	Date:
100% CDs / Bid Set	08/20/21

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	JVH

Sheet Title:

STRUCTURAL DETAILS

SHEET NUMBER:

PL201

PREPARED BY:

GRAEF
Project Number 2020-2000.46
Phone 414 / 259 1500

REGISTERED PROFESSIONAL ENGINEER BEAU M. SANDERS 5736 EXP. 6/30/23 STRUCTURAL STATE OF CALIFORNIA
6/30/21
"Structural Scope of Work"

PIPING NOTES

REFER TO DIVISION 13 SPECIFICATIONS FOR DETAILS

PIPING

a. ALL PIPING SHALL BE IN ACCORDANCE WITH THE CALIFORNIA CODE OF REGULATIONS - THE DESIGN, OPERATION, AND MAINTENANCE OF PUBLIC SWIMMING POOLS. CALIFORNIA DEPARTMENT OF PUBLIC HEALTH CODE. THE A.S.T.M. DESIGNATION NUMBER D-1785, AND THE NSF SEAL FOR POTABLE WATER.
b. ALL PIPING DESIGNED FOR 8'/SECOND MAX SUCTION, 10'/SECOND MAX PRESSURE IN OTHER THAN COPPER. 8'/SECOND MAX PRESSURE IN COPPER, AND 3'/SECOND MAX GRAVITY. MAIN DRAIN PIPING SHALL CARRY 100% OF RECIRCULATION RATE AT A VELOCITY NOT TO EXCEED 6'/SECOND.
c. ALL ZERO DEPTH GUTTER, GUTTER AND INLET SUPPLY PIPING MUST BE LAID ON A GRADE SO IT WILL DRAIN TO THE SURGE TANK COMPLETELY BY GRAVITY. MAIN DRAIN LINE PIPING MUST BE LAID ON A GRADE SO; (A) ALL PIPING FROM BENEATH THE POOL TO THE ELEVATION CHANGE SHALL PITCH TO DRAIN TO THE POOL MAIN DRAIN SUMPS AND; (B) ALL PIPING FROM THE ELEVATION CHANGE TO THE SURGE TANK SHALL PITCH TO DRAIN TO THE SURGE TANK. IN ALL INSTANCES WHERE GRAVITY DRAINAGE IS NOT PROVIDED; THE CONTRACTOR SHALL INSTALL DRAIN VALVES SO THAT ALL LINES CAN BE DRAINED COMPLETELY TO SURGE TANK OR ANOTHER APPROVED LOCATION. DRAINAGE PLUGS SHALL BE PROVIDED IN THE PIPING SYSTEM TO ALLOW FOR DRAINING OF POOL PIPING. CONTRACTOR SHALL PROVIDE OPERATION AND DRAINING INSTRUCTIONS TO OWNER.
d. ALL ELEVATIONS TO BE FIELD VERIFIED TO ALLOW FOR PROPER PITCH AND DRAINAGE. PITCH - APPROXIMATE 1"/ 10'-0". POOL CONTRACTOR SHALL MAKE EVERY EFFORT TO CURTAIL THE USE OF FITTINGS TO REDUCE HEAD.
e. THIS DRAWING IS INTENDED FOR SCHEMATIC USE ONLY!! FINAL LOCATIONS SHALL BE FIELD VERIFIED WITH ALL OTHER TRADES, BY CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL WORK WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL AND STRUCTURAL DRAWINGS.

DRAINS

a. ALL DRAIN FITTINGS TO CARRY 100% OF RECIRCULATION RATE AT A VELOCITY NOT TO EXCEED 1.5'/SECOND THROUGH THE CLEAR AREA OF THE GRATE.
b. ALL DRAINS AND OUTLETS SHALL CONFORM WITH ANSI/APSP-16 2011 OR ANY SUCCESSOR STANDARD.
c. FILTER BACKWASH LINE, POOL DRAIN LINE, SURGE TANK DRAIN LINE, SURGE TANK OVERFLOW LINE & POOL UNDER DRAIN LINE TO DISCHARGE TO SEWER WITH MIN 6" AIR GAP.

GAUGES

a. PROVIDE COMPOUND GAUGES TO BE INSTALLED ON ALL PUMP SUCTION & DISCHARGE LINES.

VALVES

a. PROVIDE BACKWATER VALVES AND GEAR OPERATED SUBSURFACE BUTTERFLY VALVES WITH VALVE EXTENSIONS FOR ALL POOL AND SURGE TANK DRAIN LINES.
b. EACH VALVE SHALL HAVE A PERMANENT IDENTIFYING LABEL OR TAG ATTACHED TO IT. THE SEQUENCE OF OPERATION, BRIEFLY STATED, SHALL BE PROMINENTLY DISPLAYED.

FLOW METERS

a. FLOW METER SHALL BE PROVIDED IN THE FILTRATION PUMP DISCHARGE LINE AND IN EACH INLET RETURN LINE AS INDICATED ON THE DRAWINGS. FLOW METERS SHALL BE INSTALLED ON A STRAIGHT LENGTH OF PIPE WITHOUT ANY VALVE, ELBOW OR OTHER SOURCE OF TURBULENCE (UNINTERRUPTED FLOW). PROVIDE A MIN OF 10 PIPE DIA UPSTREAM AND 5 PIPE DIA DOWNSTREAM FROM THE FLOW METER OF UNINTERRUPTED FLOW OR INSTALL PER MANUFACTURER'S COMMENDATIONS.
b. MAIN FLOW METER SHALL BE USED TO MONITOR BACKWASH RATE.

FILTERS

a. FILTER SHALL BE PROVIDED WITH THE FOLLOWING APPROPRIATELY LOCATED ACCESSORIES: PRESSURE GAUGES, BACKWASH SIGHT GLASS ON WASTE DISCHARGE LINE, AN AIR RELIEF VALVE AT THE HIGH POINT OF THE FILTER AND A VALVED TANK DRAIN.

DRAIN SCHEDULE

DRAIN / GRATE ID	DETAIL #	DRAIN/GRATE MFGR SPECIFICATIONS						DESIGN DATA						
		MFGR & MODEL #	DIMENSIONS		OPEN AREA		MAX ALLOWABLE FLOW PER GRATE	CONNECTED PUMPS	SYSTEM TOTAL DESIGN FLOW	DRAIN / GRATE QTY	FLOW PER GRATE	VELOCITY	SYSTEM MAXIMUM	
			WIDTH	LENGTH	PER GRATE	TOTAL							FLOW PER GRATE	VELOCITY
			(ft)	(ft)	(in2)	(in2)	(gpm)		(gpm)		(gpm)	(fps)	(gpm)	(fps)
C-PF1	PL301/1	DALDORADO: DalMAX-SG-183625	1.5	3.0	401	802	1984	P2C	1000	2	500	0.40	739	0.59
D-PF1	PL301/1	DALDORADO: DalMAX-SG-242430	2.0	2.0	357	1428	1734	P2D	449	4	112	0.10	198	0.18
NOTE: THE SYSTEM MAXIMUM FLOW RATE AND VELOCITY HAS BEEN DETERMINED BY USING THE FLOW RATE AT THE END OF THE PUMP MANUFACTURER'S PUMP CURVE.														

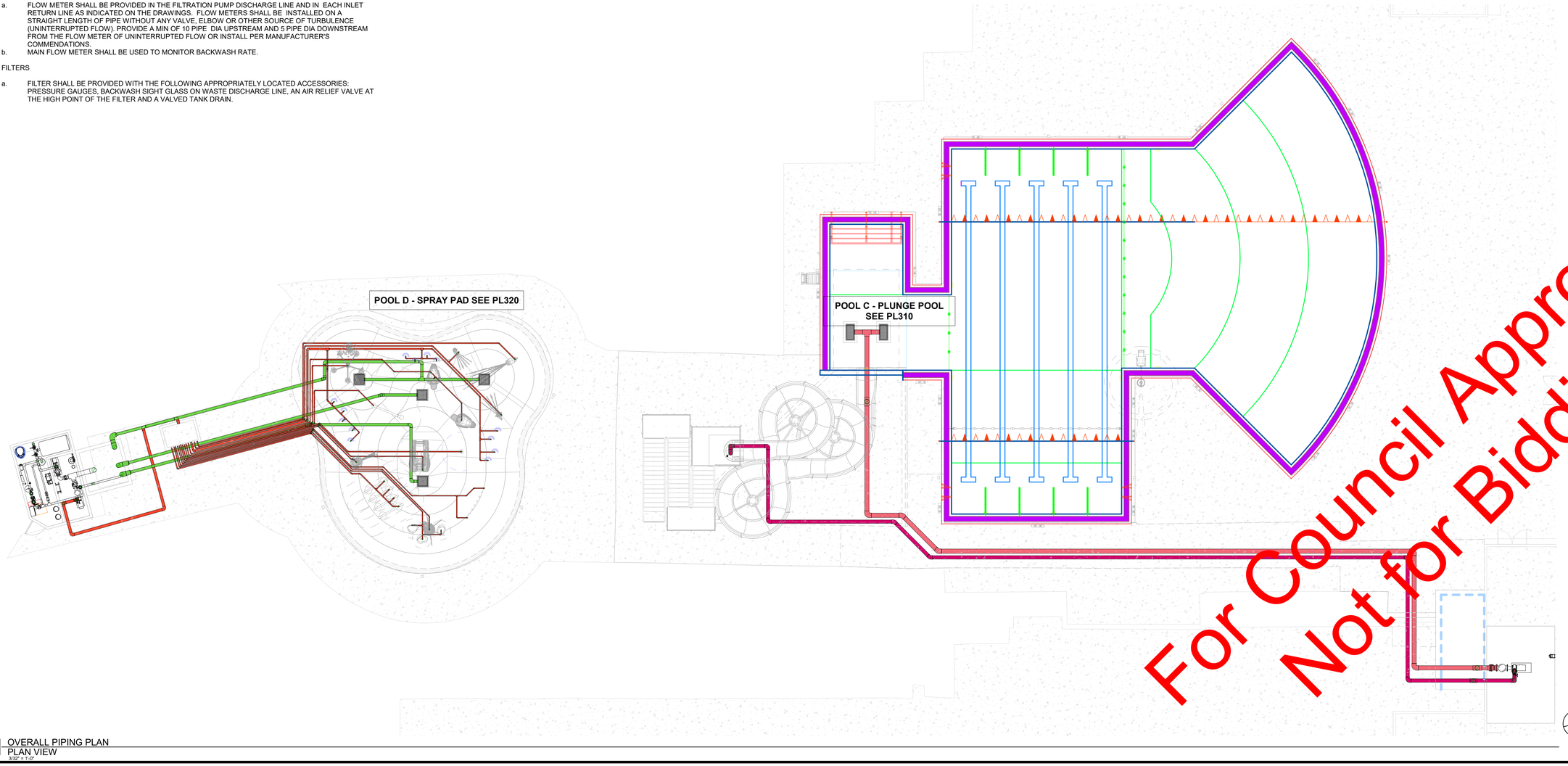
SCHEDULE - POOL FIXTURES

POOL ID	EQUIPMENT ID	QTY.	ASSEMBLY CODE	FIXTURE	MANUFACTURER	DESCRIPTION
C	1	2	PF	DalMax-SG-183625	DALDORADO	SEE DRAIN SCHEDULE
D	2	4	PF	DalMAX-SG-242430	DALDORADO	SEE DRAIN SCHEDULE

POOL CONTRACTOR PIPING PLAN NOTES

THE FOLLOWING NOTES APPLY TO ALL POOL/SLIDE PIPING PLANS:

1. THE PIPING LAYOUTS ON THIS DRAWING ARE SCHEMATIC AND FOR REFERENCE ONLY. PIPING AS SHOWN AS SPREAD OUT FOR CLARITY. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING FINAL PIPE ROUTING AND ELEVATIONS.
2. REDUCE THE USE OF FITTINGS AND LONG PIPE RUNS TO MINIMIZE HEAD LOSS IN THE SYSTEM.
3. ALL PIPING SHALL BE INSTALLED IN A PIPE TRENCH WITH BEDDING AND COVER MATERIALS PER SPECIFICATIONS. PIPING MAY BE STACKED IN THE PIPE TRENCH.
4. ARROWS DENOTE DIRECTION OF FLOW.
5. REFER TO ALL DISCIPLINES DOCUMENTATION AND COORDINATE ALL PIPING AND EMBEDMENTS WITH AFFECTED TRADES.
6. ALL GRAVITY PIPING SHALL BE INSTALLED AT A MINIMUM SLOPE OF 1" DROP PER 10' LENGTH. ALL OUTDOOR PIPING SHALL BE INSTALLED WITH A SLOPE TO ALLOW COMPLETE DRAINING. PROVIDE WINTERIZING/DRAINING INSTRUCTIONS AND SCHEMATICS TO OWNER.
7. CONTRACTOR SHALL USE SWING JOINTS OR OTHER MEANS AND METHODS AS REQUIRED TO PROVIDE POOL INLET FITTINGS FLUSH AND PERPENDICULAR WITH THE POOL FLOOR AND AS REQUIRED FOR PROPER SLOPE TO DRAIN FOR WINTERIZATION.



1 OVERALL PIPING PLAN
PL300 PLAN VIEW
3/32" = 1'-0"

For Council Approval
Not for Bidding

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JEFFREY C. KATZ C-20536 REGISTERED ARCHITECT STATE OF CALIFORNIA 8/30/2023

8/20/2021

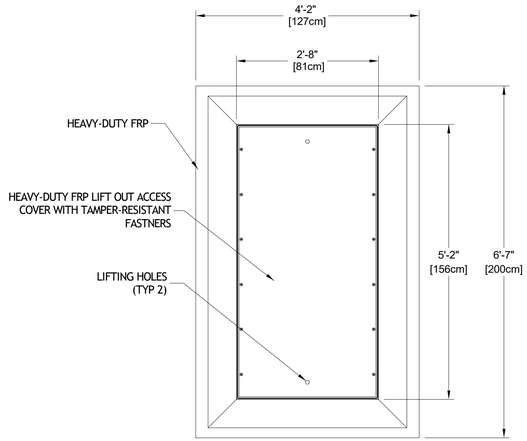
Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	KMD

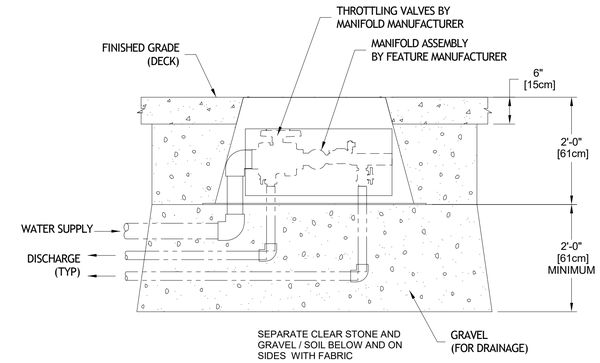
Sheet Title:

OVERALL PIPING PLAN

SHEET NUMBER:

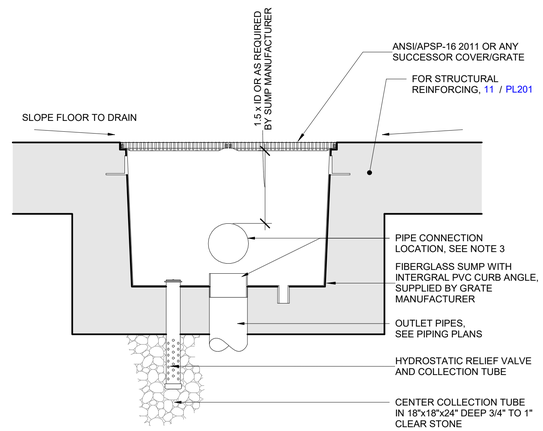
PL300





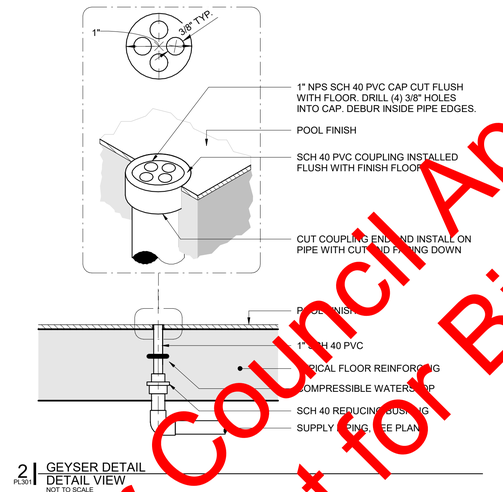
NOTE: VALVE VAULT OPEN ON BOTTOM TO ALLOW FOR DRAINAGE.

3 | PL301 VALVE VAULT DETAIL VIEW
NOT TO SCALE



NOTES:
1. SUMP AND GRATE COVER SHALL CONFORM WITH CURRENT ANSI/APSP-16 STANDARD. VERIFY GRATE DIMENSIONS AND OUTLET REQUIREMENTS WITH GRATE/SUMP MANUFACTURER PRIOR TO SUBMITTING SHOP DRAWINGS.
2. THE FIBERGLASS SUMP SHALL BE SUPPLIED WITH THE GRATE AS INDICATED IN THE DRAIN SCH. SUMP MATERIALS SHALL MEET OR EXCEED THE SCHEDULED MANUFACTURER'S SPECIFICATION: 8 OZ. FIBERGLASS MAT WITH MARINE GRADE WHITE GELCOAT AND 2" MINIMUM FRP WATERSTOP AROUND THE OUTSIDE PERIMETER.
3. AT CONTRACTOR'S OPTION, SUMP MAY HAVE BOTTOM OR SIDE OUTLET PIPE CONNECTION.
4. CONTRACTOR SHALL INCLUDE ALL POOL DRAIN/WINTERIZATION PIPE CONNECTIONS AS SHOWN ON PIPING DRAWINGS.
5. ALL SUMPS REQUIRE A MINIMUM OF ONE HYDROSTATIC RELIEF PORT AND 2" VALVE. (HAYWARD MODEL SP1056) WITH COLLECTION TUBE PER SUMP, UNLESS OTHERWISE NOTED. VERTICALLY INSTALLED SUMPS, ELEVATED POOLS AND/OR POOLS CONSTRUCTED ON A VOID FORM DO NOT REQUIRE A HYDROSTATIC RELIEF VALVE SYSTEM. UNUSED HYDROSTATIC PORTS SHALL BE PLUGGED.
6. SEE DRAIN SCHEDULE AND PIPE PLANS.
7. SECURE ALL GRATING TO DRAIN SUMP WITH CORROSION RESISTANT FASTENERS IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS. FASTENERS SHALL NOT BE REMOVABLE WITHOUT THE USE OF A TOOL AND SHALL MEET ALL CURRENT ANSI/APSP/ICC-16 REQUIREMENTS. INSPECT ALL GRATING AND EACH FASTENER TO ASSURE THEY ARE IN PLACE AND PROPERLY SECURED PRIOR TO OPENING THE POOL FOR PUBLIC USE.
8. PROTECT DRAIN FROM EXTERNAL PRESSURE DURING INSTALLATION.
9. PROVIDE A REMOVABLE PLYWOOD AND A REUSABLE 1/4" PVC TOP COVER PROTECTOR WITH STAINLESS STEEL HARDWARE TO SHIELD THE INTERNALS OF EACH DRAIN SUMP FROM DEBRIS DURING CONSTRUCTION AND FOR FUTURE OWNER USE DURING WINTERIZATION AND/OR SHUTDOWN.
10. SUPPLY EACH SUMP CONNECTION PORT WITH A THREADED OR FLANGED ADAPTOR CONNECTION INSIDE THE SUMP. INCLUDE CORRESPONDING THREADED/FLANGED ADAPTOR PLUGS/FITTINGS AND STAINLESS STEEL HARDWARE FOR THE PURPOSES OF 50 PSI PRESSURE TESTING AND FUTURE WINTERIZATION AND/OR SHUTDOWN.

1 | PL301 MAIN DRAIN DETAIL VIEW
NOT TO SCALE



2 | PL301 GEYSER DETAIL DETAIL VIEW
NOT TO SCALE

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Not for Bidding

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT C-20538 4/30/2023 STATE OF CALIFORNIA

5/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	KMD

Sheet Title:

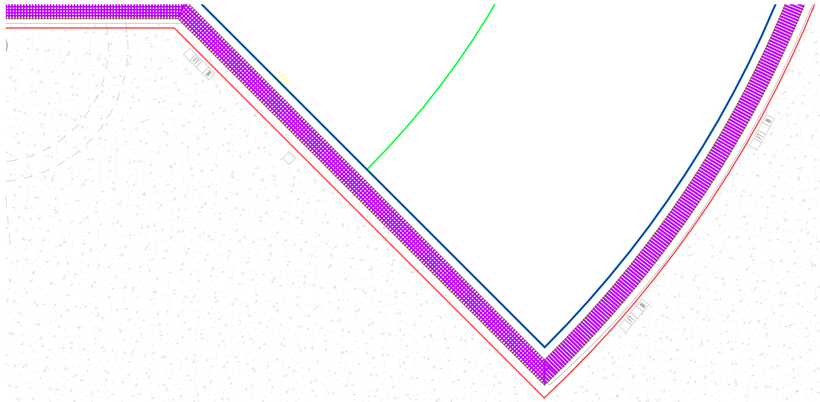
GENERAL PIPING DETAILS

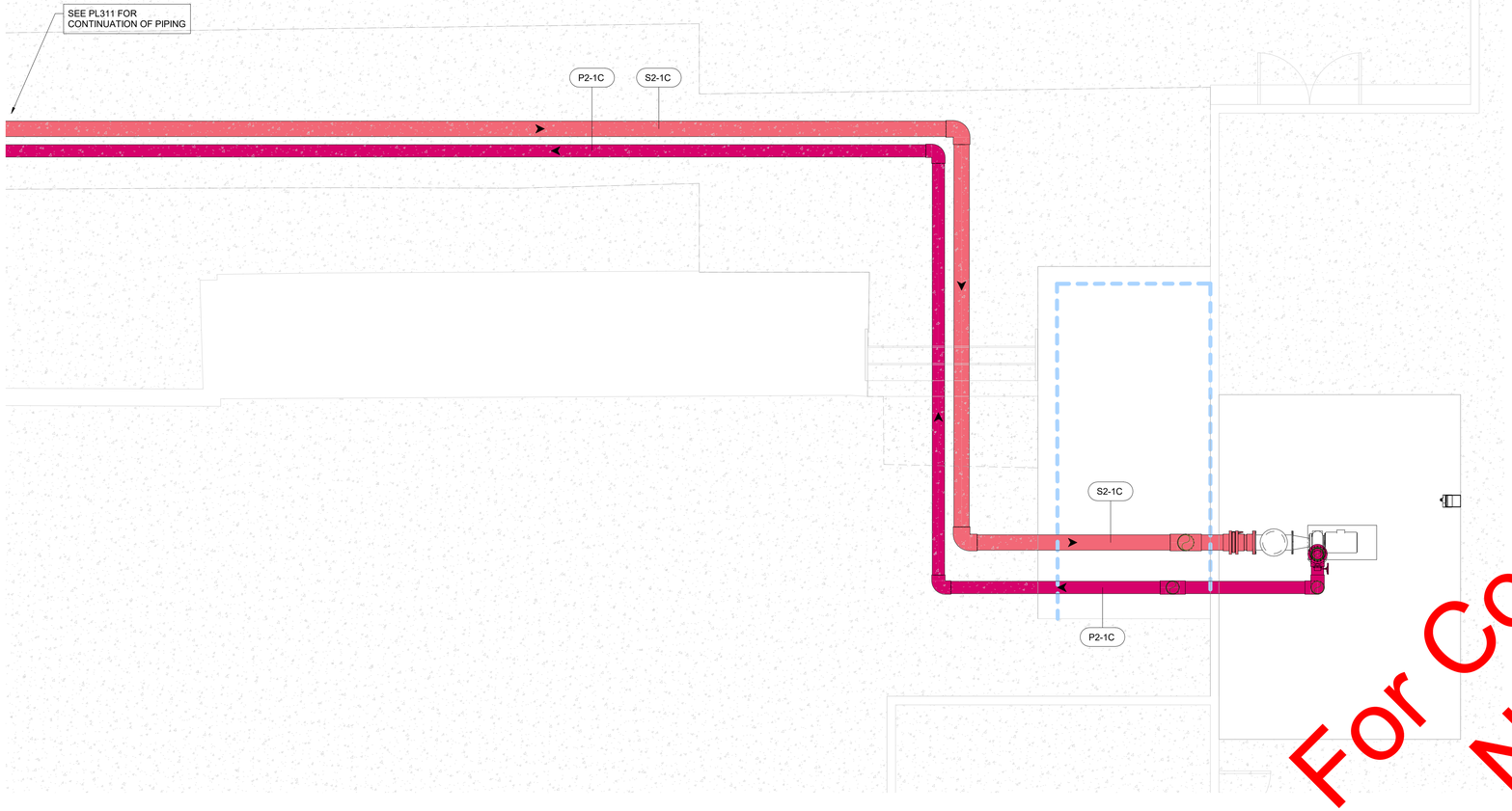
SHEET NUMBER:

PL301

POOL C - SLIDE PIPE SCHEDULE

PIPE ID	TYPE	NPS (in)	FLOW (gpm)	VELOCITY (fps)	DESCRIPTION
S2-1C	PVC SCH 80	10	1,000	4.5	SLIDE PUMP SUCTION - MAIN DRAIN
-	-	-	-	-	-
P2-1C	PVC SCH 80	8	1,000	7.1	SLIDE SUPPLY





1 | PL310 POOL C - PLUNGE POOL PIPING PLAN
PLAN VIEW
1/4" = 1'-0"

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Not for Bidding

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3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT JEFFREY KATZ C-20538 4/30/2023 STATE OF CALIFORNIA

5/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	KMD

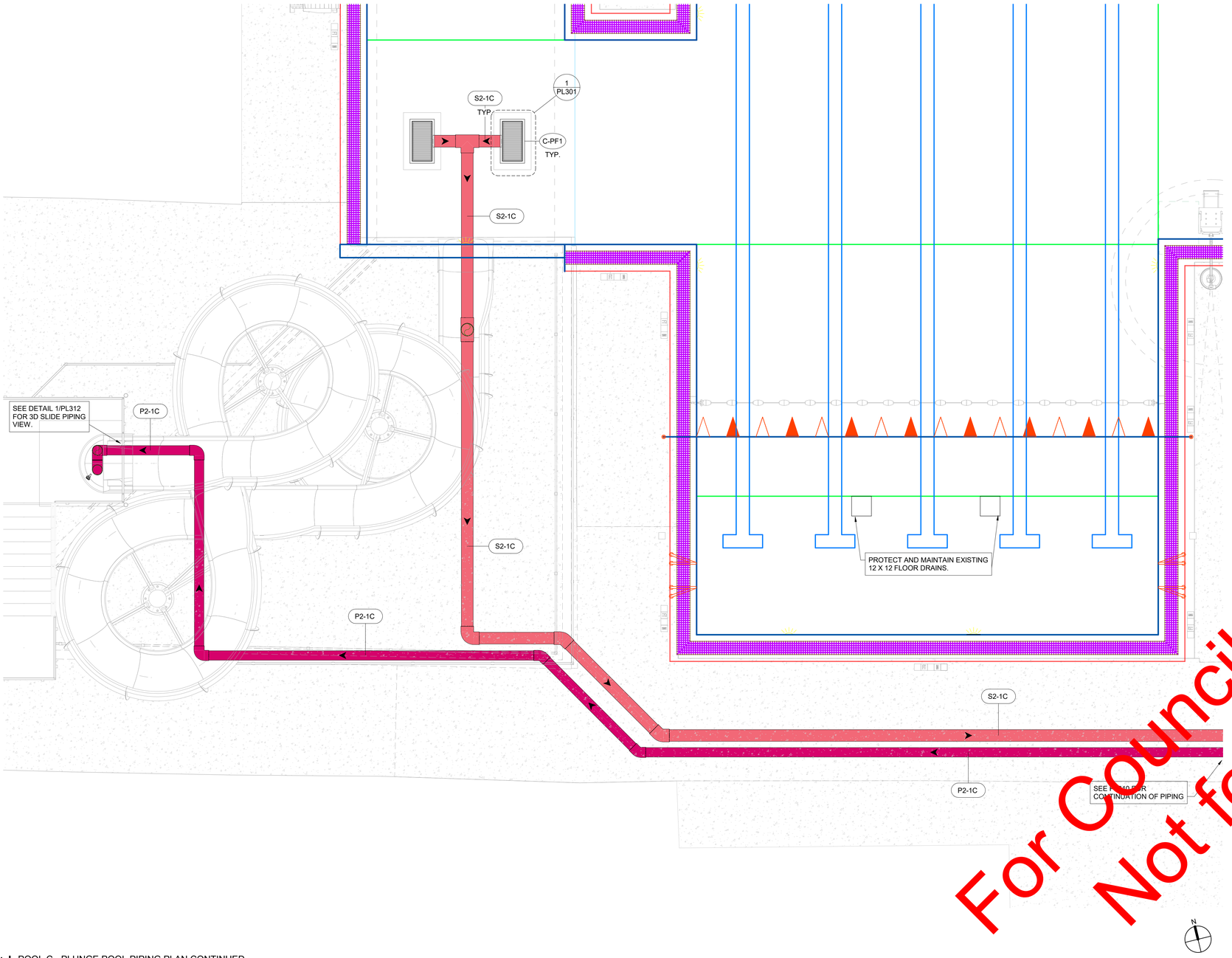
Sheet Title:

POOL C - PIPING PLAN

SHEET NUMBER:

PL310

POOL C - SLIDE PIPE SCHEDULE					
PIPE ID	TYPE	NPS	FLOW	VELOCITY	DESCRIPTION
		(in)	(gpm)	(fps)	
S2-1C	PVC SCH 80	10	1,000	4.5	SLIDE PUMP SUCTION - MAIN DRAIN
-	-	-	-	-	-
P2-1C	PVC SCH 80	8	1,000	7.1	SLIDE SUPPLY



1 | PL311 POOL C - PLUNGE POOL PIPING PLAN CONTINUED
PLAN VIEW
1/4" = 1'-0"

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CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
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REGISTERED ARCHITECT JEFFREY KATZ C-30538 4/30/2023 RENEWAL DATE STATE OF CALIFORNIA

5/20/2021

Project Number:	19285
Approved By:	Approver
Checked By:	Checker
Drawn By:	Author

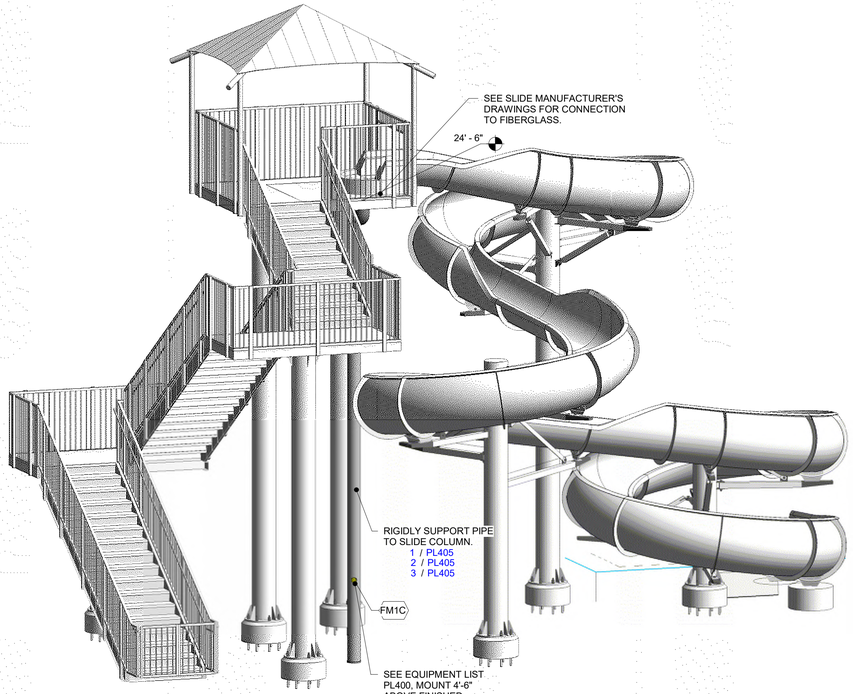
Sheet Title:

POOL C - PIPING PLAN

SHEET NUMBER:

PL311

For Council Approval
Not for Bidding



1 PL312 3D VIEW - SLIDE
PLAN VIEW

For Council Approval
Not for Bidding

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CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT
JEFFREY KATZ
C-20538
Renewal Date
STATE OF CALIFORNIA
8/30/2023
8/20/2021

Project Number: 19285
Approved By: Approver
Checked By: Checker
Drawn By: Author

Sheet Title:

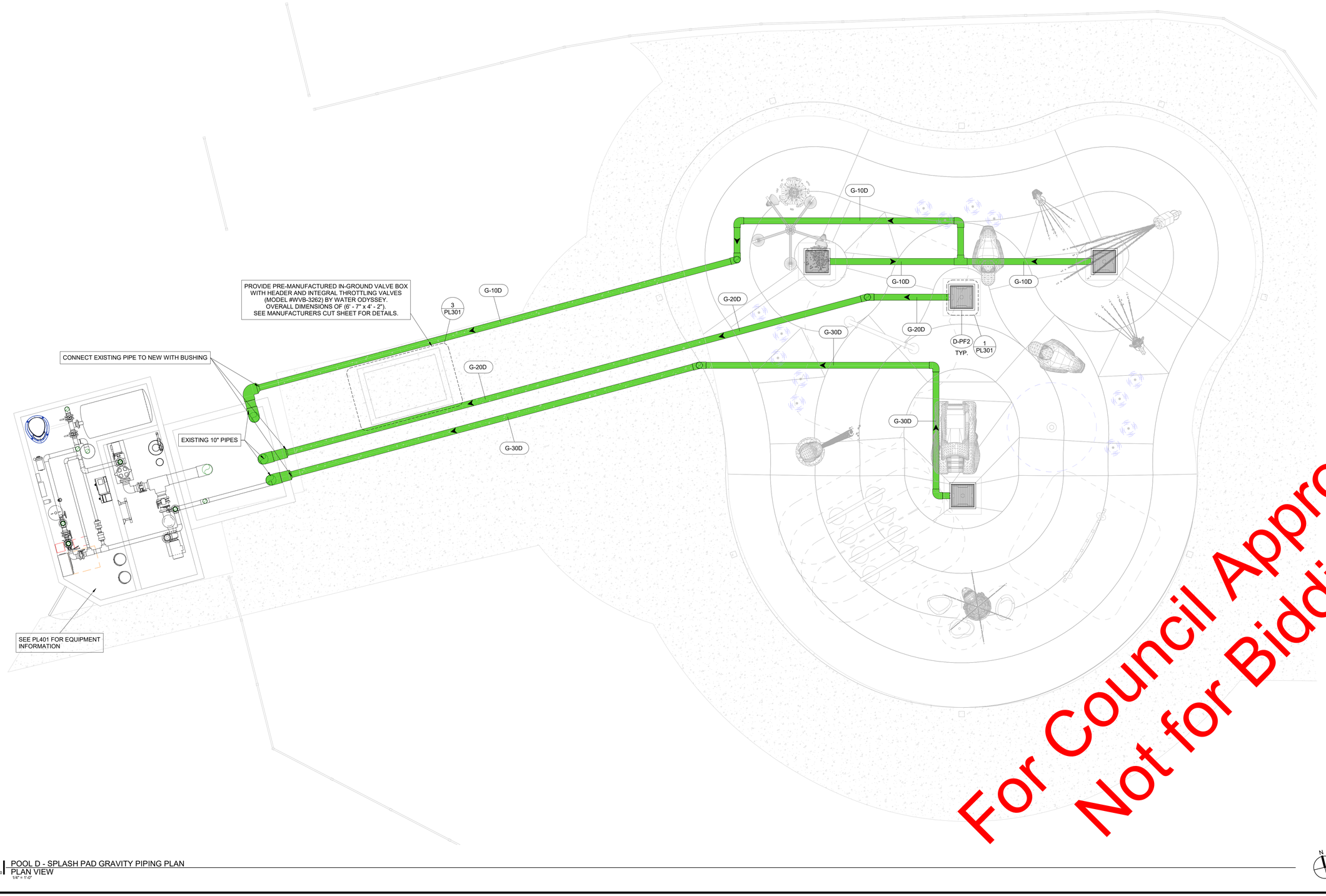
3D - PIPING VIEWS

SHEET NUMBER:

PL312

POOL D - SPLASH PAD PIPE SCHEDULE

PIPE ID	TYPE	NPS	FLOW	VELOCITY	DESCRIPTION
		(in)	(gpm)	(fps)	
G-10D	PVC SCH 40	6	150	1.7	SPLASHPAD DRAIN
-	-	-	-	-	-
G-20D	PVC SCH 40	6	150	1.7	SPLASHPAD DRAIN
-	-	-	-	-	-
G-30D	PVC SCH 40	6	150	1.7	SPLASHPAD DRAIN



1 PL320 POOL D - SPLASH PAD GRAVITY PIPING PLAN
PLAN VIEW
1/4" = 1'-0"

For Council Approval
Not for Bidding

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT C-20535 11/30/2023 Renewal Date STATE OF CALIFORNIA

8/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	KMD

Sheet Title:

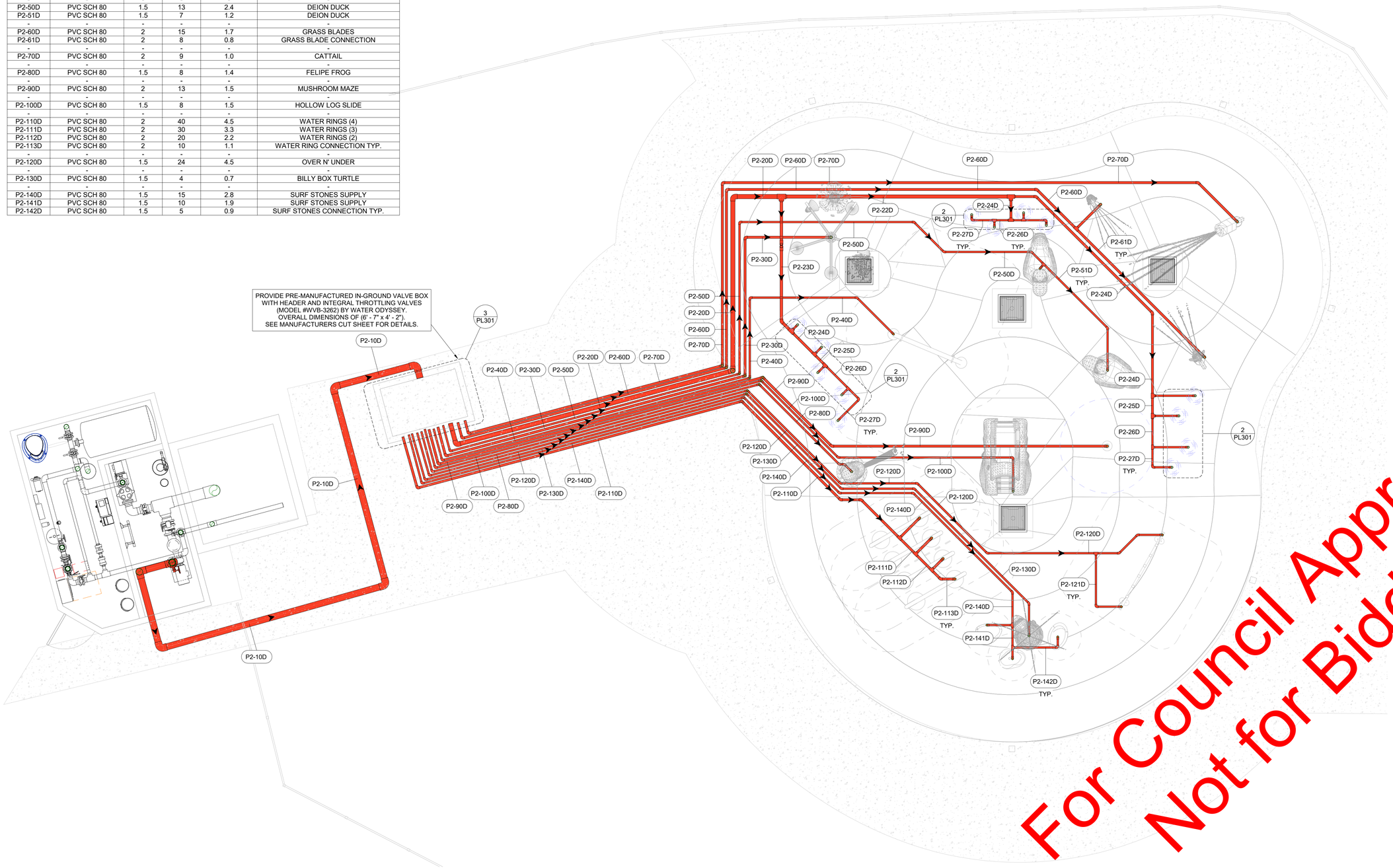
POOL D - SPLASH PAD GRAVITY PIPING PLAN

SHEET NUMBER:

PL320

POOL D - SPLASH PAD PIPE SCHEDULE

PIPE ID	TYPE	NPS	FLOW	VELOCITY	DESCRIPTION
		(in)	(gpm)	(fps)	
P2-10D	PVC SCH 80	6	449	5.6	WATER FEATURE SUPPLY
-	-	-	-	-	-
P2-20D	PVC SCH 80	4	195	5.6	GEYSERS SUPPLY
P2-22D	PVC SCH 80	3	120	6.0	GEYSERS SUPPLY
P2-23D	PVC SCH 80	2.5	75	5.8	GEYSERS SUPPLY
P2-24D	PVC SCH 80	2	60	6.7	GEYSERS SUPPLY
P2-25D	PVC SCH 80	2	45	5.0	GEYSERS SUPPLY
P2-26D	PVC SCH 80	1.5	30	5.6	GEYSERS SUPPLY
P2-27D	PVC SCH 80	1.5	15	2.8	GEYSER CONNECTION TYP.
-	-	-	-	-	-
P2-30D	PVC SCH 80	2	15	1.7	FILL N' SPILL
-	-	-	-	-	-
P2-40D	PVC SCH 80	2	45	5.0	ROLL A RAIL
-	-	-	-	-	-
P2-50D	PVC SCH 80	1.5	13	2.4	DEION DUCK
P2-51D	PVC SCH 80	1.5	7	1.2	DEION DUCK
-	-	-	-	-	-
P2-60D	PVC SCH 80	2	15	1.7	GRASS BLADES
P2-61D	PVC SCH 80	2	8	0.8	GRASS BLADE CONNECTION
-	-	-	-	-	-
P2-70D	PVC SCH 80	2	9	1.0	CATTAIL
-	-	-	-	-	-
P2-80D	PVC SCH 80	1.5	8	1.4	FELIPE FROG
-	-	-	-	-	-
P2-90D	PVC SCH 80	2	13	1.5	MUSHROOM MAZE
-	-	-	-	-	-
P2-100D	PVC SCH 80	1.5	8	1.5	HOLLOW LOG SLIDE
-	-	-	-	-	-
P2-110D	PVC SCH 80	2	40	4.5	WATER RINGS (4)
P2-111D	PVC SCH 80	2	30	3.3	WATER RINGS (3)
P2-112D	PVC SCH 80	2	20	2.2	WATER RINGS (2)
P2-113D	PVC SCH 80	2	10	1.1	WATER RING CONNECTION TYP.
-	-	-	-	-	-
P2-120D	PVC SCH 80	1.5	24	4.5	OVER N' UNDER
-	-	-	-	-	-
P2-130D	PVC SCH 80	1.5	4	0.7	BILLY BOX TURTLE
-	-	-	-	-	-
P2-140D	PVC SCH 80	1.5	15	2.8	SURF STONES SUPPLY
P2-141D	PVC SCH 80	1.5	10	1.9	SURF STONES SUPPLY
P2-142D	PVC SCH 80	1.5	5	0.9	SURF STONES CONNECTION TYP.



1 PL321 POOL D - SPLASH PAD ACTIVITY PIPING PLAN
PLAN VIEW
1/4" = 1'-0"

For Council Approval
Not for Bidding

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT C-30538 Professional Design STATE OF CALIFORNIA
4/30/2023

5/20/2021

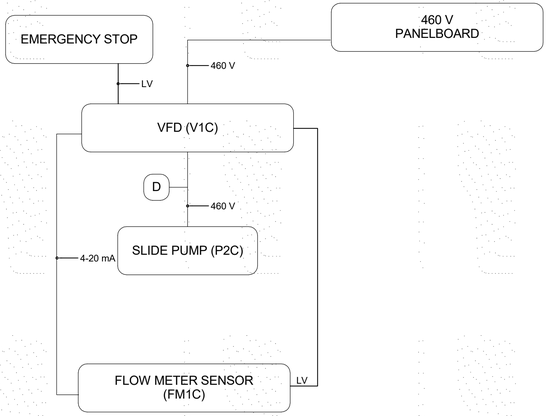
Project Number:	19285
Approved By:	Approver
Checked By:	Checker
Drawn By:	Author

Sheet Title:

POOL D - SPLASH PAD ACTIVITY PIPING PLAN

SHEET NUMBER:

PL321



FLOW METER:

- WHEN FLOW METER POWER SUPPLY IS ENERGIZED, THE FLOW METER SENSOR SHALL PROVIDE THE FLOW READOUT IN GPM.
- THE FLOW METER SHALL PROVIDE FLOW DATA TO THE INDICATED VFD AND CONTROL SPEED OF THE VFD BASED ON FLOW.

NOTES:

1. LOW VOLTAGE <=24V. ALL LOW VOLTAGE WIRING IS SUPPLIED, INSTALLED AND CONNECTED BY THE POOL CONTRACTOR.
2. IF CONDUIT IS REQUIRED BY CODE FOR LOW VOLTAGE WIRING, THEN THIS MUST BE SPECIFIED BY THE ELECTRICAL CONSULTANT AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
3. IF CODE REQUIRES THAT LOW VOLTAGE WIRING IS INSTALLED BY A LICENSED ELECTRICAL CONTRACTOR THEN THIS MUST BE SPECIFIED BY THE ELECTRICAL CONSULTANT.
4. CONDUIT, WIRE SIZES, AND SHIELDING REQUIREMENTS SHALL BE DETERMINED & SPECIFIED BY THE ELECTRICAL CONSULTANT AS NEEDED PER LOCAL BUILDING AND ELECTRICAL CODE REQUIREMENTS.
5. THIS SCHEMATIC DRAWING IS NOT AN ELECTRICAL INSTALLATION DIAGRAM AND IS FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE POOL CONTRACTOR TO COORDINATE ALL INTERLOCKS WITH THE ELECTRICAL CONTRACTOR. THE POOL CONTRACTOR IS RESPONSIBLE TO PROVIDE AN OPERATING SYSTEM PER THE SEQUENCE OF OPERATIONS.

LEGEND:

- LOW VOLTAGE
- LINE VOLTAGE
- DATA - CONTRACTOR TO COORDINATE WITH EQUIPMENT REQUIREMENTS
- (D) DISCONNECT - LOCATE AT EQUIPMENT PER CODE REQUIREMENTS

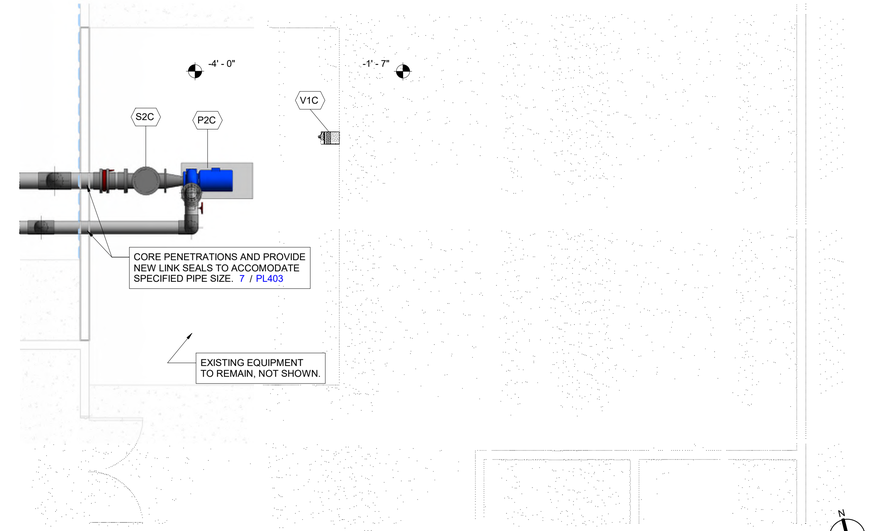
3 | PL400 POOL C - ELECTRICAL SCHEMATIC
PLAN VIEW
12" = 1'-0"

POOL C - LEISURE POOL - EQUIPMENT SCHEDULE

ID	ITEM	QTY.	MANUFACTURER	BASIS OF DESIGN
P2C	PUMP	1	AURORA PUMP	3801, 5 x 6 x 11 , 40 HP, 460 VOLT, 3 PHASE, 1800 RPM, 1,000 GPM, @ 90' TDH, TEFC MOTOR, END SUCTION, CLOSE COUPLED, 316 STAINLESS STEEL IMPELLOR AND FITTED (SF), EPOXY COATED VOLUTE, APPOX. PUMP WEIGHT: 911 LBS
S2C	STRAINER	1	NEPTUNE BENSON, INC OR MER-MADE FILTER, INC.	10" STRAIGHT BASKET STRAINER, FIBERGLASS BODY, TRANSPARENT ACRYLIC LID, STAINLESS STEEL BASKET. PROVIDE WITH EXTRA STAINLESS STEEL BASKET AND ECCENTRIC REDUCING PRECOAT TEE.
FM1C	FLOW METER	1	SIGNET	2551 MAG METER, INSERTION STYLE MAGNETIC FLOW SENSOR, MODEL #3-2551-P1-12. FLOW TO BE DISPLAYED ON VFD. PROVIDE WITH IRON STRAP-ON SADDLE MODEL NUMBER IR8S080 (8")
V1C	VFD	1	ABB	ABB MODEL ACH580-PDR-052A-4, 40 HP, 480 V, 3 PH INPUT. PROVIDE WITH UL TYPE 12 ENCLOSURE WITH INPUT DISCONNECT AND FUSES ONLY.

MECHANCIAL PLAN NOTES:
DIVISION 13 CONTRACTOR NOTES:

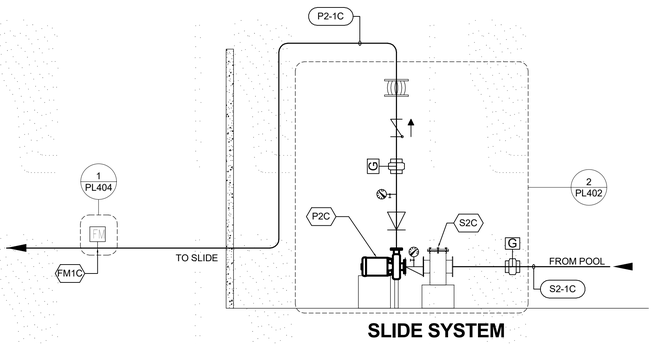
1. VERIFY EQUIPMENT PAD HEIGHT REQUIREMENTS FROM MANUFACTURER AND PROVIDE SHOP DRAWINGS TO POOL ENGINEER.
2. VERIFY ALL OPENINGS, PENETRATIONS, AND ELEVATIONS AND PROVIDE SHOP DRAWINGS TO POOL ENGINEER.
3. COORDINATE ALL PIPING AND EMBEDMENTS WITH AFFECTED TRADES.
4. REFER TO STRUCTURAL DRAWINGS FOR FUTURE CORED OPENINGS.
5. REFER TO ARCHITECTURAL PLANS FOR ACTUAL ROOM DIMENSIONS AND FINISHED FLOOR ELEVATIONS.
6. REFER TO PL200-2 FOR REINFORCEMENT AT PIPE PENETRATIONS.
7. SUPPORT PIPES PER PL405-1 THRU 7.
8. ALL SUPPORTS, BRACING, FASTENERS AND HARDWARE IN THE SURGE TANK(S) SHALL BE STAINLESS STEEL.



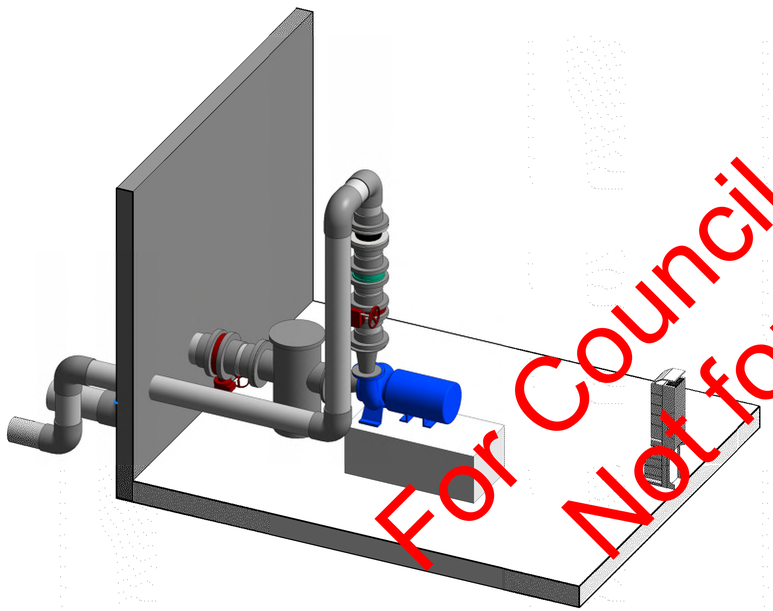
1 | PL400 POOL C - MECHANICAL EQUIPMENT ROOM
PLAN VIEW
1/4" = 1'-0"

POOL C - SLIDE PIPE SCHEDULE

PIPE ID	TYPE	NPS (in)	FLOW (gpm)	VELOCITY (fps)	DESCRIPTION
S2-1C	PVC SCH 80	10	1,000	4.5	SLIDE PUMP SUCTION - MAIN DRAIN
-	-	-	-	-	-
P2-1C	PVC SCH 80	8	1,000	7.1	SLIDE SUPPLY



4 | PL400 POOL C - MECHANICAL SCHEMATIC
DETAIL VIEW
NOT TO SCALE



2 | PL400 POOL C - SLIDE MECHANICAL ROOM
DETAIL VIEW
NOT TO SCALE

For Council Approval
Not for Bidding

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CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT JEFFREY R. KATZ C-20538 4/30/2023 Renewal Date STATE OF CALIFORNIA

5/20/2021

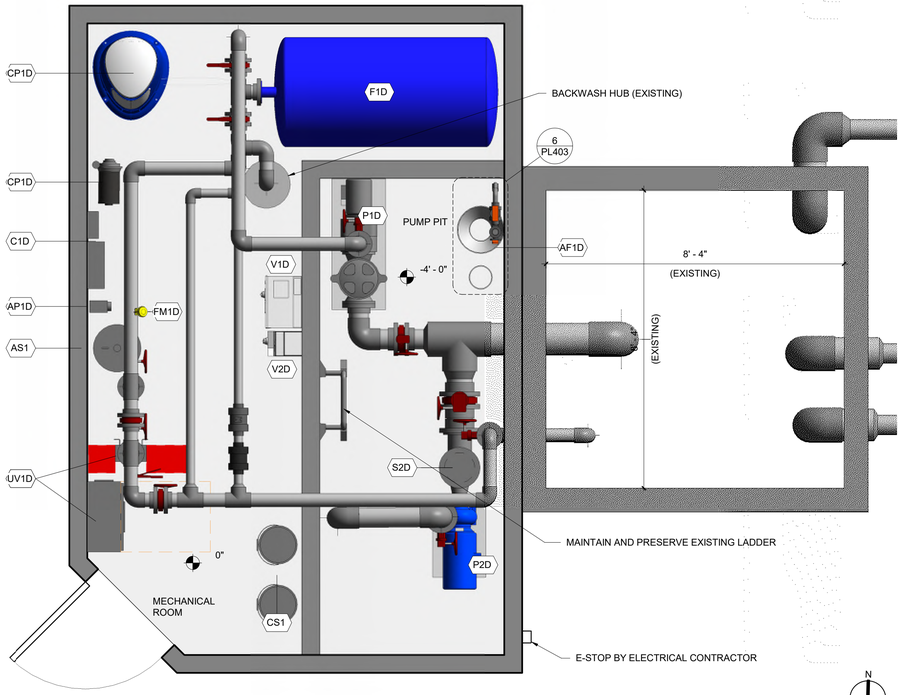
Project Number: 19285
Approved By: JRB
Checked By: JRB
Drawn By: KMD

Sheet Title:

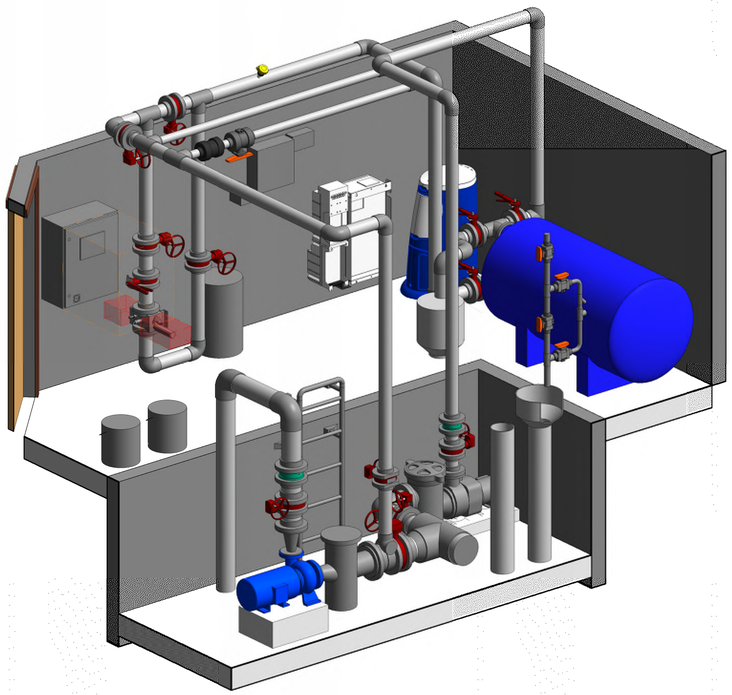
POOL C - MECHANICAL EQUIPMENT PLAN

SHEET NUMBER:

PL400



1 | POL1 POOL D - MECHANICAL EQUIPMENT ROOM PLAN VIEW
1/2" = 1'-0"



2 | POL1 POOL D - SPRAY PAD MECHANICAL ROOM PLAN VIEW

SEISMIC DESIGN CRITERIA

SEISMIC DESIGN CATEGORY D

Ss = 0.451
S1 = 0.225
Sms = 0.649
Sds = 0.433

MECHANCIAL PLAN NOTES:
DIVISION 13 CONTRACTOR NOTES:

1. VERIFY EQUIPMENT PAD HEIGHT REQUIREMENTS FROM MANUFACTURER AND PROVIDE SHOP DRAWINGS TO POOL ENGINEER.
2. VERIFY ALL OPENINGS, PENETRATIONS, AND ELEVATIONS AND PROVIDE SHOP DRAWINGS TO POOL ENGINEER.
3. COORDINATE ALL PIPING AND EMBEDMENTS WITH AFFECTED TRADES.
4. REFER TO STRUCTURAL DRAWINGS FOR FUTURE CORED OPENINGS.
5. REFER TO ARCHITECTURAL PLANS FOR ACTUAL ROOM DIMENSIONS AND FINISHED FLOOR ELEVATIONS.
6. REFER TO PL200-2 FOR REINFORCEMENT AT PIPE PENETRATIONS.
7. SUPPORT PIPES PER PL405-1 THRU 7.
8. ALL SUPPORTS, BRACING, FASTENERS AND HARDWARE IN THE SURGE TANK(S) SHALL BE STAINLESS STEEL.

POOL D-SPLASH PAD DATA

DESCRIPTION	QTY	UNITS
SPLASH PAD PERIMETER	177' 10"	FEET
WET SLAB SURFACE AREA	2,241	SQUARE FEET
WATER FEATURE STORAGE VOLUME	2,513	GALLONS
SURGE TANK OPERATING VOLUME	1,676	GALLONS
TOTAL VOLUME OF WATER	4,189	GALLONS
CIRCULATION RATE	220	GPM
TURNOVER/VOLUME/FLOW	19 MIN.	4,189 GAL. 220 GPM
FILTRATION RATE	12.74	GPM/FT²
BACKWASH RATE	260	GPM

POOL D - SPRAY PAD - EQUIPMENT SCHEDULE

ID	ITEM	QTY.	MANUFACTURER	BASIS OF DESIGN
P1D	FILTRATION PUMP 1 / PL402	1	PENTAIR PUMP	EQ SERIES, EQKT500, 220 GPM @ 69' TDH, 5 HP, 460 VOLT, 3 PHASE, 60HZ, 3450 RPM, TEFC MOTOR, END SUCTION, SELF PRIMING, CLOSE COUPLED, PROVIDE WITH INTEGRAL STRAINER AND EXTRA STRAINER BASKET, APPOX. PUMP WEIGHT: 127 LBS
P2D	ACTIVITY PUMP 3 / PL402	1	AURORA PUMP	3801, 3x4x9.5 , 20 HP, 460 VOLT, 3 PHASE, 1800 RPM, 449 GPM @ 80' TDH, TEFC MOTOR, END SUCTION, CLOSE COUPLED, 316 STAINLESS STEEL IMPELLOR AND FITTED (SF), EPOXY COATED VOLUTE, APPOX. PUMP WEIGHT: 431 LBS
S2D	STRAINER	1	NEPTUNE BENSON, INC.	8x4 ECCENTRIC REDUCING BASKET STRAINER, FIBERGLASS BODY, TRANSPARENT ACRYLIC LID, STAINLESS STEEL BASKET. PROVIDE WITH EXTRA STAINLESS STEEL BASKET.
F1D	FILTER	1	NEPTUNE BENSON, INC.	SHFFG SERIES, #3660SHFFG, 36" DIAMETER HORIZONTAL FIBERGLASS TANK, 17.3 SQUARE FEET OF TOTAL SURFACE AREA, 12.74 GPM/SF (FILTER MEDIA RATE), PROVIDE WITH 3-WAY VALVE NEST AND ELECTRONIC ACTUATORS, FASTEN TO CONCRETE SLAB WITH A MINIMUM OF (4) ¾" DIAM. HILTI KWIK BOLT TZ ANCHORS (ONE ANCHOR AT EACH CORNER OF UNIT) WITH 3-1/4" MINIMUM EMBEDMENT
UV1D	U.V. CHAMBER 8 / PL402	1	EVOQUA	MODEL WF-115-4-N, 4" CONNECTIONS, 208V, 60 Hz, 1 PHASE, 1.5 kW POWER. PROVIDE WITH 4" ETS "EZ" STRAINER VALVE. USE CONCENTRIC REDUCERS TO MATCH THE "EZ" STRAINER TO THE PIPE SIZE OF THE FILTRATION MAIN AND UV UNIT.
C1D	CHEMICAL CONTROLLER 2 / PL403	1	BECS TECHNOLOGY	BECSys5 CONTROLLER; WITH CONTINUOUS MONITORING, SEE CHEMICAL CONTROLLER SPECIFICATION FOR OPTIONS.
CP1D	CHLORINATOR 4 / PL403	1	ARCH CHEMICALS	PULSAR PRECISION, 100 POUND CAPACITY, 5 TO 192 LBS/DAY OUTPUT, PROVIDE WITH ONE 1 HP RECIRCULATION PUMP, SOLENOID VALVE, AND CONNECTIONS FOR STANDARD INSTALLATION, USE PULSAR PLUS BRIQUETTES (CALCIUM HYPOCHLORITE) FOR DISINFECTANT, PROVIDE WITH EXTRA TABLET STRAINER, FASTEN TO CONCRETE SLAB WITH A MINIMUM OF (4) ¾" DIAM. HILTI KWIK BOLT TZ ANCHORS (ONE PER CORNER OF UNIT) WITH 2" MINIMUM EMBEDMENT
CS1	CHLORINE CHEMICAL STORAGE	1	CHEMICAL SUPPLIER	BUCKETS OF CALCIUM HYPOCHLORITE PROVIDED BY OWNER'S CHEMICAL SUPPLIER
AP1D	ACID CHEMICAL FEED PUMP 5 / PL403	1	STENNER	SERIES M1, #85M2, 0.8 TO 17 GALLONS PER DAY OUTPUT, 120 VOLTS, USE MURIATIC ACID FOR pH CONTROL. PROVIDE WITH WEIGHTED FOOT STRAINER.
AS1	ACID CHEMICAL STORAGE	1	CHEMICAL SUPPLIER	15 GALLON CARBOYS PROVIDED BY OWNER'S CHEMICAL SUPPLIER, SEISMIC FASTENING BY OWNER. REFER TO 1/400 FOR SEISMIC DESIGN CRITERIA
AF1D	WATER LEVEL CONTROL 6 / PL403	1	BECS TECHNOLOGY	BECSys PLX POINT SWITCH WITH SUBMERSIBLE CABLE; MODEL BECSysPLX-AS. PROVIDE WITH ASCO 8210 1.5" SLOW CLOSING SOLENOID VALVE, BRASS BODY, BUNA "N" DISC, 110 V, NORMALLY CLOSED, WATERTIGHT ENCLOSURE. NOTE: ONE LOOP POWER SUPPLY IS REQUIRED IN THE BECSsys CONTROLLER FOR THIS.
FM1D	FLOW METER 1 / PL404	1	SIGNET	2551 316 SS METER INSERTION STYLE MAGNETIC FLOW SENSOR, MODEL #3-2551-P. PIPE FLOW TO BE DISPLAYED ON VFD. PROVIDE WITH PVC-U CLAMP-ON SADDLE MODEL NUMBER PVSS-200 (4")
V1D	VFD	1	ABB	ABB MODEL ACH580-BCD-046A-4 46 HP, 480 V, 3 PH INPUT. PROVIDE WITH UL TYPE 1 ENCLOSURE WITH E-CLIPSE BYPASS.
V2D	VFD	1	ABB	ABB MODEL ACQ580-PDR-027A-4 20 HP, 480 V, 3 PH INPUT. PROVIDE WITH UL TYPE 12 ENCLOSURE WITH INPUT DISCONNECT AND FUSES ONLY.
SC1	CONTAINMENT PALETTE 5 / PL403		GRAINGER / ULTRATECH INTERNATIONAL	MOLDED ONE-PIECE POLYETHYLENE CONTAINMENT, MINIMUM 66-GALLON CAPACITY, NON-SPILL PALLET, MIN 3,000 LB LOAD CAPACITY, SUITABLE FOR USE WITH CHEMICALS STORED. CONFORMANT TO ASTM D1998.

PREPARED BY:

GRÄEF

Project Number 2020-2000.46
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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT BRIAN R. BEE C-20535 Renewal Date 08/31/2023 STATE OF CALIFORNIA

8/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	KMD

Sheet Title:

POOL D - MECHANICAL EQUIPMENT PLAN

SHEET NUMBER:

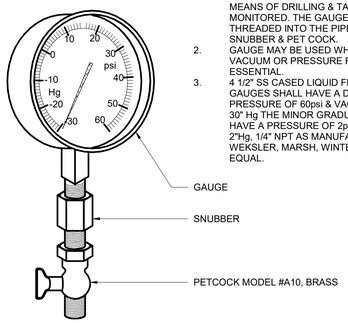
PL401

REGISTERED PROFESSIONAL ENGINEER BRENT M. SANDERS 5736 EXP. 6/30/23 STRUCTURAL STATE OF CALIFORNIA

8/20/21

"Structural Scope of Work"

For Council Approval
Not for Bidding



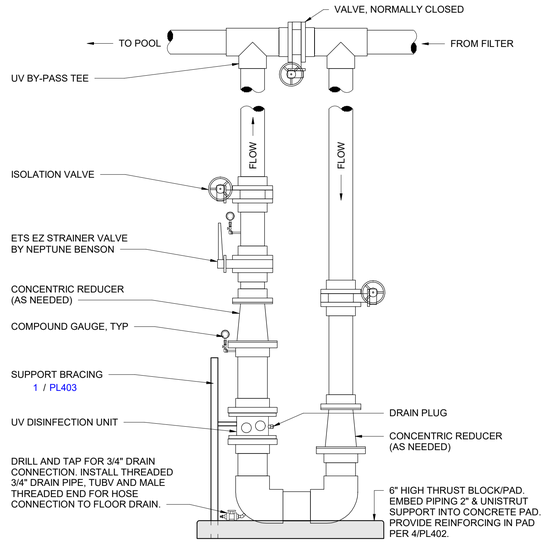
NOTES:
1. PRESSURE GAUGES SHALL BE INSTALLED BY MEANS OF DRILLING & TAPPING PIPE TO BE MONITORED. THE GAUGE SHALL THEN BE THREADED INTO THE PIPE. PROVIDE WITH SNUBBER & PET COCK.
2. GAUGE MAY BE USED WHEREVER CRUCIAL VACUUM OR PRESSURE READINGS ARE ESSENTIAL.
3. 4 1/2" SS CASED LIQUID FILLED PRESSURE GAUGES SHALL HAVE A DIAL RANGE PRESSURE OF 60psi & VACUUM RANGE OF 30" Hg THE MINOR GRADUATIONS SHALL HAVE A PRESSURE OF 2psi & VACUUM OF 2"Hg. 1/4" NPT AS MANUFACTURED BY WEKSLER, MARSH, WINTERS OR APPROVED EQUAL.

GAUGE

SNUBBER

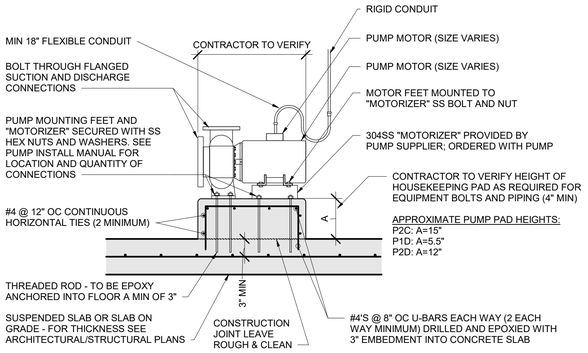
PETCOCK MODEL #A10, BRASS

7 | PL402 COMPOUND GAUGE DETAIL VIEW
NOT TO SCALE



NOTES:
1. ALL PIPING & FITTINGS TO & FROM UV UNIT TO THE "UV BY-PASS TEES" SHALL BE SCH 80 PVC.
2. ALL PIPE REDUCTIONS SHALL BE WITH A CONCENTRIC REDUCER AS SHOWN. NO BUSHINGS ALLOWED.
3. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR. CONTROL BOX SHALL BE INSTALLED WITHIN 10 FT OF UNIT, WHENEVER POSSIBLE.
4. PROVIDE CLEARANCE AS REQUIRED ADJACENT TO UV UNIT FOR REMOVAL & REPLACEMENT OF UV LAMPS.
5. DO NOT INSTALL VALVES DIRECTLY TO CHAMBER BODY.
6. UV UNIT SHALL BE PROPERLY SUPPORTED & BRACED. SEE REFERENCED "UV SUPPORT & BRACING DETAIL".

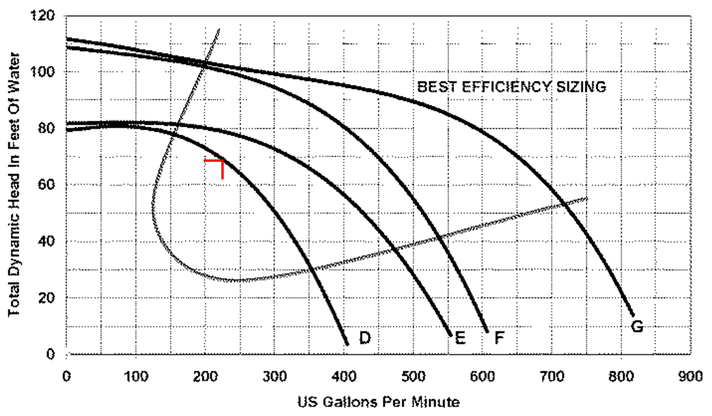
8 | PL402 UV DISINFECTION DETAIL VIEW
NOT TO SCALE



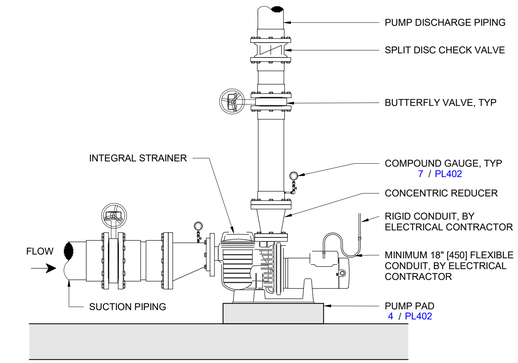
NOTES:
1. PAD SIZE SHALL BE MIN INDICATED OR AS SHOWN ON THE PLANS OR AS INDICATED BY THE MANUFACTURER.
2. THE SIZE, NUMBER, TYPE, LOCATION, AND THREAD PROJECTION OF THE ALL THREAD ROD SHALL BE DETERMINED BY THE EQUIPMENT MANUFACTURER / INSTALLING CONTRACTOR, ALL THREAD ROD SHALL BE HELD IN POSITION WITH A TEMPLATE WHILE PAD IS BEING POURED.
3. EQUIPMENT BASES SHALL BE INSTALLED LEVEL UNLESS SPECIFIED OTHERWISE. EQUIPMENT BASES SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR. SIZES AND LOCATIONS TO BE VERIFIED BY CONTRACTOR.
4. PROVIDE SUPPORT FOR PUMP SUCTION AND DISCHARGE PIPING WHILE ALLOWING FOR PUMP REMOVAL.
5. FINAL INSTALLATION SHALL ALLOW REMOVAL OF MOTOR AND PUMP IMPELLER WITHOUT REMOVAL OF PIPING OR ELECTRICAL CONNECTIONS.

4 | PL402 PUMP PAD DETAIL VIEW
NOT TO SCALE

5 | PL402 P2C PUMP CURVE DETAIL VIEW
NOT TO SCALE

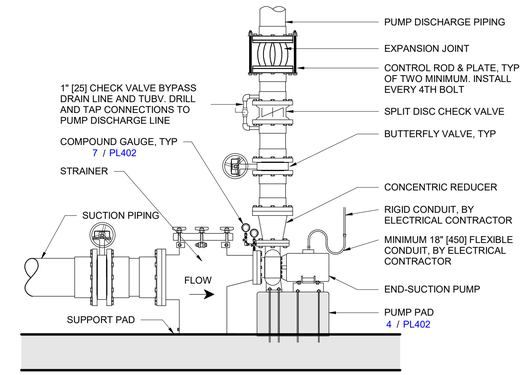


6 | PL402 P1D PUMP CURVE DETAIL VIEW
NOT TO SCALE



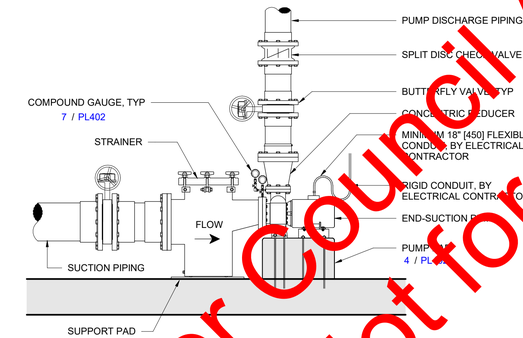
NOTES:
1. SUPPLY AND INSTALL ECCENTRIC REDUCER ON SUCTION SIDE AS NECESSARY.
2. INSTALL STRAINER OR REDUCER WITH 1/4" [6] FPT GAUGE CONNECTION AS CLOSE TO PUMP AS POSSIBLE.
3. INSTALL CHECK VALVE PER MANUFACTURER'S RECOMMENDATIONS.

1 | PL402 PUMP INSTALLATION - SAND FILTER DETAIL VIEW
NOT TO SCALE



NOTES:
1. REFER TO EQUIPMENT SCHEDULES FOR A STRAINER TYPE AND SIZE.
2. SUPPLY AND INSTALL ECCENTRIC REDUCER ON SUCTION SIDE AS NECESSARY.
3. INSTALL COMPOUND GAUGES USING 1/4" NPT TAPS SUPPLIED ON THE PUMP SUCTION AND DISCHARGE.
4. INSTALL CHECK VALVE PER MANUFACTURER'S RECOMMENDATIONS.

2 | PL402 PUMP INSTALLATION - SLIDE DETAIL VIEW
NOT TO SCALE



NOTES:
1. REFER TO EQUIPMENT SCHEDULES FOR A STRAINER TYPE AND SIZE.
2. SUPPLY AND INSTALL ECCENTRIC REDUCER ON SUCTION SIDE AS NECESSARY.
3. INSTALL COMPOUND GAUGES USING 1/4" NPT TAPS SUPPLIED ON THE PUMP SUCTION AND DISCHARGE.
4. INSTALL CHECK VALVE PER MANUFACTURER'S RECOMMENDATIONS.

3 | PL402 ACTIVITY PUMP INSTALLATION DETAIL VIEW
NOT TO SCALE

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT JEFFREY KATZ C-20536 STATE OF CALIFORNIA
4/30/2023
5/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	KMD

Sheet Title:

MECHANICAL DETAILS

SHEET NUMBER:

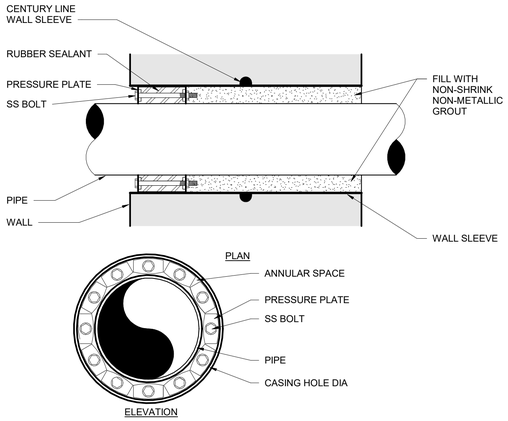
PL402

PREPARED BY:

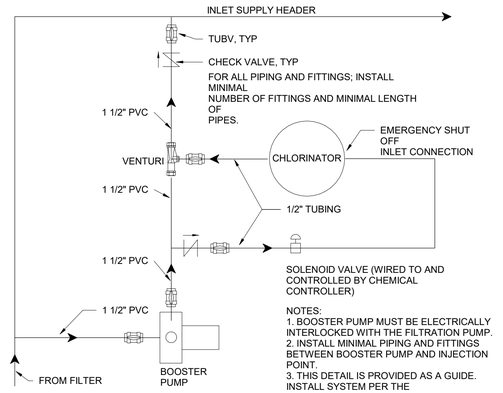
GRAEF
Project Number 2020-2000.46
Phone 414 / 259 1500

REGISTERED PROFESSIONAL ENGINEER BEAU M. SANDERS 5736 EXP 6/30/23 STRUCTURAL STATE OF CALIFORNIA
5/20/21
"Structural Scope of Work"

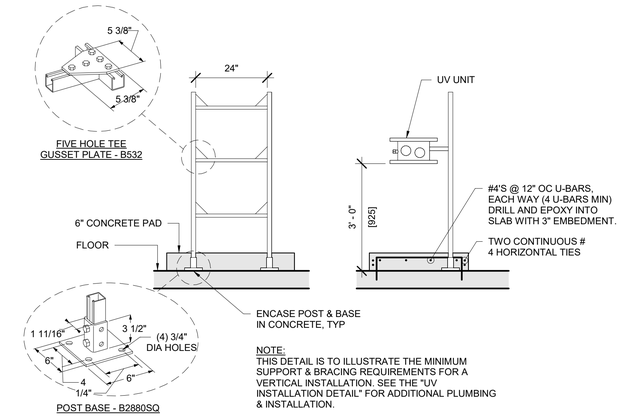
For Council Approval
Not for Bidding



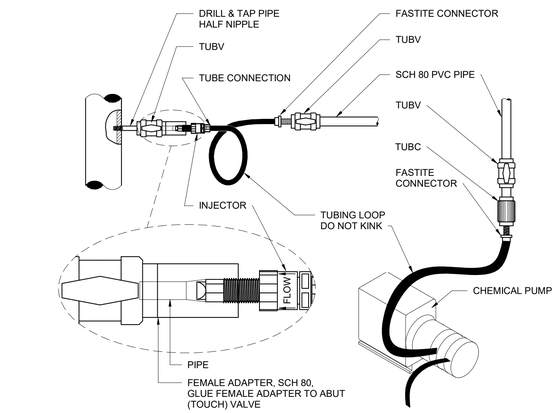
7 | PL403 | WALL SLEEVE / LINK SEAL DETAIL VIEW
NOT TO SCALE



4 | PL403 | PULSAR PRECISION DETAIL VIEW
NOT TO SCALE

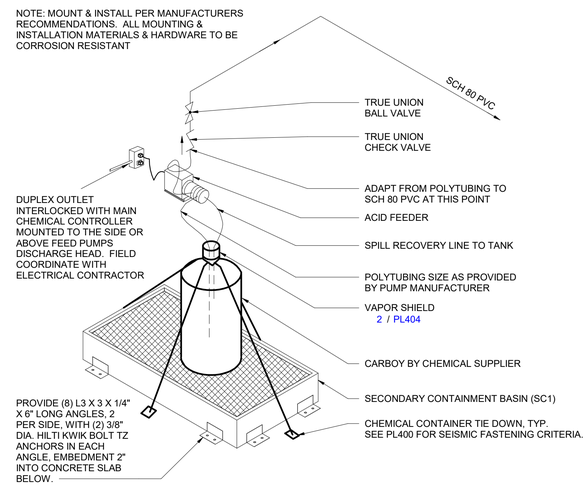


1 | PL403 | UV SUPPORT & BRACING DETAIL VIEW
NOT TO SCALE

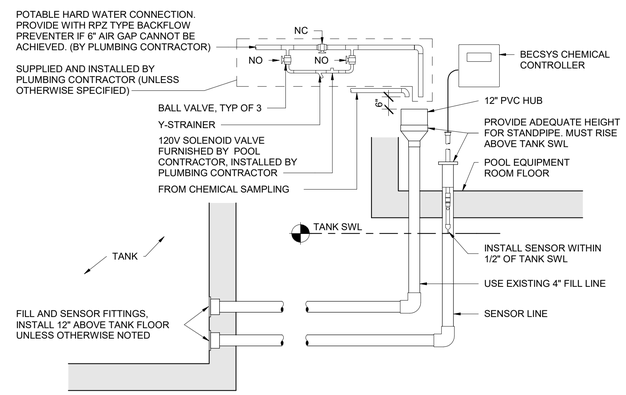


NOTE: FOR PIPING USE FASTITE CONNECTOR OR SIMILAR COMPRESSION FITTING.

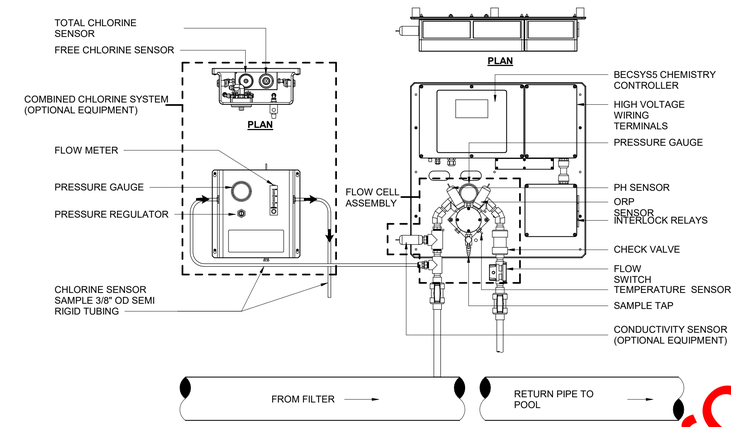
8 | PL403 | CHEMICAL INJECTION PLAN VIEW
NONE



5 | PL403 | ACID ISOMETRIC DETAIL VIEW
NOT TO SCALE

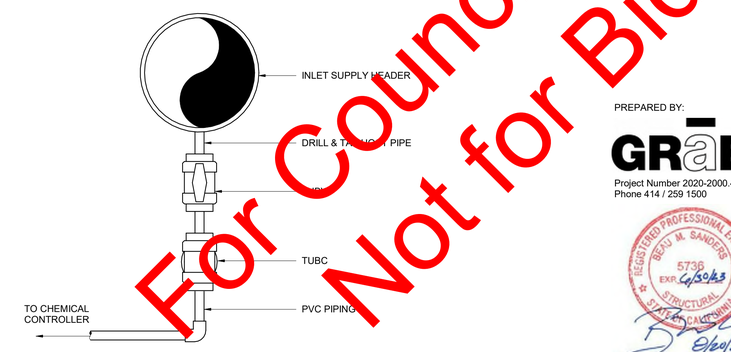


6 | PL403 | AUTOFILL/WATER LEVEL CONTROL PLAN VIEW
NONE



NOTES:
1. PROVIDE STAINLESS STEEL MOUNTING HARDWARE AS REQUIRED FOR WALL TYPE.
2. INTERLOCK CHEMICAL CONTROL RELAYS WITH FILTRATION PUMP.
3. SEE CHEMICAL CONTROLLER SPECIFICATIONS FOR REQUIRED OPTIONAL EQUIPMENT.
4. RIGIDLY SECURE BACK PANEL TO BUILDING WALL, APPROXIMATELY 5'-8" ABOVE FINISHED FLOOR, IN LOCATION INDICATED IN PLAN.
5. CHEMICAL SAMPLING STREAMS SHALL TERMINATE AT THE AUTOFILL WITH 6" AIR GAP.

2 | PL403 | CHEMICAL CONTROLLER DETAIL VIEW
NOT TO SCALE



3 | PL403 | CHEMICAL SAMPLING DETAIL VIEW
NOT TO SCALE

For Council Approval
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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT JEFFREY KATZ C-20538 4/30/2023 Renewal Date STATE OF CALIFORNIA

8/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	KMD

Sheet Title:

MECHANICAL DETAILS

SHEET NUMBER:

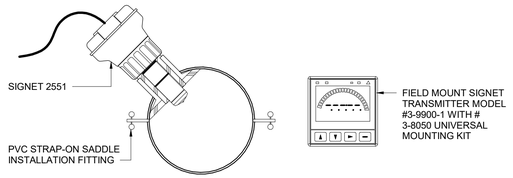
PL403

PREPARED BY:
GRAEF
Project Number 2020-2000.46
Phone 414 / 259 1500

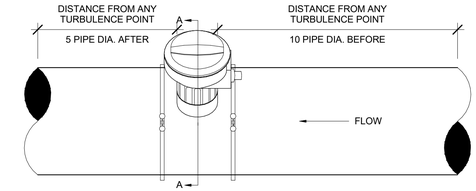
REGISTERED PROFESSIONAL ENGINEER BEAU M. SANDERS 5736 EXP. 6/30/23 STRUCTURAL STATE OF CALIFORNIA

6/20/21

"Structural Scope of Work"



SECTION A-A



ELEVATION

NOTES:
1. INSTALL PIPE SUCH THAT AIR CANNOT GET TRAPPED IN AREA OF SENSOR. DO NOT INSTALL IN PIPES WITH FLOW MOVING DOWNWARD OR IN HORIZONTAL SECTIONS OF PIPE THAT ARE HIGHER THAN ADJACENT HORIZONTAL PIPE.
2. FOR HORIZONTAL PIPE INSTALLATIONS, INSTALL FLOWMETER FACING UPWARD AT A 45° ANGLE TO MINIMIZE ADVERSE EFFECTS OF AIR POCKETS AND SEDIMENT.
3. FIELD MOUNT TRANSMITTER APPROXIMATELY 4'-6" (1350) ABOVE FINISHED FLOOR OR GRADE UTILIZING THE #3-8050 UNIVERSAL MOUNTING KIT.

1 PL404 FLOW METER DETAIL VIEW
NOT TO SCALE

NOTES:
1. CONTRACTOR SHALL INSTALL A VAPOR SHIELD, BY AQUATIC COMMERCIAL INDUSTRIES, ON EACH ACID TANK CONNECTED TO A FEED PUMP AS DETAILED ABOVE. VAPOR SHIELD SHALL PREVENT RELEASE OF ALL CHEMICAL VAPORS WHILE ALLOWING LIQUID REMOVAL BY THE PUMP.
2. THE VAPOR SHIELD SHALL BE SUPPLIED WITH SUCTION TUBING, SHALL INCLUDE NO METALLIC PARTS, AND SHALL REQUIRE NO ASSEMBLY, EXCEPT ADJUSTMENT OF THE SUCTION TUBE SIZE.

2 PL404 VAPOR SHIELD DETAIL VIEW
NOT TO SCALE

For Council Approval
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100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT C-20538 Professional Design STATE OF CALIFORNIA
5/20/2021

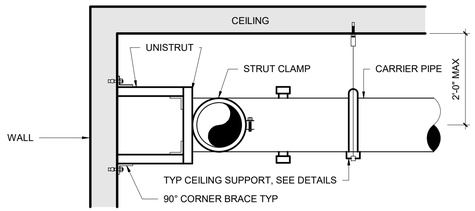
Project Number: 19285
Approved By: JRB
Checked By: JRB
Drawn By: KMD

Sheet Title:

MECHANICAL DETAILS

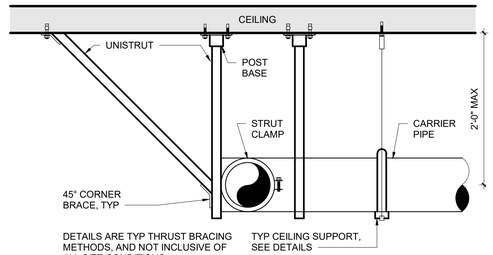
SHEET NUMBER:

PL404



DETAILS ARE TYP THRUST BRACING METHODS, AND NOT INCLUSIVE OF ALL SITE CONDITIONS. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF BRACING METHODS FOR APPROVAL.

7 PL405 PIPE THRUST BRACING DETAIL VIEW
NOT TO SCALE



DETAILS ARE TYP THRUST BRACING METHODS, AND NOT INCLUSIVE OF ALL SITE CONDITIONS. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF BRACING METHODS FOR APPROVAL.

4 PL405 PIPE THRUST BRACING DETAIL VIEW
NOT TO SCALE

BASIS OF DESIGN FOR SUUPORT OF PIPING:
2016 CALIFORNIA BUILDING CODE, CHAPTER 16; ASCE 7-10, CHAPTER 13 - SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS

MAX ALLOWABLE SUPPORT SPACING FOR PVC PIPE (IN FT)										
NOMINAL PIPE SIZE	SCHEDULE 40 TEMPERATURE (°F)					SCHEDULE 80 TEMPERATURE (°F)				
	60°	80°	100°	120°	140°	60°	80°	100°	120°	140°
1/2"	4.5	4.5	4	2.5	2.5	5	4.5	4.5	3	2.5
3/4"	5	4.5	4	2.5	2.5	5.5	5	4	3	2.5
1"	5.5	5	4.5	3	2.5	6	5.5	5	3.5	3
1 1/4"	5.5	5.5	5	3	3	6	6	5.5	3.5	3
1 1/2"	6	5.5	5	3.5	3	6.5	6	5.5	3.5	3.5
2"	6	5.5	5	3.5	3	7	6.5	6	4	3.5
2 1/2"	7	6.5	6	4	3.5	7.5	7.5	6.5	4.5	4
3"	7	7	6	4	3.5	8	7.5	7	4.5	4
4"	7.5	7	6.5	4.5	4	9	8	7.5	5	4.5
6"	8.5	8	7.5	5	4.5	10	9.5	9	6	5
8"	9	8.5	8	5	4.5	11	10.5	9.5	6.5	5.5
10"	10	9	8.5	5.5	5	12	11	10	7	6
12"	11.5	10.5	9.5	6.5	5.5	12	11	10	7	6

1 PL405 PIPE SUPPORT SCHEDULE DETAIL VIEW
NOT TO SCALE

PIPING DISTRIBUTION SYSTEM BRACING NOTE

PIPING DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8, AND 2016 CBC, SECTIONS 1616A.1.23, 1616A.1.24, 1616A.1.25, AND 1616A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON PREAPPROVED INSTALLATION GUIDE (e.g. SMACNA OR OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEM (E):

MP	MD	PP	E	
☐	☐	☐	☐	OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.
☒	☐	☐	☐	OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED (OPM #) #0043-13.
☐	☐	☐	☐	OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009), INCLUDING ANY ADDENDA. FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSPHD EDITION, NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL _____ AND CONNECTION LEVEL _____ FOR THE PROJECT AND CONDITIONS.

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26, AND 30.

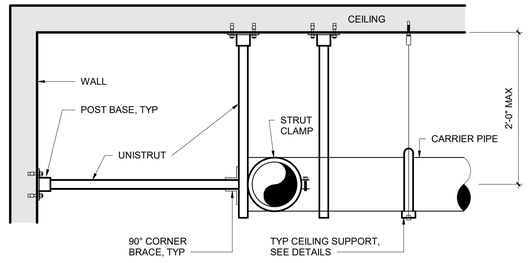
1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WATER) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS, OR WATER.
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORTS THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS OR IN THE CASE OF DISTRIBUTION SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

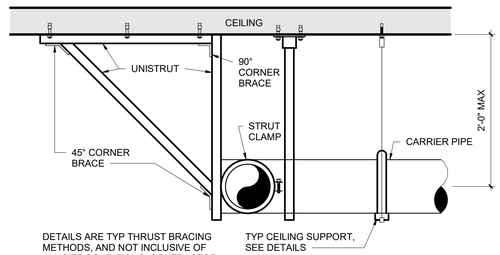
FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

8 PL405 PIPE SUPPORT NOTES PLAN VIEW
1" = 1'-0"



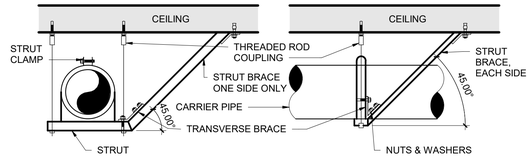
DETAILS ARE TYP THRUST BRACING METHODS, AND NOT INCLUSIVE OF ALL SITE CONDITIONS. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF BRACING METHODS FOR APPROVAL.

5 PL405 PIPE THRUST BRACING DETAIL VIEW
NOT TO SCALE



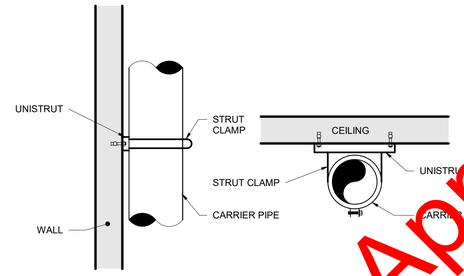
DETAILS ARE TYP THRUST BRACING METHODS, AND NOT INCLUSIVE OF ALL SITE CONDITIONS. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF BRACING METHODS FOR APPROVAL.

6 PL405 PIPE THRUST BRACING DETAIL VIEW
NOT TO SCALE



NOTES:
1. DETAILS ARE TYP SUPPORT METHODS & NOT INCLUSIVE OF ALL SITE CONDITIONS.
2. ALL PIPING SHALL BE RIGIDLY SUPPORTED LATERALLY & VERTICALLY. SUPPORT SYSTEM SHALL PROVIDE ZERO MOVEMENT IN PIPING DURING ALL OPERATING CONDITIONS.
3. PROVIDE THRUST RESTRAINT AT ALL HORIZONTAL/HORIZONTAL, HORIZONTAL/VERTICAL, & VERTICAL/HORIZONTAL CHANGES IN DIRECTION.
4. SEE DIVISION 13 SPECIFICATIONS FOR ADDITIONAL SUPPORT REQUIREMENTS & MATERIALS
5. SEE PIPE SUPPORT TABLE ON DRAWINGS.

2 PL405 PIPE SUPPORT DETAIL VIEW
NOT TO SCALE



NOTES:
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4. SEE DIVISION 13 SPECIFICATIONS FOR ADDITIONAL SUPPORT REQUIREMENTS & MATERIALS
5. SEE PIPE SUPPORT TABLE ON DRAWINGS.

3 PL405 PIPE SUPPORT DETAIL VIEW
NOT TO SCALE

PREPARED BY:

GRÄEF

Project Number 2020-2000.46
Phone 414 / 259 1500

REGISTERED PROFESSIONAL ENGINEER BEAU M. SANDERS 5736 EXP. 6/30/23 STRUCTURAL STATE OF CALIFORNIA

5/20/21

"Structural Scope of Work"

For Council Approval
Not for Bidding

JKA jeffkatz ARCHITECTURE
6353 DEL CERRO BLVD., SAN DIEGO, CA 92120
619.688.9177 | www.jeffkatzarchitecture.com

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PROJECT:

CITY OF ROSEVILLE

ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT JEFFREY B. KATZ C-20538 Professional Design 4/30/2023 STATE OF CALIFORNIA

5/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	KMD

Sheet Title:

MECHANICAL DETAILS

SHEET NUMBER:

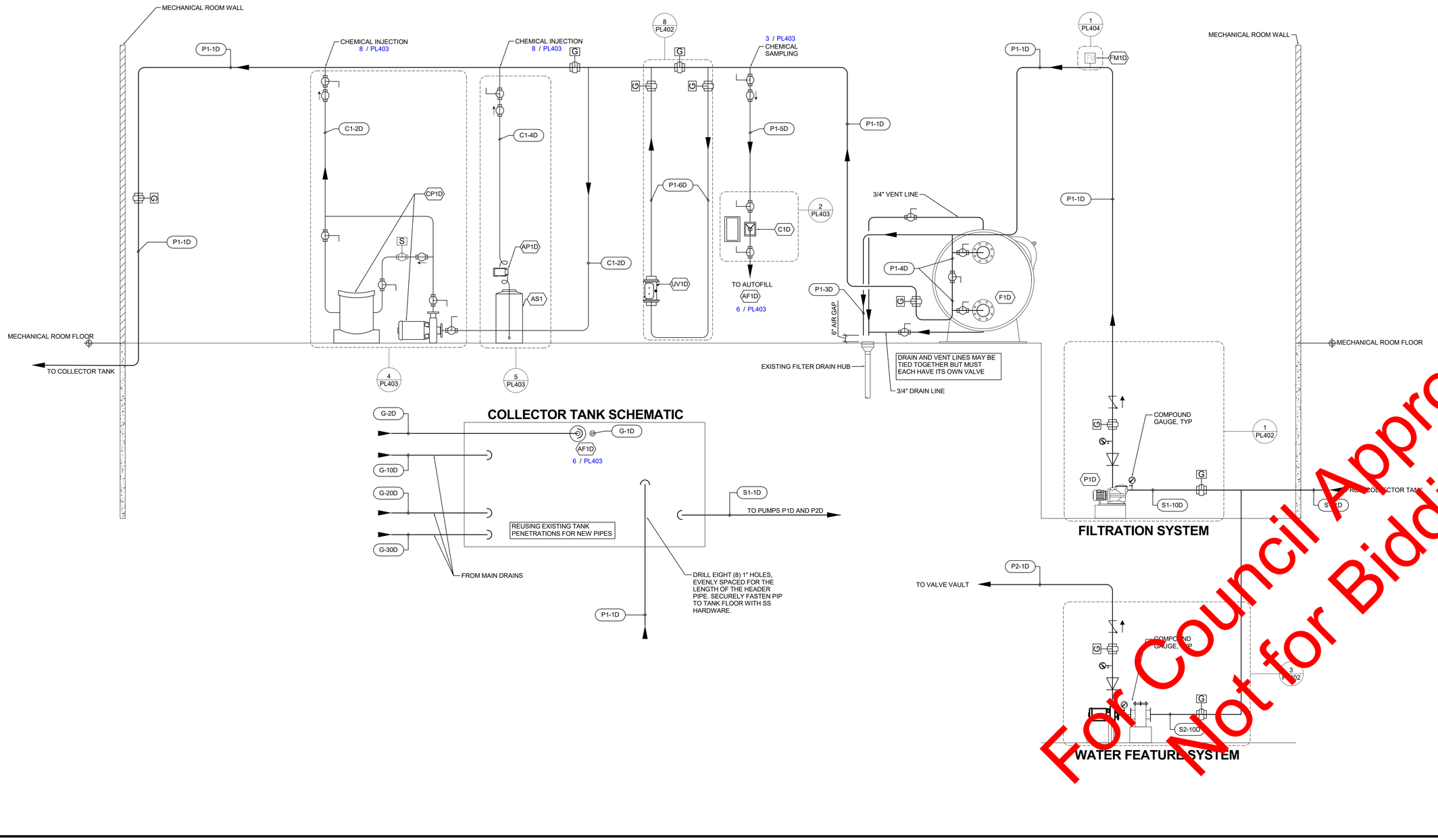
PL405

POOL D - SPLASH PAD PIPE SCHEDULE

PIPE ID	TYPE	NPS (in)	FLOW (gpm)	VELOCITY (fps)	DESCRIPTION
S1-1D	PVC SCH 80	10	669	3.0	PUMP SUCTION - SURGE TANK
S1-10D	PVC SCH 80	6	220	2.8	FILTRATION PUMP SUCTION - SURGE TANK
-	-	-	-	-	-
P1-1D	PVC SCH 80	4	220	6.3	FILTRATION SUPPLY
P1-3D	PVC SCH 80	4	260	7.4	FILTER BACKWASH
P1-4D	PVC SCH 80	4	220	6.3	FILTER FACE PIPING
P1-5D	PVC SCH 80	0.75	10	7.8	CHEMICAL SAMPLING
P1-6D	PVC SCH 80	4	220	6.3	UV LOOP
-	-	-	-	-	-
C1-2D	PVC SCH 80	1.5	0	-	CAL HYPO LOOP
C1-4D	PVC SCH 80	0.5	0	-	ACID INJECTION
-	-	-	-	-	-
G-10D	PVC SCH 40	6	150	1.7	SPLASHPAD DRAIN
G-20D	PVC SCH 40	6	150	1.7	SPLASHPAD DRAIN
G-30D	PVC SCH 40	6	150	1.7	SPLASHPAD DRAIN
-	-	-	-	-	-
P2-10D	PVC SCH 80	6	449	5.6	WATER FEATURE SUPPLY
-	-	-	-	-	-
S2-10D	PVC SCH 80	8	449	3.2	WATER FEATURE PUMP SUCTION - SURGE TANK
-	-	-	-	-	-
G-1D	PVC SCH 40	2	0	0.0	SENSOR
G-2D	PVC SCH 40	4	0	0.0	FILL

POOL MECHANICAL PIPING SCHEMATIC NOTES:

1. SEE PL400 FOR EQUIPMENT LOCATIONS.
2. SUPPORT PIPES PER DETAILS PL405-1 THRU 7.
3. SEE DETAIL PL200-2 FOR REINFORCING AT PENETRATIONS.
4. ARROWS DENOTE DIRECTION OF FLOW.
5. NOTE: THE INTENT OF THIS SCHEMATIC IS NOT TO BE INCLUSIVE OF ALL VALVES OR FITTINGS REQUIRED FOR THIS PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE ALL VALVES AND FITTINGS REQUIRED.
6. THIS DRAWING IS FOR SCHEMATIC USE ONLY!



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ROSEVILLE AQUATICS COMPLEX

3015 WOODCREEK OAKS BLVD.ROSEVILLE, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT C-20535 Renewal Date 8/31/2023 STATE OF CALIFORNIA

5/20/2021

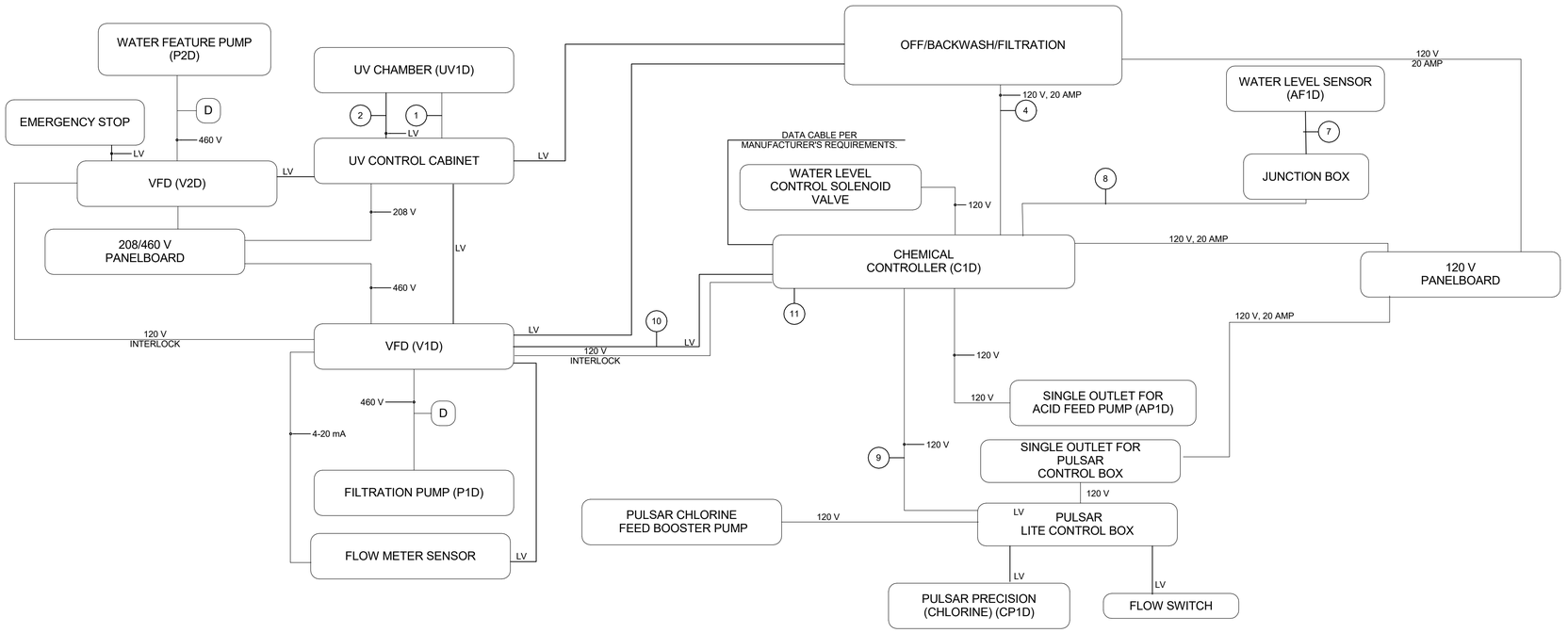
Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	KMD

Sheet Title:

POOL D - MECHANICAL SCHEMATIC

SHEET NUMBER:

PL500



SEQUENCE OF OPERATIONS - SWIMMING POOL WITH MANUAL BACKWASH SAND FILTER SYSTEM

FILTRATION PUMP MOTOR STARTER SELECTOR SWITCH ("OFF/BACKWASH/FILTRATION"):

- A THREE POSITION SELECTOR SWITCH SHALL BE PROVIDED FOR THE MOTOR STARTER/VFD WITH POSITIONS LABELED "OFF", "BACKWASH", AND "FILTRATION".
- INTERLOCK WATER FEATURE PUMP VFD WITH FILTRATION PUMP VFD. WATER FEATER PUMP MUST DEACTIVATE WHEN FILTRATION PUMP IS NOT OPERATING.

"FILTRATION" POSITION:

- PLACE THE SWITCH IN THE "FILTRATION" POSITION FOR THE NORMAL FILTRATION OPERATING MODE OF THE SYSTEM.
- WITH THE FILTRATION PUMP SELECTOR SWITCH IN THE "FILTRATION" POSITION, THE FILTRATION PUMP SHALL RUN AT DESIGN FLOW (FREQUENCY) AND THE CHEMICAL CONTROLLER SHALL BE CAPABLE OF ENERGIZING THE CHEMICAL FEED SYSTEM OUTLETS.
- THE ACTUAL FLOW INFORMATION SHALL BE PROVIDED TO THE VFD BY THE FM TRANSMITTER. THE VFD SHALL ADJUST FREQUENCY AS REQUIRED TO ACHIEVE SYSTEM DESIGN FLOW.
- THE CHEMICAL CONTROLLER SHALL BE WIRED TO THE CHEMICAL FEED OUTLETS AND SHALL ENERGIZE/DE-ENERGIZE THESE OUTLETS BASED UPON POOL WATER CHEMISTRY..
- THE ACID FEED PUMP IS POWERED ON/OFF BY THE CHEMICAL CONTROLLER PH FEED OUTLET.
- IF THE FILTRATION PUMP LOSES POWER WHILE IN THE "FILTRATION" MODE THE CHEMICAL CONTROLLER SHALL NOT BE CAPABLE OF ENERGIZING THE CHEMICAL FEED OUTLETS AND THE POOL HEATER AND WATER FEATURE PUMP SHALL BE INACTIVE.

"BACKWASH" POSITION:

- PLACE THE SWITCH IN THE "BACKWASH" POSITION WHEN BACKWASHING THE FILTERS.
- WITH THE FILTRATION PUMP SELECTOR SWITCH IN THE "BACKWASH" POSITION, THE FILTRATION PUMP SHALL RUN, BUT THE CHEMICAL CONTROLLER SHALL NOT BE CAPABLE OF ENERGIZING THE CHEMICAL FEED SYSTEM OUTLETS AND THE POOL HEATER SHALL BE INACTIVE.

"OFF" POSITION:

- PLACE THE SWITCH IN THE "OFF" POSITION TO TURN THE PUMP AND FILTRATION SYSTEM OFF.
- WITH THE FILTRATION PUMP SELECTOR SWITCH IN THE "OFF" POSITION, THE FILTRATION PUMP SHALL BE OFF AND THE CHEMICAL CONTROLLER SHALL NOT BE CAPABLE OF ENERGIZING THE CHEMICAL FEED SYSTEM OUTLETS AND THE POOL HEATER SHALL BE INACTIVE.

CHEMICAL CONTROLLER & CHEMICAL FEED OUTLETS:

- THE CHEMICAL CONTROLLER CPU SHALL BE POWERED AT ALL TIMES.
- THE CHEMICAL FEED OUTLETS SHALL BE INTERLOCKED SUCH THAT IF THE FILTRATION PUMP LOSES POWER WHILE IN THE "FILTRATION" MODE, THE IN-LINE FLOW SWITCH IS NOT MADE OR THE SELECTOR SWITCH IS IN THE OFF OR BACKWASH POSITIONS; THE FEED OUTLETS ARE INACTIVE.
- CHEMICAL CONTROLLER FEED OUTLETS ENERGIZES / DE-ENERGIZES SANITIZER AND pH FEED BASED UPON POOL WATER CHEMISTRY.

CHEMICAL FEED PUMPS

- THE CHEMICAL FEED PUMPS ARE ENERGIZED BY THE CHEMICAL FEED OUTLETS.

PULSAR CHLORINE FEEDER:

- THE PULSAR CONTROL BOX SHALL BE POWERED AT ALL TIMES.
- THE PULSAR FLOW SWITCH IS USED TO PROVE FLOW TO THE PULSAR CONTROL BOX. IF NO FLOW IS DETECTED, THE CHLORINATOR AND PULSAR CHLORINE FEED BOOSTER PUMP WILL BE DEACTIVATED.
- THE FILTRATION PUMP AND PULSAR CHLORINE FEED BOOSTER PUMP SHALL BE INTERLOCKED SUCH THAT IF THE FILTRATION PUMP IS NOT RUNNING, THE PULSAR CHLORINE FEED BOOSTER PUMP SHALL BE DEACTIVATED .
- THE PULSAR CONTROL BOX RECEIVES FEED/NO FEED SIGNALS FROM THE CHEMICAL CONTROLLER BASED ON POOL WATER CHEMISTRY.

FLOW METER:

- WHEN FLOW METER POWER SUPPLY IS ENERGIZED, THE FLOW METER SENSOR SHALL PROVIDE THE FLOW READOUT IN GPM.
- THE FLOW METER SHALL PROVIDE FLOW DATA TO THE INDICATED VFD AND CONTROL SPEED OF THE VFD BASED ON FLOW.

ULTRAVIOLET (UV) DISINFECTION UNIT:

- THE UV UNIT IS NORMALLY ON.
- THE UV UNIT SHALL BE INTERLOCKED SUCH THAT IF THE SELECTOR SWITCH IS IN THE BACKWASH POSITION THE UV SHALL BE TURNED OFF.
- THE UV NORMALLY RUNS IN VARIABLE POWER MODE.
- THE UV UNIT SHALL BE INTERLOCKED SUCH THAT IF THE DOSAGE RATE IS NOT ACHIEVED THE ACTIVITY PUMP SHALL NOT BE POWERED.

POOL EQUIPMENT OPERATING MODES

FILTRATION SELECTOR SWITCH POSITION	FILTRATION PUMP	WATER FEATURE PUMP	CHEMICAL CONTROLLER	CHLORINE FEED	ACID FEED	UV
OFF	O	O	X	O	O	O
BACKWASH	X	O	X	O	O	O
FILTRATION	X	X	X	X	X	X

"X" INDICATES THE EQUIPMENT IS ENERGIZED/RUNNING.
"O" INDICATES THE EQUIPMENT IS NOT ENERGIZED.

NOTES:

1. LOW VOLTAGE <=24V. ALL LOW VOLTAGE WIRING IS SUPPLIED, INSTALLED AND CONNECTED BY THE POOL CONTRACTOR.
2. IF CONDUIT IS REQUIRED BY CODE FOR LOW VOLTAGE WIRING, THEN THIS MUST BE SPECIFIED BY THE ELECTRICAL CONSULTANT AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
3. IF CODE REQUIRES THAT LOW VOLTAGE WIRING IS INSTALLED BY A LICENSED ELECTRICAL CONTRACTOR THEN THIS MUST BE SPECIFIED BY THE ELECTRICAL CONSULTANT.
4. CONDUIT, WIRE SIZES, AND SHIELDING REQUIREMENTS SHALL BE DETERMINED & SPECIFIED BY THE ELECTRICAL CONSULTANT AS NEEDED PER LOCAL BUILDING AND ELECTRICAL CODE REQUIREMENTS.
5. THIS SCHEMATIC DRAWING IS NOT AN ELECTRICAL INSTALLATION DIAGRAM AND IS FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE POOL CONTRACTOR TO COORDINATE ALL INTERLOCKS WITH THE ELECTRICAL CONTRACTOR. THE POOL CONTRACTOR IS RESPONSIBLE TO PROVIDE AN OPERATING SYSTEM PER THE SEQUENCE OF OPERATIONS.

KEYNOTES: (#)

1. WIRING (LAMP POWER CORD) FURNISHED WITH UV UNIT AND INSTALLED BY THE ELECTRICAL CONTRACTOR. FINAL CONNECTIONS TO UV CHAMBER AND CONTROL CABINET BY POOL CONTRACTOR
2. FURNISHED WITH UV UNIT AND INSTALLED BY POOL CONTRACTOR
3. NOT USED.
4. POWER FOR THE CHEMICAL FEEDERS . WHEN FILTER SELECTOR SWITCH POSITION IS OFF, BACKWASH, OR THE FILTRATION PUMP LOSES POWER WHILE IN FILTRATION MODE, THIS CONNECTION SHALL INACTIVE CHEMICAL FEED TO THE SYSTEM.
5. NOT USED.
6. NOT USED.
7. SENSOR CABLE FROM WATER LEVEL SENSOR. FURNISHED WITH WATER LEVEL SENSOR AND INSTALLED BY POOL CONTRACTOR.
8. CONDUCTOR CABLE CONTAINS POWER AND SIGNAL CABLES. COORDINATE REQUIREMENTS WITH WATER LEVEL SENSOR AND CHEMICAL CONTROLLER MANUFACTURERS.
9. WHEN FILTER SELECTOR SWITCH POSITION IS OFF, BACKWASH MODE OF THE FILTRATION PUMP LOSES POWER WHILE IN FILTRATION MODE, THIS CONNECTION SHALL INACTIVE PULSAR CHLORINE FEED BOOSTER PUMP.
10. VFD ANALOG OUTPUT REPEAT FLOW METER DATA TO CHEMICAL CONTROLLER.
11. A FLOW CELL WITH SHUT-OFF SWITCH SHALL BE PRESSURE TESTED AND WIRED TO THE CHEMICAL CONTROLLER. POOL CONTRACTOR SHALL ASSURE CHEMICAL CONTROLLER FLOW CELL ASSEMBLY IS WORKING PROPERLY AND DEACTIVATES CHEMICAL FEED UNDER A NO FLOW CONDITION.

LEGEND:

- LOW VOLTAGE
- LINE VOLTAGE
- DATA - CONTRACTOR TO COORDINATE WITH EQUIPMENT REQUIREMENTS
- (D) DISCONNECT TO LOCATE AT EQUIPMENT PER CODE REQUIREMENTS

For Council Approval
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ROSEVILLE AQUATICS COMPLEX

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CITY OF ROSEVILLE CALIFORNIA

Description:	Date:
100% CDs / Bid Set	08/20/21

REGISTERED ARCHITECT JEFFREY KATZ C-20538 4/30/2023 CALIFORNIA

5/20/2021

Project Number:	19285
Approved By:	JRB
Checked By:	JRB
Drawn By:	KMD

Sheet Title:

POOL D - ELECTRICAL SCHEMATIC

SHEET NUMBER:

PL510

COUNCIL COMMUNICATION

CC #: 1686
File #: 0704-01

Title: Buljan Park Play Structure Improvements - Contract Purchase Agreement
Contact: Tara Gee 916-774-5253 tgee@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 7.2.

RECOMMENDATION TO COUNCIL

Staff recommends City Council adopt a resolution to approve a contract purchase agreement (#3001566) with Playpower LT Farmington, Inc. for $87,000 to add new play elements to the play structure at Buljan Park and authorize the City Manager to execute the agreement.

BACKGROUND

The play structure at Buljan Park was replaced in 2019. The structure was more than twenty years old and had reached end of life. After completion of the replacement, neighbors surrounding the park expressed the need to have a bigger play structure that better matched what previously existed. Staff participated in numerous meetings with the neighbors to determine needs. Neighborhood leaders revitalized the Highland Reserve Neighborhood Association which worked to raise $10,000 to contribute towards the addition of more play elements.

Staff recommends approval of contract purchase agreement number 3001566 with Playpower LT Farmington, Inc. for $87,000 for additional play elements to the play structure. This includes installation by a contractor. The contract purchase agreement piggybacks National Joint Powers Alliance (NJPA) Contract #030117-LTS.

The additional play elements included in the contract are a result of direct input from the neighbors. Because these are add-ons to an existing play structure, this is a sole source purchase from the existing playground manufacturer.

FISCAL IMPACT

This project was approved in FY2021-22 using funds from the Parks, Recreation & Libraries Capital Projects Fund (Fund 3130). Ongoing maintenance costs are anticipated to remain the same and are already included in the Parks, Recreation & Libraries operations budget in the General Fund.

ENVIRONMENTAL REVIEW

The proposed project involves the improvements to an existing structure. This activity is categorically exempt from CEQA as a Class 1 Exemption (State CEQA Guidelines Section 15302). The Exemption has been prepared and no further CEQA action is required.

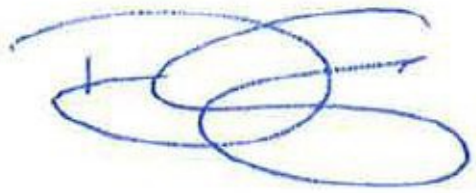
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal B - Support community engagement and advoca
Goal E - Deliver exceptional city services
Goal F - Invest in well-planned infrastructure and growth

Respectfully Submitted,

Tara Gee, Park Planning & Development Superintendent

Jill Geller, Parks, Recreation & Libraries Director



Dominick Casey, City Manager

ATTACHMENTS:

Description

Resolution 21-385

CPA 3001566

RESOLUTION NO. 21-385

APPROVING A CONTRACT PURCHASE AGREEMENT, BY AND BETWEEN THE CITY OF ROSEVILLE AND PLAYPOWER LT FARMINGTON INC., AND AUTHORIZING THE CITY MANAGER TO EXECUTE IT ON BEHALF OF THE CITY OF ROSEVILLE

WHEREAS, a contract purchase agreement (3001566), for play structure improvements at Buljan Park, by and between the City of Roseville and Playpower LT Farmington Inc., has been reviewed by the City Council.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Roseville that said contract purchase agreement is approved and that the City Manager is authorized to execute it on behalf of the City of Roseville.

PASSED AND ADOPTED by the Council of the City of Roseville this____day of _____, 2021, by the following vote on roll call:

AYES COUNCILMEMBERS:

NOES COUNCILMEMBERS:

ABSENT COUNCILMEMBERS:

_____
MAYOR

ATTEST:

_____
City Clerk

CITY OF ROSEVILLE CALIFORNIA

Contract Purchase Agreement 3001566

Supplier Details:

Company	PlayPower LT Farmington Inc
Contact	Glen Wurster
Address	C/O All About Play
	3844 Presidio St
	Sacramento, CA 95838

Submit your response to:

Company	City of Roseville
Contact	Sue Jessup
Address	Purchasing Division
	2075 Hilltop Circle
	Roseville, CA 95747
Phone	(916) 746-1702
Fax	(916) 774-5736
E-mail	SJessup@roseville.ca.us

This Contract Purchase Agreement is sent for your review and acceptance. Notify the Buyer via email of any needed changes to the company name, address, and contact information. The Buyer will update the agreement prior to you signing the document.

Return signed copies of the agreement to the Buyer noted on the agreement. Alterations or modifications to the agreement are not allowed. Upon receipt of all necessary documents, the City will sign the agreement and return a fully executed copy to you. Receipt of the signed copy will be your notice to proceed with the work in accordance with the terms and conditions of the agreement. Work must not begin until the contract has been fully executed.

The following guidelines must be followed for the signature block on the agreement:

Sole proprietorship - **By owner**

Partnership - **Any general partner**

Corporation - **Two options:**
(1) A signature from the President and the corporate seal; **OR**
(2) One signature from the Chairman of the Board, President, or any Vice President **AND** one signature from the Secretary, any Assistant Secretary, Chief Financial Officer, or any Treasurer or Assistant Treasurer of the corporation

*General Manager, Office Manager and/or Sales Manager are **not** corporate officer titles. The agreement will be rejected if not signed in accordance with these guidelines.

Insurance requirements:
The City's insurance requirements are referenced on Attachment A of the agreement. By signing the agreement, you are confirming that your company has the minimum insurance limits required.

CITY OF ROSEVILLE CALIFORNIA

Contract Purchase Agreement 3001566

Agreement	**3001566**
Agreement Date	**30-JUL-2021**
Revision	**0**
Agreement Amount	**86,998.73 USD**

Invoice To	**City of Roseville** **Accounts Payable** **311 Vernon St** **ROSEVILLE CA 95678**	Supplier	**PlayPower LT Farmington Inc** C/O All About Play 3844 Presidio St Sacramento, CA 95838
Phone:	(916) 774-5488	**Phone:**	(916) 923-2180
Fax:	(916) 784-3796	**Fax:**	()
Email:	accountspayable@roseville.ca.us	**Email:**	glen@playgroundpros.com

Description of Labor, equipment and/or materials

THE VENDOR SHALL PROVIDE AND INSTALL PLAYGROUND EQUIPMENT AT BULJAN PARK IN ACCORDANCE WITH THE ATTACHED PLAYPOWER LT FARMINGTON C/O ALL ABOUT PLAY QUOTE# BPP72521 DATED 7/25/2021 UTILIZING THE SOURCEWELL/NJPA CONTRACT 030117-LTS.

START DATE: EXECUTED AGREEMENT
END DATE: UPON FINAL PAYMENT

CONTACT STACIE MARCHETTI AT (916) 774 5246 OR EMAIL AT SMARCHETTI2@ROSEVILLE.CA.US FOR QUESTIONS REGARDING THIS AGREEMENT.

Customer #	Supplier #	Payment Terms	Freight Terms	FOB	Shipping Method
	11284	**Net 30**	**Freight on Board at the destination**	**Destination**	**Best Method**

Start Date	End Date	Confirm To
		Sue Jessup Phone **1-916-746-1702**

Attention: Total Cost not to exceed the agreement amount without prior approval of the Purchasing office.

Contract Terms and Conditions

1. To the fullest extent allowed by law, Contractor shall defend, indemnify, and save and hold harmless the City, its officers, agents, employees and volunteers from any claims, suits or actions of every name, kind and description brought forth, or on account of, injuries to or death of any person (including but not limited to workers and the public), or damage to property, resulting from or arising out of Contractor's willful misconduct or negligent act or omission while engaged in the performance of obligations or exercise of rights created by this Agreement, except those matters arising from City's sole or active negligence or willful misconduct. The parties intend that this provision shall be broadly construed. Contractor's responsibility for such defense and indemnity obligations shall survive the termination or completion of this Agreement for the full period of time allowed by law. The defense and indemnity obligations of this Agreement are undertaken in addition to, and shall not in any way be limited by, the insurance obligations contained in this Agreement.

2. Contractor is an independent contractor, and shall not be considered an officer, agent or employee of the City.

3. Without the written consent of the City, this Agreement is not assignable by Contractor either in whole or in part.

4. Time is of the essence of this Agreement.

5. At any time during the term of this Agreement, the City has the right to terminate this Agreement, provided Contractor is given thirty (30) days written notice. City's termination shall be without further liability to City; however, Contractor shall be entitled to all costs reasonably incurred prior to the date of termination. Contractor acknowledges that City may terminate this Agreement should funds not be appropriated by its governing body to continue services under this Agreement.

6. This Agreement may only be amended or modified in writing. It is integrated and contains the complete understanding of the parties.

7. All equipment, supplies and services sold to the City of Roseville shall conform to the general safety orders of the State of California.

8. Unless notified to the contrary, in writing, the City assumes that the Contractor has accepted the work in accordance with the plans and specifications (if any) and agrees to do the work in compliance with this Agreement.

9. All prevailing wages and fair employment practices must be adhered to. For prevailing wage contracts over $25,000, copies of certified payroll must be submitted with invoices. Prevailing wage rates may be obtained from the State Department of Industrial Relations and/or the following website address: http://www.dir.ca.gov/dlsr/DPreWageDetermination.htm.

10. Contractor agrees to the below insurance requirements:

    a. Unless otherwise specified, the Contractor shall maintain the policies of insurance outlined in Attachment A, incorporated herein by this reference, in full force and effect during the term of this Agreement. The City of Roseville retains sole discretion in determining the types and proper levels of insurance coverage.

b. Form. Contractor shall submit a certificate evidencing such coverage for the period covered by this Agreement in a form satisfactory to Risk Management and the City Attorney, prior to undertaking any work hereunder. Any insurance written on a claims made basis is subject to the approval of Risk Management and the City Attorney.

c. Additional Insureds. Contractor shall also provide a separate endorsement or section of the policy showing City, its officers, agents, employees, and volunteers as additional insureds for each type of coverage (except Workers' Compensation) and for ongoing and completed operations. Such insurance shall specifically cover the contractual liability of Contractor. The additional insured coverage under the Contractor's policy shall be primary and noncontributory, as evidenced by a separate endorsement or section of the policy, and shall not seek contribution from City's insurance or self-insurance. In addition, the additional insured coverage shall be at least as broad as the Insurance Services Office (ISO) CG 20 01 Endorsement. Any available insurance proceeds in excess of the specified minimum insurance coverage requirements and limits shall be available to the additional insureds. Furthermore, the requirements for coverage and limits shall be:

(1) the minimum coverage and limits specified in this Agreement; or
(2) the full coverage and maximum limits of any insurance proceeds available to the named insureds, whichever is greater.

d. Cancellation/Modification. Contractor shall provide ten (10) days written notice to City prior to cancellation or modification of any insurance required by this Agreement.

e. Umbrella/Excess Insurance. The limits of insurance required in this Agreement may be satisfied by a combination of primary and excess insurance. Any excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and noncontributory basis for the benefit of City (if agreed to in a written contract) before City's own insurance shall be called upon to protect it as a named insured.

f. Subcontractors. Contractor agrees to include in its contracts with all subcontractors the same requirements and provisions of this Agreement, including the indemnity and insurance requirements, to the extent they apply to the scope of the subcontractor's work. Furthermore, Contractor shall require its subcontractors to agree to be bound to Contractor and City in the same manner and to the same extent as Contractor is bound to City under this Agreement. Additionally, Contractor shall obligate its subcontractors to comply with these same provisions with respect to any tertiary subcontractor, regardless of tier. A copy of City's indemnity and insurance provisions will be furnished to the subcontractor or tertiary subcontractor upon request.

g. Self-Insured Retentions. All self-insured retentions (SIR) must be disclosed to Risk Management for approval and shall not reduce the limits of liability. Policies containing any SIR provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named insured or City. City reserves the right to obtain a full certified copy of any insurance policy and endorsements. The failure to exercise this right shall not constitute a waiver of such right.

h. Waiver of Subrogation. Contractor hereby agrees to waive subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss under a Workers Compensation, Commercial General Liability or Automobile Liability policy. All Workers Compensation, Commercial General

Liability and Automobile Liability policies shall be endorsed with a waiver of subrogation in favor of City, its officers, agents, employees and volunteers for all work performed by Contractor, its employees, agents and subcontractors.

i. Liability/Remedies. Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve Contractor of liability in excess of such coverage, nor shall it preclude City from taking such other actions as are available to it under any other provisions of this Agreement or law.

11. Contractor shall comply with all federal, state and local laws and ordinances, including but not limited to the City's storm water regulations, as may be applicable to the performance of services under this Agreement. Failure to comply with local ordinances may result in monetary fines and cancellation of this Agreement. Refer to www.roseville.ca.us/stormwater for links to more information on the City's storm water regulations.

12. In the event that the terms of any attachment or exhibit conflict with any terms of this Agreement, the terms of this Agreement shall control.

13. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or ".pdf" signature page were an original thereof.

14. If either party commences any legal action against the other party arising out of this Agreement or the performance thereof, the prevailing party in such action shall be entitled to recover its reasonable litigation expenses, including but not limited to, court costs, expert witness fees, discovery expenses, and attorneys' fees. Any action arising out of this Agreement shall be brought in Placer County, California, regardless of where else venue may lie. This Agreement shall be governed by and construed in accordance with the laws of the State of California.

15. This Agreement shall be binding upon the heirs, successors, executors, administrators and assigns of the respective parties hereto.

16. If any of the provisions contained in this Agreement are for any reason held invalid or unenforceable, such holding shall not affect the remaining provisions or the validity and enforceability of the Agreement as a whole.

17. For purposes of this Agreement, the terms "Contractor," "Consultant," and "Supplier" are used interchangeably.

18. No contractor or subcontractor may work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. During the performance of this agreement, Contractor and its subcontractors shall have a continuing legal obligation to maintain current registration with the Department of Industrial Relations. Contractor is hereby notified that this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

19. Contractor must submit all claims as defined in and in accordance with the claim resolution process set forth in Section 9204 of the Public Contract Code. Each such claim must be sent to the City by registered mail or certified mail with return receipt requested and must contain reasonable documentation to support the claim. All claims must be received prior to acceptance of the work.

20. Contractor certifies that Contractor, its employees, directors, officers, agents, subcontractors, vendors, and volunteers are not presently debarred, excluded, suspended, declared ineligible, voluntarily excluded, or proposed for debarment, exclusion, suspension or ineligibility by any federal, state, or local department or agency.

21. This Agreement may be amended via change order, but only if such change order is made in writing, approved by the City, and signed by both parties.

22. CONTRACTOR agrees to defend and indemnify CITY if, despite the parties intent and practice, any venue, agency, or court with competent jurisdiction determines that CONTRACTOR and/or any of its agents, officers, employees, volunteers, independent contractors, or subcontractors, are characterized as employee(s) of CITY.

    CONTRACTOR and CITY agree that: (a) CONTRACTOR is free from the control and direction of CITY in connection with the performance of the work; (b) CONTRACTOR is providing services directly to CITY; (c) CONTRACTOR has and will maintain at all relevant times a business license; (d) CONTRACTOR maintains a business location that is separate from CITY; (e) CONTRACTOR is customarily engaged in an independently established business of the same nature as that involved in the work performed hereunder; (f) CONTRACTOR actually contracts with other businesses to provide the same or similar services and maintains a clientele without restrictions from CITY; (g) CONTRACTOR advertises and holds itself out to the public as available to provide the same or similar services; (h) CONTRACTOR provides its own tools, vehicles, and equipment to perform the services; (i) CONTRACTOR has negotiated its own rates; (j) CONTRACTOR set its own hours and location of work in accomplishing CITY's on-call needs; and (k) CONTRACTOR has the right to control the manner and means of accomplishing the result desired and exercises its own expert independent judgement.

The supplier named hereon by the acceptance of this order agrees to the provisions of this document titled "Contract Purchase Agreement" and all accompanying terms, conditions, and attachments.

Roseville Business License No. _____

Contractor License No. _____

DIR Registration No. _____

Check mark the applicable company type below:

_____✓_____ **Corporation**

_____ **Limited Liability Company**

_____ **Partnership**

_____ **Sole Proprietor**

City Reserves the right to withold any payments to contractor in the event of noncompliance with insurance requirements or if required by law.
Construction T&C
REV 3/2/21 JS

ATTACHMENT A
HUMAN RESOURCES/RISK MANAGEMENT DIVISION
INSURANCE REQUIREMENTS
AGREEMENT OVER FORMAL BID LIMIT OR INVOLVING HIGH RISK ACTIVITIES

General - Required Coverage/Documentation

- General Liability: $1 Million per occurrence /$2 Million aggregate
- Automobile Liability: $1 Million combined single limit
- Workers' Compensation: Statutory *Must provide a Waiver of subrogation
- Additional Insured Endorsement (AIE) - General Liability policy: CG 20 38 04 13 or an equivalent, blanket endorsement or section of the policy. Endorsement shall cover the City of Roseville, its officers, agents, employees and volunteers as additional insured.
- Policies must be primary and non-contributory
- A 30 day notice of cancellation must be provided
- List certificate holder as: The City of Roseville - Insurance Compliance, PO Box 100085-R1, Duluth, GA 30096

Additional Liability/Insurance Requirements if required by Agreement (and marked below):

Construction:____
General Liability:
$2 Million/occurrence
$4 Million aggregate

Design Professional:____
General Liability:
$2 Million/occurrence
$4 Million aggregate
Professional Liability:
$2 Million/occurrence

Professional Consultant:____
Professional Liability:
$1 Million/occurrence

IT Services:____
Professional Liability:
$1 Million/occurrence
No auto required

Hazardous Materials:____
Pollution Liability:
$1 Million/occurrence

Special Events/Caterers-Vendors:____
No auto required
No workers' comp required

Professional Counseling/ Psychological:____
Professional Liability:
$1 Million/occurrence
No auto required

Pyrotechnics:____
General Liability:
$5 Million/occurrence
$10 Million aggregate
Auto - $2 Million/occurrence

Chemical/Environmental:____
General Liability:
$3 Million/occurrence
$6 Million aggregate
Pollution – $2 Million/Occurrence
Auto - $2 Million/Occurrence

Insurance Submission Process

The City of Roseville Human Resources/Risk Management Department uses a service called EBIX to manage our insurance certificate tracking.

How It Works

- The vendor's contact information is entered into EBIX. EBIX will contact the vendor to request proof of insurance.
- The Vendor can forward the request to their Insurance Agent(s) if necessary.
- Vendor/Insurance Agent submits insurance to EBIX by email to roseville@ebix.com or by fax to (770) 325-5727. After faxing or emailing the certificate, please DO NOT send the certificate by mail to EBIX. Please do not mail, email or fax any certificates to the City of Roseville.
- Once submitted, EBIX reviews the insurance documentation. If there are deficiencies, EBIX will send a follow up letter or email requesting additional information.

Questions Regarding Insurance Submission: Contact EBIX at (951) 652-4239
Questions Regarding Insurance Requirements Contact Risk Management at (916) 774-5202

Supplier	
Signature:	
Print Name:	Jeff Prangler
Title:	Customer Services Manager

Supplier	
Signature:	
Print Name:	Audrey A Gilliam
Title:	Credit Analyst

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

AUDREY A. GILLIAM
My Commission Expires
June 8, 2022
Lawrence County
Commission #14982523

City of Roseville, A Municipal Corporation	
Signature:	
Print Name:	Dominick Casey
Title:	City Manager

QUOTATION

PlayPower LT Farmington C/O

All About Play Inc
3844 Presidio Street, Sacramento, CA 95838
Phone: 916-923-2180 Fax: 916-646-6383
www.playgroundpros.com

TO:	City of Roseville Buljan Park Add-On Playground Equipment	**DATE:**	July 25, 2021
		BY:	Glen Wurster 916.923.2180 PH
CONTACT:	Tara Gee		
PHONE:	916.774.5253		glen@playgroundpros.com
EMAIL:	tgee@roseville.ca.us		
REFERENCE:	Add-On Parts for Tree Fort Playground		**Quote #BPP72521**

Little Tikes Commercial Equipment - Sourcewell/NJPA Contract #030117-LTS

	Qty	Description	Each		Total
MATERIALS:	1	Kid Builder Add-On Playground Parts for Tree Fort Playground	$ 59,857.00	$	59,857.00
					-
					-
					-
					-
					-
					-
		Sourcewell/NJPA Discount	20.00%	$	(11,971.40)
					-
		SUB TOTAL:		$	47,885.60
TAX:		Sales tax is an estimate final tax will be charged based on final shipping address	7.750%	$	3,711.13
FREIGHT:		Freight cost of $5,600.00 covered by Sourcewell			No Charge
INSTALLATION:		Installation of Playground Parts and needed site work		$	35,402.00
TOTAL:				**$**	**86,998.73**

Quote Good for 30 Days

Price increases or surcharges may be applied due to the volatility of steel and raw material cost.
The installation pricing is quoted with prevailing wage rates and includes a final playground inspection.
Quote includes installer receiving and offloading the playground equipment.
Installer not responsible of underground utilities, obstruction or permitting of any kind.

To process non-municipal orders, a completed Credit Application is required and a deposit may be required.

Please make purchase orders out to:
PlayPower LT Farmington C/O All About Play 3844 Presidio St., Sacramento, CA 95838
Remit All Payments To:
PlayPower LT Farmington PO Box 734155 Dallas, TX 75373-4155

I accept the terms and pricing listed on the above quotation:

Signature: _____ **Date:** _____

Bond No. _____
Premium $_____

PUBLIC WORKS
FAITHFUL PERFORMANCE BOND

(Project: _____)

WHEREAS, the City of Roseville ("CITY") has awarded a bid and contract to _____ as contractor ("PRINCIPAL") for the public work described as _____ _____ (the "WORK"). The contract ("AGREEMENT"), for the public work described above, and all of its terms and conditions are incorporated by reference and made a part hereof; and

WHEREAS, the PRINCIPAL is required to furnish a bond in connection with the AGREEMENT guaranteeing its faithful performance; and

NOW, THEREFORE, we the undersigned PRINCIPAL and _____ _____, a _____, admitted and duly authorized to transact business under the laws of the State of California, as SURETY ("SURETY"), are held and firmly bound unto the CITY or its successors and assigns in the sum of _____ dollars ($_____) (which amount is not less than 100% of the AGREEMENT price) to be paid to the CITY or its successors and assigns; and for which payment, well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors or assigns jointly and severally, firmly by these presents.

The condition of this obligation is such that if the PRINCIPAL, or its heirs, executors, administrators, successors or assigns, shall abide by, and in all respects promptly and faithfully perform the covenants, conditions and provisions in said AGREEMENT and any alteration thereof made as therein provided, notice of which alterations to Surety being hereby waived, on its part to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless CITY, its officers, agents, employees, volunteers as therein stipulated, then this obligation shall be null and void; otherwise, this obligation shall be and remain in full force and effect.

As condition precedent to the satisfactory completion of the contract, the obligation of the PRINCIPAL and SURETY under this Bond shall remain in effect for a period of one (1) year after the completion and acceptance of the WORK. During that time, if the PRINCIPAL, its heirs, executors, administrators, successors or assigns fails to make full, complete and satisfactory repair and replacement or totally protect the CITY from any loss or damage made evident during that year which results from or is caused by either defective materials or faulty workmanship in the prosecution of the WORK, then the obligation shall remain in full force and effect. However, anything in

this paragraph to the contrary notwithstanding, the obligation of the SURETY shall continue so long as any obligation of the PRINCIPAL remains.

No prepayment or delay in payments, and no change, extension, addition or alteration of any provision of the AGREEMENT or in the specifications agreed to between the PRINCIPAL and the CITY, or any forbearance on the part of the CITY shall operate to relieve the SURETY. The SURETY hereby waives the provisions of Section 2819 of the California Civil Code. The SURETY waives all rights of subrogation against the CITY or any person employed by the CITY. If the contract price increases by the issuance of change orders, the amount specified in this bond shall increase by the same amount.

Whenever PRINCIPAL shall be and declared by CITY to be in default under the AGREEMENT, SURETY shall promptly remedy the default, or shall promptly do one of the follow at CITY's election:

1. Undertake through its agents or independent contractors, reasonably acceptable to CITY, to complete the AGREEMENT in accordance with its terms and conditions and to pay and perform all obligations of PRINCIPAL under the AGREEMENT, including without limitation, all obligations with respect to warranties, guarantees, and the payment of liquidated damages.

2. Reimburse CITY for all costs CITY incurs in completing the AGREEMENT, and in correcting, repairing or replacing defects in materials or workmanship and/or materials and workmanship which do not conform to the specifications in the AGREEMENT.

SURETY's obligations hereunder are independent of the obligations of any other surety for the performance of the AGREEMENT, and suit may be brought against SURETY and such other sureties, jointly and severally, or against any one or more of them, or against less than all of them without impairing CITY's rights against the others.

No right of action shall accrue on this bond to or for the use of any person or corporation other than CITY or its successors or assigns.

As part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by CITY in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

[SIGNATURES NEXT PAGE]

IN WITNESS WHEREOF, this instrument has been duly executed by the PRINCIPAL and SURETY above-named, on the ____ day of _____, 20___.

PRINCIPAL:

BY:_____

PRINT NAME: _____

PRINT TITLE: _____

AND

BY: _____

PRINT NAME: _____

PRINT TITLE:_____

SURETY:

BY:_____

PRINT NAME: _____

PRINT TITLE:_____

MAILING ADDRESS:

_____

_____

_____

(Notarization by Surety and copy of Power of Attorney required.)

APPROVED AS TO FORM:

BY: _____
City Attorney

Bond No. _____
Premium $_____

PUBLIC WORKS
LABOR AND MATERIALS PAYMENT BOND

(Project: _____)

WHEREAS, the City of Roseville ("CITY"), has awarded a bid and contract to _____ as contractor ("PRINCIPAL"), for the public work described as _____ _____ (the "WORK"). The contract ("AGREEMENT"), for the public work described above, and all of its terms and conditions are incorporated by reference and made a part hereof; and

WHEREAS, the PRINCIPAL is required to furnish a bond in connection with the AGREEMENT guaranteeing payment of persons who provide labor and material; and

NOW, THEREFORE, we the undersigned PRINCIPAL and _____ _____, a _____, admitted and duly authorized to transact business under the laws of the State of California, as SURETY ("SURETY"), are held and firmly bound unto the CITY or its successors and assigns in the sum of _____ dollars ($_____) (which amount is not less than 100% of the AGREEMENT price) to be paid to the CITY or its successors and assigns; and for which payment, well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors or assigns jointly and severally, firmly by these presents.

The condition of the obligation is such that if the PRINCIPAL, its subcontractors, heirs, executors, administrators, successors or assigns fails to pay any of the persons named in Section 8004 or 9100 of the Civil Code of the State of California, or the amounts due under the Unemployment Insurance Code of the State of California, or any amounts required to be deducted, withheld and paid over to the Employment Development Department from the wages of employees of the PRINCIPAL and its subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to work or labor performed by any such claimant, that the SURETY will pay for the same, in an amount not exceeding the sum specified in this bond, and also, in case suit is brought upon the bond, shall pay reasonable attorneys' fees, to be fixed by the Court.

This bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file a Stop Payment Notice pursuant to the provisions of Section 9350 et seq. of the Civil Code of the State of California, so as to give a right of action to them or their assigns in any suit brought upon this bond.

No prepayment or delay in payments, and no change, extension, addition or alteration of any provision of the AGREEMENT or in the specifications agreed to between the PRINCIPAL and the CITY, or any forbearance on the part of the CITY shall operate to relieve the SURETY. The SURETY hereby waives the provisions of Section 2819 of the California Civil Code. The SURETY waives all rights of subrogation against the CITY or any person employed by the CITY. If the contract price increases by the issuance of change orders, the amount specified in this bond shall increase by the same amount.

As part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by CITY in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

IN WITNESS WHEREOF, this instrument has been duly executed by the PRINCIPAL and SURETY above-named, on the _____ day of _____, 20__.

PRINCIPAL:

BY:_____

PRINT NAME: _____

PRINT TITLE: _____

AND

BY: _____

PRINT NAME: _____

PRINT TITLE:_____

SURETY:

BY:_____

PRINT NAME: _____

PRINT TITLE:_____

MAILING ADDRESS:

_____

_____

_____

(Notarization by Surety and copy of Power of Attorney required.)

APPROVED AS TO FORM:

BY: _____
City Attorney

COUNCIL COMMUNICATION

CC #: 1690
File #: 0900-04-02

Title:	Washington Boulevard at All America City Boulevard Roundabout Project - Approval of Plans and Specifications and Authorization to Call for Bids
Contact:	Beth Taylor 916-746-1300 bftaylor@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 7.3.

RECOMMENDATION TO COUNCIL

Staff recommends that the City Council approve the plans and specifications for the Washington Boulevard at All America City Boulevard Roundabout Project and authorize staff to call for bids.

BACKGROUND

The Washington Boulevard at All America City Roundabout Project is identified in the City's Transportation System Capital Improvement Program (CIP). The project was also identified as a mitigation measure in the Placer County Sports and Event Complex Project EIR in 2018 to address impacts to the intersection of Washington Boulevard and All America City Boulevard/Lincoln Street.

Washington Boulevard is an arterial roadway (originally part of old Hwy 65) that extends from Central Roseville to the northern City Limit and is one of the main connections to the City's Historic and Downtown regions. The roundabout project limits currently include Washington Boulevard, a five-lane arterial, intersected by the collector roadways of All America City Boulevard on the west, and Lincoln Street to the east.

The proposed roundabout will maintain the multi-lane configuration for the north and southbound directions, while reducing the intersecting collector streets to a single approach and departure from All America City Boulevard, and an exit to Lincoln Street. This project will improve the intersection safety, accessibility for bicyclists and pedestrians, and corridor aesthetics, while also reducing vehicle emissions. Improvements to aesthetics include landscaping and a railroad-themed urban design feature within the center of the roundabout.

PUBLIC OUTREACH

Public Works staff will be working closely with the City's communication team to keep the community informed of the project's progress and traffic impacts during the construction phase of the project. The Public Affairs and Communications staff will inform residents and businesses about the project benefits and construction impacts through a variety of methods including, but not limited to: direct mail, signage, social media, web, and email notifications.

FISCAL IMPACT

CONSTRUCTION OF PROJECT

The project cost is estimated to be $5.7 million and is funded by a $4.9 million Congestion Mitigation Air Quality grant; $560,000 of Local Transportation Funds and $240,000 from Environmental Utility Water Rehabilitation Funds. Once the actual construction costs are known, a budget adjustment will be recommended for approval at the time of Council award of the construction contract.

IMPACT OF MAINTENANCE COSTS FOR LANDSCAPING

This project includes landscaping improvements along the corridor that will require maintenance by the City. The estimated landscaping maintenance cost increase as a result of the improvements is $300 per month ($3,600 annually). At project award, a budget adjustment will be requested from the General Fund to cover the additional maintenance costs in the appropriate operations budget.

ENVIRONMENTAL REVIEW

Council approval of bid documents for Washington Boulevard All America City Boulevard Roundabout Project is an action that is subject to CEQA. Project level CEQA compliance for the Washington Boulevard All America City Boulevard Roundabout project was accomplished with preparation of the Washington Boulevard at All America City Boulevard (WAAC) Roundabout Project Final Initial Study and Mitigated Negative Declaration (Adopted: January 20, 2021) (SCH: 2020100313). Because the Washington Boulevard All America City Boulevard Roundabout project is consistent with the project evaluated in the Washington Boulevard at All America City Boulevard (WAAC) Roundabout Project Final Initial Study and Mitigated Negative Declaration, no new effects would be expected to occur and all applicable mitigation measures from the Washington Boulevard at All America City Boulevard (WAAC) Roundabout Project Final Initial Study and Mitigated Negative Declaration will be implemented. As such, no additional CEQA action is required at this time.

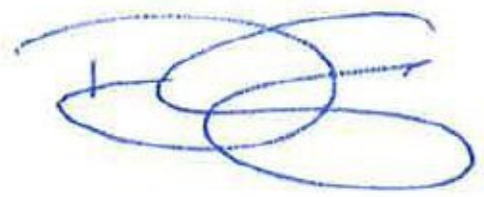
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal F - Invest in well-planned infrastructure and growth

Respectfully Submitted,

Beth Taylor, Assistant Engineer

Jason Shykowski, Public Works Director



Dominick Casey, City Manager

ATTACHMENTS:

Description

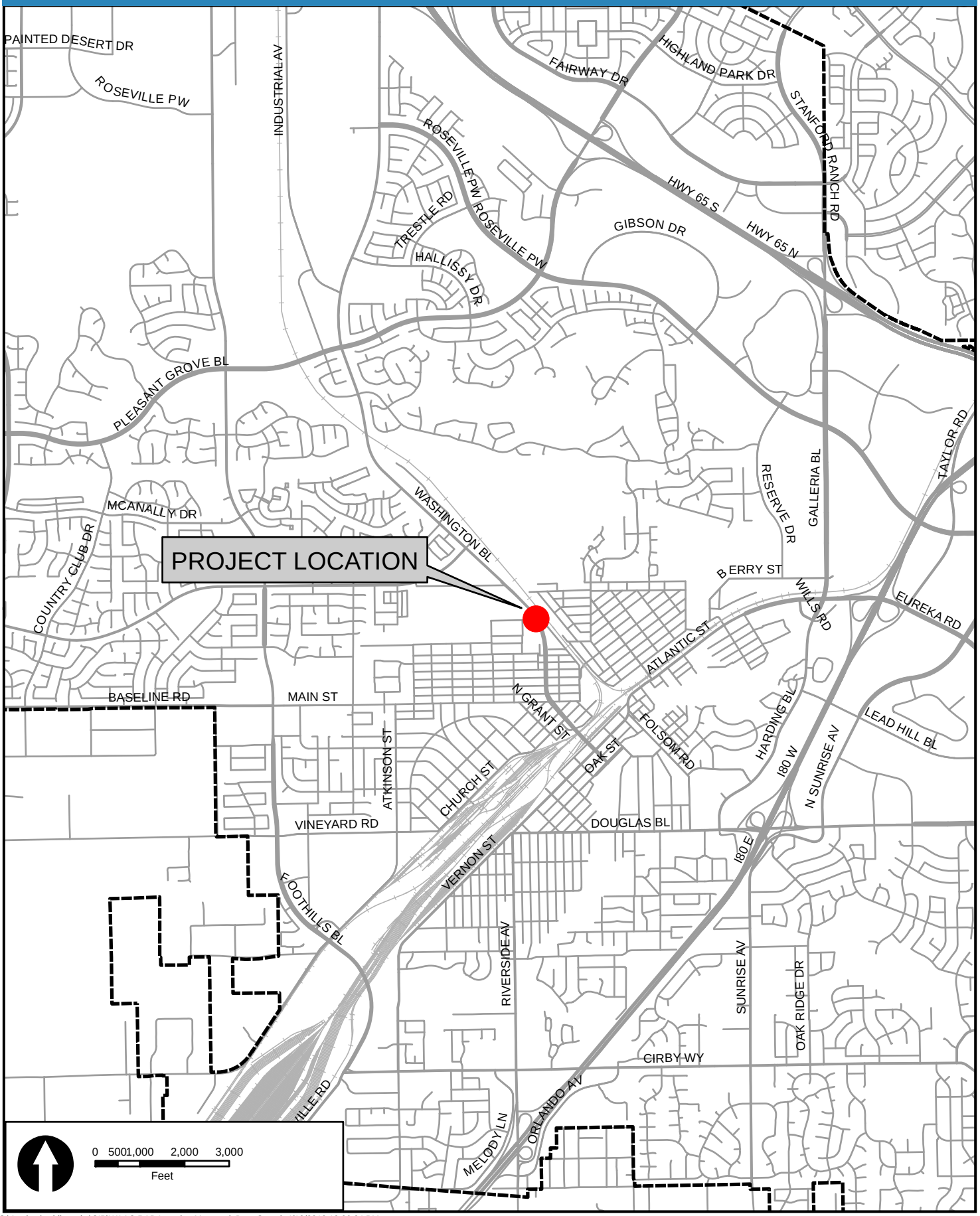
Location Map

WAACR Project Manual

WAACR Plan Set pg 1-45

WAACR Plan Set pg 46-62

Washington Blvd. & All America City Blvd. Roundabout Project - Location Map



S:\Arcdata\publicworks\CIP\WAAC RAB Location Map.mxd Date Saved: 4/12/2019 12:06:24 PM

Streets & Bridges
Project Manual

Name of project:

Washington Boulevard at All America City Boulevard Roundabout Project

City Project # 500070

Federal Project ID # CML 5182 (079)

Department:

Public Works –Engineering

CITY OF ROSEVILLE CALIFORNIA

FEDERAL AID NO. CML 5182 (079)
PROJECT NO. 500070

The special provisions contained herein have been prepared by or under the direction of the following Registered Persons:

CIVIL

Daniel Carley, Registered Civil Engineer

ELECTRICAL

Robert Paderna, Registered Civil Engineer

LANDSCAPE

Randall Kopff, Licensed Landscape Architect

APPROVAL RECOMMENDED BY:

Stefanie A. Kemen

Digitally signed by Stefanie A. Kemen
Date: 2021.07.27 09:51:32 -07'00'

STEFANIE KEMEN, P.E., DIVISION MANAGER
PUBLIC WORKS – ENGINEERING
CITY OF ROSEVILLE
RCE 72653

APPROVED BY:

Jason Shykowski

Digitally signed by Jason Shykowski
Date: 2021.07.27 15:40:48 -07'00'

JASON SHYKOWSKI, P.E.
PUBLIC WORKS DIRECTOR
CITY OF ROSEVILLE
RCE 58234

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Assembly Bill No. 626	AB 626
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Construction Details	CD

CITY OF ROSEVILLE

DEPARTMENT OF PUBLIC WORKS

Name of Project: WASHINGTON BLVD AT ALL AMERICA CITY ROUNDABOUT PROJECT

Federal Aid Project: CML 5182(079)

City of Roseville Contract: 500070

NOTICE TO CONTRACTORS

NOTICE IS HEREBY GIVEN THAT sealed Proposal will be received at the Office of the City Clerk, 311 Vernon Street, Roseville, California, until _____ at 3:00 p.m. Late proposals will be rejected. No exceptions.

The Proposals will be publicly opened and read by the City Clerk or designee of the City of Roseville at 3:05 p.m. on _____, 20__ at the Office of the City Clerk located at 311 Vernon Street, Roseville California for the following project:

_____.

A pre-bid meeting will be held at NOT APPLICABLE.

A Project Manual, including all Contract Documents and the Proposal forms for bidding this project, may be obtained on-line from the City of Roseville's website at https://www.roseville.ca.us/business/procurement_services/bids_rfps. All communications relative to this project shall be conducted through Public Purchase.

Bids shall be submitted on the City's Proposal Forms included in the Project Manual, plainly endorsed with the Bidder's name together with signed acknowledgement of any and all addenda. Proposal Forms shall be securely sealed in a suitable envelope marked with the name

and address of the Bidder, and marked in capital letters on the front and back of the envelope as follows:

[NAME OF PROJECT]

(Name of Bidder)

(Address of Bidder)

Whether mailed or personally delivered, all bids shall be addressed to the City of Roseville, Office of the City Clerk, 311 Vernon Street, Roseville, California, 95678.

Each bid must be accompanied by a Bid Guaranty in the form of a Certificate of Deposit, Certified or Cashier's Check, Bidder's Bond or Irrevocable Standby Letter of Credit in an amount equal to at least ten percent (10%) of the Bidder's Grand Total Price. The Bid Guaranty will be retained by the City and applied to any and all damages sustained by the City in the event that the successful Bidder fails or refuses to enter into the Contract awarded to it and to furnish all required bonds and Certificates of Insurance. The City intends to award the Contract to the lowest responsible Bidder based on the Grand Total Bid Price for all components of the Project. To the extent allowed by law, the City reserves the right to reject any and all bids and/or to waive any irregularities or informalities in any bid or in the bidding procedure. The City specifically reserves the right to not award the Contract after the opening of bids.

Any bid may be withdrawn at any time prior to the time fixed in the public notice for the deadline submission of bids only by written request for the withdrawal of the bid filed with the City Clerk. The request shall be executed by the Bidder or his or her duly authorized representative. The withdrawal of a bid does not prejudice the right of the Bidder to file a new bid by the submission deadline. Whether or not bids are opened exactly at the time fixed in the public notice for opening bids, a bid will not be received after the deadline submission of bids

nor may any bid be withdrawn after the time fixed in the public notice for deadline for submission of bids. Immediately following the deadline for submission of bids all bids shall become the property of the City of Roseville and the City is under no obligation to return bids.

Bids will be examined and reported to the City Council within sixty (60) business days after the bid opening. Except as permitted by applicable law, no Bidder may withdraw its bid for a period of sixty (60) business days after the date of bid opening. Each Bidder will be notified of any award of the Contract by the City.

The City will affirmatively ensure non-discrimination on the basis of one or more of the following: race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, age, sexual orientation, or military and veteran status in the award and administration of contracts that it awards.

The City will affirmatively ensure that, in any Contract entered into pursuant to this Notice to Contractors, disadvantaged business enterprises will be afforded full opportunity to submit bids and will not be discriminated against on the grounds of sex, race, color, or national origin in consideration for an award.

Bidders are advised that, as required by federal law, the City of Roseville is implementing new Disadvantaged Business Enterprise (DBE) requirements. Section 2, "Proposal Requirements and Conditions," under subsection title "Disadvantaged Business Enterprises (DBE)" and Section 5, "General," under subsection titled "Performance of Subcontractors" of the Special Provisions cover the DBE requirements.

The DBE contract goal for this project is: <u>Twenty two (22%) percent</u>.

THIS PROJECT IS SUBJECT TO THE "BUY AMERICA" PROVISIONS OF THE SURFACE TRANSPORTATION ASSISTANCE ACT OF 1982 AS AMENDED BY THE INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991.

Pursuant to Public Contract Code Section 22300, the successful Bidder may submit certain securities in lieu of the City withholding retention of payments during the Project.

In accordance with the California Public Contract Code 20103.5 when federal funds are involved in local agency contracts, no bid shall be invalidated by the failure of the bidder to be licensed in California at the time of bid opening. However, at the time of award, the selected contractor shall be properly licensed in accordance with the laws of the State and the City of Roseville. Contractor shall possess a valid Class A, General Engineering Contractor license prior to award of Contract or other license qualifying the bidder to bid as a prime Contractor, prior to award of Contract as approved by Council. Said license shall be maintained during the contract period. It is the Bidder's and Contractor's responsibility to obtain the correct Contractor's licenses. Bidders shall be skilled and regularly engage in the general class or type of work called for under this contract.

The work is to be done in Placer County. Pursuant to California Labor Code Section 1773, the City has ascertained the General Prevailing Rate of Wages in the County in which the work is to be done to be as determined by the Director of Industrial Relations of the State of California. The Contractor is hereby made aware that information regarding prevailing wage rates may be obtained from the State Department of Industrial Relations and/or the following website address: http://www.dir.ca.gov/dlsr/DPreWageDetermination.htm. The Contractor is required to post a copy of the applicable wage rates at the job site. Attention is directed to Section 7 "Legal Relations and Responsibility" of the Standard Construction Specifications.

The Federal minimum wage rates for this project as predetermined by the United States Secretary of Labor are set forth in the Project Manual and in copies of this book that may be examined at the offices described above where project plans, special provisions, and bid forms may be seen. Addenda to modify the Federal minimum wage rates, if necessary, will be issued

to holders of the Project Manual. Future effective general prevailing wage rates, which have been predetermined and are on file with the California Department of Industrial Relations, are referenced but not printed in the general prevailing wage rates.

Attention is directed to the Federal minimum wage rate requirements in the Project Manual. If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California Department of Industrial Relations for similar classifications of labor, the Contractor and subcontractors shall pay not less that the higher wage rate. The City of Roseville will not accept lower State wage rates not specifically included in the Federal minimum wage determinations. This includes "helper" (or other classifications based on hours of experience) or any other classification not appearing in the Federal wage determinations. Where Federal wage determinations do not contain the State wage rate determination otherwise available for use by the Contractor and subcontractors, the Contractor and subcontractors shall pay not less than the Federal minimum wage rate, which most closely approximates the duties of the employees in question.

The U.S. Department of Transportation (DOT) provides a toll-free "hotline" service to report bid rigging activities. Bid rigging activities can be reported Mondays through Fridays, between 8:00 a.m. and 5:00 p.m., Eastern Time, Telephone No. 1-800-424-9071. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report these activities. The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

Pursuant to Labor Code Section 1771.1(b), notice is hereby given that a contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in Labor Code Sections 1720, et seq., unless currently registered and qualified to perform public work pursuant to Labor Code Section 1725.5 or exempt from registration requirements pursuant to Labor Code Section 1725.5(f). It is not a violation of Labor Code Section 1771.1 for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform work pursuant to Labor Code Section 1725.5 at the time the contract is awarded or is exempt from registration requirements pursuant to Labor Code Section 1725.5(f). The Contractor is hereby notified that this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

All questions prior to the deadline for bid submissions shall be directed to the attention of _____ via _____ at _____. The deadline for submissions of questions and clarifications regarding the Contract Documents is _____ calendar days before the deadline for bid submissions. Only Addenda issued by the City are binding.

_____

City Clerk, City of Roseville

Dated: _____

Published: _____

INSTRUCTIONS TO BIDDERS

SECTION 1. GENERAL

1-1.01 **GENERAL.** These Instructions to Bidders form a part of the Contract Documents. Capitalized terms are defined in Standard Construction Specifications Section 1.

1-1.02 **EXAMINATION OF PLANS, CONTRACT DOCUMENTS AND SITE OF THE WORK.** The Bidder shall examine carefully the site of the Work and all the Contract Documents, including these Instructions to Bidders, and shall inform itself of the conditions relating to the execution of the Work. Failure to do so will not relieve the successful Bidder of its obligation to enter into an Agreement and complete the Work in strict accordance with the Contract Documents. Conditions relating to the execution of the Work include the requirements of federal, state, and local laws, statutes and ordinances relative to the execution of Work, including, but not limited to, applicable regulations concerning prevailing wage rates, non-discrimination in the employment of labor, protection of the public, employee health and safety, and environmental protection.

The submission of a bid shall be conclusive evidence that the Bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of Work to be performed, the quantities of materials to be furnished, and as to the requirements of all the Contract Documents.

1-1.03 **EXISTING INFORMATION.** Where the Department has made investigations of site conditions, including subsurface conditions in areas where Work is to be performed under the Contract, such investigations are made only for the purpose of study and design. City does not represent that such conditions as found in these investigations or inferences or conclusions drawn as a result of these investigations will represent actual site

conditions and hereby disclaims any liability as a result of Contractor's or Bidder's reliance on such investigations. City will presume that all Bidders have conducted their own site investigations, including investigations of subsurface conditions. Where such investigations have been made, Bidders or Contractors may, upon written request, inspect the records of the Department as to such investigations subject to the conditions set forth in these Instructions to Bidders. Such inspection of records may be made only at the location noted above. The records of such investigations are not a part of the Contract Documents and are shown solely for the convenience of the Bidder or Contractor. The City assumes no responsibility whatsoever with respect to the sufficiency or accuracy of the investigations made, the records thereof, or of the interpretations set forth therein or made by the City in its use thereof. The City makes no warranty or guarantee, either express or implied, that the conditions indicated by such investigations or records are representative of those existing throughout such areas, or any part thereof, or that unforeseen developments may not occur, or that materials other than, or in proportions different from those indicated, may not be encountered.

No information derived from such inspection of records of investigations or compilation thereof made by the City, the Department or from the Engineer, or his or her assistants, will in any way relieve the Bidder or Contractor from properly examining the site and making such additional investigations as it may elect, or from properly fulfilling the terms of the Contract.

SECTION 2: BID REQUIREMENTS

2-1.01 **PROPOSAL FORMS.** The Department will furnish to each Bidder standard Proposal Forms, which, when filled out and executed may be submitted as the bid. Proposals shall include all pages in the Project Manual with page numbers marked "PROP" plus the Addendum acknowledgment form (front sheet) from all Addenda received by the Bidder. Proposals shall be removed from the Project Manual. The full Project Manual shall not be submitted with the proposal. Bids not presented on forms so furnished will be disregarded.

The Proposal and one (1) copy thereof shall be submitted as directed in the "Notice to Contractors" under sealed cover plainly marked as a Proposal, and identifying the project to which the Proposal relates and the date of the bid opening therefor. Proposals which are not properly marked may be disregarded.

All blank spaces in the Proposal must be completed, as required, in ink. All price information shall be shown, clearly legible, in figures where required.

The Bidder shall sign the Proposal in the blank space provided therefor. If the Bidder is the sole owner, the Proposal shall be signed by the owner. If the Bidder is a corporation, the legal name of the corporation and its State of incorporation shall be set forth and the Proposal shall be signed by at least two officers authorized to sign contracts on behalf of the corporation. If the Bidder is a partnership, the true name of the firm shall be set forth, the names and addresses of all partners shall be given and the Proposal shall be signed by a partner in the firm authorized to sign contracts on behalf of the partnership. If the Bidder is a joint venture, the Proposal shall be signed on behalf of each participating company by officers or other individuals who have the full and proper authorization to do so. If the Proposal is signed by an agent of the Bidder other than an officer of a corporation or a member of a partnership, a notarized Power of

Attorney must be on file with the City prior to opening of bids or must be submitted with the Proposal. If requested by the City, the Bidder shall promptly submit evidence satisfactory to the City of the authority of the person signing the Proposal.

2-1.02 **SUBMISSION OF BIDS.** Bids must be submitted at the prescribed time and location specified in the Notice to Contractors. Any submission received after the prescribed time shall be rejected, regardless of whether or not bids are opened exactly at the prescribed time.

Any unauthorized conditions or qualifications entered on, or changes made to, the Proposal may render it invalid and may cause its rejection.

No telegraphic, telephonic, or facsimile or other electronically transmitted bids will be considered.

2-1.03 **REQUIRED LISTING OF PROPOSED SUBCONTRACTORS.** Each Proposal shall list the name, address and Contractor license number of each Subcontractor to whom the Bidder proposes to subcontract portions of the Work in an amount in excess of one-half of one percent (0.5%) of its total bid, in accordance with Section 4100 to 4114, inclusive, of the Public Contract Code for the State of California. The Bidder shall list the Subcontractor's license number and the portion of the Work that will be done by each Subcontractor. If the Bidder fails to specify a Subcontractor for any portion of the Work, the Bidder agrees to perform that portion of the Work itself, and represents that it is qualified to perform that portion of the Work itself. The Bidder's attention is invited to other provisions of the Public Contract Code related to the imposition of penalties for a failure to observe its provisions by using unauthorized Subcontractors or by making unauthorized substitutions.

2-1.04 **CONTRACTOR'S LICENSING LAWS.** Attention is directed to the provisions of Business and Professions Code Chapter 9 of Division 3 concerning the licensing of Contractors.

All Bidders at the time of bid submittal shall be licensed as Contractors in accordance with the laws of this State. Any Bidder or Contractor not so licensed is subject to the penalties imposed by such laws. The form of Contractor's license required is stated in the Notice to Contractors, provided that the City makes no representation as to whether the State may require other or additional licenses. It is the Bidder's and Contractor's responsibility to obtain the correct Contractor's licenses. Bidders shall be skilled and regularly engaged in the general class or type of Work called for under this Contract.

All Bidders and Contractors, including Subcontractors, shall have a current City business license before undertaking any Work.

2-1.05 **NONCOLLUSION DECLARATION.** By submitting a bid, the Bidder represents and warrants that such bid is genuine and not a sham or collusive or made in the interest or on the behalf of any person therein named, and that the Bidder has not, directly or indirectly, included or solicited any other Bidder to put in a sham bid, or any other person, firm, or corporation to refrain from bidding, and that the Bidder has not in any manner sought collusion to secure the Bidder an advantage over any other Bidder.

Bidders shall submit a properly completed and executed "Noncollusion Declaration" in the form required by Public Contract Code Section 7106 and provided with the Proposal (PROP-11).

2-1.06 **DISQUALIFICATION, REMOVAL OR OTHER PREVENTION OF BIDDING.** A bid may be rejected on the basis of a Bidder, any officer of such Bidder, or any

employee of such Bidder who has a proprietary interest in such Bidder, having been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local project because of a violation of law or a safety regulation.

2-1.07 **PROPOSAL GUARANTY.** All bids shall be accompanied by one of the following forms of Bidder's security: Cash, a cashier's check, a certified check, or a Bidder's bond executed by an admitted California surety insurer, made payable to the City of Roseville, or any other form of security deemed acceptable by the City Attorney. The security shall be in an amount equal to at least ten percent (10%) of the amount bid. A bid will not be considered unless one of the form of Bidder's security is enclosed with it.

A Bidder's bond shall conform to the City's bond form in the Proposal and shall be properly filled out and executed.

2-1.08 **SCHEDULE OF BID PRICES.** Bidders are directed to submit firm unit and lump sum prices for all Work set forth in the Contract Documents on the Proposal Form entitled "Schedule of Bid Prices."

Unit prices and lump sum prices, as indicated, must be entered in the appropriate spaces provided in the Schedule of Bid Prices. If applicable, unit prices shall be multiplied by the quantities shown, and the total shall be inserted in the Amount column. In the event of any error or discrepancy between the unit price and the calculated amount, the unit prices shall govern. The City may correct any mathematical errors apparent on the face of the bid.

The amounts shown in the Amount column must be added together in arriving at the Grand Total Bid Price.

Amounts for Allowance bid items must be entered in the exact amount in the Amount column.

The prices included within the Schedule of Bid Prices shall include all costs for labor, materials, tools, equipment, services, Subcontractors, suppliers, taxes, insurance, shipment, delivery, overhead, profit, and all other costs necessary to perform the Work in accordance with the Contract Documents.

The Grand Total Bid Price shall be indicated in the Summary table form included with the Schedule of Bid Prices. The Grand Total Bid Price shall be the sum of the amounts bid for each of the designated portions of the Work, as more specifically described on the Schedule of Bid Prices form itself.

Full compensation for complying with the Contract Documents, including requirements of the Standard Specifications, the Standard Construction Specifications, Supplemental Conditions, and all warranties, shall be considered included in the bid items and no additional compensation shall be allowed therefor.

Full compensation for completion of all work as shown on the plans, as specified in the Specifications, and as directed by the City, shall be considered included in the bid items and no additional compensation shall be allowed.

Bidders are strongly discouraged from submitting unbalanced bids. As used herein, the term "unbalanced bid" is defined as any bid that does not include a reasonable proportionate allocation of indirect costs and profit of each bid item indicated in the Schedule of Bid Prices. The City reserves the right to reject any unbalanced bid if the City determines that there is a reasonable doubt that an acceptance of the bid will not result in the lowest ultimate cost to the City with regard to the work or a disproportionate distribution of contract funds.

The City reserves the right to delete any bid item in its entirety and/or significantly reduce the quantity of Work under a bid item. The City makes no representation that any Work

under a bid item will be performed during the course of the Project or that the Work will be performed at the quantities included in the Schedule of Bid Prices. As provided in the Standard Construction Specifications, for any deleted Work, Contractor shall not be entitled to payment of the indirect costs and profit included for said bid item. All bid items shall be considered distinct and severable from the remaining bid items, and each Bidder acts at its peril if its bid is unbalanced.

The City shall compare bids on the basis of the Grand Total Bid Price, which includes the base bid and any alternates designated on the Schedule of Bid Prices. Alternates may or may not be awarded, or may be awarded in any combination, at the City's discretion.

2-1.09 **WITHDRAWAL OF PROPOSALS.** Any bid may be withdrawn at any time prior to the time fixed in the Notice to Contractors for the opening of bids, provided that a request in writing, executed by the Bidder or its duly authorized representative, for the withdrawal of such bid is filed with the City Clerk. Facsimile and electronic mail requests are not acceptable. The withdrawal of a bid shall not prejudice the right of a Bidder to file a new bid. The withdrawal of any bid after the time fixed in the Notice to Contractors for the opening of bids will not be permitted.

2-1.10 **ADDENDUM.** Proposals shall include all costs and account for all Addenda issued prior to opening of bids. The Bidder is responsible for verifying that all issued Addenda have been received. An Addendum acknowledgment form for each Addendum shall be included as part of the Proposal submittal.

2-1.11 **PUBLIC OPENING OF PROPOSALS.** Proposals will be publicly opened and read at the time and place indicated in the Notice to Contractors. Bidders or their authorized agents are invited to be present.

2-1.12 **TRENCHING AND EXCAVATION WORK.** In accordance with the provisions of California Labor Code Section 6707, if the Work involves construction of a pipeline, sewer, sewage disposal system, boring or jacking pits, or similar trenches or open excavations, which are five feet (5') or deeper, each bid submitted shall contain, as a bid item, adequate sheeting, shoring, and bracing, or equivalent method, for the protection of life or limb, which shall conform to all applicable safety orders.

SECTION 3: EVALUATION OF BIDS

3-1.01 **BID EVALUATION PROCESS.** Bids will be evaluated to determine the apparent low Bidder. The apparent low Bidder will be determined on the basis of the Grand Total Bid Price, as shown in the Schedule of Bid Prices. If additive or deductive alternates are used in the Schedule of Bid Prices, the apparent low Bidder will be the Bidder with the lowest total of the bid prices for base contract items plus the alternates designated by the City as those that will be used for determining the lowest bid price. However, the City reserves the right to (1) not award any alternates or (2) award any combination of alternates.

In case of discrepancy between the total of the base contract items and any specified alternates and the stated Grand Total Bid Price, the total of the base contract items plus specified alternates shall prevail. Any mathematical errors that appear on the face of the bid will be corrected by the City and the City will use the mathematically corrected addition. For example, if the mathematical total of Bidder's base contract items plus specified alternates equals $1,000,000, but the Bidder has written $1,250,000 as the Grand Total Bid Price, the City will consider $1,000,000 to be the Bidder's Grand Total Bid Price for purposes of comparison to other Bidders and actual bid award. The City reserves its rights to reject or accept bids based on discrepancies between the stated Grand Total Bid Price and the actual mathematical total of the base contract bid items, plus specified alternates.

3-1.02 **REJECTION OF IRREGULAR PROPOSALS.** Proposals may be rejected in the City's sole discretion if they show any alterations of form, additions not called for, conditional bids, incomplete bids, erasures, or irregularities of any kind. However, the City reserves the right to waive any minor irregularities and informalities in any bid or in the bid procedure for any reason.

3-1.03 **COMPETITIVE BIDDING.** If more than one proposal is offered by any individual, firm, partnership, corporation, association, or any combination thereof, under the same or different names, all such proposals may be rejected. A party who has quoted prices on materials or Work to a Bidder is not thereby disqualified from quoting prices to other Bidders, or from submitting a bid directly for the materials or Work.

All Bidders are put on notice that any collusive agreement to control or affect the awarding of this Contract is in violation of the competitive bidding requirements of the City Charter, State Contract Act and the Business and Professions Code and may render void any Contract let under such circumstances.

3-1.04 **RELIEF OF BIDDERS.** If the Bidder claims a mistake was made in its bid, the Bidder shall give the Department written notice within five (5) Days after the opening of the bids of the alleged mistake, specifying in the notice in detail how the mistake occurred. No relief from a claimed mistaken bid shall be granted unless such mistake clearly appears on the face of the bid submitted to the City. Claimed mistakes on backup worksheets, spreadsheets, computerized bidding programs, or any other similar calculative bidding mistake which is not apparent on the face of the bid shall not under any circumstance be considered as a basis for relief. The burden of proving the occurrence of a mistake entitling a Bidder to relief from its bid rests entirely on the Bidder. Relief from bids shall be in the City's sole discretion.

SECTION 4: AWARD AND EXECUTION OF CONTRACT

4-1.01 **AWARD OF CONTRACT.** The City reserves the right to reject any and all proposals and to award (or not award) any combination of bid items at its option. Any such award will be to the lowest responsible Bidder whose proposal complies with the requirements prescribed for the bid items awarded. Such award, if made, will be made within sixty (60) business days after the opening of the proposals. If the lowest responsible Bidder refuses or fails to execute the Contract, or provide an acceptable Performance Bond, Payment Bond, and insurance certificate(s), the City may award the Contract to the second lowest responsible Bidder. Such award, if made, will be made within eighty-two (82) business days after the opening of proposals. If the second lowest responsible Bidder refuses or fails to execute the Contract, or provide an acceptable Performance Bond, Payment Bond, and insurance certificate(s), the City may award the Contract to the third lowest responsible Bidder. Such award, if made, will be made within one hundred four (104) business days after the opening of the proposals. The above time periods within which the award of Contract may be made are subject to extension for such further period as may be agreed upon in writing between the City and the Bidder concerned.

4-1.02 **RETURN OF BIDDER'S SECURITIES.** Within ten (10) Days after the award of the Contract, the City Clerk will return all Bidders' securities, other than Bidders' bonds, accompanying the proposals that are not to be further considered in making the award. Retained Bidders' securities will be held until the Contract has been fully executed, after which all Bidders' securities, except Bidders' bonds and any Bidders' securities that have been forfeited, will be returned.

4-1.03 **CONTRACT BONDS.** The successful Bidder shall furnish two (2) bonds in the form contained in the section entitled Insurance Broker Information Packet and Bonds. One (1) bond shall secure the payment of the claims of laborers, mechanics or materialmen employed on the Work under the Contract, and the other bond shall guarantee the faithful performance of the Contract.

Each of the two (2) bonds shall be in a sum equal to one hundred percent (100%) of the Contract Price. If the Contract Price increases by the issuance of Change Orders, the penal amounts of the bonds required shall increase accordingly. Sureties on each of said bonds shall be satisfactory to the City.

All alterations, extensions of time, extra and additional Work, and other changes authorized by the Standard Specifications, the Standard Construction Specifications, the Supplemental Conditions or any part of the Contract may be made without securing the consent of the surety or sureties on the Contract bonds.

Furthermore, the successful Bidder shall furnish a certificate from the County Clerk as required by California Civil Code of Procedure Section 995.660(a)(3).

4-1.04 **INSURANCE.** At the time of the execution of the Contract, the Contractor shall, at its own expense, procure, and at all times during the prosecution of the Work maintain in full force and effect Worker's Compensation Insurance, and Liability Insurance as specified in the Standard Construction Specifications. The Contractor shall provide a Certificate of Insurance in the form contained in the section entitled Insurance Broker Information Packet.

4-1.05 **EXECUTION OF CONTRACT.** The Contract shall be signed by the successful Bidder and returned, together with all the required Contract bonds and insurance

certificates, within fifteen (15) Days after the Contract has been awarded, or as otherwise directed, in writing, by the City.

If the Bidder is an individual, the Contract shall be executed personally by the Bidder. If the Bidder is a partnership, it is desirable that the Contract be executed by all of the partners, but it may be executed by one of them. If the Bidder is a corporation, it must be executed by two officers of the corporation consisting of (1) the chairman of the board, president or vice president; and (2) the secretary, assistant secretary, chief financial officer, treasurer or assistant treasurer, or by a person authorized by the corporation to execute written contracts on its behalf, and the corporate seal affixed thereto. In the alternative, a person other than an officer may sign the Contract, provided evidence satisfactory to the City is provided indicating the individual's authority to bind the corporation. If the corporate seal is not affixed to the Contract, or if it is executed by a person other than officers, or only by one officer, there must be attached to the Contract a certified copy of a resolution of the corporation authorizing such officer or person to execute written contracts for and on behalf of the corporation. If the Bidder is a joint venture, the Contract must be executed on behalf of each participating firm by officers or other individuals who have the full and proper authorization to do so.

4-1.06 **FAILURE TO EXECUTE CONTRACT.** Failure of the lowest responsible Bidder, the second lowest responsible Bidder, or the third lowest responsible Bidder to execute the Contract and file acceptable bonds and insurance as provided within fifteen (15) Days after the Contract has been awarded, or as otherwise directed, in writing, by the City, shall be just cause for annulment of the award and forfeiture of the Bidder's security. The successful Bidder may file with the City Clerk a written notice, signed by the Bidder or Bidder's authorized representative, specifying that the Bidder will refuse to execute the Contract if presented to

Bidder. The filing of such notice shall have the same force and effect as the failure of the Bidder to execute the Contract and furnish acceptable bonds within the time prescribed.

SECTION 5: BID PROTEST PROCEDURES

5-1.01 **POLICY/PROCEDURES.** It is the policy of the City to consider fully and adjudicate promptly protests filed by prospective Bidders relating to the City's bidding procedure or award of the Contract. Protests shall be filed and processed in accordance with Section 4.12.150 of the Roseville Municipal Code. A Bidder's failure to follow the bid protest procedures may result in rejection of the protest by the City.

PROPOSAL TO THE DEPARTMENT OF _____

Project:_____

Name of Bidder _____ Business Phone _____

Business Address _____

Place of Business _____

Contractor's License No. _____

License Expiration Date_____

License Classification Type _____

DIR Registration No. _____

Type of business organization: _____

*If a Corporation, incorporated under the laws of the State of: _____

The undersigned Bidder herewith submits this Proposal and binds itself on award by the City of Roseville under this bid to execute a Contract in accordance with its bid and the Contract Documents.

The Notice to Contractors, Instructions to Bidders, Form of Agreement, Standard Specifications, Standard Construction Specifications, Supplemental Conditions, Contract Drawings, and Addenda, if any, are made part of this bid and all provisions thereof are hereby accepted, and all representations and warranties are required thereby are hereby affirmed.

The work to be done is described in the Bidding Documents entitled _____

_____, City of Roseville, California.

This offer shall be irrevocable for a period of sixty (60) Days after the date on which bids are opened.

The undersigned Bidder understands that any clarification made to the above or any new and different conditions or information submitted on or with its Proposal, other than that requested, may render the bid non-responsive.

The undersigned, as Bidder, declares that the only persons or parties interested in this Proposal as principals are those named herein; that this Proposal is made without collusion with any other person, firm, or corporation; that the Bidder has carefully examined the location of the proposed Work, the attached Form of Agreement, and the plans, Specifications, and other Contract Documents; and agrees if this Proposal is accepted, that it will contract with the City of Roseville, in the form of a copy of the Agreement contained in the Project Manual, to provide all necessary machinery, tools, apparatus and other means of construction, and to do all the work and furnish all the materials specified in the Contract Documents, in the manner and time therein prescribed, and according to the requirements of the Director, as therein set forth, and that the Bidder will take in full payment therefore prices indicated in the Schedule of Bid Items, including all work modified by addendum numbers _____. (IF NONE, STATE NONE).

Bids are required for all Bid Items. The amount of the Bid for comparison purposes will be the total of all items awarded.

The Bidder shall set forth for each item of work, in clearly legible figures, an item ("unit") price and a total for the item in the respective spaces provided for this purpose in the Schedule of Bid Items.

The prices included within the Schedule of Bid Items include all costs for labor, materials, tools, equipment, services, Subcontractors, suppliers, taxes, insurance, shipment,

delivery, overhead, profit, and for all other costs necessary to perform the Work in accordance with the Contract Documents.

Accompanying this Proposal is _____.

(Notice: Insert the words "Cash $_____," "Cashier's Check," "Certified Check," or "Bidder's Bond," as the case may be, in an amount equal to at least ten percent (10%) of the total of the Bid.)

The names of all persons interested in the foregoing Proposal as Principals, are as follows: _____

_____

_____

_____

If SOLE OWNER, execute here:

I sign as sole owner of the business named above:

_____

If PARTNERSHIP, one or more partners sign here:

The undersigned certify that we are partners in the business named above and that we sign this bid with the full authority to do so:

_____

_____

If CORPORATION, execute here:

Corporate Name: _____

Incorporated under the laws of the State of _____

The undersigned certify that they sign this bid with the full and proper authorization so to do:

By_____	By_____
*Signature of Authorized Official**	*Signature of Authorized Official**
_____	_____
Title	*Title*
_____	_____
Typewritten or Printed Name	*Typewritten or Printed Name*

If JOINT VENTURE, execute here:

Joint Venture name composed of: _____

The undersigned certify that they sign this bid with the full and proper authorization so to do:

_____	_____
*Signature of Authorized Official**	*Signature of Authorized Official**
_____	_____
Title	*Title*
_____	_____
Typewritten or Printed Name	*Typewritten or Printed Name*

*If Bidder is a partnership or Joint Venture, give the full names of all partners and/or Joint Ventures in the space provided (use additional sheet if required). If Bidder is a corporation, two signatures are required as follows: (1) the Chairman, President, or Vice-President and (2) the Secretary, Assistant Secretary, Chief Financial Officer, Treasurer, or Assistant Treasurer. In the alternative, this Agreement may be executed by a single officer or a person other than an officer provided that evidence satisfactory to City is provided demonstrating that such individual is

authorized to bind the corporation (example, a copy of a certified resolution from the corporation's board or a copy of the corporation's bylaws).

[LIST OF SUBCONTRACTORS FOLLOWS ON NEXT PAGE.]

LIST OF SUBCONTRACTORS

Contractor's Name: _____

The Bidder is required to furnish the following information in accordance with the provisions of Section 4100 and 4114, inclusive, of the Public Contract Code of the State of California. This list and information shall include all Subcontractors that perform work, provide labor or render services to the Bidder in connection with the Project in an amount in excess of one-half of one percent (0.5%) of the total amount of the Bidder Grand Total Price.

PORTION/ TYPE OF WORK	% OF CONTRACT	SUB-CONTRACTOR'S NAME	CONTRACTOR LICENSE NO.	DIR REG NO.	BUSINESS ADDRESS (CITY, STATE)

SECURITY FOR COMPENSATION CERTIFICATE

(Required by California Labor Code Section 1861)

TO: City Council
City of Roseville

I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Contract.

_____

_____
(Signature of Bidder)

_____

_____
Business Address

_____
Telephone

BIDDER'S BOND

City Council of the City of Roseville

KNOW ALL MEN BY THESE PRESENTS:

That we _____

_____, as PRINCIPAL, and

_____

a, _____ and duly authorized to transact business under the laws of the State of California, as SURETY, are held and firmly bound unto the City of Roseville in the penal sum of _____ dollars ($_____), being at least TEN PERCENT (10%) OF THE TOTAL AMOUNT OF THE BID of the Principal above named, submitted by said Principal to the City of Roseville, acting by and through the Public Works Director, for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, to the Director of the Department to which said Bid was submitted, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH,

That whereas the Principal has submitted the above-mentioned Bid to the City Council of the City of Roseville, as aforesaid, for certain construction specifically described as follows, for which Bids are to be opened at the Office of the City Clerk located at 311 Vernon Street, Roseville, California, on _____, 20__ FOR

_____

(Copy here the exact title of work as it appears on the Proposal.)

NOW, THEREFORE, IF THE AFORESAID PRINCIPAL is awarded the Contract and, within the time and manner required under the Contract Documents, after the prescribed forms are presented for signature, enters into a written Contract, in the prescribed form, in accordance with the Bid, and files all insurance and two (2) Bonds with the Department, one (1) to guarantee Faithful Performance and the other to guarantee Payment for Labor and Materials, as required by law, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on this _____ day of _____, 20___.

_____(Seal)

_____(Seal)

_____(Seal)
Principal

_____(Seal)

_____(Seal)

_____(Seal)
Surety

_____

_____
Business Address

NOTE: To be considered complete, both the Principal and the Surety must sign this Bidder's Bond. In addition, signatures of those executing for the Surety must be properly acknowledged.

CONTRACTOR:_____

SCHEDULE OF BID ITEMS

ITEM NO.	*	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE (IN FIGURES)	SUBTOTAL (IN FIGURES)
1		MOBILIZATION (5%)	LS	1		
2		PROJECT INFORMATION SIGN	EA	2		
3		CONSTRUCTION STAKING	LS	1		
4		TRAFFIC CONTROL SYSTEM	LS	1		
5		CONSTRUCTION AREA SIGNS	LS	1		
6		PREPARE STORM WATER POLLUTION PREVENTION PLAN	LS	1		
7		JOB SITE MANAGEMENT	LS	1		
8		CLEARING AND GRUBBING	LS	1		
9		REMOVE TREE	EA	14		
10		RESET CLF	LF	55		
11		UNSUITABLE MATERIAL	CY	340		
12	F	ROADWAY EXCAVATION	CY	4185		
13		IMPORT BORROW	CY	2140		
14		AGGREGATE BASE (CLASS II)	CY	2919		
15		HOT MIX ASPHALT (TYPE A)	TON	1418		
16		JOINTED PLAIN CONCRETE PAVEMENT	CY	419		
17		0.20' HMA OVERLAY	TON	115		
18		MICROSURFACING TYPE 2	SY	2628		
19		DETECTABLE WARNING SURFACE	SF	630		
20		2FT RETAINING WALL	LF	24		
21		OVERSIDE DRAIN	EA	1		
22		MINOR CONCRETE (CURB RAMP)	EA	14		
23		MINOR CONCRETE (CURB RAMP (BIKE))	EA	5		
24		MINOR CONCRETE (TYPE 2 BARRIER CURB)	LF	2837		
25		MINOR CONCRETE (TYPE 2 VERTICAL CURB AND GUTTER)	LF	2004		
26		MINOR CONCRETE (CALTRANS TYPE A1-8 CURB WITH 1FT CONCRETE BUFFER)	LF	246		
27		MINOR CONCRETE (VALLEY GUTTER)	LF	90		

CONTRACTOR:_____

SCHEDULE OF BID ITEMS

ITEM NO.	*	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE (IN FIGURES)	SUBTOTAL (IN FIGURES)
28		MINOR CONCRETE (BUS TURN OUT CURB)	LF	248		
29		MINOR CONCRETE (BUS PAD)	SF	2387		
30		MINOR CONCRETE (MOUNTABLE CURB)	LF	358		
31		MINOR CONCRETE (SIDEWALK)	SF	12542		
32		MINOR CONCRETE (TRUCK APRON)	CY	62		
33		HARDSCAPE	SF	1279		
34		DECOMPOSED GRANITE	SF	1338		
35		DECORATIVE FENCE	LF	93		
36		PIPE HANDRAILING	LF	30		
37		6" THERMOPLASTIC STRIPING - WHITE	LF	1548		
38		8" THERMOPLASTIC STRIPING - WHITE	LF	1734		
39		12" THERMOPLASTIC STRIPING - YELLOW	LF	250		
40		WHITE THERMOPLASTIC PAVEMENT MARKING	SF	712		
41		6" MMA STRIPING - WHITE	LF	155		
42		8" MMA STRIPING - WHITE	LF	367		
43		6" MMA STRIPING - YELLOW	LF	316		
44		18" MMA STRIPING - WHITE (YIELD LINE)	LF	113		
45		WHITE MMA PAVEMENT MARKING	SF	136		
46		YELLOW MMA PAVEMENT MARKING	SF	800		
47		PAVEMENT MARKERS (A)	EA	200		
48		PAVEMENT MARKERS (AY)	EA	448		
49		PAVEMENT MARKERS (D)	EA	168		
50		PAVEMENT MARKERS (G)	EA	124		
51		PAVEMENT MARKERS (RY)	EA	36		
52		ROADSIDE SIGN (RELOCATE)	EA	6		
53		ROADSIDE SIGN (INSTALL)	EA	72		
54		ADJUST PULL BOX TO GRADE	EA	3		

CONTRACTOR:_____

SCHEDULE OF BID ITEMS

ITEM NO.	*	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE (IN FIGURES)	SUBTOTAL (IN FIGURES)
55		DRAINAGE INLET (TYPE C)	EA	9		
56		DRAINAGE INLET (TYPE F)	EA	2		
57		12" HDPE PIPE	LF	435		
58		24" HDPE PIPE	LF	71		
59		36" REINFORCED CONCRETE PIPE	LF	321		
60		HEADWALL	EA	1		
61		12" FLARED END SECTION	EA	1		
62		24" PIPE INLET STRUCTURE	EA	1		
63		REMOVE PIPE	LF	127		
64		REMOVE HEADWALL	EA	3		
65		REMOVE FLARED END SECTION	EA	2		
66		ADJUST WATER VALVE COVER TO GRADE	EA	2		
67		FIRE HYDRANT ASSEMBLY	EA	1		
68		ADJUST FIRE HYDRANT	EA	1		
69		8" GATE VALVE	EA	4		
70		3" AIR RELEASE VALVE	EA	1		
71		16” BUTTERFLY VALVE	EA	2		
72		16" DUCTILE IRON PIPE	LF	318		
73		8" DUCTILE IRON PIPE	LF	106		
74		BLOW OFF VALVE	EA	1		
75		LANDSCAPE IRRIGATION SERVICE	EA	1		
76		REMOVE PIPE	LF	310		
77		REMOVE FIRE HYDRANT	EA	1		
78		FURNISH AND INSTALL LANDSCAPE	LS	1		
79		FURNISH AND INSTALL IRRIGATION SYSTEM (COMPLETE)	LS	1		
80		MAINTENANCE-PLANT ESTABLISHMENT (90 DAYS)	LS	1		
81		CONSTRUCT ROUNDABOUT WATER TOWER FEATURE (COMPLETE)	LS	1		

CONTRACTOR:_____

SCHEDULE OF BID ITEMS

ITEM NO.	*	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE (IN FIGURES)	SUBTOTAL (IN FIGURES)
82		STREET LIGHTING SYSTEM	LS	1		
83		SIGNAL INTERCONNECT	LS	1		
		TOTAL OF ALL ITEMS (1 TO 83)				

* NOTES:
(F) DENOTES FINAL PAY ITEM
(P) DENOTES PARTIAL PAYMENT
(S) DENOTES SPECIALTY ITEM

CONTRACTOR'S ACKNOWLEDGEMENT OF BLACK ROCK QUARRY MICRO-SURFACING:_____

NAME & LOCATION OF BLACK ROCK AGGREGATE QUARRY MICRO-SURFACING:_____

CONTRACTOR'S ACKNOWLEDGEMENT OF ADDENDUM NO. 1:_____

NONCOLLUSION DECLARATION TO BE EXECUTED BY
BIDDER AND SUBMITTED WITH BID

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham bid. The Bidder has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham bid, or to refrain from bidding. The Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other Bidder. All statements contained in the bid are true. The Bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a Bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the Bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____ [date], at _____ [city], _____ [state].

_____
(Signature of Declarant)

DISQUALIFICATION QUESTIONNAIRE

The Bidder shall complete, under the penalty of perjury, the following questionnaire:

Has the Bidder, any officer of the Bidder, or any employee of the Bidder who has proprietary interest in the Bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

Yes_____ No_____

If the answer is yes, explain the circumstances in the following space.

_____

_____

_____

_____

_____

_____

NAME OF BIDDER: _____

SIGNATURE OF BIDDER: _____

TITLE OF BIDDER: _____

DATE: _____

ACKNOWLEDGEMENT OF INSURANCE AND BOND REQUIREMENTS

Included in the Bid Price is full compensation for the requirements set forth in the INSURANCE BROKER INFORMATION PACKET of the Project Manual.

NAME OF BIDDER: _____

SIGNATURE OF BIDDER: _____

TITLE OF BIDDER: _____

DATE: _____

DISCLAIMER OF WARRANTIES AND ACCURACY OF DATA

Although soil and site investigation reports have been obtained from sources believed to be reliable, no warranty expressed or implied is made regarding accuracy, adequacy, completeness, legality, reliability or usefulness of any information contained therein. These reports are subject to change at any time, may be incomplete, and/or may contain errors. This information is provided for informational purposes only. The City of Roseville provides this information on an "as is" basis. Warranties of any kind, express or implied, or statutory, including but not limited to the implied warranties of merchantability, and fitness for a particular purpose ARE DISCLAIMED to any party viewing these documents or to any third party.

The City of Roseville does not accept and expressly disclaims liability to any party viewing such information, or to any third party whatsoever, for any loss, damage, or injury (including incidental or consequential damages) whether such loss, damage, or injury is the result of negligence, willful or intentional misconduct, or any other cause.

I have read and acknowledged the above disclaimer and agree to hold harmless the City of Roseville on any theory of liability for any loss, damage or injury whether in contract, strict liability or tort arising in any way out of the use or contents of the released information or documents described above or the performance of the work called for herein.

Print Name	Signature
Name of Business/Company/Corporation	Date
Address	Phone

EXHIBIT 15-G CONSTRUCTION CONTRACT DBE COMMITMENT

1. Local Agency: City of Roseville 2. Contract DBE Goal: 22%
3. Project Description: At the intersection of Washington Blvd and All America City Blvd construct a 2-lane roundabout
4. Project Location: City of Roseville, Placer County
5. Bidder's Name: _____ 6. Prime Certified DBE: ☐ 7. Bid Amount: _____
8. Total Dollar Amount for **ALL** Subcontractors: _____ 9. Total Number of **ALL** Subcontractors: _____

10. Bid Item Number	11. Description of Work, Service, or Materials Supplied	12. DBE Certification Number	13. DBE Contact Information (Must be certified on the date bids are opened)	14. DBE Dollar Amount

Local Agency to Complete this Section upon Execution of Award

21. Local Agency Contract Number: _____
22. Federal-Aid Project Number: CML 5182(079)
23. Bid Opening Date: _____
24. Contract Award Date: _____
25. Award Amount: _____

Local Agency certifies that all DBE certifications are valid and information on this form is complete and accurate.

26. Local Agency Representative's Signature _____ 27. Date _____
28. Local Agency Representative's Name _____ 29. Phone _____
30. Local Agency Representative's Title _____

15. TOTAL CLAIMED DBE PARTICIPATION $ 0.00

0.00 %

IMPORTANT: Identify all DBE firms being claimed for credit, regardless of tier. Names of the First Tier DBE Subcontractors and their respective item(s) of work listed above must be consistent, where applicable with the names and items of the work in the "Subcontractor List" submitted with your bid. Written confirmation of each listed DBE is required.

16. Preparer's Signature _____ 17. Date _____
18. Preparer's Name _____ 19. Phone _____
20. Preparer's Title _____

DISTRIBUTION: 1. Original – Local Agency
2. Copy – Caltrans District Local Assistance Engineer (DLAE). Failure to submit to DLAE within 30 days of contract execution may result in de-obligation of federal funds on contract.
3. Include additional copy with award package.

ADA Notice: For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

INSTRUCTIONS – CONSTRUCTION CONTRACT DBE COMMITMENT

CONTRACTOR SECTION

1. Local Agency - Enter the name of the local agency that is administering the contract.
2. Contract DBE Goal - Enter the contract DBE goal percentage as it appears on the project advertisement.
3. Project Location - Enter the project location(s) as it appears on the project advertisement.
4. Project Description - Enter the project description as it appears on the project advertisement (Bridge Rehab, Seismic Rehab, Overlay, Widening, etc).
5. Bidder's Name - Enter the contractor's firm name.
6. Prime Certified DBE - Check box if prime contractor is a certified DBE.
7. Bid Amount - Enter the total contract bid dollar amount for the prime contractor.
8. Total Dollar Amount for ALL Subcontractors – Enter the total dollar amount for all subcontracted contractors. SUM = (DBEs + all Non-DBEs). Do not include the prime contractor information in this count.
9. Total number of ALL subcontractors – Enter the total number of all subcontracted contractors. SUM = (DBEs + all Non-DBEs). Do not include the prime contractor information in this count.
10. Bid Item Number - Enter bid item number for work, services, or materials supplied to be provided.
11. Description of Work, Services, or Materials Supplied - Enter description of work, services, or materials to be provided. Indicate all work to be performed by DBEs including work performed by the prime contractor's own forces, if the prime is a DBE. If 100% of the item is not to be performed or furnished by the DBE, describe the exact portion to be performed or furnished by the DBE. See LAPM Chapter 9 to determine how to count the participation of DBE firms.
12. DBE Certification Number - Enter the DBE's Certification Identification Number. All DBEs must be certified on the date bids are opened.
13. DBE Contact Information - Enter the name, address, and phone number of all DBE subcontracted contractors. Also, enter the prime contractor's name and phone number, if the prime is a DBE.
14. DBE Dollar Amount - Enter the subcontracted dollar amount of the work to be performed or service to be provided. Include the prime contractor if the prime is a DBE. See LAPM Chapter 9 for how to count full/partial participation.
15. Total Claimed DBE Participation - $: Enter the total dollar amounts entered in the "DBE Dollar Amount" column. %: Enter the total DBE participation claimed ("Total Claimed DBE Participation Dollars" divided by item "Bid Amount"). If the total % claimed is less than item "Contract DBE Goal," an adequately documented Good Faith Effort (GFE) is required (see Exhibit 15-H DBE Information - Good Faith Efforts of the LAPM).
16. Preparer's Signature - The person completing the DBE commitment form on behalf of the contractor's firm must sign their name.
17. Date - Enter the date the DBE commitment form is signed by the contractor's preparer.
18. Preparer's Name - Enter the name of the person preparing and signing the contractor's DBE commitment form.
19. Phone - Enter the area code and phone number of the person signing the contractor's DBE commitment form.
20. Preparer's Title - Enter the position/title of the person signing the contractor's DBE commitment form.

LOCAL AGENCY SECTION

21. Local Agency Contract Number - Enter the Local Agency contract number or identifier.
22. Federal-Aid Project Number - Enter the Federal-Aid Project Number(s).
23. Bid Opening Date - Enter the date contract bids were opened.
24. Contract Award Date - Enter the date the contract was executed.
25. Award Amount – Enter the contract award amount as stated in the executed contract.
26. Local Agency Representative's Signature - The person completing this section of the form for the Local Agency must sign their name to certify that the information in this and the Contractor Section of this form is complete and accurate.
27. Date - Enter the date the DBE commitment form is signed by the Local Agency Representative.
28. Local Agency Representative's Name - Enter the name of the Local Agency Representative certifying the contractor's DBE commitment form.
29. Phone - Enter the area code and phone number of the person signing the contractor's DBE commitment form.

30. Local Agency Representative Title - Enter the position/title of the Local Agency Representative certifying the contractor's DBE commitment form.

EXHIBIT 15-H: PROPOSER/CONTRACTOR GOOD FAITH EFFORTS

Cost Proposal Due Date _____ PE/CE

Federal-aid Project No(s). CML 5182(079) Bid Opening Date _____ CON

The _____ established a Disadvantaged Business Enterprise (DBE) goal of 22.00% for this contract. The information provided herein shows the required good faith efforts to meet or exceed the DBE contract goal.

Proposers or bidders submit the following information to document their good faith efforts within five (5) calendar days from cost proposal due date or bid opening. Proposers and bidders are recommended to submit the following information even if the Exhibit 10-O1: Consultant Proposal DBE Commitments or Exhibit 15-G: Construction Contract DBE Commitment indicate that the proposer or bidder has met the DBE goal. This form protects the proposer's or bidder's eligibility for award of the contract if the administering agency determines that the bidder failed to meet the goal for various reasons, e.g., a DBE firm was not certified at bid opening, or the bidder made a mathematical error.

The following items are listed in the Section entitled "Submission of DBE Commitment" of the Special Provisions, **please attach additional sheets as needed**:

A. The names and dates of each publication in which a request for DBE participation for this project was placed by the bidder (please attach copies of advertisements or proofs of publication):

Publications	Dates of Advertisement

B. The names and dates of written notices sent to certified DBEs soliciting bids for this project and the dates and methods used for following up initial solicitations to determine with certainty whether the DBEs were interested (please attach copies of solicitations, telephone records, fax confirmations, etc.):

Names of DBEs Solicited	Date of Initial Solicitation	Follow Up Methods and Dates

C. The items of work made available to DBE firms including those unbundled contract work items into economically feasible units to facilitate DBE participation. It is the bidder's responsibility to demonstrate that sufficient work to facilitate DBE participation in order to meet or exceed the DBE contract goal.

Items of Work	Proposer or Bidder Normally Performs Item (Y/N)	Breakdown of Items	Amount ($)	Percentage Of Contract
	Pick			0.00%
	Pick			0.00%
	Pick			0.00%
	Pick			0.00%

D. The names, addresses and phone numbers of rejected DBE firms, the reasons for the bidder's rejection of the DBEs, the firms selected for that work (please attach copies of quotes from the firms involved), and the price difference for each DBE if the selected firm is not a DBE:

Names, addresses and phone numbers of rejected DBEs and the reasons for the bidder's rejection of the DBEs:

Names, addresses and phone numbers of firms selected for the work above:

E. Efforts (e.g. in advertisements and solicitations) made to assist interested DBEs in obtaining information related to the plans, specifications and requirements for the work which was provided to DBEs:

F. Efforts (e.g. in advertisements and solicitations) made to assist interested DBEs in obtaining bonding, lines of credit or insurance, necessary equipment, supplies, materials, or related assistance or services, excluding supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate:

G. The names of agencies, organizations or groups contacted to provide assistance in contacting, recruiting and using DBE firms (please attach copies of requests to agencies and any responses received, i.e., lists, Internet page download, etc.):

Name of Agency/Organization	Method/Date of Contact	Results

H. Any additional data to support a demonstration of good faith efforts:

Exhibit 12-B: Bidder's List of Subcontractor (DBE and Non-DBE) Part 1

As of March 1, 2015 Contractors (and sub-contractors) wishing to bid on public works contracts shall be registered with the State Division of Industrial Relations and certified to bid on Public Works contracts. Please register here. The local agency will verify registration of all contractors and subcontractors on public works projects at bid and thereafter annually to assure that yearly registration is maintained throughout the life of the project.

In accordance with Title 49, Section 26.11 of the Code of Federal Regulations, and Section 4104 of the Public Contract Code of the State of California, as amended, the following information is required for each sub-contractor who will perform work amounting to more than one half of one percent (0.5%) of the Total Base Bid or $10,000 (whichever is greater). **Photocopy this form for additional firms.** Federal Project Number: CML 5182 (079)

Subcontractor Name and Location	Line Item & Description	Subcontract Amount	Percentage of Bid Item Sub-contracted	Contractor License Number / DIR Reg Number	DBE (Y/N)	DBE Cert Number	Annual Gross Receipts
Name: City, State:							☐ <$1 million ☐ <$5 million ☐ <$10 million ☐ <$15 million Age of Firm: ___ yrs.
Name: City, State:							☐ <$1 million ☐ <$5 million ☐ <$10 million ☐ <$15 million Age of Firm: ___ yrs.
Name: City, State:							☐ <$1 million ☐ <$5 million ☐ <$10 million ☐ <$15 million Age of Firm: ___ yrs.
Name: City, State:							☐ <$1 million ☐ <$5 million ☐ <$10 million ☐ <$15 million Age of Firm: ___ yrs.
Name: City, State:							☐ <$1 million ☐ <$5 million ☐ <$10 million ☐ <$15 million Age of Firm: ___ yrs.
Name: City, State:							☐ <$1 million ☐ <$5 million ☐ <$10 million ☐ <$15 million Age of Firm: ___ yrs.

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Distribution: 1) Original: Local Agency File; 2) Copy: DLAE w/ Award Package

Exhibit 12-B: Bidder's List of Subcontractor (DBE and Non-DBE) Part 2

In accordance with Title 49, Section 26 of the Code of Federal Regulations, the Bidder shall list all subcontractor who provided a quote or bid but **were not selected** to participate as a subcontractor on this project. **Photocopy this form for additional firms.** Federal Project Number: _____

Subcontractor Name and Location	Line Item & Description	Subcontract Amount	Percentage of Bid Item Sub-contracted	Contractor License Number / DIR Reg Number	DBE (Y/N)	DBE Cert Number	Annual Gross Receipts
Name: City, State:							☐ <$1 million ☐ <$5 million ☐ <$10 million ☐ <$15 million Age of Firm: ___ yrs.
Name: City, State:							☐ <$1 million ☐ <$5 million ☐ <$10 million ☐ <$15 million Age of Firm: ___ yrs.
Name: City, State:							☐ <$1 million ☐ <$5 million ☐ <$10 million ☐ <$15 million Age of Firm: ___ yrs.
Name: City, State:							☐ <$1 million ☐ <$5 million ☐ <$10 million ☐ <$15 million Age of Firm: ___ yrs.
Name: City, State:							☐ <$1 million ☐ <$5 million ☐ <$10 million ☐ <$15 million Age of Firm: ___ yrs.
Name: City, State:							☐ <$1 million ☐ <$5 million ☐ <$10 million ☐ <$15 million Age of Firm: ___ yrs.

PROP-22

Distribution: 1) Original: Local Agency File
2) Copy: DLAE w/ Award Package

END OF PROPOSAL

A G R E E M E N T

THIS AGREEMENT, is made and entered into this _____day of _____, 20_____, by and between the City of Roseville, a municipal corporation, ("CITY"), and _____, a _____, ("CONTRACTOR"); and

W I T N E S S E T H:

WHEREAS, the City Council of the CITY, at a meeting held on the _____day of _____, 20_____, approved plans and specifications for the _____ _____

and directed the City Clerk to advertise for sealed proposals for doing said work and providing that bids be submitted on the _____ day of _____, 20_____; and

WHEREAS, the City Clerk, thereafter duly and regularly caused a notice to be published in the manner and for the time prescribed by law; and

WHEREAS, CONTRACTOR, pursuant to the provisions of said notice duly filed a bid with the City Clerk, a true copy of which bid is now on file in the office of the City Clerk, and is hereby referred to and by this reference made a part hereof as fully as if set forth at length herein; and

WHEREAS, all bids received pursuant to said notice were opened and examined and publicly declared at the time specified in said advertisement for bids and at a meeting of the City Council held on the _____ day of _____, 20_____, the Council found and

declared the bid of CONTRACTOR to be the lowest responsible bid and thereupon awarded a contract to CONTRACTOR to do the work referred to in the aforementioned specifications.

NOW, THEREFORE, the parties agree as follows:

1. THE WORK. CONTRACTOR agrees:

a. To do the work and furnish all the labor, materials, tools, supplies, equipment, superintendence, insurance, and bonds required for the _____

_____

in accordance with the Contract Documents (the Work).

b. To do and perform the Work contemplated hereby in a good and workmanlike manner under the direction of and to the satisfaction of the Director of Public Works of the City of Roseville.

2. PAYMENT. CITY shall pay CONTRACTOR _____

_____ dollars ($_____) for the Work to be done under this Agreement in accordance with the Contract Documents.

3. CONTRACT DOCUMENTS. The complete Agreement between the parties hereto consists of the following documents:

a. The advertisement for bids (including the notice to bidders, instructions to bidders and proposals);

b. The accepted bid;

c. Plans and specifications (including standard construction specifications, special provisions and construction details);

d. Bonds and insurance required by the specifications; and

e. This contract.

All documents specified above are intended to operate so that any work called for in any one and not mentioned in the other, or vice versa, is to be executed the same as if mentioned in all said documents.

4. LIQUIDATED DAMAGES. In the event CONTRACTOR does not complete the Work within the time specified, CONTRACTOR agrees that CITY will suffer damages. Inasmuch as the actual damages which would result from such breach by CONTRACTOR under this Agreement are uncertain, and would be impractical or extremely difficult to fix, CONTRACTOR agrees that it shall pay, or CITY shall deduct from CONTRACTOR's fee, the amount of $_____ per day as liquidated damages, in the event of such delay.

5. TIME OF COMPLETION. Time is of the essence of this Agreement. CONTRACTOR shall complete all Work under the Contract Documents within _____ Days of the date of this Contract. CONTRACTOR shall begin work by the date specified in the "Notice to Proceed" letter and shall diligently prosecute all of the Work under this Contract in all parts and requirements as defined in the Contract Documents.

6. SERVICE OF NOTICE. Any notice required or permitted to be given under this Agreement shall be deemed given when (a) personally delivered to the recipient identified below; (b) mailed by registered or certified mail, return receipt requested, postage pre-paid, to the address specified below; or (c) sent by facsimile, with confirmation of receipt, to the facsimile number identified below.

CITY OF ROSEVILLE	CONTRACTOR
_____	_____
_____	_____
_____	_____
_____	_____

CITY may also act through either its architect or construction manager if CITY expressly gives notice to CONTRACTOR, in writing, that CITY's designee has authority to act for CITY in a specific capacity.

7. DISPUTES. Disputes arising from this Agreement will be determined in accordance with the Contract Documents and Public Contract Code Sections 10240-10240.13.

8. GOVERNING LAW. This Agreement shall be governed by and construed in accordance with the laws of the State of California.

9. INDEPENDENT CONTRACTOR. CONTRACTOR shall act as an independent contractor, and covenants and agrees that it will conduct itself consistent with such status, that it will neither hold itself out as, nor claim to be, an officer or employee of CITY by reason of this Agreement.

10. SUCCESSORS IN INTEREST. This Agreement shall be binding upon the heirs, successors, executors, administrators and assigns of the respective parties hereto.

11. MODIFICATION. This Agreement and each provision contained herein may be waived, amended, supplemented or eliminated only by mutual written agreement of the parties.

12. SEVERABILITY. If any of the provisions contained in this Agreement are for any reason held invalid or unenforceable, such holding shall not affect the remaining provisions or the validity and enforceability of the Agreement as a whole.

13. INTEGRATED AGREEMENT. This is an integrated agreement and contains all of the terms, considerations, understanding and promises of the parties. It shall be read as a whole.

14. CONTRACTORS LICENSE LAW. CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTORS' STATE LICENSE BOARD WHICH HAS JURISDICTION TO INVESTIGATE COMPLAINTS AGAINST CONTRACTORS IF A COMPLAINT REGARDING A PATENT ACT OR OMISSION IS FILED WITHIN FOUR (4) YEARS OF THE DATE OF THE ALLEGED VIOLATION. A COMPLAINT REGARDING A LATENT ACT OR OMISISON PERTAINING TO STRUCTURAL DEFECTS MUST BE FILED WITHIN TEN (10) YEARS OF THE DATE OF THE ALLEGED VIOLATION. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS' STATE LICENSE BOARD, P.O. BOX 26000, SACRAMENTO, CALIFORNIA 95826.

15. FEDERAL CONTRACTING REQUIREMENTS. CONTRACTOR shall adhere to all requirements set forth in the FHWA-1273 form entitled "Required Contract Provisions Federal-Aid Construction Contracts" which is attached hereto in its entirety as Exhibit "A" and incorporated herein by this reference. The current wage determination for federal minimum wage rates established by the United States Secretary of Labor referenced in Section IV of Exhibit "A" is set forth in Exhibit "B," also attached hereto and incorporated herein by this reference.

IN WITNESS WHEREOF, the City of Roseville, a municipal corporation, has authorized the execution of this Agreement in duplicate by its City Manager and attestation by its City Clerk under authority of Resolution No. _____, adopted by the Council of the City of Roseville on the ____day of _____, 20_____, and CONTRACTOR has caused this Agreement to be duly executed.

CITY OF ROSEVILLE, a
municipal corporation

BY:_____
DOMINICK CASEY
City Manager

ATTEST:

BY:_____
SONIA OROZCO
City Clerk

APPROVED AS TO FORM:

BY: _____
ROBERT R. SCHMITT
City Attorney

APPROVED AS TO SUBSTANCE:

BY: _____

Print Name:_____

Title:_____

_____, a
_____

BY: _____
its: _____

and

BY: _____
its: _____

EXHIBIT “A”

FHWA-1273 Form

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. No segregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Government wide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers and EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting and active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

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7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

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IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

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2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

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8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

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X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed information of participant is not required to exceed that which is $100,000 and that all such recipients shall certify and disclose accordingly.

12. FEMALE AND MINORITY GOALS

To comply with Section II, "Nondiscrimination," of "Required Contract Provisions Federal-Aid Construction Contracts," the following are for female and minority utilization goals for Federal-aid construction contracts and subcontracts that exceed $10,000:

The nationwide goal for female utilization is 6.9 percent.

The goals for minority utilization [45 Fed Reg 65984 (10/3/1980)] are as follows:

MINORITY UTILIZATION GOALS

Economic Area		Goal (Percent)
174	Redding CA: Non-SMSA (Standard Metropolitan Statistical Area) Counties: CA Lassen; CA Modoc; CA Plumas; CA Shasta; CA Siskiyou; CA Tehama	6.8
175	Eureka, CA Non-SMSA Counties: CA Del Norte; CA Humboldt; CA Trinity	6.6
176	San Francisco-Oakland-San Jose, CA: SMSA Counties: 7120 Salinas-Seaside-Monterey, CA CA Monterey 7360 San Francisco-Oakland CA Alameda; CA Contra Costa; CA Marin; CA San Francisco; CA San Mateo 7400 San Jose, CA CA Santa Clara, CA 7485 Santa Cruz, CA CA Santa Cruz 7500 Santa Rosa CA Sonoma 8720 Vallejo-Fairfield-Napa, CA CA Napa; CA Solano Non-SMSA Counties: CA Lake; CA Mendocino; CA San Benito	 28.9 25.6 19.6 14.9 9.1 17.1 23.2
177	Sacramento, CA: SMSA Counties: 6920 Sacramento, CA CA Placer; CA Sacramento; CA Yolo Non-SMSA Counties CA Butte; CA Colusa; CA El Dorado; CA Glenn; CA Nevada; CA Sierra; CA Sutter; CA Yuba	 16.1 14.3
178	Stockton-Modesto, CA: SMSA Counties: 5170 Modesto, CA CA Stanislaus 8120 Stockton, CA CA San Joaquin Non-SMSA Counties CA Alpine; CA Amador; CA Calaveras; CA Mariposa; CA Merced; CA Tuolumne	 12.3 24.3 19.8
179	Fresno-Bakersfield, CA SMSA Counties: 0680 Bakersfield, CA CA Kern 2840 Fresno, CA	 19.1 26.1

	CA Fresno Non-SMSA Counties: CA Kings; CA Madera; CA Tulare	23.6
180	Los Angeles, CA: SMSA Counties: 0360 Anaheim-Santa Ana-Garden Grove, CA CA Orange 4480 Los Angeles-Long Beach, CA CA Los Angeles 6000 Oxnard-Simi Valley-Ventura, CA CA Ventura 6780 Riverside-San Bernardino-Ontario, CA CA Riverside; CA San Bernardino 7480 Santa Barbara-Santa Maria-Lompoc, CA CA Santa Barbara Non-SMSA Counties CA Inyo; CA Mono; CA San Luis Obispo	11.9 28.3 21.5 19.0 19.7 24.6
181	San Diego, CA: SMSA Counties 7320 San Diego, CA CA San Diego Non-SMSA Counties CA Imperial	16.9 18.2

For the last full week of July during which work is performed under the contract, the prime contractor and each non material-supplier subcontractor with a subcontract of $10,000 or more must complete Form FHWA PR-1391 (Appendix C to 23 CFR 230). Submit the forms by August 15.

13. TITLE VI ASSURANCES

During the performance of this Agreement, the contractor, for itself, its assignees and successors in interest (hereinafter collectively referred to as CONTRACTOR) agrees as follows:

a. Compliance with Regulations: CONTRACTOR shall comply with the regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the REGULATIONS), which are herein incorporated by reference and made a part of this agreement.

b. Nondiscrimination: CONTRACTOR, with regard to the work performed by it during the AGREEMENT, shall not discriminate on the grounds of race, color, sex, national origin, religion, age, or disability in the selection and retention of sub-applicants, including procurements of materials and leases of equipment. CONTRACTOR shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the agreement covers a program set forth in Appendix B of the Regulations.

c. Solicitations for Sub-agreements, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by CONTRACTOR for work to be performed under a Sub- agreement, including procurements of materials or leases of equipment, each potential sub-applicant or supplier shall be notified by CONTRACTOR of the CONTRACTOR'S obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

d. Information and Reports: CONTRACTOR shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the California Department of Transportation or FHWA to be pertinent to ascertain compliance with such

Regulations or directives. Where any information required of CONTRACTOR is in the exclusive possession of another who fails or refuses to furnish this information, CONTRACTOR shall so certify to the California Department of Transportation or the FHWA as appropriate, and shall set forth what efforts CONTRACTOR has made to obtain the information.

e. Sanctions for Noncompliance: In the event of CONTRACTOR's noncompliance with the nondiscrimination provisions of this agreement, the California Department of Transportation shall impose such agreement sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
   i. withholding of payments to CONTRACTOR under the Agreement within a reasonable period of time, not to exceed 90 days; and/or
   ii. cancellation, termination or suspension of the Agreement, in whole or in part.

f. Incorporation of Provisions: CONTRACTOR shall include the provisions of paragraphs (1) through (6) in every sub-agreement, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

CONTRACTOR shall take such action with respect to any sub-agreement or procurement as the California Department of Transportation or FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance, provided, however, that, in the event CONTRACTOR becomes involved in, or is threatened with, litigation with a sub-applicant or supplier as a result of such direction, CONTRACTOR may request the California Department of Transportation enter into such litigation to protect the interests of the State, and, in addition, CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

14. USE OF UNITED STATES-FLAG VESSELS (CARGO PREFERENCE ACT)

The CONTRACTOR agrees-

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carries, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
2. To Furnish within 20 days following the date of loading for shipments originating within the United State or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.
3. To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

Federal Trainee Program Special Provisions
(to be used when applicable)

15. FEDERAL TRAINEE PROGRAM

For the Federal training program, the number of trainees or apprentices is___.

This section applies if a number of trainees or apprentices is specified in the special provisions.

As part of the prime contractor's equal opportunity affirmative action program, provide on-the-job training to develop full journeymen in the types of trades or job classifications involved.

The prime contractor has primary responsibility for meeting this training requirement.

If the prime contractor subcontracts a contract part, they shall determine how many trainees or apprentices are to be trained by the subcontractor. Include these training requirements in each subcontract.

Where feasible, 25 percent of apprentices or trainees in each occupation must be in their 1st year of apprenticeship or training.

Distribute the number of apprentices or trainees among the work classifications on the basis of the prime contractor's needs and the availability of journeymen in the various classifications within a reasonable recruitment area.

Before starting work, the prime contractor shall submit to the City/County of_____ :

1. Number of apprentices or trainees to be trained for each classification
2. Training program to be used
3. Training starting date for each classification

The prime contractor shall obtain the City/County of _____approval for this submitted information before the prime contractor starts work. The City/County of_____credits the prime contractor for each apprentice or trainee the prime contractor employs on the job who is currently enrolled or becomes enrolled in an approved program.

The primary objective of this section is to train and upgrade minorities and women toward journeyman status. The prime contractor shall make every effort to enroll minority and women apprentices or trainees, such as conducting systematic and direct recruitment through public and private sources likely to yield minority and women apprentices or trainees, to the extent they are available within a reasonable recruitment area and show that they have made the efforts. In making these efforts, the prime contractor shall not discriminate against any applicant for training.

The prime contractor shall not employ as an apprentice or trainee an employee:

1. In any classification in which the employee has successfully completed a training course leading to journeyman status or in which the employee has been employed as a journeyman
2. Who is not registered in a program approved by the US Department of Labor, Bureau of Apprenticeship and Training

The prime contractor shall ask the employee if the employee has successfully completed a training course leading to journeyman status or has been employed as a journeyman. The prime contractor's records must show the employee's answers to the questions.

In the training program, the prime contractor shall establish the minimum length and training type for each classification. The City/County of _____ and FHWA approves a program if one of the following is met:

1. It is calculated to:
   - Meet the your equal employment opportunity responsibilities
   - Qualify the average apprentice or trainee for journeyman status in the classification involved by the end of the training period
2. It is registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, and it is administered in a way consistent with the equal employment responsibilities of Federal-aid highway construction contracts

The prime contractor shall obtain the State's approval for their training program before they start work involving the classification covered by the program.

The prime contractor shall provide training in the construction crafts, not in clerk-typist or secretarial-type positions. Training is allowed in lower level management positions such as office engineers, estimators, and timekeepers if the training is oriented toward construction applications. Training is allowed in the laborer classification if significant and meaningful training is provided and approved by the division office. Off-site training is allowed if the training is an integral part of an approved training program and does not make up a significant part of the overall training.

The City/County of_____reimburses the prime contractor 80 cents per hour of training given an employee on this contract under an approved training program:

1. For on-site training
2. For off-site training if the apprentice or trainee is currently employed on a Federal-aid project and prime contractor does at least one of the following:
    a. Contribute to the cost of the training
    b. Provide the instruction to the apprentice or trainee
    c. Pay the apprentice's or trainee's wages during the off-site training period
3. If the prime contractor complies with this section.

Each apprentice or trainee must:

1. Begin training on the project as soon as feasible after the start of work involving the apprentice's or trainee's skill
2. Remain on the project as long as training opportunities exist in the apprentice's or trainee's work classification or until the apprentice or trainee has completed the training program

The prime contractor shall furnish the apprentice or trainee with a copy of the program that the prime contractor will comply with in providing the training

EXHIBIT “B”

Federal Minimum Wage Rates

"General Decision Number: CA20210007 07/09/2021

Superseded General Decision Number: CA20200007

State: California

Construction Types: Building, Heavy (Heavy and Dredging) and Highway

Counties: Alpine, Amador, Butte, Colusa, El Dorado, Glenn, Lassen, Marin, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Solano, Sonoma, Sutter, Tehama, Trinity, Yolo and Yuba Counties in California.

BUILDING CONSTRUCTION PROJECTS (excluding Amador County only); DREDGING CONSTRUCTION PROJECTS (does not include hopper dredge work); HEAVY CONSTRUCTION PROJECTS (does not include water well drilling); AND HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate,if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/01/2021
1	01/08/2021
2	01/15/2021
3	01/22/2021
4	02/05/2021
5	02/19/2021
6	02/26/2021
7	04/02/2021
8	04/23/2021
9	05/07/2021
10	05/14/2021
11	05/21/2021
12	06/18/2021
13	06/25/2021
14	07/02/2021
15	07/09/2021

ASBE0016-001 01/01/2021

AREA 1: MARIN, NAPA, SAN BENITO, SAN FRANCISCO, SOLANO, & SONOMA COUNTIES

AREA 2: ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHEMA, TRINITY, YOLO, & YUBA COUNTIES

	Rates	Fringes
Asbestos Workers/Insulator (Includes the application of all insulating materials, Protective Coverings, Coatings, and Finishes to all types of mechanical systems)		
Area 1	$ 74.16	23.58
Area 2	$ 46.81	33.50

ASBE0016-007 01/01/2021

AREA 1 : ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SOLANO, SONOMA, SUTTER, TEHAMA, TRINITY, YOLO & YUBA COUNTIES

AREA 2: MARIN & NAPA COUNTIES

	Rates	Fringes
Asbestos Removal worker/hazardous material handler (Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials from mechanical systems, whether they contain asbestos or not)		
AREA 1	$ 30.45	10.60
AREA 2	$ 36.53	9.27

BOIL0549-002 10/01/2016

	Rates	Fringes
BOILERMAKER		
(1) Marin & Solano Counties	$ 43.28	37.91
(2) Remaining Counties	$ 39.68	35.71

BRCA0003-001 08/01/2020

	Rates	Fringes
MARBLE FINISHER	$ 36.53	17.08

BRCA0003-004 05/01/2019

AREA 1: ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA,

SIERRA, SUTTER, TEHAMA, YOLO AND YUBA COUNTIES

AREA 2: MARIN, NAPA, SISKIYOU, SOLANO, SONOMA AND TRINITY COUNTIES

	Rates	Fringes
BRICKLAYER		
AREA 1	$ 43.24	21.63
AREA 2	$ 45.92	26.70

SPECIALTY PAY:
(A) Underground work such as tunnel work, sewer work, manholes, catch basins, sewer pipes and telephone conduit shall be paid $1.25 per hour above the regular rate. Work in direct contact with raw sewage shall receive $1.25 per hour in addition to the above.
(B) Operating a saw or grinder shall receive $1.25 per hour above the regular rate.
(C) Gunite nozzle person shall receive $1.25 per hour above the regular rate.

BRCA0003-008 07/01/2019

	Rates	Fringes
TERRAZZO FINISHER	$ 37.58	17.33
TERRAZZO WORKER/SETTER	$ 48.53	26.84

BRCA0003-010 04/01/2019

	Rates	Fringes
TILE FINISHER		
Area 1	$ 27.31	14.75
Area 2	$ 27.10	16.50
Area 3	$ 29.94	16.38
Area 4	$ 28.06	15.82
Tile Layer		
Area 1	$ 45.51	17.64
Area 2	$ 45.15	19.06
Area 3	$ 49.90	19.16
Area 4	$ 46.77	19.08

AREA 1: Butte, Colusa, El Dorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Sutter, Tehema, Yolo, Yuba
AREA 2: Alpine, Amador
AREA 3: Marin, Napa, Solano, Siskiyou
AREA 4: Sonoma

BRCA0003-014 08/01/2020

	Rates	Fringes
MARBLE MASON	$ 51.30	28.47

CARP0034-001 07/01/2021

	Rates	Fringes
Diver		

Assistant Tender, ROV		
Tender/Technician	$ 54.10	34.69
Diver standby	$ 60.51	34.69
Diver Tender	$ 59.51	34.69
Diver wet	$ 103.62	34.69
Manifold Operator (mixed gas)	$ 64.51	34.69
Manifold Operator (Standby)	$ 59.51	34.69

DEPTH PAY (Surface Diving):
050 to 100 ft $2.00 per foot
101 to 150 ft $3.00 per foot
151 to 220 ft $4.00 per foot
221 ft.-deeper $5.00 per foot

SATURATION DIVING:
The standby rate shall apply until saturation starts. The saturation diving rate applies when divers are under pressure continuously until work task and decompression are complete. The diver rate shall be paid for all saturation hours.

DIVING IN ENCLOSURES:
Where it is necessary for Divers to enter pipes or tunnels, or other enclosures where there is no vertical ascent, the following premium shall be paid: Distance traveled from entrance 26 feet to 300 feet: $1.00 per foot. When it is necessary for a diver to enter any pipe, tunnel or other enclosure less than 48"" in height, the premium will be $1.00 per foot.

WORK IN COMBINATION OF CLASSIFICATIONS:
Employees working in any combination of classifications within the diving crew (except dive supervisor) in a shift are paid in the classification with the highest rate for that shift.

CARP0034-003 07/01/2021

	Rates	Fringes
Piledriver	$ 54.10	34.69

CARP0035-001 08/01/2020

AREA 1: MARIN, NAPA, SOLANO & SONOMA

AREA 3: SACRAMENTO, WESTERN EL DORADO (Territory west of an including highway 49 and the territory inside the city limits of Placerville), WESTERN PLACER (Territory west of and including highway 49), & YOLO

AREA 4: ALPINE, BUTTE, COLUSA, EASTERN EL DORADO, GLENN, LASSEN, MODOC, NEVADA, EASTERN PLACER, PLUMAS, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA, TRINITY, & YUBA

	Rates	Fringes
Drywall Installers/Lathers:		
Area 1	$ 52.65	31.26
Area 3	$ 47.27	31.26
Area 4	$ 45.92	31.26
Drywall Stocker/Scrapper		

Area 1	$ 26.33	18.22
Area 3	$ 23.64	18.22
Area 4	$ 22.97	18.22

CARP0035-009 07/01/2020

Marin County

	Rates	Fringes
CARPENTER		
Bridge Builder/Highway Carpenter	$ 52.65	30.82
Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw Filer	$ 52.80	30.82
Journeyman Carpenter	$ 52.65	30.82
Millwright	$ 52.75	32.41

CARP0035-010 07/01/2020

AREA 1: Marin, Napa, Solano & Sonoma Counties

AREA 2: Monterey, San Benito and Santa Cruz

AREA 3: Alpine, Butte, Colusa, El Dorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, Yolo & Yuba counties

	Rates	Fringes
Modular Furniture Installer		
Area 1		
Installer	$ 28.76	22.53
Lead Installer	$ 32.21	23.03
Master Installer	$ 36.43	23.03
Area 2		
Installer	$ 26.11	22.53
Lead Installer	$ 29.08	23.03
Master Installer	$ 32.71	23.03
Area 3		
Installer	$ 25.16	22.53
Lead Installer	$ 27.96	23.03
Master Installer	$ 31.38	23.03

CARP0046-001 07/01/2021

El Dorado (West), Placer (West), Sacramento and Yolo Counties

	Rates	Fringes
Carpenters		
Bridge Builder/Highway Carpenter	$ 54.85	31.49
Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw Filer	$ 49.12	31.49
Journeyman Carpenter	$ 48.97	31.49
Millwright	$ 51.47	33.08

Footnote: Placer County (West) includes territory West of and including Highway 49 and El Dorado County (West) includes territory West of and including Highway 49 and territory inside the city limits of Placerville.

CARP0046-002 07/01/2021

Alpine, Colusa, El Dorado (East), Nevada, Placer (East), Sierra, Sutter and Yuba Counties

	Rates	Fringes
Carpenters		
Bridge Builder/Highway Carpenter	$ 54.85	31.49
Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw Filer	$ 47.77	31.49
Journeyman Carpenter	$ 47.62	31.49
Millwright	$ 50.12	33.08

CARP0152-003 07/01/2020

Amador County

	Rates	Fringes
Carpenters		
Bridge Builder/Highway Carpenter	$ 52.65	30.82
Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw Filer	$ 45.57	30.82
Journeyman Carpenter	$ 45.42	30.82
Millwright	$ 47.92	32.41

CARP0180-001 07/01/2021

Solano County

	Rates	Fringes
Carpenters		
Bridge Builder/Highway Carpenter	$ 54.85	31.49
Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw Filer	$ 55.00	31.49
Journeyman Carpenter	$ 54.85	31.49
Millwright	$ 54.95	33.08

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* CARP0751-001 07/01/2021

Napa and Sonoma Counties

	Rates	Fringes

Carpenters
Bridge Builder/Highway
Carpenter.....$ 54.85 31.49
Hardwood Floorlayer,
Shingler, Power Saw
Operator, Steel Scaffold &
Steel Shoring Erector, Saw
Filer.....$ 55.00 31.49
Journeyman Carpenter.....$ 54.85 31.49
Millwright.....$ 54.95 33.08

CARP1599-001 07/01/2020

Butte, Glenn, Lassen, Modoc, Plumas, Shasta, Siskiyou, Tehama and Trinity Counties

	Rates	Fringes
Carpenters		
Bridge Builder/Highway Carpenter	$ 52.65	30.82
Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw Filer	$ 45.57	30.82
Journeyman Carpenter	$ 45.42	30.82
Millwright	$ 47.92	32.41

ELEC0180-001 06/01/2021

NAPA AND SOLANO COUNTIES

	Rates	Fringes
CABLE SPLICER	$ 59.69	3%+24.38
ELECTRICIAN	$ 53.06	3%+24.38

ELEC0180-003 12/01/2020

NAPA AND SOLANO COUNTIES

	Rates	Fringes
Sound & Communications		
Installer	$ 42.11	22.41
Technician	$ 48.43	22.60

SCOPE OF WORK INCLUDES-
SOUND & VOICE TRANSMISSION (Music, Intercom, Nurse Call, Telephone); FIRE ALARM SYSTEMS [excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs], TELEVISION & VIDEO SYSTEMS, SECURITY SYSTEMS, COMMUNICATIONS SYSTEMS that transmit or receive information and/or control systems that are intrinsic to the above.

EXCLUDES-
Excludes all other data systems or multiple systems which include control function or power supply; excludes installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level

having building access); excludes energy management systems.

ELEC0340-002 02/01/2018

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, NEVADA, PLACER, PLUMAS, SACRAMENTO, TRINITY, YOLO, YUBA COUNTIES

	Rates	Fringes
Communications System		
Sound & Communications Installer	$ 29.35	3%+15.35
Sound & Communications Technician	$ 33.75	3%+15.35

SCOPE OF WORK

Includes the installation testing, service and maintenance, of the following systems which utilize the transmission and/or transference of voice, sound, vision and digital for commercial, education, security and entertainment purposes for the following TV monitoring and surveillance, background-foreground music, intercom and telephone interconnect, inventory control systems, microwave transmission, multi-media, multiplex, nurse call system, radio page, school intercom and sound, burglar alarms, and low voltage master clock systems.

A. SOUND AND VOICE TRANSMISSION/TRANSFERENCE SYSTEMS
Background foreground music Intercom and telephone interconnect systems, Telephone systems, Nurse call systems, Radio page systems, School intercom and sound systems, Burglar alarm systems, Low voltage master clock systems, Multi-media/multiplex systems, Sound and musical entertainment systems, RF systems, Antennas and Wave Guide.

B. FIRE ALARM SYSTEMS
Installation, wire pulling and testing

C. TELEVISION AND VIDEO SYSTEMS Television monitoring and surveillance systems, Video security systems, Video entertainment systems, Video educational systems, Microwave transmission systems, CATV and CCTV

D. SECURITY SYSTEMS Perimeter security systems Vibration sensor systems Card access systems Access control systems Sonar/infrared monitoring equipment

E. COMMUNICATIONS SYSTEMS THAT TRANSMIT OR RECEIVE INFORMATION AND/OR CONTROL SYSTEMS THAT ARE INTRINSIC TO THE ABOVE LISTED SYSTEMS SCADA (Supervisory Control and Data Acquisition) PCM (Pulse Code Modulation) Inventory Control Systems Digital Data Systems Broadband and Baseband and Carriers Point of Sale Systems VSAT Data Systems Data Communication Systems RF and Remote Control Systems Fiber Optic Data Systems WORK EXCLUDED Raceway systems are not covered (excluding Ladder-Rack for the purpose of the above listed systems). Chases and/or nipples (not to exceed 10 feet) may be installed on open wiring systems. Energy management systems. SCADA (Supervisory Control and Data Acquisition) when not intrinsic to the above listed systems (in the

scope). Fire alarm systems when installed in raceways (including wire and cable pulling) shall be performed at the electrician wage rate, when either of the following two (2) conditions apply:
1. The project involves new or major remodel building trades construction.
2. The conductors for the fire alarm system are installed in conduit.

ELEC0340-003 06/01/2021

ALPINE (West of Sierra Mt. Watershed), AMADOR, BUTTE, COLUSA, EL DORADO (West of Sierra Mt. Watershed), GLENN, LASSEN, NEVADA (West of Sierra Mt. Watershed), PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA (West of Sierra Mt. Watershed), SUTTER, TEHAMA, TRINITY, YOLO & YUBA COUNTIES

	Rates	Fringes
ELECTRICIAN		
Remaining area	$ 41.56	32.49
Sierra Army Depot, Herlong	$ 48.83	18.54
Tunnel work	$ 41.01	18.54

CABLE SPLICER: Receives 110% of the Electrician basic hourly rate.

ELEC0401-005 07/01/2020

ALPINE (east of the main watershed divide), EL DORADO (east of the main watershed divide), NEVADA (east of the main watershed), PLACER (east of the main watershed divide) and SIERRA (east of the main watershed divide) COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 41.50	20.17

ZONE RATE:

70-90 miles - $8.00 per hour
91+ miles - $10.00 per hour

ELEC0551-004 06/01/2021

MARIN AND SONOMA COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 53.90	26.47

ELEC0551-005 12/21/2020

MARIN & SONOMA COUNTIES

	Rates	Fringes
Sound & Communications		
Installer	$ 42.11	22.41
Technician	$ 48.43	22.60

SCOPE OF WORK INCLUDES-
SOUND & VOICE TRANSMISSION (Music, Intercom, Nurse Call, Telephone); FIRE ALARM SYSTEMS [excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs], TELEVISION & VIDEO SYSTEMS, SECURITY SYSTEMS, COMMUNICATIONS SYSTEMS that transmit or receive information and/or control systems that are intrinsic to the above.

EXCLUDES-
Excludes all other data systems or multiple systems which include control function or power supply; excludes installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excludes energy management systems.

ELEC0659-006 01/01/2021

DEL NORTE, MODOC and SISKIYOU COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 38.49	17.74

ELEC0659-008 02/01/2020

DEL NORTE, MODOC & SISKIYOU COUNTIES

	Rates	Fringes
Line Construction		
(1) Cable Splicer	$ 60.28	4.5%+19.40
(2) Lineman, Pole Sprayer, Heavy Line Equipment Man	$ 53.82	4.5%+19.40
(3) Tree Trimmer	$ 37.84	4.5%+14.30
(4) Line Equipment Man	$ 53.82	4.5%+19.40
(5) Powdermen, Jackhammermen	$ 40.37	4.5%+14.30
(6) Groundman	$ 33.37	4.5%+14.30

ELEC1245-004 06/01/2021

ALL COUNTIES EXCEPT DEL NORTE, MODOC & SISKIYOU

	Rates	Fringes
LINE CONSTRUCTION		
(1) Lineman; Cable splicer	$ 60.19	21.94
(2) Equipment specialist (operates crawler tractors, commercial motor vehicles, backhoes, trenchers, cranes (50 tons and below), overhead & underground distribution line equipment)	$ 48.08	20.73
(3) Groundman	$ 36.76	20.33
(4) Powderman	$ 51.87	18.79

HOLIDAYS: New Year's Day, M.L. King Day, Memorial Day,

Independence Day, Labor Day, Veterans Day, Thanksgiving Day and day after Thanksgiving, Christmas Day

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ELEV0008-001 01/01/2021

	Rates	Fringes
ELEVATOR MECHANIC	$ 72.10	35.825+a+b

FOOTNOTE:
a. PAID VACATION: Employer contributes 8% of regular hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for 6 months to 5 years of service.
b. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

ENGI0003-008 07/20/2020

	Rates	Fringes
Dredging: (DREDGING: CLAMSHELL & DIPPER DREDGING; HYDRAULIC SUCTION DREDGING:)		
AREA 1:		
(1) Leverman	$ 49.88	34.35
(2) Dredge Dozer; Heavy duty repairman	$ 44.92	34.35
(3) Booster Pump Operator; Deck Engineer; Deck mate; Dredge Tender; Winch Operator	$ 43.80	34.35
(4) Bargeman; Deckhand; Fireman; Leveehand; Oiler	$ 40.50	34.35
AREA 2:		
(1) Leverman	$ 51.88	34.35
(2) Dredge Dozer; Heavy duty repairman	$ 46.92	34.35
(3) Booster Pump Operator; Deck Engineer; Deck mate; Dredge Tender; Winch Operator	$ 45.80	34.35
(4) Bargeman; Deckhand; Fireman; Leveehand; Oiler	$ 42.50	34.35

AREA DESCRIPTIONS

AREA 1: ALAMEDA,BUTTE, CONTRA COSTA, KINGS, MARIN, MERCED, NAPA, SACRAMENTO, SAN BENITO, SAN FRANCISCO, SAN JOAQUIN, SAN MATEO, SANTA CLARA, SANTA CRUZ, SOLANO, STANISLAUS, SUTTER, YOLO, AND YUBA COUNTIES

AREA 2: MODOC COUNTY

THE REMAINGING COUNTIES ARE SPLIT BETWEEN AREA 1 AND AREA 2 AS NOTED BELOW:

ALPINE COUNTY:
Area 1: Northernmost part
Area 2: Remainder

CALAVERAS COUNTY:
Area 1: Remainder
Area 2: Eastern part

COLUSA COUNTY:
Area 1: Eastern part
Area 2: Remainder

ELDORADO COUNTY:
Area 1: North Central part
Area 2: Remainder

FRESNO COUNTY:
Area 1: Remainder
Area 2: Eastern part

GLENN COUNTY:
Area 1: Eastern part
Area 2: Remainder

LASSEN COUNTY:
Area 1: Western part along the Southern portion of border with Shasta County
Area 2: Remainder

MADERA COUNTY:
Area 1: Except Eastern part
Area 2: Eastern part

MARIPOSA COUNTY
Area 1: Except Eastern part
Area 2: Eastern part

MONTERREY COUNTY
Area 1: Except Southwestern part
Area 2: Southwestern part

NEVADA COUNTY:
Area 1: All but the Northern portion along the border of Sierra County
Area 2: Remainder

PLACER COUNTY:
Area 1: Al but the Central portion
Area 2: Remainder

PLUMAS COUNTY:
Area 1: Western portion
Area 2: Remainder

SHASTA COUNTY:
Area 1: All but the Northeastern corner
Area 2: Remainder

SIERRA COUNTY:
Area 1: Western part
Area 2: Remainder

SISKIYOU COUNTY:
Area 1: Central part
Area 2: Remainder

SONOMA COUNTY:
Area 1: All but the Northwestern corner
Area 2: Remainder

TEHAMA COUNTY:
Area 1: All but the Western border with Mendocino & Trinity Counties
Area 2: Remainder

TRINITY COUNTY:
Area 1: East Central part and the Northeastern border with Shasta County
Area 2: Remainder

TUOLUMNE COUNTY:
Area 1: Except Eastern part
Area 2: Eastern part

ENGI0003-019 06/29/2020

SEE AREA DESCRIPTIONS BELOW

	Rates	Fringes
OPERATOR: Power Equipment (LANDSCAPE WORK ONLY)		
GROUP 1		
AREA 1	$ 39.95	30.28
AREA 2	$ 41.95	30.28
GROUP 2		
AREA 1	$ 36.35	30.28
AREA 2	$ 38.35	30.28
GROUP 3		
AREA 1	$ 31.74	30.28
AREA 2	$ 33.74	30.28

GROUP DESCRIPTIONS:

GROUP 1: Landscape Finish Grade Operator: All finish grade work regardless of equipment used, and all equipment with a rating more than 65 HP.

GROUP 2: Landscape Operator up to 65 HP: All equipment with a manufacturer's rating of 65 HP or less except equipment covered by Group 1 or Group 3. The following equipment shall be included except when used for finish work as long as manufacturer's rating is 65 HP or less: A-Frame and Winch Truck, Backhoe, Forklift, Hydragraphic Seeder Machine, Roller, Rubber-Tired and Track Earthmoving Equipment, Skiploader, Straw Blowers, and Trencher 31 HP up to 65 HP.

GROUP 3: Landscae Utility Operator: Small Rubber-Tired Tractor, Trencher Under 31 HP.

AREA DESCRIPTIONS:

AREA 1: ALAMEDA, BUTTE, CONTRA COSTA, KINGS, MARIN, MERCED, NAPA, SACRAMENTO, SAN BENITO, SAN FRANCISCO, SAN JOAQUIN, SAN MATEO, SANTA CLARA, SANTA CRUZ, SOLANO, STANISLAUS, SUTTER, YOLO, AND YUBA COUNTIES

AREA 2 - MODOC COUNTY

THE REMAINING COUNTIES ARE SPLIT BETWEEN AREA 1 AND AREA 2 AS NOTED BELOW:

ALPINE COUNTY:
Area 1: Northernmost part
Area 2: Remainder

CALAVERAS COUNTY:
Area 1: Except Eastern part
Area 2: Eastern part

COLUSA COUNTY:
Area 1: Eastern part
Area 2: Remainder

DEL NORTE COUNTY:
Area 1: Extreme Southwestern corner
Area 2: Remainder

ELDORADO COUNTY:
Area 1: North Central part
Area 2: Remainder

FRESNO COUNTY
Area 1: Except Eastern part
Area 2: Eastern part

GLENN COUNTY:
Area 1: Eastern part
Area 2: Remainder

HUMBOLDT COUNTY:
Area 1: Except Eastern and Southwestern parts
Area 2: Remainder

LAKE COUNTY:
Area 1: Southern part
Area 2: Remainder

LASSEN COUNTY:
Area 1: Western part along the Southern portion of border with Shasta County
Area 2: Remainder

MADERA COUNTY
Area 1: Remainder
Area 2: Eastern part

MARIPOSA COUNTY
Area 1: Remainder
Area 2: Eastern part

MENDOCINO COUNTY:
Area 1: Central and Southeastern parts
Area 2: Remainder

MONTEREY COUNTY
Area 1: Remainder
Area 2: Southwestern part

NEVADA COUNTY:
Area 1: All but the Northern portion along the border of Sierra County
Area 2: Remainder

PLACER COUNTY:
Area 1: All but the Central portion
Area 2: Remainder

PLUMAS COUNTY:
Area 1: Western portion
Area 2: Remainder

SHASTA COUNTY:
Area 1: All but the Northeastern corner
Area 2: Remainder

SIERRA COUNTY:
Area 1: Western part
Area 2: Remainder

SISKIYOU COUNTY:
Area 1: Central part
Area 2: Remainder

SONOMA COUNTY:
Area 1: All but the Northwestern corner
Area 2: Reaminder

TEHAMA COUNTY:
Area 1: All but the Western border with mendocino & Trinity Counties
Area 2: Remainder

TRINITY COUNTY:
Area 1: East Central part and the Northeaster border with Shasta County
Area 2: Remainder

TULARE COUNTY;
Area 1: Remainder
Area 2: Eastern part

TUOLUMNE COUNTY:
Area 1: Remainder
Area 2: Eastern Part

ENGI0003-038 06/29/2020

""AREA 1"" WAGE RATES ARE LISTED BELOW

""AREA 2"" RECEIVES AN ADDITIONAL $2.00 PER HOUR ABOVE AREA 1 RATES.

SEE AREA DEFINITIONS BELOW

	Rates	Fringes
OPERATOR: Power Equipment		
(AREA 1:)		
GROUP 1	$ 51.42	31.15
GROUP 2	$ 49.89	31.15
GROUP 3	$ 48.41	31.15
GROUP 4	$ 47.03	31.15
GROUP 5	$ 45.76	31.15
GROUP 6	$ 44.44	31.15
GROUP 7	$ 43.30	31.15
GROUP 8	$ 42.16	31.15
GROUP 8-A	$ 39.95	31.15
OPERATOR: Power Equipment		
(Cranes and Attachments -		

AREA 1:)
GROUP 1
Cranes.....$ 52.30 31.15
Oiler.....$ 43.79 31.15
Truck crane oiler.....$ 46.08 31.15
GROUP 2
Cranes.....$ 50.54 31.15
Oiler.....$ 42.83 31.15
Truck crane oiler.....$ 45.07 31.15
GROUP 3
Cranes.....$ 48.80 31.15
Hydraulic.....$ 44.44 31.15
Oiler.....$ 42.55 31.15
Truck crane oiler.....$ 44.83 31.15
GROUP 4
Cranes.....$ 45.76 31.15
OPERATOR: Power Equipment
(Piledriving - AREA 1:)
GROUP 1
Lifting devices.....$ 52.64 31.15
Oiler.....$ 43.38 31.15
Truck Crane Oiler.....$ 45.66 31.15
GROUP 2
Lifting devices.....$ 50.82 31.15
Oiler.....$ 43.11 31.15
Truck Crane Oiler.....$ 45.41 31.15
GROUP 3
Lifting devices.....$ 49.14 31.15
Oiler.....$ 42.89 31.15
Truck Crane Oiler.....$ 45.12 31.15
GROUP 4
Lifting devices.....$ 47.37 31.15
GROUP 5
Lifting devices.....$ 44.73 31.15
GROUP 6
Lifting devices.....$ 42.50 31.15
OPERATOR: Power Equipment
(Steel Erection - AREA 1:)
GROUP 1
Cranes.....$ 53.27 31.15
Oiler.....$ 43.72 31.15
Truck Crane Oiler.....$ 45.95 31.15
GROUP 2
Cranes.....$ 51.50 31.15
Oiler.....$ 43.45 31.15
Truck Crane Oiler.....$ 45.73 31.15
GROUP 3
Cranes.....$ 50.02 31.15
Hydraulic.....$ 45.07 31.15
Oiler.....$ 43.23 31.15
Truck Crane Oiler.....$ 45.46 31.15
GROUP 4
Cranes.....$ 48.00 31.15
GROUP 5
Cranes.....$ 46.70 31.15
OPERATOR: Power Equipment
(Tunnel and Underground Work
- AREA 1:)
SHAFTS, STOPES, RAISES:
GROUP 1.....$ 47.52 31.15
GROUP 1-A.....$ 49.99 31.15
GROUP 2.....$ 46.26 31.15
GROUP 3.....$ 44.93 31.15
GROUP 4.....$ 43.79 31.15
GROUP 5.....$ 42.65 31.15

UNDERGROUND:		
GROUP 1	$ 47.42	31.15
GROUP 1-A	$ 49.89	31.15
GROUP 2	$ 46.16	31.15
GROUP 3	$ 44.83	31.15
GROUP 4	$ 43.69	31.15
GROUP 5	$ 42.55	31.15

FOOTNOTE: Work suspended by ropes or cables, or work on a Yo-Yo Cat: $.60 per hour additional.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Operator of helicopter (when used in erection work); Hydraulic excavator, 7 cu. yds. and over; Power shovels, over 7 cu. yds.

GROUP 2: Highline cableway; Hydraulic excavator, 3-1/2 cu. yds. up to 7 cu. yds.; Licensed construction work boat operator, on site; Power blade operator (finish); Power shovels, over 1 cu. yd. up to and including 7 cu. yds. m.r.c.

GROUP 3: Asphalt milling machine; Cable backhoe; Combination backhoe and loader over 3/4 cu. yds.; Continuous flight tie back machine assistant to engineer or mechanic; Crane mounted continuous flight tie back machine, tonnage to apply; Crane mounted drill attachment, tonnage to apply; Dozer, slope brd; Gradall; Hydraulic excavator, up to 3 1/2 cu. yds.; Loader 4 cu. yds. and over; Long reach excavator; Multiple engine scraper (when used as push pull); Power shovels, up to and including 1 cu. yd.; Pre-stress wire wrapping machine; Side boom cat, 572 or larger; Track loader 4 cu. yds. and over; Wheel excavator (up to and including 750 cu. yds. per hour)

GROUP 4: Asphalt plant engineer/box person; Chicago boom; Combination backhoe and loader up to and including 3/4 cu. yd.; Concrete batch plant (wet or dry); Dozer and/or push cat; Pull- type elevating loader; Gradesetter, grade checker (GPS, mechanical or otherwise); Grooving and grinding machine; Heading shield operator; Heavy-duty drilling equipment, Hughes, LDH, Watson 3000 or similar; Heavy-duty repairperson and/or welder; Lime spreader; Loader under 4 cu. yds.; Lubrication and service engineer (mobile and grease rack); Mechanical finishers or spreader machine (asphalt, Barber-Greene and similar); Miller Formless M-9000 slope paver or similar; Portable crushing and screening plants; Power blade support; Roller operator, asphalt; Rubber-tired scraper, self-loading (paddle-wheels, etc.); Rubber- tired earthmoving equipment (scrapers); Slip form paver (concrete); Small tractor with drag; Soil stabilizer (P & H or equal); Spider plow and spider puller; Tubex pile rig; Unlicensed constuction work boat operator, on site; Timber skidder; Track loader up to 4 yds.; Tractor-drawn scraper; Tractor, compressor drill combination; Welder; Woods-Mixer (and other similar Pugmill equipment)

GROUP 5: Cast-in-place pipe laying machine; Combination slusher and motor operator; Concrete conveyor or concrete pump, truck or equipment mounted; Concrete conveyor, building site; Concrete pump or pumpcrete gun; Drilling equipment, Watson 2000, Texoma 700 or similar; Drilling and

boring machinery, horizontal (not to apply to waterliners, wagon drills or jackhammers); Concrete mixer/all; Person and/or material hoist; Mechanical finishers (concrete) (Clary, Johnson, Bidwell Bridge Deck or similar types); Mechanical burm, curb and/or curb and gutter machine, concrete or asphalt); Mine or shaft hoist; Portable crusher; Power jumbo operator (setting slip-forms, etc., in tunnels); Screed (automatic or manual); Self-propelled compactor with dozer; Tractor with boom D6 or smaller; Trenching machine, maximum digging capacity over 5 ft. depth; Vermeer T-600B rock cutter or similar

GROUP 6: Armor-Coater (or similar); Ballast jack tamper; Boom- type backfilling machine; Assistant plant engineer; Bridge and/or gantry crane; Chemical grouting machine, truck-mounted; Chip spreading machine operator; Concrete saw (self-propelled unit on streets, highways, airports and canals); Deck engineer; Drilling equipment Texoma 600, Hughes 200 Series or similar up to and including 30 ft. m.r.c.; Drill doctor; Helicopter radio operator; Hydro-hammer or similar; Line master; Skidsteer loader, Bobcat larger than 743 series or similar (with attachments); Locomotive; Lull hi-lift or similar; Oiler, truck mounted equipment; Pavement breaker, truck-mounted, with compressor combination; Paving fabric installation and/or laying machine; Pipe bending machine (pipelines only); Pipe wrapping machine (tractor propelled and supported); Screed (except asphaltic concrete paving); Self- propelled pipeline wrapping machine; Tractor; Self-loading chipper; Concrete barrier moving machine

GROUP 7: Ballast regulator; Boom truck or dual-purpose A-frame truck, non-rotating - under 15 tons; Cary lift or similar; Combination slurry mixer and/or cleaner; Drilling equipment, 20 ft. and under m.r.c.; Firetender (hot plant); Grouting machine operator; Highline cableway signalperson; Stationary belt loader (Kolman or similar); Lift slab machine (Vagtborg and similar types); Maginnes internal full slab vibrator; Material hoist (1 drum); Mechanical trench shield; Pavement breaker with or without compressor combination); Pipe cleaning machine (tractor propelled and supported); Post driver; Roller (except asphalt); Chip Seal; Self-propelled automatically applied concrete curing mahcine (on streets, highways, airports and canals); Self-propelled compactor (without dozer); Signalperson; Slip-form pumps (lifting device for concrete forms); Tie spacer; Tower mobile; Trenching machine, maximum digging capacity up to and including 5 ft. depth; Truck- type loader

GROUP 8: Bit sharpener; Boiler tender; Box operator; Brakeperson; Combination mixer and compressor (shotcrete/gunite); Compressor operator; Deckhand; Fire tender; Forklift (under 20 ft.); Generator; Gunite/shotcrete equipment operator; Hydraulic monitor; Ken seal machine (or similar); Mixermobile; Oiler; Pump operator; Refrigeration plant; Reservoir-debris tug (self-propelled floating); Ross Carrier (construction site); Rotomist operator; Self-propelled tape machine; Shuttlecar; Self-propelled power sweeper operator (includes vacuum sweeper); Slusher operator; Surface heater; Switchperson; Tar pot firetender; Tugger hoist, single drum; Vacuum cooling plant; Welding machine (powered other than by electricity)

GROUP 8-A: Elevator operator; Skidsteer loader-Bobcat 743

series or smaller, and similar (without attachments); Mini excavator under 25 H.P. (backhoe-trencher); Tub grinder wood chipper

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ALL CRANES AND ATTACHMENTS

GROUP 1: Clamshell and dragline over 7 cu. yds.; Crane, over 100 tons; Derrick, over 100 tons; Derrick barge pedestal-mounted, over 100 tons; Self-propelled boom-type lifting device, over 100 tons

GROUP 2: Clamshell and dragline over 1 cu. yd. up to and including 7 cu. yds.; Crane, over 45 tons up to and including 100 tons; Derrick barge, 100 tons and under; Self-propelled boom-type lifting device, over 45 tons; Tower crane

GROUP 3: Clamshell and dragline up to and including 1 cu. yd.; Cranes 45 tons and under; Self-propelled boom-type lifting device 45 tons and under;

GROUP 4: Boom Truck or dual purpose A-frame truck, non-rotating over 15 tons; Truck-mounted rotating telescopic boom type lifting device, Manitex or similar (boom truck) over 15 tons; Truck-mounted rotating telescopic boom type lifting device, Manitex or similar (boom truck) - under 15 tons;

PILEDRIVERS

GROUP 1: Derrick barge pedestal mounted over 100 tons; Clamshell over 7 cu. yds.; Self-propelled boom-type lifting device over 100 tons; Truck crane or crawler, land or barge mounted over 100 tons

GROUP 2: Derrick barge pedestal mounted 45 tons to and including 100 tons; Clamshell up to and including 7 cu. yds.; Self-propelled boom-type lifting device over 45 tons; Truck crane or crawler, land or barge mounted, over 45 tons up to and including 100 tons; Fundex F-12 hydraulic pile rig

GROUP 3: Derrick barge pedestal mounted under 45 tons; Self-propelled boom-type lifting device 45 tons and under; Skid/scow piledriver, any tonnage; Truck crane or crawler, land or barge mounted 45 tons and under

GROUP 4: Assistant operator in lieu of assistant to engineer; Forklift, 10 tons and over; Heavy-duty repairperson/welder

GROUP 5: Deck engineer

GROUP 6: Deckhand; Fire tender

STEEL ERECTORS

GROUP 1: Crane over 100 tons; Derrick over 100 tons; Self-propelled boom-type lifting device over 100 tons

GROUP 2: Crane over 45 tons to 100 tons; Derrick under 100

tons; Self-propelled boom-type lifting device over 45 tons to 100 tons; Tower crane

GROUP 3: Crane, 45 tons and under; Self-propelled boom-type lifting device, 45 tons and under

GROUP 4: Chicago boom; Forklift, 10 tons and over; Heavy-duty repair person/welder

GROUP 5: Boom cat

TUNNEL AND UNDERGROUND WORK

GROUP 1-A: Tunnel bore machine operator, 20' diameter or more

GROUP 1: Heading shield operator; Heavy-duty repairperson; Mucking machine (rubber tired, rail or track type); Raised bore operator (tunnels); Tunnel mole bore operator

GROUP 2: Combination slusher and motor operator; Concrete pump or pumpcrete gun; Power jumbo operator

GROUP 3: Drill doctor; Mine or shaft hoist

GROUP 4: Combination slurry mixer cleaner; Grouting Machine operator; Motorman

GROUP 5: Bit Sharpener; Brakeman; Combination mixer and compressor (gunite); Compressor operator; Oiler; Pump operator; Slusher operator

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AREA DESCRIPTIONS:

POWER EQUIPMENT OPERATORS, CRANES AND ATTACHMENTS,TUNNEL AND UNDERGROUND [These areas do not apply to Piledrivers and Steel Erectors]

AREA 1: DEL NORTE, HUMBOLDT, LAKE, MENDOCINO
AREA 2 -NOTED BELOW

THE REMAINING COUNTIES ARE SPLIT BETWEEN AREA 1 AND AREA 2 AS NOTED BELOW:

DEL NORTE COUNTY:
Area 1: Extreme Southwest corner
Area 2: Remainder

HUMBOLDT COUNTY:
Area 1: Except Eastern and Southwestern parts
Area 2: Remainder

LAKE COUNTY:
Area 1: Southern part
Area 2: Remainder

MENDOCINO COUNTY:
Area 1: Central and Southeastern Parts
Area 2: Remainder

IRON0433-006 07/01/2020

	Rates	Fringes
IRONWORKER		
Fence Erector	$ 34.58	24.81
Ornamental, Reinforcing and Structural	$ 41.00	33.45

PREMIUM PAY:

$6.00 additional per hour at the following locations:

China Lake Naval Test Station, Chocolate Mountains Naval Reserve-Niland,
Edwards AFB, Fort Irwin Military Station, Fort Irwin Training Center-Goldstone, San Clemente Island, San Nicholas Island, Susanville Federal Prison, 29 Palms - Marine Corps, U.S. Marine Base - Barstow, U.S. Naval Air Facility - Sealey, Vandenberg AFB

$4.00 additional per hour at the following locations:

Army Defense Language Institute - Monterey, Fallon Air Base, Naval Post Graduate School - Monterey, Yermo Marine Corps Logistics Center

$2.00 additional per hour at the following locations:

Port Hueneme, Port Mugu, U.S. Coast Guard Station - Two Rock

LABO0067-001 06/28/2021

AREA ""A"" - MARIN COUNTY

AREA ""B"" - ALPINE, AMADOR, BUTTE COLUSA EL DORADO, GLENN, LASSEN, MODOC, NAPA, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SOLANO, SONOMA, SUTTER, TEHAMA, TRINITY, YOLO, AND YUBA COUNTIES

	Rates	Fringes
Asbestos Removal Laborer	$ 26.05	12.75
LABORER (Lead Removal)		
Marin County	$ 34.37	25.95
Remaining Counties	$ 33.37	25.95

LABO0067-005 06/27/2017

AREA ""A"" - ALAMEDA, CONTRA COSTA, MARIN, SAN FRANCISCO, SAN MATEO AND SANTA CLARA COUNTIES

AREA ""B"" - ALPINE, AMADOR, BUTTE, CALAVERAS, COLUSA, DEL NORTE, EL DORADO, FRESNO, GLENN, HUMBOLDT, KINGS, LAKE, LASSEN, MADERA, MARIPOSA, MENDOCINO, MERCED, MODOC, MONTEREY, NAPA, NEVADA, PLACER, PLUMAS, SANCREMENTO, SAN BENITO, SAN JOAQUIN, SANTA CRUZ, SIERRA, SHASTA, SISKIYOU, SOLANO, SONOMA, STANISLAUS, TEHAMA, TRINITY, TULARE, TUOLUMNE, YOLO AND YOUBA COUNTIES

	Rates	Fringes

LABORER (TRAFFIC CONTROL/LANE CLOSURE)

Escort Driver, Flag Person		
Area A	$ 29.54	22.17
Area B	$ 28.54	22.17
Traffic Control Person I		
Area A	$ 29.84	22.17
Area B	$ 28.84	22.17
Traffic Control Person II		
Area A	$ 27.34	22.17
Area B	$ 26.34	22.17

TRAFFIC CONTROL PERSON I: Layout of traffic control, crash cushions, construction area and roadside signage.

TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions.

LABO0185-002 07/01/2020

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA, TRINITY, YOLO AND YUBA COUNTIES

	Rates	Fringes
LABORER		
Mason Tender-Brick	$ 32.84	23.71

LABO0185-005 06/25/2018

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA, TRINITY, YOLO AND YUBA COUNTIES

	Rates	Fringes
Tunnel and Shaft Laborers:		
GROUP 1	$ 37.82	24.11
GROUP 2	$ 37.59	24.11
GROUP 3	$ 37.34	24.11
GROUP 4	$ 36.89	24.11
GROUP 5	$ 36.35	24.11
Shotcrete Specialist	$ 38.34	24.11

TUNNEL AND SHAFT CLASSIFICATIONS

GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete nozzlemen

GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level)

GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickermen - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Gunite & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and

setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

LABO0185-006 06/25/2018

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHIASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA, TRINITY, YOLO, YUBA COUNTIES

	Rates	Fringes
LABORER (CONSTRUCTION CRAFT LABORERS - AREA B:)		
Construction Specialist Group	$ 30.49	23.20
GROUP 1	$ 29.79	23.20
GROUP 1-a	$ 30.01	23.20
GROUP 1-c	$ 30.01	23.20
GROUP 1-e	$ 30.34	23.20
GROUP 1-f	$ 30.37	23.20
GROUP 2	$ 29.64	23.20
GROUP 3	$ 29.54	23.20
GROUP 4	$ 23.23	23.20
See groups 1-b and 1-d under laborer classifications.		
LABORER (GARDENERS, HORTICULTURAL & LANDSCAPE LABORERS - AREA B:)		
(1) New Construction	$ 29.54	23.20
(2) Establishment Warranty Period	$ 23.23	23.20
LABORER (GUNITE - AREA B:)		
GROUP 1	$ 29.75	22.31
GROUP 2	$ 29.25	22.31
GROUP 3	$ 28.66	22.31
GROUP 4	$ 28.54	22.31
LABORER (WRECKING - AREA B:)		
GROUP 1	$ 29.79	23.20
GROUP 2	$ 29.64	23.20

FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive $0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill;

Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2"" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive $4.00 per day above Group 1 wage rates. ""Sewer cleaner"" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive $5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive $ .25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after

the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification ""material cleaner"" is to be utilized under the following conditions:
A: at demolition site for the salvage of the material.
B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.
C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of ""form stripping, cleaning and oiling and moving to the next point of erection"".

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Structural Nozzleman

GROUP 2: Nozzleman, Gunman, Potman, Groundman

GROUP 3: Reboundman

GROUP 4: Gunite laborer

WRECKING WORK LABORER CLASSIFICATIONS

GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials)

GROUP 2: Semi-skilled wrecker (salvaging of other building materials)

LABO0185-008 07/01/2018

	Rates	Fringes
Plasterer tender	$ 32.02	23.00

Work on a swing stage scaffold: $1.00 per hour additional.

LABO0261-002 06/25/2018

MARIN COUNTY

	Rates	Fringes
LABORER (TRAFFIC CONTROL/LANE CLOSURE)		
Escort Driver, Flag Person	$ 30.54	23.65
Traffic Control Person I	$ 30.84	23.65
Traffic Control Person II	$ 28.34	23.65

TRAFFIC CONTROL PERSON I: Layout of traffic control, crash cushions, construction area and roadside signage.

TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions.

LABO0261-004 06/25/2018

MARIN COUNTY

	Rates	Fringes
Tunnel and Shaft Laborers:		
GROUP 1	$ 37.82	24.11
GROUP 2	$ 37.59	24.11
GROUP 3	$ 37.34	24.11
GROUP 4	$ 36.89	24.11
GROUP 5	$ 36.35	24.11
Shotcrete Specialist	$ 38.34	24.11

TUNNEL AND SHAFT CLASSIFICATIONS

GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete nozzlemen

GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level)

GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickermen - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Gunite & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and

bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

LABO0261-007 07/01/2018

MARIN AND NAPA COUNTIES

	Rates	Fringes
LABORER		
Mason Tender-Brick	$ 32.45	22.20

LABO0261-010 06/25/2018

MARIN COUNTY

	Rates	Fringes
LABORER (CONSTRUCTION CRAFT LABORERS - AREA A:)		
Construction Specialist Group	$ 31.49	23.20
GROUP 1	$ 30.79	23.20
GROUP 1-a	$ 31.01	23.20
GROUP 1-c	$ 30.84	23.20
GROUP 1-e	$ 31.34	23.20
GROUP 1-f	$ 31.37	23.20
GROUP 2	$ 30.64	23.20
GROUP 3	$ 30.54	23.20
GROUP 4	$ 24.23	23.20
See groups 1-b and 1-d under laborer classifications.		
LABORER (GARDENERS, HORTICULTURAL & LANDSCAPE LABORERS - AREA A:)		
(1) New Construction	$ 30.54	23.20
(2) Establishment Warranty Period	$ 24.23	23.20
LABORER (GUNITE - AREA A:)		
GROUP 1	$ 30.75	22.31
GROUP 2	$ 30.25	22.31
GROUP 3	$ 29.66	22.31
GROUP 4	$ 29.54	22.31
LABORER (WRECKING - AREA A:)		
GROUP 1	$ 30.79	23.20
GROUP 2	$ 30.64	23.20

FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive $0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2"" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive $4.00 per day above Group 1 wage rates. ""Sewer cleaner"" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive $5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers'

work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive $ .25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification ""material cleaner"" is to be utilized under the following conditions:
A: at demolition site for the salvage of the material.
B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.
C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of ""form stripping, cleaning and oiling and moving to the next point of erection"".

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Structural Nozzleman

GROUP 2: Nozzleman, Gunman, Potman, Groundman

GROUP 3: Reboundman

GROUP 4: Gunite laborer

WRECKING WORK LABORER CLASSIFICATIONS

GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials)

GROUP 2: Semi-skilled wrecker (salvaging of other building materials)

LABO0261-015 07/01/2018

	Rates	Fringes
Plasterer tender	$ 32.02	23.00

Work on a swing stage scaffold: $1.00 per hour additional.

LABO0324-004 06/25/2018

NAPA, SOLANO, AND SONOMA, COUNTIES

	Rates	Fringes
LABORER (TRAFFIC CONTROL/LANE CLOSURE)		
Escort Driver, Flag Person	$ 29.54	23.65
Traffic Control Person I	$ 29.84	23.65
Traffic Control Person II	$ 27.34	23.65

TRAFFIC CONTROL PERSON I: Layout of traffic control, crash cushions, construction area and roadside signage.

TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions.

LABO0324-008 06/25/2018

NAPA, SOLANO, AND SONOMA COUNTIES

	Rates	Fringes
Tunnel and Shaft Laborers:		
GROUP 1	$ 37.82	24.11
GROUP 2	$ 37.59	24.11
GROUP 3	$ 37.34	24.11
GROUP 4	$ 36.89	24.11
GROUP 5	$ 36.35	24.11
Shotcrete Specialist	$ 38.34	24.11

TUNNEL AND SHAFT CLASSIFICATIONS

GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete nozzlemen

GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level)

GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickermen - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Gunite & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

LABO0324-010 07/01/2018

SOLANO AND SONOMA COUNTIES

	Rates	Fringes
LABORER		
Mason Tender-Brick	$ 31.45	22.20

LABO0324-013 06/25/2018

NAPA, SOLANO, AND SONOMA COUNTIES

	Rates	Fringes
LABORER (CONSTRUCTION CRAFT LABORERS - AREA B:)		
Construction Specialist Group	$ 30.49	23.20
GROUP 1	$ 29.79	23.20
GROUP 1-a	$ 30.01	23.20
GROUP 1-c	$ 29.84	23.20
GROUP 1-e	$ 30.34	23.20
GROUP 1-f	$ 29.37	23.20
GROUP 2	$ 29.64	23.20
GROUP 3	$ 29.54	23.20
GROUP 4	$ 23.23	23.20
See groups 1-b and 1-d under laborer classifications.		
LABORER (GARDENERS, HORTICULTURAL & LANDSCAPE LABORERS - AREA B:)		
(1) New Construction	$ 29.54	23.20
(2) Establishment Warranty Period	$ 23.23	23.20
LABORER (GUNITE - AREA B:)		
GROUP 1	$ 29.75	22.31
GROUP 2	$ 29.25	22.31
GROUP 3	$ 28.66	22.31
GROUP 4	$ 28.54	22.31
LABORER (WRECKING - AREA B:)		
GROUP 1	$ 29.79	23.20
GROUP 2	$ 29.64	23.20

FOOTNOTES:
Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive $0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2"" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive $4.00 per day above Group 1 wage rates. ""Sewer cleaner"" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive $5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive $ .25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification ""material cleaner"" is to be utilized under the following conditions:
A: at demolition site for the salvage of the material.
B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.
C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of ""form stripping, cleaning and oiling and moving to the next point of erection"".

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Structural Nozzleman

GROUP 2: Nozzleman, Gunman, Potman, Groundman

GROUP 3: Reboundman

GROUP 4: Gunite laborer

WRECKING WORK LABORER CLASSIFICATIONS

GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials)

GROUP 2: Semi-skilled wrecker (salvaging of other building materials)

LABO0324-019 07/01/2018

	Rates	Fringes
Plasterer tender	$ 32.02	23.00

Work on a swing stage scaffold: $1.00 per hour additional.

PAIN0016-004 01/01/2021

MARIN, NAPA, SOLANO & SONOMA COUNTIES

	Rates	Fringes
Painters:	$ 45.22	25.48

PREMIUMS:
EXOTIC MATERIALS - $1.25 additional per hour.
SPRAY WORK: - $0.50 additional per hour.
INDUSTRIAL PAINTING - $0.25 additional per hour
[Work on industrial buildings used for the manufacture and processing of goods for sale or service; steel construction (bridges), stacks, towers, tanks, and similar structures]

HIGH WORK:
over 50 feet - $2.00 per hour additional
100 to 180 feet - $4.00 per hour additional
Over 180 feet - $6.00 per houir additional

PAIN0016-005 01/01/2021

ALPINE, BUTTE, COLUSA, EL DORADO (west of the Sierra Nevada Mountains), GLENN, LASSEN (west of Hwy. 395, excluding Honey Lake); MARIN, MODOC, NAPA, NEVADA (west of the Sierra Nevada Mountains), PLACER (west of the Sierra Nevada Mountains), PLUMAS, SACRAMENTO, SHASTA, SIERRA (west of the Sierra Nevada

Mountains), SISKIYOU, SOLANO, SONOMA, SUTTER, TEHAMA, TRINITY, YOLO AND YUBA COUNTIES

	Rates	Fringes
DRYWALL FINISHER/TAPER	$ 49.03	27.09

PAIN0016-007 01/01/2021

ALPINE, AMADOR, BUTTE, COLUSA. EL DORADO (west of the Sierra Nevada Mountains), GLENN, LASSEN (west of Highway 395, excluding Honey Lake), MODOC, NEVADA (west of the Sierra Nevada Mountains), PLACER (west of the Sierra Nevada Mountains), PLUMAS, SACRAMENTO, SHASTA, SIERRA (west of the Sierra Nevada Mountains), SISKIYOU, SUTTER, TEHAMA, TRINITY, YOLO & YUBA COUNTIES

	Rates	Fringes
Painters:	$ 35.88	21.16

SPRAY/SANDBLAST: $0.50 additional per hour.
EXOTIC MATERIALS: $1.25 additional per hour.
HIGH TIME: Over 50 ft above ground or water level $2.00 additional per hour. 100 to 180 ft above ground or water level $4.00 additional per hour. Over 180 ft above ground or water level $6.00 additional per hour.

PAIN0016-008 01/01/2019

MARIN, NAPA, SOLANO AND SONOMA COUNTIES

	Rates	Fringes
SOFT FLOOR LAYER	$ 48.60	27.43

PAIN0169-004 01/01/2021

MARIN , NAPA & SONOMA COUNTIES; SOLANO COUNTY (west of a line defined as follows: Hwy. 80 corridor beginning at the City of Fairfield, including Travis Air Force Base and Suisun City; going north of Manakas Corner Rd., continue north on Suisun Valley Rd. to the Napa County line; Hwy. 80 corridor south on Grizzly Island Rd. to the Grizzly Island Management area)

	Rates	Fringes
GLAZIER	$ 53.07	31.15

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* PAIN0567-001 07/01/2020

EL DORADO COUNTY (east of the Sierra Nevada Mountains); LASSEN COUNTY (east of Highway 395, beginning at Stacey and including Honey Lake); NEVADA COUNTY (east of the Sierra Nevada Mountains); PLACER COUNTY (east of the Sierra Nevada Mountains); AND SIERRA COUNTY (east of the Sierra Nevada Mountains)

	Rates	Fringes

Painters:
Brush and Roller.....$ 29.80 13.44
Spray Painter & Paperhanger.$ 31.29 13.44

PREMIUMS:
Special Coatings (Brush), and Sandblasting = $0.50/hr
Special Coatings (Spray), and Steeplejack = $1.00/hr
Special Coating Spray Steel = $1.25/hr
Swing Stage = $2.00/hr

*A special coating is a coating that requires the mixing of 2 or more products.

PAIN0567-007 07/01/2020

EL DORADO COUNTY (east of the Sierra Nevada Mountains); LASSEN COUNTY (east of Highway 395, beginning at Stacey and including Honey Lake); NEVADA COUNTY (east of the Sierra Nevada Mountains); PLACER COUNTY (east of the Sierra Nevada Mountains) AND SIERRA COUNTY (east of the Sierra Nevada Mountains)

	Rates	Fringes
SOFT FLOOR LAYER	$ 31.01	15.48

PAIN0567-010 07/01/2020

EL DORADO COUNTY (east of the Sierra Nevada Mountains); LASSEN COUNTY (east of Highway 395, beginning at Stacey and including Honey Lake); NEVADA COUNTY (east of the Sierra Nevada Mountains); PLACER COUNTY (east of the Sierra Nevada Mountains); AND SIERRA COUNTY (east of the Sierra Nevada Mountains)

	Rates	Fringes
Drywall		
(1) Taper	$ 35.20	14.02
(2) Steeplejack - Taper, over 40 ft with open space below	$ 36.70	14.02

PAIN0767-004 01/01/2021

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SOLANO (Remainder), SUTTER, TEHAMA, TRINITY, YOLO, YUBA

	Rates	Fringes
GLAZIER	$ 41.51	31.36

PAID HOLIDAYS: New Year's Day, Martin Luther King, Jr. Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day.

Employee rquired to wear a body harness shall receive $1.50 per hour above the basic hourly rate at any elevation.

PAIN1176-001 07/01/2020

HIGHWAY IMPR0VEMENT

	Rates	Fringes
Parking Lot Striping/Highway Marking:		
GROUP 1	$ 38.48	16.88
GROUP 2	$ 32.71	16.88
GROUP 3	$ 33.09	16.88

CLASSIFICATIONS

GROUP 1: Striper: Layout and application of painted traffic stripes and marking; hot thermo plastic; tape, traffic stripes and markings

GROUP 2: Gamecourt & Playground Installer

GROUP 3: Protective Coating, Pavement Sealing

PAIN1237-001 01/01/2021

ALPINE; COLUSA; EL DORADO (west of the Sierra Nevada Mountains); GLENN; LASSEN (west of Highway 395, beginning at Stacey and including Honey Lake); MODOC; NEVADA (west of the Sierra Nevada Mountains); PLACER (west of the Sierra Nevada Mountains); PLUMAS; SACRAMENTO; SHASTA; SIERRA (west of the Sierra Nevada Mountains); SISKIYOU; SUTTER; TEHAMA; TRINITY; YOLO AND YUBA COUNTIES

	Rates	Fringes
SOFT FLOOR LAYER	$ 41.81	23.39

PLAS0300-003 07/01/2018

	Rates	Fringes
PLASTERER		
AREA 295: Alpine, Amador, Butte, Colusa, El Dorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Solano, Sutter, Tehema, Trinity, Yolo & Yuba Counties	$ 32.70	31.68
AREA 355: Marin	$ 36.73	31.68
AREA 355: Napa & Sonoma Counties	$ 32.70	31.68

PLAS0300-005 07/01/2017

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 33.49	23.67

PLUM0038-002 07/01/2020

MARIN AND SONOMA COUNTIES

	Rates	Fringes

PLUMBER (Plumber,
Steamfitter, Refrigeration
Fitter)
(1) Work on wooden frame structures 5 stories or less excluding high-rise buildings and commercial work such as hospitals, prisons, hotels, schools, casinos, wastewater treatment plants, and resarch facilities as well as refrigeration pipefitting, service and repair work - MARKET RECOVERY RATE.....$ 64.86 43.54
(2) All other work - NEW CONSTRUCTION RATE.....$ 76.30 45.27

PLUM0038-006 07/01/2019

MARIN & SONOMA COUNTIES

	Rates	Fringes
Landscape/Irrigation Fitter (Underground/Utility Fitter)	$ 63.04	31.48

PLUM0228-001 07/01/2021

BUTTE, COLUSA, GLENN, LASSEN, MODOC, PLUMAS, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA, TRINITY & YUBA COUNTIES

	Rates	Fringes
PLUMBER	$ 42.50	35.89

PLUM0343-001 07/01/2021

NAPA AND SOLANO COUNTIES

	Rates	Fringes
PLUMBER/PIPEFITTER		
Light Commercial	$ 30.85	20.40
All Other Work	$ 56.00	39.61

DEFINITION OF LIGHT COMMERICIAL:
Work shall include strip shopping centers, office buildings, schools and other commercial structures which the total plumbing bid does not exceed Two Hundred and Fifty Thousand ($250,000) and the total heating and cooling does not exceed Two Hundred Fifty Thousand ($250,000); or Any projects bid in phases shall not qualify unless the total project is less than Two Hundred Fifty Thousand ($250,000) for the plumbing bid; and Two Hundred Fifty Thousand ($250,000) for the heating and cooling bid. Excluded are hospitals, jails, institutions and industrial projects, regardless size of the project

FOOTNOTES: While fitting galvanized material: $.75 per hour additional. Work from trusses, temporary staging, unguarded structures 35' from the ground or water: $.75 per

hour additional. Work from swinging scaffolds, boatswains chairs or similar devices: $.75 per hour additional.

PLUM0350-001 08/01/2019

EL DORADO COUNTY (Lake Tahoe area only); NEVADA COUNTY (Lake Tahoe area only); AND PLACER COUNTY (Lake Tahoe area only)

	Rates	Fringes
PLUMBER/PIPEFITTER	$ 45.84	13.81

PLUM0355-001 07/01/2021

ALPINE, AMADOR, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NAPA, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SOLANO, SUTTER, TEHAMA, TRINITY, YOLO, AND YUBA COUNTIES

	Rates	Fringes
Underground Utility Worker /Landscape Fitter	$ 31.00	16.80

PLUM0442-003 07/01/2021

AMADOR (South of San Joaquin River) and ALPINE COUNTIES

	Rates	Fringes
PLUMBER	$ 47.50	33.39

PLUM0447-001 07/01/2021

AMADOR (north of San Joaquin River), EL DORADO (excluding Lake Tahoe area), NEVADA (excluding Lake Tahoe area); PLACER (excluding Lake Tahoe area), SACRAMENTO AND YOLO COUNTIES

	Rates	Fringes
PLUMBER/PIPEFITTER		
Journeyman	$ 56.37	26.75
Light Commercial Work	$ 36.23	17.72

ROOF0081-006 08/01/2020

MARIN, NAPA, SOLANO AND SONOMA COUNTIES

	Rates	Fringes
Roofer	$ 44.62	19.36

ROOF0081-007 08/01/2020

ALPINE, BUTTE, COLUSA, EL DORADO, GLENN,LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA, TRINITY, YOLO, AND YUBA COUNTIES

	Rates	Fringes

Roofer.....$ 39.73 19.11

SFCA0483-003 01/01/2021

MARIN, NAPA, SOLANO AND SONOMA COUNTIES

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....	$ 67.99	32.85

SFCA0669-003 04/01/2021

ALPINE, BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA, TRINITY, YOLO AND YUBA COUNTIES

	Rates	Fringes
SPRINKLER FITTER.....	$ 42.34	26.29

SHEE0104-006 06/29/2020

MARIN, NAPA, SOLANO SONOMA & TRINITY COUNTIES

	Rates	Fringes
Sheet Metal Worker		
Mechanical Contracts		
$200,000 or less.....	$ 55.92	45.29
All other work.....	$ 64.06	46.83

SHEE0104-009 07/01/2020

AMADOR, COLUSA, EL DORADO, NEVADA, PLACER, SACRAMENTO, SUTTER, YOLO AND YUBA COUNTIES

	Rates	Fringes
SHEET METAL WORKER.....	$ 46.60	40.21

SHEE0104-010 07/01/2020

AlPINE COUNTY

	Rates	Fringes
SHEET METAL WORKER.....	$ 43.50	37.42

SHEE0104-011 07/01/2020

BUTTE, COLUSA, EL DORADO, GLENN, LASSEN, MODOC, NEVADA, PLACER, PLUMAS, SACRAMENTO, SHASTA, SIERRA, SISKIYOU, SUTTER, TEHAMA, YOLO AND YUBA COUNTIES

	Rates	Fringes
Sheet Metal Worker (Metal decking and siding only).....	$ 44.45	35.55

SHEE0104-014 07/01/2020

MARIN, NAPA, SOLANO, SONOMA AND TRINITY COUNTIES

	Rates	Fringes
SHEET METAL WORKER (Metal Decking and Siding only)	$ 44.45	35.55

SHEE0104-019 07/01/2020

BUTTE, GLENN, LASSEN, MODOC, PLUMAS, SHASTA, SIERRA, SISKIYOU AND TEHAMA COUNTIES

	Rates	Fringes
SHEET METAL WORKER		
Mechanical Jobs $200,000 & under	$ 35.16	35.88
Mechanical Jobs over $200,000	$ 46.60	40.21

TEAM0094-001 07/01/2021

	Rates	Fringes
Truck drivers:		
GROUP 1	$ 35.15	31.42
GROUP 2	$ 35.45	31.42
GROUP 3	$ 35.75	31.42
GROUP 4	$ 36.10	31.42
GROUP 5	$ 36.45	31.42

FOOTNOTES:
Articulated dump truck; Bulk cement spreader (with or without auger); Dumpcrete truck; Skid truck (debris box); Dry pre-batch concrete mix trucks; Dumpster or similar type; Slurry truck: Use dump truck yardage rate.
Heater planer; Asphalt burner; Scarifier burner; Industrial lift truck (mechanical tailgate); Utility and clean-up truck: Use appropriate rate for the power unit or the equipment utilized.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Dump trucks, under 6 yds.; Single unit flat rack (2-axle unit); Nipper truck (when flat rack truck is used appropriate flat rack shall apply); Concrete pump truck (when flat rack truck is used appropriate flat rack shall apply); Concrete pump machine; Fork lift and lift jitneys; Fuel and/or grease truck driver or fuel person; Snow buggy; Steam cleaning; Bus or personhaul driver; Escort or pilot car driver; Pickup truck; Teamster oiler/greaser and/or serviceperson; Hook tender (including loading and unloading); Team driver; Tool room attendant (refineries)

GROUP 2: Dump trucks, 6 yds. and under 8 yds.; Transit mixers, through 10 yds.; Water trucks, under 7,000 gals.; Jetting trucks, under 7,000 gals.; Single-unit flat rack (3-axle unit); Highbed heavy duty transport; Scissor truck; Rubber-tired muck car (not self-loaded); Rubber-tired truck jumbo; Winch truck and ""A"" frame drivers; Combination winch truck with hoist; Road oil truck or bootperson; Buggymobile; Ross, Hyster and similar straddle carriers; Small rubber-tired tractor

GROUP 3: Dump trucks, 8 yds. and including 24 yds.; Transit mixers, over 10 yds.; Water trucks, 7,000 gals. and over; Jetting trucks, 7,000 gals. and over; Vacuum trucks under 7500 gals. Trucks towing tilt bed or flat bed pull trailers; Lowbed heavy duty transport; Heavy duty transport tiller person; Self- propelled street sweeper with self-contained refuse bin; Boom truck - hydro-lift or Swedish type extension or retracting crane; P.B. or similar type self-loading truck; Tire repairperson; Combination bootperson and road oiler; Dry distribution truck (A bootperson when employed on such equipment, shall receive the rate specified for the classification of road oil trucks or bootperson); Ammonia nitrate distributor, driver and mixer; Snow Go and/or plow

GROUP 4: Dump trucks, over 25 yds. and under 65 yds.; Water pulls - DW 10's, 20's, 21's and other similar equipment when pulling Aqua/pak or water tank trailers; Helicopter pilots (when transporting men and materials); Lowbedk Heavy Duty Transport up to including 7 axles; DW10's, 20's, 21's and other similar Cat type, Terra Cobra, LeTourneau Pulls, Tournorocker, Euclid and similar type equipment when pulling fuel and/or grease tank trailers or other miscellaneous trailers; Vacuum Trucks 7500 gals and over and truck repairman

GROUP 5: Dump trucks, 65 yds. and over; Holland hauler; Low bed Heavy Duty Transport over 7 axles

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification

and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

INSURANCE BROKER INFORMATION PACKET

Project:_____

NOTICE TO CONTRACTOR:

For your convenience, this package contains the Requirements for Insurance and Bonds for this project, including the necessary City forms. You are required to return these forms in addition to the executed Contract within fifteen (15) calendar days after the award of the Bid, unless otherwise directed by City in writing. (See the Instructions to Bidders.)

Please insert the dollar amount of your accepted Bid into the blank on page INS-1 and present this entire package to your insurance broker if you are awarded the Bid.

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Insurance Requirements	INS 2
Public Works Faithful Performance Bond	INS 7
Public Works Payment Bond	INS 9

NOTICE TO INSURANCE BROKER

Your client has been awarded a bid by the City Council of the City of Roseville to perform a public works project known as _____. The Contract Conditions for that project require your client ("the Contractor") to return certain evidence of insurance and bonds to the City Attorney of the City within fifteen (15) days after the Bid award, unless otherwise directed by the City in writing, or else the Bid award may be terminated and awarded to another company.

This package contains the information you will need as an insurance broker to provide the appropriate insurance and bonds to the City. The insurance coverages the Contractor needs are specified in the section entitled "Insurance Requirements." Please note that, in addition to the insurance certificate itself, copies of several endorsements must be actually furnished.

Please refer to Special Provisions for modifications of the Standard Construction Specifications, if any, and the requirements of this insurance packet.

Please use the standard City of Roseville Bond Forms provided in this package.

The Bonds required must each be in the penal amount of: $_____.

Bonds must be sent to the following staff person:

_____

_____

_____

Insurance documents must be provided using one of the following methods:

a. By email to roseville@ebix.com and riskmanagement@roseville.ca.us

b. By fax to (770) 335-5727 and (916) 774-5461

After using one of these methods, please **DO NOT** send the insurance certificate(s) by mail.

When forwarding the documents, please refer to the project name so that the documents can be matched with the Contract for which they are submitted.

Thank you.

INSURANCE REQUIREMENTS

The following sections are quoted from the Standard Construction Specifications:

7-1.06 **INSURANCE COVERAGE.**

A. Evidence of Maintenance Required. The Contractor shall, at its expense, procure and at all times maintain in full force and effect at a minimum the insurance required by this section on all of its operations; and the Contractor shall not allow any Subcontractor to commence work until similar insurance required of the Subcontractor has been obtained and filed. An original Certificate of Insurance, and copies of all required endorsements, all in a form approved by the Risk Manager, evidencing all required coverage or policies shall be filed after the award of the bid and prior to approval of the Contract by the City Council. Contractor shall provide ten (10) days prior written notice to the City of any reduction of coverage limits or cancellation of the coverage or policies shall be given to the City of Roseville as Certificate holder.

B. Qualifying Insurers. With the exception of the State Compensation Insurance Fund, all required insurance policies shall be issued by companies acceptable to the City and licensed to do business in the State of California and who hold a current policy holders alphabetic and financial size category rating of not less than AVII according to the most recent issue of Best's Insurance Reports.

C. Insurance Required.

1. **Commercial General Liability (CGL):** Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations with limits of no less than Two Million Dollars ($2,000,000) per occurrence for bodily injury, personal injury and property damage for projects under One Million Dollars ($1,000,000) and

limits of no less than Five Million Dollars ($5,000,000) per occurrence for bodily injury, personal injury and property damage for projects over One Million Dollars ($1,000,000). If a general aggregate limit applies, either the aggregate limit shall apply separately to this project or the general aggregate limit shall be twice the required occurrence limit.

The Commercial General Liability insurance shall include the following, copies of which shall be provided:

a. Inclusion of the City of Roseville, and its officers, agents, employees, and volunteers, as additional insureds (except for workers' compensation) as respects services or operations under the Contract. The additional insured endorsement for the general liability policy shall be at least as broad as the ISO CG 2010 10 01 combined with ISO CGL Endorsement CG 2037 10 01. Any other endorsement must be approved in writing by the City. Endorsements must include coverage for on-going and completed operations, which coverage shall be maintained for four (4) years following completion of the Project. Endorsements shall cover the City of Roseville, its officers, agents, employees, and volunteers.

b. The insurance shall provide coverage for claims by one insured against another insured and the policies shall not contain any cross-suits exclusions, cross-liability exclusions, or insured versus insured exclusions. The policies shall not contain any classification exclusions purporting to deny coverage for any work to be performed by Contractor or any of its Subcontractors.

c. Stipulation that the insurance is primary and noncontributory, as evidenced by a separate endorsement (CG 20 01 04 13 or an equivalent) or section of the policy, and that neither the City nor its insurers will be called upon to contribute to a loss.

d. Such insurance shall specifically cover the contractual liability of the Contractor.

e. Any available insurance proceeds in excess of the specified minimum insurance coverage requirements and limits shall be available to the additional insureds. Furthermore, the requirements for coverage and limits shall be: (1) the minimum coverage and limits specified in this Agreement; or (2) the full coverage and maximum limits of any insurance proceeds available to the named insureds, whichever is greater.

f. Waiver of subrogation endorsement.

g. The Contractor shall furnish a certificate for the period covered.

2. **Automobile Liability:** Insurance Services Office Form Number CA 0001 covering Code 1 (any auto), or if Contractor has no owned autos, Code 8 (hired) and Code 9 (non-owned), with limits of no less than One Million Dollars ($1,000,000) per accident for bodily injury and property damage.

3. **Workers' Compensation:** In accordance with the provisions of the California Labor Code, Contractor is required to be insured against liability for Workers' Compensation or to undertake self-insurance. Statutory Workers' Compensation and Employers' Liability of at least One Million Dollars ($1,000,000) shall cover all Contractors staff while performing any work incidental to the performance or this Agreement.

4. **Professional Liability:** Professional Liability (Errors and Omission) Insurance appropriate to Contractor's profession, with a limit of liability not less than One Million Dollars ($1,000,000) per occurrence or claim and Two Million Dollars ($2,000,000) aggregate to cover all design and engineering services rendered by Contractor pursuant to the

Agreement. Coverage must commence from the first day that Contractor or any of its Subcontractors provided any design or engineering services in connection with the Project.

5. **Builder's Risk/Course of Construction Insurance Is ____ OR Is Not ____ Required by Risk Management:** The Contractor shall be responsible for all loss, damage or destruction whatsoever to the work called for by this Contract until the approval of a Notice of Completion or acceptance of the Work if no Notice of Completion is to be recorded.

The Contractor shall secure "All Risk" type of builder's Risk Insurance of the type covering one hundred percent (100%) of the value of the work performed under this Contract (the value is presumed to be the Contract amount unless otherwise stated in Supplemental Conditions) and all materials, equipment, or other items to be incorporated therein while the same are located at the construction site, a bonded warehouse, or its place of manufacture. At any time, the policy shall cover the value of the work completed. The policy shall cover hazards including the losses due to fire, explosion, hail, rain, lightning, flood (separate insurance as needed), vandalism, malicious mischief, wind, collapse, aircraft, and smoke.

The policies providing such insurance shall name the City as a loss payee as its respective interests may appear, and certified copies of such policies shall be filed with the City. The maximum deductible allowable under the Builder's All Risk policy shall be five percent (5%) of the Contract amount.

Builder's Risk Insurance is not required for coverage of losses in excess of five percent (5%) of the Contract amount for damages resulting from earthquake in excess of a magnitude of 3.5 on the Richter scale, or tidal waves. Coverage in the amount of five percent (5%) of the Contract amount for such losses is required.

6. **Pollution Coverage:** Contractor shall procure pollution liability coverage or other insurance covering claims for bodily injury or property damage arising out of the abatement, removal, storage, transportation, or other exposure to hazardous materials or pollutants, in limits not less than Two Million Dollars ($2,000,000). Contractor shall add the City and all parties required to be indemnified by Contractor as additional insured on all pollution liability policies.

7. **Higher Coverage Limits:** If Contractor maintains higher coverage limits than the amounts shown above, then the City requires and shall be entitled to coverage for the higher coverage limits maintained by Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the City.

8. **Claims Made Coverage:** Liability insurance coverage may not be written on a "claims made" or modified occurrence basis. The Certificate of Insurance must clearly provide that the coverage is on an "occurrence" basis.

7-1.06A **OTHER INSURANCE PROVISIONS.**

A. The requirements of the Standard Specifications as to types and limits of insurance coverage to be maintained by the Contractor, and any approval of insurance by the City, are not intended to, and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to the Contract, including, but not limited to, the provisions concerning indemnification, nor preclude the City from taking any other action available to it under any other provision of the Contract or law.

B. The City acknowledges that some insurance requirements contained in these Standard Specifications may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by Contractor under the Contract.

Any self-insurance must be approved in writing by the City, in its sole discretion and shall not reduce the limits of liability. Any deductibles or self-insured retentions ("SIR") must be declared on the certificate of insurance and approved by City in writing. Policies containing any SIR provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named insured or City. City reserves the right to obtain a full certified copy of any insurance policy and endorsements. The failure to exercise this right shall not constitute a waiver of such right.

C. The Contractor agrees to include in its contracts with all subcontractors the same requirements and provisions of this Contract, including the indemnity and insurance requirements, to the extent they apply to the scope of the subcontractor's work. Furthermore, the Contractor shall require its subcontractors to agree to be bound to the Contractor and the City in the same manner and to the same extent as the Contractor is bound to the City under this Contract. Additionally, the Contractor shall obligate its subcontractors to comply with these same provisions with respect to any tertiary subcontractor, regardless of tier. A copy of the City's indemnity and insurance provisions will be furnished to the subcontractor or tertiary subcontractor upon request. Alternatively, the Contractor may insure subcontractor(s) under its own policy.

D. The City, its officers, agents, employees, and volunteers are to be covered as insureds with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the Contractor; and with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts or equipment furnished in connection with such work or operations. Coverage shall not extend to any indemnity coverage

for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under California Insurance Code Section 11580.04.

E. The limits of insurance required in this Contract may be satisfied by a combination of primary and excess insurance. Any excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and noncontributory basis for the benefit of the City (if agreed to in a written contract) before the City's own insurance shall be called upon to protect it as a named insured.

F. The insurance procured by Contractor shall be subject to the approval of the City, but any acceptance of insurance certificates by the City shall in no way limit or relieve Contractor of its duties and responsibilities under the Agreement.

G. Contractor shall be responsible for all premiums, deductibles, and self-insured retention applicable to the insurance it is required to procure under the Contract. All deductibles or self-insured retentions over five hundred thousand dollars ($500,000) must be approved by the City, in writing. Contractor shall be responsible for all deductibles, self-insured retention payments, and/or increased premiums incurred if the City's policies of insurance are forced to cover damages or respond to claims for which Contractor or its Subcontractors were obligated to provide insurance under the Contract.

H. Failure of the City to enforce in a timely manner any of the requirements of these insurance provisions shall not act as a waiver to enforcement of any of these provisions at a later date.

I. Contractor's indemnity obligations shall not be limited by these insurance provisions and shall survive the expiration of the Contract and the insurance provisions of the Contract shall likewise not be limited by the indemnity provisions of the Contract.

J. THE CITY RESERVES THE RIGHT TO WITHHOLD ANY PROGRESS PAYMENTS TO THE CONTRACTOR IN THE EVENT OF NONCOMPLIANCE WITH ANY INSURANCE REQUIREMENTS.

Bond No. _____
Premium $_____

PUBLIC WORKS
FAITHFUL PERFORMANCE BOND

(Project: _____)

WHEREAS, the City of Roseville ("CITY") has awarded a bid and contract to _____ as contractor ("PRINCIPAL") for the public work described as _____ _____ (the "WORK"). The contract ("AGREEMENT"), for the public work described above, and all of its terms and conditions are incorporated by reference and made a part hereof; and

WHEREAS, the PRINCIPAL is required to furnish a bond in connection with the AGREEMENT guaranteeing its faithful performance; and

NOW, THEREFORE, we the undersigned PRINCIPAL and _____ _____, a _____, admitted and duly authorized to transact business under the laws of the State of California, as SURETY ("SURETY"), are held and firmly bound unto the CITY or its successors and assigns in the sum of _____ dollars ($_____) (which amount is not less than 100% of the AGREEMENT price) to be paid to the CITY or its successors and assigns; and for which payment, well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors or assigns jointly and severally, firmly by these presents.

The condition of this obligation is such that if the PRINCIPAL, or its heirs, executors, administrators, successors or assigns, shall abide by, and in all respects promptly and faithfully perform the covenants, conditions and provisions in said AGREEMENT and any alteration thereof made as therein provided, notice of which alterations to Surety being hereby waived, on its part to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless CITY, its officers, agents, employees, volunteers as therein stipulated, then this obligation shall be null and void; otherwise, this obligation shall be and remain in full force and effect.

As condition precedent to the satisfactory completion of the contract, the obligation of the PRINCIPAL and SURETY under this Bond shall remain in effect for a period of one (1) year after the completion and acceptance of the WORK. During that time, if the PRINCIPAL, its heirs, executors, administrators, successors or assigns fails to make full, complete and satisfactory repair and replacement or totally protect the CITY from any loss or damage made evident during that year which results from or is caused by either defective materials or faulty workmanship in the prosecution of the WORK, then the obligation shall remain in full force and effect. However, anything in

this paragraph to the contrary notwithstanding, the obligation of the SURETY shall continue so long as any obligation of the PRINCIPAL remains.

No prepayment or delay in payments, and no change, extension, addition or alteration of any provision of the AGREEMENT or in the specifications agreed to between the PRINCIPAL and the CITY, or any forbearance on the part of the CITY shall operate to relieve the SURETY. The SURETY hereby waives the provisions of Section 2819 of the California Civil Code. The SURETY waives all rights of subrogation against the CITY or any person employed by the CITY. If the contract price increases by the issuance of change orders, the amount specified in this bond shall increase by the same amount.

Whenever PRINCIPAL shall be and declared by CITY to be in default under the AGREEMENT, SURETY shall promptly remedy the default, or shall promptly do one of the follow at CITY's election:

1. Undertake through its agents or independent contractors, reasonably acceptable to CITY, to complete the AGREEMENT in accordance with its terms and conditions and to pay and perform all obligations of PRINCIPAL under the AGREEMENT, including without limitation, all obligations with respect to warranties, guarantees, and the payment of liquidated damages.

2. Reimburse CITY for all costs CITY incurs in completing the AGREEMENT, and in correcting, repairing or replacing defects in materials or workmanship and/or materials and workmanship which do not conform to the specifications in the AGREEMENT.

SURETY's obligations hereunder are independent of the obligations of any other surety for the performance of the AGREEMENT, and suit may be brought against SURETY and such other sureties, jointly and severally, or against any one or more of them, or against less than all of them without impairing CITY's rights against the others.

No right of action shall accrue on this bond to or for the use of any person or corporation other than CITY or its successors or assigns.

As part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by CITY in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

[SIGNATURES NEXT PAGE]

IN WITNESS WHEREOF, this instrument has been duly executed by the PRINCIPAL and SURETY above-named, on the ____ day of _____, 20___.

PRINCIPAL:

BY:_____

PRINT NAME: _____

PRINT TITLE: _____

AND

BY: _____

PRINT NAME: _____

PRINT TITLE:_____

SURETY:

BY:_____

PRINT NAME: ____ _____

PRINT TITLE:_____

MAILING ADDRESS:

_____

_____

_____

(Notarization by Surety and copy of Power of Attorney required.)

APPROVED AS TO FORM:

BY: _____
City Attorney

Bond No. _____
Premium $_____

PUBLIC WORKS
LABOR AND MATERIALS PAYMENT BOND
(Project: _____)

WHEREAS, the City of Roseville ("CITY"), has awarded a bid and contract to _____ as contractor ("PRINCIPAL"), for the public work described as _____ _____ (the "WORK"). The contract ("AGREEMENT"), for the public work described above, and all of its terms and conditions are incorporated by reference and made a part hereof; and

WHEREAS, the PRINCIPAL is required to furnish a bond in connection with the AGREEMENT guaranteeing payment of persons who provide labor and material; and

NOW, THEREFORE, we the undersigned PRINCIPAL and _____ _____, a _____, admitted and duly authorized to transact business under the laws of the State of California, as SURETY ("SURETY"), are held and firmly bound unto the CITY or its successors and assigns in the sum of _____ dollars ($_____) (which amount is not less than 100% of the AGREEMENT price) to be paid to the CITY or its successors and assigns; and for which payment, well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors or assigns jointly and severally, firmly by these presents.

The condition of the obligation is such that if the PRINCIPAL, its subcontractors, heirs, executors, administrators, successors or assigns fails to pay any of the persons named in Section 8004 or 9100 of the Civil Code of the State of California, or the amounts due under the Unemployment Insurance Code of the State of California, or any amounts required to be deducted, withheld and paid over to the Employment Development Department from the wages of employees of the PRINCIPAL and its subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to work or labor performed by any such claimant, that the SURETY will pay for the same, in an amount not exceeding the sum specified in this bond, and also, in case suit is brought upon the bond, shall pay reasonable attorneys' fees, to be fixed by the Court.

This bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file a Stop Payment Notice pursuant to the provisions of Section 9350 et seq. of the Civil Code of the State of California, so as to give a right of action to them or their assigns in any suit brought upon this bond.

No prepayment or delay in payments, and no change, extension, addition or alteration of any provision of the AGREEMENT or in the specifications agreed to between the PRINCIPAL and the CITY, or any forbearance on the part of the CITY shall operate to relieve the SURETY. The SURETY hereby waives the provisions of Section 2819 of the California Civil Code. The SURETY waives all rights of subrogation against the CITY or any person employed by the CITY. If the contract price increases by the issuance of change orders, the amount specified in this bond shall increase by the same amount.

As part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees, including reasonable attorneys' fees, incurred by CITY in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

IN WITNESS WHEREOF, this instrument has been duly executed by the PRINCIPAL and SURETY above-named, on the _____ day of _____, 20__.

PRINCIPAL:

BY:_____

PRINT NAME: _____

PRINT TITLE: _____

AND

BY: _____

PRINT NAME: _____

PRINT TITLE:_____

SURETY:

BY:_____

PRINT NAME: ____ _____

PRINT TITLE:_____

MAILING ADDRESS:

_____

_____

_____

(Notarization by Surety and copy of Power of Attorney required.)

APPROVED AS TO FORM:

BY: _____
City Attorney

CITY OF ROSEVILLE

STANDARD CONSTRUCTION SPECIFICATIONS

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ADOPTION OF STATE SPECIFICATIONS

1. The State of California Department of Transportation ("Caltrans") Standard Specifications dated 2015, are hereby adopted as the Standard Specifications of the City of Roseville except insofar as they may be modified by these Standard Construction Specifications.

2. Except for Division 1, Section 2, numbering in these Standard Construction Specifications conforms to that in the Caltrans Standard Specifications. The existence of a section in these Standard Construction Specifications means that the corresponding section of the Standard Specifications is modified in some respect. Unless otherwise specified, the modified Standard Specification provisions are deleted entirely, and the provisions of these Standard Construction Specifications are substituted.

DIVISION 1. GENERAL PROVISIONS

SECTION 1. GENERAL

ACCEPTANCE. Shall mean the formal Acceptance by resolution of the Roseville City Council of an entire Contract which has been completed in all respects in accordance with the Plans and specifications and any modifications thereof previously approved, causing a notice of completion to be filed with the County Recorder.

ATTORNEY GENERAL. The City Attorney of the City of Roseville.

CITY ATTORNEY. The City Attorney of the City of Roseville.

CITY CLERK. Shall mean the City Clerk of the City of Roseville.

DEPARTMENT. Shall mean the Department of Public Works of the City of Roseville, also referred to as the Department of Contract Administration. References made to the Department of Transportation otherwise shall mean the State of California Department of Transportation.

DIRECTOR. Shall mean the Public Works Director of the City of Roseville or his or her duly authorized representative.

ENGINEER. Shall mean the Public Works Director of the City of Roseville or his or her duly authorized representative.

ESTIMATED COST. The estimate prepared by the Public Works Director of quantities of work to be performed.

LIQUIDATED DAMAGE. The amount to be deducted from payments due or to become due to the Contractor for delay, as set forth in the Special Provisions.

PLANS. The official Project Plans, Standard Plans, Improvement Plans, Construction Standards, profiles, typical cross sections, general cross sections, working drawings, and supplemental drawings, or reproductions thereof, approved by the Director which show the location, character, dimensions and details of the work to be performed. All such documents are to be considered as a part of the Plans whether or not reproduced in the Special Provisions.

In the above definition, the following terms are defined as follows:

a. Standard Plans - The Standard Plans of the Department of Transportation of the State of California.

b. Project Plans - The Project Plans are specific details and dimension peculiar to the Work and supplemented by the Standard Plans, insofar as the same may apply.

c. Construction Standards - The City of Roseville Design and Construction Standards.

STATE. Reference to the State or State of California shall mean City or City of Roseville unless the reference is to a law or regulation of the State, and reference to Sacramento shall mean Roseville unless otherwise noted.

SECTION 2. BIDDING

SECTION 2 SHALL BE DELETED IN ITS ENTIRETY AND REPLACED WITH THE FOLLOWING:

2-1.01 **PROPOSAL FORMS.** The Department will furnish to each Bidder a standard proposal form, which, when filled out and executed shall be submitted as its bid. Bids not presented on forms so furnished will be disregarded.

The proposal form is bound in a book together with the Notice to Contractors, special provisions, and Contract. The proposal shall set forth for each item of work, in clearly legible figures and words, an item price and a total for the item in the respective spaces provided, and shall be signed by the Bidder, who shall fill out all blanks in the proposal form as required therein.

All items shown on the schedule of bid items shall be properly filled in and shall include all costs of labor, materials, equipment, and State, Federal, or other taxes applicable to the transaction. The completed forms shall be without inter-lineations, erasures or alterations of any nature. If the proposal is made by an individual, his or her name and post office address must be shown; if made by a firm or partnership, the name and post office address of each member of the

firm or partnership must be shown; or if made by a corporation, the proposal shall show the name of the State under the laws of which the corporation was chartered and the names, titles, and business addresses of the president, secretary, and treasurer of said corporation. If the proposal is signed by an agent, a "Power of Attorney" must be filed with the proposal.

The proposal shall be submitted as directed in the "Notice to Contractors" under sealed cover plainly marked as a proposal, and identifying the project to which the proposal relates and the time and date of the bid opening therefor. Proposals which are not properly marked may be disregarded. Proposal forms shall be obtained from the Director of Public Works, City of Roseville, California. Proposal forms are not transferable.

2-1.02 **REJECTION OF PROPOSALS AND DISQUALIFICATION OF BIDDERS.** Proposals may be rejected if they show any alterations of the forms, additions not called for, conditional bids, incomplete bids, erasures or irregularities of any kind. More than one proposal from an individual, firm, partnership, corporation or association under the same or different names, will not be considered. Reasonable grounds for believing that any Bidder is interested in more than one (1) proposal for the work contemplated, will cause the rejection of all proposals in which the Bidder is interested. The City reserves the right to reject any and all proposals.

2-1.03 **PROPOSAL GUARANTY.** All bids shall be presented under sealed cover and accompanied by one (1) of the following forms of Bidder's security.

a. Cash, a cashier's check, a certified check, or a Bidder's bond executed by an admitted California surety insurer, made payable to the City.

b. The security shall be in an amount equal to at least ten percent (10%) of the bid amount. A bid will not be considered unless one (1) of the forms of Bidder's security is enclosed with it.

c. A Bidder's bond will not be accepted unless it conforms to a bond form approved by the City Attorney. Upon request "Bidder's Bond" forms may be obtained from the Department.

2-1.04 **WITHDRAWAL OF PROPOSALS.** Any bid may be withdrawn at any time prior to the time fixed in the public notice for the deadline submission of bids only by written request for the withdrawal of the bid filed with the Director. The request shall be executed by the Bidder or his or her duly authorized representative. The withdrawal of a bid does not prejudice the right of the Bidder to file a new bid. Whether or not bids are opened exactly at the time fixed in the public notice for opening bids, a bid will not be received after the deadline for submission of bids nor may any bid be withdrawn after the time fixed in the public notice for deadline for submission of bids. Immediately following the deadline for submission of bids all bids shall become the property of the City of Roseville and City is under no obligation to return the bids.

2-1.05 **RELIEF OF BIDDERS.** If the Bidder claims a mistake was made in his or her bid, the Bidder shall give the Department written notice within five (5) calendar days after the opening of the bids of the alleged mistake, specifying in the notice in detail how the mistake occurred. No relief from a claimed mistaken bid shall be granted unless such mistake clearly appears on the face of the bid submitted to the City. Claimed mistakes on backup worksheets, spreadsheets, computerized bidding programs, or any other similar calculative bidding mistake which is not apparent on the face of the bid shall not under any circumstance be considered as a

basis for relief. The burden of proving the occurrence of a mistake entitling a Bidder to relief from its bid rests entirely on the Bidder. Relief from bids shall be in the City's sole discretion.

2-1.06 **PREVIOUS DISQUALIFICATION, REMOVAL OR OTHER PREVENTION OF BIDDING.** A bid may be rejected on the basis of a Bidder, any officer of such Bidder, or any employee of such Bidder who has a proprietary interest in such Bidder, having been disqualified, removed, or otherwise prevented from bidding on, or completing a Federal, State, or local project because of a violation of law or a safety regulation.

2-1.07 **COMPETENCY OF BIDDERS.** If two (2) or more prospective Bidders desire to bid jointly as a joint venture on a single project, they must file an affidavit of joint venture with the Bid on a form approved by the City Attorney, and such affidavit of joint venture will be valid only for the specific project for which it is filed. If such affidavit of joint venture is not filed as aforesaid and approved by the City Attorney prior to the time for awarding bids on the specific project for which it is submitted, a joint bid submitted by said Bidders will be disregarded. No bid will be accepted from or a Contract awarded to any Bidder to whom a proposal form has not been issued pursuant to Section 2-1.06.

2-1.08 **GUARANTY AND WARRANTY.** The Contractor shall guarantee and warrant all materials supplied as being fit for the purpose intended. The Contractor shall guarantee and warrant all work performed as having been accomplished in a proper and workman-like manner. The guarantee and warranty required by this section shall continue for a period of one (1) year after Acceptance of the Work.

Should any failure of the work occur within a period of one (1) year, after Acceptance of the project by the City Council due to faulty materials, poor workmanship, or defective equipment, the Contractor shall promptly make the needed repairs at his or her expense.

The City is hereby authorized to make such repairs if the Contractor fails to make or undertake with due diligence the aforesaid repairs within ten (10) calendar days after being given written notice of such failure; provided, however, that in case of emergency where in the opinion of the Engineer, providing a reasonable attempt has been made to notify the Contractor, delay would cause serious loss or damages, or a serious hazard to the public, the repairs may be made or lights, signs, and barricades erected without prior notice to the Contractor, and the Contractor shall pay the entire cost thereof. At the completion of the work the faithful performance bond may be reduced at the discretion of the City Council to not less than ten percent (10%) of the Contract price to cover said guarantee.

Additional guarantees or warranties may be required by the Special Provisions.

SECTION 3. CONTRACT AWARD AND EXECUTION

3-1.04 **CONTRACT AWARD.** The right is reserved to reject any and all proposals. The award of the Contract, if it be awarded, will be to the lowest responsible Bidder whose proposal complies with all the requirements prescribed. Such award, if made, will be made within sixty (60) calendar days after the public opening of the proposals. If the lowest responsible Bidder refuses or fails to execute the Contract, the Roseville City Council may award the Contract to the second lowest responsible Bidder. Such award, if made, will be made within eighty-two (82) calendar days after the public opening of proposals. If the second lowest responsible Bidder refuses or fails to execute the Contract, the City may award the Contract to the third lowest responsible Bidder. Such award, if made, will be made within one hundred and four (104) calendar days after public opening of the proposals. The above time periods within

which the award of Contract may be made are subject to extension for such further period as may be agreed upon in writing between the City and the Bidder concerned.

All bids will be compared on the basis of the Director's estimate of the quantities of work to be done.

3-1.05 **CONTRACT BONDS.** The successful Bidder, simultaneously with the execution of the Contract, will be required to furnish a payment bond in an amount equal to one hundred percent (100%) of the Contract price, and a faithful performance bond in an amount equal to one hundred percent (100%) of the Contract price; said bonds shall be in a form approved by the City Attorney and shall be secured by a surety company satisfactory to the City Attorney. If the Contract price increases by the issuance of Change Orders, the penal amounts of the bonds required shall increase accordingly.

Furthermore, the successful Bidder shall furnish a certificate from the County Clerk as required by California Civil Code of Procedure Section 995.660(a)(3).

3-1.18 **CONTRACT EXECUTION.** The Contract, in form and contents satisfactory to the City, shall be executed by the successful Bidder and returned, together with the Contract bonds and certificates of insurance within fifteen (15) calendar days after written notice that the Contract has been awarded, or as otherwise directed, in writing, by the City. No proposal shall be considered binding upon the City until the execution of the Contract by the City.

3-1.20 **FAILURE TO EXECUTE CONTRACT.** Section 3-1.20, "Failure to Execute Contract" is added as follows:

"Failure of the lowest responsible Bidder, the second lowest responsible Bidder, or the third lowest responsible Bidder to execute the Contract and file acceptable bonds

and insurance as provided herein within fifteen (15) calendar days, or within a different timeframe specified by City in writing, after such Bidder has received notice that the Contract has been awarded to him or her, shall be just cause for the annulment of the award and the forfeiture of the Bidder's security to the City as Liquidated Damages. The successful Bidder may file with the Roseville City Council a written notice, signed by the Bidder or his or her authorized representative, specifying that the Bidder will refuse to execute the Contract if presented to him or her. The filing of such notice shall have the same force and effect as the failure of the Bidder to execute the Contract and furnish acceptable bonds and insurance within the time prescribed by Section 3-1.18."

SECTION 4. SCOPE OF WORK

There are no amendments to the Standard Specifications.

SECTION 5. CONTROL OF WORK

5-1.02 **CONTRACT COMPONENTS.** These Standard Construction Specifications, the Standard Specifications, the Standard Plans, the Improvement Plans, Construction Standards, Project Plans, project Special Provisions (and any addenda), the Agreement, Contract Change Orders, and all supplementary documents are all essential parts of the Contract between Contractor and the City. A requirement occurring in one (1) is as binding

as though occurring in all. They are intended to be complementary, and to describe and provide for a complete work.

In resolving inconsistencies among two (2) or more sections of the Contract Documents, precedence shall be given in the following order:

A. Special Provisions

B. City of Roseville Standard Construction Specifications

C. City of Roseville Design and Construction Standards

D. State Standard Specifications and Amendments to the State Standard Specifications, Standard Special Provisions, and Plans

E. Drawings

Should it appear that the work to be done or any of the matters relative thereto are not sufficiently detailed or explained in these specifications, the special provisions, or the Plans, the Contractor shall apply in writing to the Director for such further explanations as may be necessary and shall conform to them as part of the Contract. In the event of any doubt or question arising respecting the true meaning of these specifications, the special provisions or the Plans, reference shall be made to the Director, whose decision thereon shall be final.

In the event of any discrepancy, between any drawing and the figures written thereon, the figures shall be taken as correct. Detail drawings shall prevail over general drawings.

5-1.20B(5) **CITY OF ROSEVILLE ENCROACHMENT PERMITS.** Section 5-1.20B(5), "City of Roseville Encroachment Permits" is added as follows:

"The Contractor need not obtain a separate encroachment permit from the City prior to construction within street rights-of-way or other City rights-of-way. Execution of the Contract by the City shall be deemed an encroachment permit for work required by

the Contract within rights-of-way. All work shall conform to the rules and regulations of encroachment permits and shall be subject to the inspection and approval of the Director."

5-1.20B(6) **CITY OF ROSEVILLE BUSINESS LICENSE.** Section 5-1.20B(6), "City of Roseville Business License" is added as follows:

"The Contractor shall obtain a business license from the City prior to commencing work."

5-1.20B(7) **OTHER PERMITS.** Section 5-1.20B(7), "Other Permits" is added as follows:

"The Contractor in coordination with the Director shall procure any necessary permits which the City has not specifically mentioned as obtaining."

5-1.31 **JOB SITE APPEARANCE.** The Contractor shall maintain a neat appearance to the work. In any area visible to the public, the following shall apply:

When practicable, broken concrete and debris developed during clearing and grubbing shall be disposed of concurrently with its removal. If stockpiling is necessary, the material shall be removed or disposed of weekly.

The Contractor shall furnish trash bins for all debris from structure construction. All debris shall be placed in trash bins daily. Forms or falsework that are to be reused shall be stacked neatly concurrently with their removal. Forms and falsework that are not to be reused shall be disposed of concurrently with their removal.

Full compensation for conforming to the provisions in this section, not otherwise provided for, shall be considered as included in price paid for the various Contract items of work involved, and no additional compensation will be allowed therefore.

5-1.38 **MAINTENANCE AND PROTECTION RELIEF.** Section 5-1.38 is deleted.

5-1.43 **POTENTIAL CLAIMS AND DISPUTE RESOLUTION.** Section 5-1.43 is deleted in its entirety and replaced with the following:

5-1.43A **NOTICE OF POTENTIAL CLAIM.** The Contractor shall not be entitled to payment for any additional compensation for any act or failure to act by the City, including failure or refusal to issue a Change Order, or for the happening of any event, thing, occurrence or other cause unless he or she shall have given the City due written Notice of Potential Claim as hereinafter specified.

The written Notice of Potential Claim shall set forth the reasons for which the Contractor believes additional compensation will or may be due, the nature of the costs involved, and, insofar as possible, the amount of the potential claim. The said Notice as above required must have been given to the Director prior to the time that the Contractor shall have performed the Work giving rise to the potential claim for additional compensation, if based on an act or failure to act by the Director, or in all other cases within three (3) Days after the happening of the event, thing, occurrence or other cause giving rise to the potential claim.

If the Notice of Potential Claim does not include complete information about the claim or the parties do not execute a Contract Change Order in connection with the Notice of Potential Claim, Contractor shall submit a complete information about its claim for additional compensation and/or extension of time for performance within fifteen (15) calendar days after such work is performed. Failure to provide written notice of claim prior to undertaking such work or failure to timely submit a complete and specific information about the claim for

additional compensation and/or extension of the time for performance shall be deemed a waiver and abandonment of such claim.

If there is a dispute over any claim, the Contractor shall continue to work during the dispute resolution process in a diligent and timely manner as directed by the City, and shall be governed by all applicable provision of the Agreement.

The Contractor shall maintain cost records of all work that is the basis of any dispute. On a daily basis, Contractor shall submit to City completed daily forms, the format of which will be acceptable to the City, with respect to the Contractor's costs of performing the disputed work. These daily forms shall itemize all of Contractor's costs in performing the disputed work, including, but not limited to, all costs relating to materials, labor and equipment with respect to the disputed work. These daily forms shall provide names or identification and classification of affected workers, the hourly rate of pay and hours worked, and also the size, type, and identification number of equipment and hours operated. Said daily work forms shall be duly signed and verified by the Contractor or its authorized representative. The City's receipt of the Contractors' daily forms shall not constitute an approval of the Contractor's claim. Contractor's failure to submit the daily forms on a daily basis shall constitute a waiver of the Contractor's right to claim any additional compensation for the disputed work.

Each Contractor claim shall include full and complete information concerning the Claim. Contractor shall provide a clear, concise recital of the basis, upon which the claim is asserted, including a designation of the provisions of the Contract Documents upon which the claim is based. Contractor shall also include a statement as to the amount of time and/or compensation sought pursuant to the claim; if Contractor's claim arises from an ongoing occurrence, Contractor shall so state in its claim, including a description of the specific Work activities

affected by the claim. All costs, expenses or damages and extensions of time claimed shall be described in reasonable detail under the circumstances together with complete supporting documentation.

The City will review any timely Notice of Potential Claim and supporting information submitted by Contractor. In conducting this review, the City shall have the right to require the Contractor to submit such additional or supporting documents, data and other information as the City may require.

If an agreement can be reached which resolves the Contractor's claim, the parties will execute a Contract Change Order to document the resolution of the claim. If the parties cannot reach agreement with respect to the Contractor's claim, the Contractor shall still be obligated to comply with the claim identification provisions identified in these Standard Construction Specifications, including but not limited to Section 5-1.43B.

It is the intention of this Section 5-1.43A that differences between the parties arising under and by virtue of the Contract be brought to the attention of the Director at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action promptly taken. The Contractor hereby agrees that he or she shall have no right to additional compensation for any Claim that may be based on any such act, failure to act, event, thing or occurrence for which no timely written Notice of Potential Claim as herein required was filed.

5-1.43B **CLAIMS.** Contractor must submit all Claims, for which it has previously submitted a Notice of Potential Claim, prior to Acceptance of the Work. Each such Claim must be sent to the City by registered mail or certified mail with return receipt requested and must contain reasonable documentation to support the Claim.

Upon receipt of a Claim, the City shall conduct a reasonable review of the Claim and, within a period not to exceed forty-five (45) calendar days, or such further time as mutually agreed upon or necessary pursuant to Public Contract Code Section 9204, the City shall provide the Contractor a written statement identifying what portion of the Claim is disputed and what portion is undisputed. If the City does not respond to a Claim from the Contractor within the time specified herein, such Claim shall be deemed rejected in its entirety.

Any payment due on an undisputed portion of the Claim shall be processed and made within sixty (60) calendar days after the City issues its written statement.

If the Contractor disputes the City's written response, or if the City does not respond within the time specified herein, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the City shall schedule a meet and confer conference within thirty (30) calendar days for settlement of the dispute.

Within ten (10) business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the City shall provide the Contractor a written statement identifying the portion of the Claims that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the Claims shall be processed and made within sixty (60) calendar days after the public entity issues its written statement. Any disputed portion of the Claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation, with the City and the Contractor sharing the associated costs equally. The City and the Contractor shall mutually agree to a mediator within ten (10) business days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a

qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall be responsible for the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the Claim remaining in dispute shall be resolved in accordance with Section 9-1.22.

5-1.46 **FINAL INSPECTION AND CONTRACT ACCEPTANCE.** When the Director has made the final inspection and determines that the Contract work has been completed in all respects in accordance with the Plans and specifications, the Director will recommend that the Roseville City Council formally accept the work, and immediately upon and after such Acceptance by the City, the Contractor will be responsible for the work done for a period of one (1) year.

SECTION 6. CONTROL OF MATERIALS

6-1.03 **LOCAL MATERIALS.** Local material sites used by the Contractor shall be graded so that, at the time of final inspection of the Contract, they will drain and will blend in with the surrounding terrain.

SECTION 7. LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

7-1.02K(2) **WAGES.** The provisions of paragraphs 1and 2 of Section 7-1.02K(2) of the Standard Specifications are amended to read as follows:

"Pursuant to the provisions of California Labor Code Section 1773, the City has identified the source, stated below, of the general prevailing rate of wages applicable to the

work to be done, for straight time, overtime, Saturday, Sunday and holiday work. The holiday wage rate listed shall be applicable to all holidays recognized in the collective bargaining agreement of the particular craft, classification or type of workmen concerned. The wage rates may be obtained from the State Department of Industrial Relations and/or the following website address: http://www.dir.ca.gov/dlsr/DPreWageDetermination.htm, and are incorporated herein as part of the Contract.

Pursuant to California Labor Code Section 1773.2, general prevailing wage rates shall be posted by the Contractor at a prominent place at the site of the work."

7-1.02K(6)(b) **EXCAVATION SAFETY.** For trenches or excavation five feet (5') or deeper, the Contractor shall obtain from the Division of Industrial Safety, a permit authorizing such construction.

7-1.02O **VEHICLE CODE.** Pursuant to the authority contained in Vehicle Code Section 591, the Department has determined that, within such areas as are within the limits of the project and are open to public traffic, the Contractor shall comply with all the requirements set forth in Vehicle Code Divisions 11, 12, 13, 14, and 15. Attention is directed to the statement in Section 591 that this section shall not relieve the Contractor nor any person from the duty of exercising due care. The Contractor shall take all necessary precautions for safe operation of equipment and the protection of the public from injury and damage from such equipment.

7-1.03 **PUBLIC CONVENIENCE.** Section 7-1.03 of the Standard Specifications is amended in part as follows:

1. Delete paragraph 10 ("Install signs, lights, flares . . .") and substitute the following:

"In order to expedite the passage of public traffic through or around the work, the Contractor shall install signs, lights, flares, temporary railing (type K), barricades, and other facilities for the sole convenience and direction of public traffic as may be required. Also, as may be required, the Contractor shall furnish competent flaggers whose sole duties shall consist of directing the movement of public traffic through or around the work. The cost of furnishing and installing such signs, lights, flares, temporary railing (type K), barricades, flaggers, and other facilities shall be included in the lump sum paid for traffic control and no additional compensation will be allowed therefor.

In addition to the requirements previously specified for furnishing facilities and flaggers to expedite the safe passage of the public through or around the work, the Contractor shall at his or her expense furnish and erect within or adjacent to the work such warning, regulatory, or guide signs, markers, or devices as are necessary."

2. Add a paragraph at the end of the section to read as follows:

"In addition to the requirements hereinbefore specified for furnishing facilities and flaggers for expediting the passage of public traffic through or around the work, the Contractor shall furnish and erect, within or adjacent to the limits of the Contract, such warning, regulatory, and guide signs as may be required. The Contractor shall furnish, install and remove all such signs. Payment for furnishing, installing and removing all such signs shall be included in the lump sum price paid for traffic control and no additional compensation will be allowed therefor."

7-1.04 **PUBLIC SAFETY.** It is the intent of the parties that the City is not an exposing, creating, controlling, or correcting employer under California Labor Code Section 6400. In accordance with generally accepted construction practices and State law, the Contractor

shall have the authority and be solely and completely responsible for conditions on the job site, including safety of all persons and property during performance of the Work. Moreover, the Contractor shall be the controlling employer and has the authority and responsibility to enforce worksite safety. The Contractor shall be responsible for conducting daily safety inspections and assuring all hazards and violations are abated. The Contractor is responsible for assuring that all subcontractors adhere to the minimum CAL/OSHA safety requirements and that each subcontractor has an effective CAL/OSHA IIP (Illness and Injury Protection Program) in place that specifically addresses all potential exposures, such as, but not limited to, fall protection, confined space, and trenching/shoring. These requirements shall apply continuously and not be limited to normal working hours. The Contractor shall be responsible for any delay costs or damages in the event the progress of Work is slowed or stopped due to a safety violation.

The services of the Director in conducting construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's Work methods, equipment, bracing or scaffolding, or safety measures, in, on, or near the construction site. If a City employee observes a safety violation, the City employee will report the violation to the Contractor who is then responsible for assuring the violation is abated.

The Contractor is hereby informed that Work on this project could be hazardous. The Contractor shall carefully instruct all personnel working in potentially hazardous Work areas as to potential dangers and shall provide such necessary safety equipment and instructions as are necessary to prevent injury to personnel and damage to property. Special care shall be exercised relative to Work underground.

All Work and materials shall be in strict accordance with all applicable State, City, County, and Federal Rules, Regulations, and Codes, and attention is drawn to the requirements

of CAL/OSHA. The Contractor shall be solely responsible for compliance with all City, County and State blasting requirements and for any damages caused by his or her operations.

In accordance with California Labor Code Section 6705, the Contractor shall submit to the City specific plans to show details of provisions for worker protection from caving ground. This in no way relieves the Contractor from the requirement of maintaining safety in all operations performed by the Contractor or the Contractor's subcontractors. The detailed plan showing design of shoring, bracing, sloping or other provisions shall be prepared by a registered civil or structural engineer in the State of California as required. Acceptance by the City or its designated agent only constitutes acknowledgment of the submission and does not constitute review or approval of the designs, design assumptions or criteria, completeness of submissions, applicability to areas of intended use, nor implementation of the plans, which are solely the responsibility of the Contractor and his or her registered engineer.

Notwithstanding any classifications relative to the Tunnel Safety Orders, Work within confined spaces on this project is subject to the definitions and applicable provisions of California Code of Regulations Section 8400 et seq., Title 8.

The Contractor shall so perform its Work as not to expose personnel to, or to discharge into the atmosphere from any source whatever, smoke, dust, asbestos, toxic chemicals or other air contaminants in violation of the laws, rules, and regulations of the governmental entities having jurisdiction. Contractors or subcontractors removing one hundred or more square feet (100') of asbestos must be “Certified” in accordance with State law. All Work involving exposure to asbestos and all other hazardous materials shall be performed with protection of personnel in compliance with all applicable regulations and safety requirements.

Nothing in these Standard Construction Specifications is to be construed to permit Work not conforming to governing codes. When Contract Documents differ from governing codes, the Contractor shall furnish and install the higher standards called for without extra charge. All equipment furnished shall be grounded and provided with guards and protection as required by safety codes. Where vapor tight or explosion proof electrical installation is required by code, this shall be provided. In accordance with the provisions of Labor Code Section 6707, the Contractor shall provide adequate sheeting, shoring and bracing for employee protection, as provided in the proposal as separate Bid Items.

7-1.05 **INDEMNIFICATION.** The City of Roseville and its officers, agents, employees, and volunteers, including but not limited to the Director, shall not be answerable or accountable in any manner: for any loss or damage that may happen to the work or any part thereof; for any loss or damage to any of the materials or any things used or employed in performing the work; for injury to or death of any person, either workers or the public; or for damage to property from any cause which might have been prevented by the Contractor, his or her workers, or anyone employed by the Contractor or his or her subcontractors.

The Contractor shall be responsible for any liability imposed by law and for injuries to, or death of, any person including, but not limited to, workers and the public, or damage to property resulting from defects or obstructions, or from any cause whatsoever during the progress of the work or at any time before its completion and final Acceptance.

To the fullest extent allowed by law, the Contractor shall defend (through counsel acceptable to the City), indemnify, and save harmless the City of Roseville and its officers, agents, employees, and volunteers from all claims, suits, or actions of every name, kind, and description, brought forth, or on account of, injuries to or death of any person including, but not

limited to, workers and the public, or damage to property resulting from the performance of the Contract, except as otherwise provided by statute.

The duty of the Contractor to defend, indemnify, and save harmless includes, but is not limited to, the duties to defend as set forth in Civil Code Section 2778. The Contractor waives any and all rights to any type of express or implied indemnity against the City, its officers, agents, employees, or volunteers.

It is the intent of the parties that the Contractor will defend, indemnify, and hold harmless the City of Roseville, its officers, agents, employees, and volunteers from any and all claims, suits, or actions as set forth above regardless of existence or degree of fault or negligence, on the part of the City, the Contractor, the subcontractor or employee of any of these; except the duty does not apply where the injury or damage is due to the sole or active negligence or willful misconduct of the City.

The Contractor's responsibility for such defense and indemnity obligations shall survive the termination or completion of this Contract for the full period of time allowed by law. The defense and indemnity obligations of this Contract are undertaken in addition to, and shall not in any way be limited by, the insurance obligations contained in this Contract. The parties intend that the defense and indemnity obligations in this Contract shall be broadly construed.

In addition to any remedy authorized by law, so much of the money due the Contractor under and by virtue of the Contract as shall be considered necessary by the City may be retained by the City until disposition has been made of such suits or claims for damages.

The retention of money due the Contractor shall be subject to the following:

A. The City will give the Contractor thirty (30) calendar days' notice of its intention to retain funds from any partial payment which may become due to the Contractor prior

to Acceptance of the Contract. Retention of funds from any payment made after Acceptance of the Contract may be made without such prior notice to the Contractor.

B. No retention of additional amounts out of partial payments will be made if the amount to be retained does not exceed the amount being withheld from partial payments pursuant to Section 9-1.16F, "Retentions," of the Standard Construction Specifications.

C. If the City had retained funds and it is subsequently determined that the City is not entitled to be indemnified and saved harmless by the Contractor in connection with the matter for which such retention was made, the City shall be liable for interest on the amount retained at the legal rate of interest for the period of such retention.

7-1.06 **INSURANCE COVERAGE.** Section 7-1.06 Insurance in the Standard Specifications shall be deleted in its entirety and replaced with the following:

A. Evidence of Maintenance Required. The Contractor shall, at its expense, procure and at all times maintain in full force and effect at a minimum the insurance required by this section on all of its operations; and the Contractor shall not allow any Subcontractor to commence work until similar insurance required of the Subcontractor has been obtained and filed. An original Certificate of Insurance, and copies of all required endorsements, all in a form approved by the Risk Manager, evidencing all required coverage or policies shall be filed after the award of the bid and prior to approval of the Contract by the City Council. Contractor shall provide ten (10) days prior written notice to the City of any reduction of coverage limits or cancellation of the coverage or policies shall be given to the City of Roseville as Certificate holder.

B. Qualifying Insurers. With the exception of the State Compensation Insurance Fund, all required insurance policies shall be issued by companies acceptable to the

City and licensed to do business in the State of California and who hold a current policy holders alphabetic and financial size category rating of not less than AVII according to the most recent issue of Best's Insurance Reports.

C. Insurance Required.

1. **Commercial General Liability (CGL):** Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations with limits of no less than Two Million Dollars ($2,000,000) per occurrence for bodily injury, personal injury and property damage for projects under One Million Dollars ($1,000,000) and limits of no less than Five Million Dollars ($5,000,000) per occurrence for bodily injury, personal injury and property damage for projects over One Million Dollars ($1,000,000). If a general aggregate limit applies, either the aggregate limit shall apply separately to this project or the general aggregate limit shall be twice the required occurrence limit.

The Commercial General Liability insurance shall include the following, copies of which shall be provided:

a. Inclusion of the City of Roseville, and its officers, agents, employees, and volunteers, as additional insureds (except for workers' compensation) as respects services or operations under the Contract. The additional insured endorsement for the general liability policy shall be at least as broad as the ISO CG 2010 10 01 combined with ISO CGL Endorsement CG 2037 10 01. Any other endorsement must be approved in writing by the City. Endorsements must include coverage for on-going and completed operations, which coverage shall be maintained for four (4) years following completion of the Project. Endorsements shall cover the City of Roseville, its officers, agents, employees, and volunteers.

b. The insurance shall provide coverage for claims by one insured against another insured and the policies shall not contain any cross-suits exclusions, cross-liability exclusions, or insured versus insured exclusions. The policies shall not contain any classification exclusions purporting to deny coverage for any work to be performed by Contractor or any of its Subcontractors.

c. Stipulation that the insurance is primary and noncontributory, as evidenced by a separate endorsement (CG 20 01 04 13 or an equivalent) or section of the policy, and that neither the City nor its insurers will be called upon to contribute to a loss.

d. Such insurance shall specifically cover the contractual liability of the Contractor.

e. Any available insurance proceeds in excess of the specified minimum insurance coverage requirements and limits shall be available to the additional insureds. Furthermore, the requirements for coverage and limits shall be: (1) the minimum coverage and limits specified in this Agreement; or (2) the full coverage and maximum limits of any insurance proceeds available to the named insureds, whichever is greater.

f. Waiver of subrogation endorsement.

g. The Contractor shall furnish a certificate for the period covered.

2. **Automobile Liability:** Insurance Services Office Form Number CA 0001 covering Code 1 (any auto), or if contractor has no owned autos, Code 8 (hired) and Code 9 (non-owned), with limits of no less than One Million Dollars ($1,000,000) per accident for bodily injury and property damage.

3. **Workers' Compensation:** In accordance with the provisions of the California Labor Code, Contractor is required to be insured against liability for Workers'

Compensation or to undertake self-insurance. Statutory Workers' Compensation and Employers' Liability of at least One Million Dollars ($1,000,000) shall cover all Contractors staff while performing any work incidental to the performance or this Agreement.

4. **Professional Liability:** Professional Liability (Errors and Omission) Insurance appropriate to Contractor's profession, with a limit of liability not less than One Million Dollars ($1,000,000) per occurrence or claim and Two Million Dollars ($2,000,000) aggregate to cover all design and engineering services rendered by Contractor pursuant to the Agreement. Coverage must commence from the first day that Contractor or any of its Subcontractors provided any design or engineering services in connection with the Project.

5. **Builder's Risk/Course of Construction Insurance (If Required by Risk Management):** The Contractor shall be responsible for all loss, damage or destruction whatsoever to the work called for by this Contract until the approval of a Notice of Completion or acceptance of the Work if no Notice of Completion is to be recorded.

The Contractor shall secure "All Risk" type of builder's Risk Insurance of the type covering one hundred percent (100%) of the value of the work performed under this Contract (the value is presumed to be the Contract amount unless otherwise stated in Supplemental Conditions) and all materials, equipment, or other items to be incorporated therein while the same are located at the construction site, a bonded warehouse, or its place of manufacture. At any time, the policy shall cover the value of the work completed. The policy shall cover hazards including the losses due to fire, explosion, hail, rain, lightning, flood (separate insurance as needed), vandalism, malicious mischief, wind, collapse, aircraft, and smoke.

The policies providing such insurance shall name the City as a loss payee as its respective interests may appear, and certified copies of such policies shall be filed with the City. The

maximum deductible allowable under the Builder's All Risk policy shall be five percent (5%) of the Contract amount.

Builder's Risk Insurance is not required for coverage of losses in excess of five percent (5%) of the Contract amount for damages resulting from earthquake in excess of a magnitude of 3.5 on the Richter scale, or tidal waves. Coverage in the amount of five percent (5%) of the Contract amount for such losses is required.

6. **Pollution Coverage:** Contractor shall procure pollution liability coverage or other insurance covering claims for bodily injury or property damage arising out of the abatement, removal, storage, transportation, or other exposure to hazardous materials or pollutants, in limits not less than Two Million Dollars ($2,000,000). Contractor shall add the City and all parties required to be indemnified by Contractor as additional insured on all pollution liability policies.

7. **Higher Coverage Limits:** If Contractor maintains higher coverage limits than the amounts shown above, then the City requires and shall be entitled to coverage for the higher coverage limits maintained by Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the City.

8. **Claims Made Coverage:** Liability insurance coverage may not be written on a "claims made" or modified occurrence basis. The Certificate of Insurance must clearly provide that the coverage is on an "occurrence" basis.

7-1.06A **OTHER INSURANCE PROVISIONS.**

A. The requirements of the Standard Specifications as to types and limits of insurance coverage to be maintained by the Contractor, and any approval of insurance by the City, are not intended to, and shall not in any manner limit or qualify the liabilities and

obligations otherwise assumed by the Contractor pursuant to the Contract, including, but not limited to, the provisions concerning indemnification, nor preclude the City from taking any other action available to it under any other provision of the Contract or law.

B. The City acknowledges that some insurance requirements contained in these Standard Specifications may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by Contractor under the Contract. Any self-insurance must be approved in writing by the City, in its sole discretion and shall not reduce the limits of liability. Any deductibles or self-insured retentions ("SIR") must be declared on the certificate of insurance and approved by City in writing. Policies containing any SIR provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named insured or City. City reserves the right to obtain a full certified copy of any insurance policy and endorsements. The failure to exercise this right shall not constitute a waiver of such right.

C. The Contractor agrees to include in its contracts with all subcontractors the same requirements and provisions of this Contract, including the indemnity and insurance requirements, to the extent they apply to the scope of the subcontractor's work. Furthermore, the Contractor shall require its subcontractors to agree to be bound to the Contractor and the City in the same manner and to the same extent as the Contractor is bound to the City under this Contract. Additionally, the Contractor shall obligate its subcontractors to comply with these same provisions with respect to any tertiary subcontractor, regardless of tier. A copy of the City's indemnity and insurance provisions will be furnished to the subcontractor or tertiary subcontractor upon request. Alternatively, the Contractor may insure subcontractor(s) under its own policy.

D. The City, its officers, agents, employees, and volunteers are to be covered as insureds with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the Contractor; and with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts or equipment furnished in connection with such work or operations. Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under California Insurance Code Section 11580.04.

E. The limits of insurance required in this Contract may be satisfied by a combination of primary and excess insurance. Any excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and noncontributory basis for the benefit of the City (if agreed to in a written contract) before the City's own insurance shall be called upon to protect it as a named insured.

F. The insurance procured by Contractor shall be subject to the approval of the City, but any acceptance of insurance certificates by the City shall in no way limit or relieve Contractor of its duties and responsibilities under the Agreement.

G. Contractor shall be responsible for all premiums, deductibles, and self-insured retention applicable to the insurance it is required to procure under the Contract. All deductibles or self-insured retentions over five hundred thousand dollars ($500,000) must be approved by the City, in writing. Contractor shall be responsible for all deductibles, self-insured retention payments, and/or increased premiums incurred if the City's policies of insurance are forced to cover damages or respond to claims for which Contractor or its Subcontractors were obligated to provide insurance under the Contract.

H. Failure of the City to enforce in a timely manner any of the requirements of these insurance provisions shall not act as a waiver to enforcement of any of these provisions at a later date.

I. Contractor's indemnity obligations shall not be limited by these insurance provisions and shall survive the expiration of the Contract and the insurance provisions of the Contract shall likewise not be limited by the indemnity provisions of the Contract.

J. THE CITY RESERVES THE RIGHT TO WITHHOLD ANY PROGRESS PAYMENTS TO THE CONTRACTOR IN THE EVENT OF NONCOMPLIANCE WITH ANY INSURANCE REQUIREMENTS.

SECTION 8. PROSECUTION AND PROGRESS

8-1.04 **START OF JOB SITE ACTIVITIES.** The Contractor shall begin work by the date specified in the "Notice to Proceed" letter, and the Contractor shall thereafter diligently prosecute the work to completion.

The Contractor shall notify the Director, in writing, of his or her intent to commence work at least seventy-two (72) hours before work is begun. The notice shall specify the date on which the Contractor intends to begin work. If a project has more than one (1) location of work, a separate notice shall be given for each location.

Should the Contractor begin work in advance of issuance of a "Notice to Proceed," any work performed in advance of such issuance shall be considered to have been done at Contractor's own risk and as a volunteer.

SECTION 9. PAYMENT

9-1.11C **PAYMENT INCLUSIONS.** The following is added to Section 9-1.11C Payment Inclusions:

"No additional compensation will be made to the Contractor for claims of increased overhead costs occurring within the originally specified construction Contract period plus any time extensions granted by Change Order. No compensation for extended performance will be granted unless the delay exceeds more than half of the float time available at the time of the delay."

9-1.16E(4) **STOP NOTICE WITHHOLDS.** The City may, at its option and at any time, retain out of amounts due the Contractor, sums sufficient to cover claims (including costs and attorneys' fees), filed pursuant to California Civil Code Section 9350 et seq.

9-1.16F **RETENTIONS.** The Department shall retain five percent (5%) of the Contract price as part security for the fulfillment of the Contract by the Contractor.

9-1.16G **PAYMENT OF WITHHELD FUNDS.** Section 9-1.16G, "Payment of Withheld Funds" is added as follows:

"Except as otherwise prohibited by law, the Contractor may elect to receive all payments due under the Contract pursuant to without any retention. If the Contractor so elects, a deposit with the City of securities with a value equivalent to the retention that would otherwise be withheld by the City shall be made. Said security shall be as provided in California Public Contract Code Section 22300, and shall be approved by the City both as to sufficiency and form. In the alternative, the Contractor may elect to deposit such securities in an escrow account and enter into a standard form Escrow

Agreement for Security Deposits in Lieu of Retention. Blank Agreements are available from the Public Works Director and the City Attorney's Office."

9-1.17 **PAYMENT AFTER CONTRACT ACCEPTANCE.** "Final Payment" shall be made in accordance with this section. The Contractor shall, after the completion of the Contract, submit a final estimate of the amount of work done thereunder and the value of such work. Upon approval of the estimate by the Director, the City of Roseville shall pay the entire sum so found to be due after deducting therefrom all previous payments and all amounts to be kept and all amounts to be retained under the provisions of the Contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment. The final payment shall not be due and payable until the expiration of thirty five (35) calendar days from the date of Acceptance of the work by the City Council, and thirty-five (35) calendar days after filing of the Notice of Completion with the County of Placer.

No certificate given or payments made under the Contract, except the final certificate or final payment, shall be conclusive evidence of the performance of the Contract, either wholly or in part, and no payment (including the final payment) or certificate shall be construed to be an Acceptance of any defective work or improper materials. Final payment shall not release the Contractor from one (1) year guarantee of the work as provided in Section 7-1.17, "Acceptance of Contract" and Section 2-1.12 "Guarantee and Warranty" of these Specifications.

SECTION 14. ENVIRONMENTAL STEWARDSHITP

14-8.02 **NOISE CONTROL.** The provisions of Section 14-8.02 of the Standard Specifications are amended by adding the following:

"The Contractor shall additionally conform to the provisions of Roseville Municipal Code Chapter 9.24 where such provisions are more restrictive than these specifications."

14-9.01 **AIR QUALITY GENERAL.** The provisions of Section 14-9.01, "Air Quality General" of the Standard Specifications are amended by adding the following:

"Material to be disposed of shall not be burned unless the Contractor has obtained a permit to burn combustible material resulting from clearing and grubbing operations from the Placer County Air Pollution Control District and City of Roseville Fire Marshall. A copy of the permits shall be filed with the Director

before beginning any burning. All such burning shall be conducted in strict conformance with the provision stipulated in said permits and at such times and in such manner as to prevent fire from spreading to areas adjoining the right-of-way."

14-11.02A **ASBESTOS REMOVAL AND DISPOSAL.** Section 14-11.02A, "Asbestos Removal and Disposal" is added as follows:

"The Contractor shall comply with all rules, regulations, statutes and ordinances regarding asbestos removal and disposal, including but not limited to, 42 U.S.C. Sections 7401, 7412 and 7601 and 40 C.F.R. Part 61, Subpart M.

If the Contractor discovers that a building to be demolished or renovated contains asbestos containing material, the Contractor shall immediately cease work and notify the City."

END OF STANDARD SPECIFICATIONS

TEXT OF AB 626

Assembly Bill No. 626

CHAPTER 810

An act to add and repeal Section 9204 of the Public Contract Code, relating to public contracts.

[Approved by Governor September 29, 2016. Filed with Secretary of State September 29, 2016.]

LEGISLATIVE COUNSEL'S DIGEST

AB 626, Chiu. Public contracts: claim resolution.

Existing law prescribes various requirements regarding the formation, content, and enforcement of state and local public contracts. Existing law applicable to state public contracts generally requires that the resolution of claims related to those contracts be subject to arbitration. Existing law applicable to local agency contracts prescribes a process for the resolution of claims related to those contracts of $375,000 or less.

This bill would establish, for contracts entered into on or after January 1, 2017, a claim resolution process applicable to any claim by a contractor in connection with a public works project. The bill would define a claim as a separate demand by the contractor for one or more of the following: a time extension for relief from damages or penalties for delay, payment of money or damages arising from work done pursuant to the contract for a public work, or payment of an amount disputed by the public entity, as specified.

This bill would require a public entity, defined to exclude certain state entities, upon receipt of a claim sent by registered or certified mail, to review it and, within 45 days, provide a written statement identifying the disputed and undisputed portions of the claim. The bill would authorize the 45-day period to be extended by mutual agreement. The bill would require any payment due on an undisputed portion of the claim to be processed within 60 days, as specified. The bill would require that the claim be deemed rejected in its entirety if the public entity fails to issue the written statement.

This bill would authorize, if the claimant disputes the public entity's written response or if the public entity fails to respond to a claim within the time prescribed, the claimant to demand to meet and confer for settlement of the issues in dispute. The bill would require any disputed portion of the claim that remains in dispute after the meet and confer conference to be subject to nonbinding mediation, as specified. The bill would provide that unpaid claim amounts accrue interest at 7% per annum. The bill would prescribe a procedure by which a subcontractor or lower tier contractor may make a claim through the contractor.

This bill would require the text of these provisions, or a summary, to be set forth in the plans or specifications for any public work which may give rise to a claim. The bill would specify that a waiver of these rights is void and contrary to public policy, except as specified. The bill would also specify that it does not impose liability on a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

By increasing the duties of local agencies and officials, this bill would impose a state-mandated local program.

This bill would, on January 1, 2020, repeal the provision establishing the claim resolution process.

This bill would specify that these provisions constitute a matter of statewide concern.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that, if the Commission on State Mandates determines that the bill contains costs mandated by the state, reimbursement for those costs shall be made pursuant to these statutory provisions.

The people of the State of California do enact as follows:

SECTION 1. Section 9204 is added to the Public Contract Code, to read:

9204. (a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.

(b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.

(c) For purposes of this section:

(1) ”Claim” means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

(A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.

(B) Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.

(C) Payment of an amount that is disputed by the public entity.

(2) ”Contractor” means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.

(3) (A) ”Public entity” means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.

(B) ”Public entity” shall not include the following:

(i) The Department of Water Resources as to any project under the jurisdiction of that department.

(ii) The Department of Transportation as to any project under the jurisdiction of that department.

(iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.

(iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.

(v) The Military Department as to any project under the jurisdiction of that department.

(vi) The Department of General Services as to all other projects.

(vii) The High-Speed Rail Authority.

(4) ”Public works project” means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.

(5) ”Subcontractor” means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.

(d) (1) (A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.

(B) The claimant shall furnish reasonable documentation to support the claim.

(C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.

(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.

(2) (A) If the claimant disputes the public entity’s written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each

party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

(C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

(E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

(3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

(4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

(5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

(e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.

(f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

(g) This section applies to contracts entered into on or after January 1, 2017.

(h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

(i) This section shall remain in effect only until January 1, 2020, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2020, deletes or extends that date.

SECTION 2.
The Legislature finds and declares that it is of statewide concern to require a charter city, charter county, or charter city and county to follow a prescribed claims resolution process to ensure there are uniform and equitable procurement practices.

SECTION 3.
If the Commission on State Mandates determines that this act contains costs mandated by the state, reimbursement to local agencies and school districts for those costs shall be made pursuant to Part 7 (commencing with Section 17500) of Division 4 of Title 2 of the Government Code.

SPECIAL PROVISIONS

PROJECT:

WASHINGTON BLVD. AT ALL AMERICA CITY BLVD. ROUNDABOUT PROJECT

FEDERAL AID NO. CML 5182(079)

CITY PROJECT NUMBER. 500070

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SPECIAL PROVISIONS
FOR THE CITY OF ROSEVILLE

WASHINGTON BLVD AT ALL AMERICA CITY BLVD
ROUNDABOUT PROJECT

SECTION 1: SCOPE OF SPECIAL PROVISIONS

The work described in these Special Provisions shall be done in conformance with the City of Roseville Standard Construction Specifications, City of Roseville Design and Construction Standards and Details, and the 2015 State of California Standard Specifications, as amended by the Revised Standard, except insofar as they may be modified by these Special Provisions.

Numbering in these Special Provisions conforms to that in the State Standard Specifications. The existence of a section in these Special Provisions means that the corresponding section in the State Standard Specifications is modified in some respect. Unless otherwise specified, when these special provisions reference a section number of the State Standard Specifications, that implies that the referenced State Standard Specification section is deleted in its entirety, and the provisions of these Special Provisions are substituted.

The construction materials, payment, etc., for items of work shown in the proposal and on the plans, but not specifically mentioned in these Special Provisions are referred to the Standard Construction Specifications and State Standard Specifications for conformance.

Project shall conform to the latest edition of the CA MUTCD except as modified by these plans and specifications.

Project shall conform to all ADA Standards adopted by the City of Roseville and as directed by the Engineer.

Abbreviation or Term- Intent and Meaning

AGENCY- The Department of Public Works, City of Roseville

CITY-The City of Roseville and its applicable Departments

DEPARTMENT -The Department of Public Works, City of Roseville

ADMINISTRATOR -The Director of Public Works

ENGINEER- The Director of Public Works, and agents or assistants duly authorized by the Director of the Public Works to act on his behalf

Replace the following definitions in section 1-1.07B:

Director: Director of Public Works, City of Roseville

Engineer: City Engineer, and agents or assistants duly authorized by the Director of the Public Works to act on his behalf

DISCREPANCIES AND OMISSIONS

Any discrepancies or omissions found in the Contract Documents shall be reported to the Engineer immediately. The Engineer will clarify discrepancies or omissions, in writing, within a reasonable time.

In resolving inconsistencies among two or more sections of the Contract Documents, precedence shall be given in the following order:

1. Special Provisions
2. City of Roseville Standard Construction Specifications
3. City of Roseville Design and Construction Standards
4. Caltrans Standard Specifications and Plans (2015 editions as revised, unless otherwise noted on the plans)
5. CA MUTCD (latest edition)
6. Drawings

Addenda shall take precedence over all sections referenced therein. Figure dimensions on Drawings shall take precedence over scale dimensions. Detailed Drawings shall take precedence over general Drawings.

SECTION 4. SCOPE OF WORK

4-1.13 CLEANUP In addition to the requirements of Section 4-1.13 of the State Standard Specifications, the following shall apply:

The Contractor shall remove all temporary pavement delineation.

Prior to submitting the final payment request, the Contractor shall remove all reference markings (i.e. USA markings, striping reference points, utility reference points) placed during the course of work by pressure washing. On micro-surfaced roadways segments, remove markings by hand painting all reference markings with black paint. Paint shall be in rectangular blocks.

SECTION 5. CONTROL OF WORK

5-1.05 ORDER OF WORK.

The Contractor shall prepare a traffic control plan that conforms to Section 12, Traffic Control Plan.

The work shall be performed in conformance with the phases of construction shown on the Contractor's Traffic Control Plan. Non-conflicting work in subsequent phases may proceed concurrently with work in preceding phases.

The first order of work shall be to contact Underground Service Alert (U.S.A.). (See Section 8-1.10).

The second order of work shall be to place Best Management Practices (BMP). BMP's shall remain in place until the project is complete.

The third order of work shall be to install new replacement fiber-optic conduit, pull boxes and cable as shown on plans. Contractor shall submit workplan and schedule for this work for City review and approval. The submittal shall include a standalone kick-off meeting for fiber-optic work, installation on new replacement fiber conduit and pull boxes, testing of fiber-optic cable (pre-installation, post-installation, post-splicing), installation of new replacement fiber-optic cable, cutting existing fiber-optic cable, splicing of new fiber-optic cable to existing fiber-optic cable, and removal of existing fiber-optic cable. Splicing of new fiber-optic cable shall be completed over a weekend. Communications shall be online at all times. Contractor shall coordinate with City and City IT contractor to ensure that temporary redundant communication link is online before cutting existing fiber-optic cable.
The order of all other work shall be such as to assure the completion of the project within the allotted time as described herein while complying with the requirements set forth in the contract documents.

The Contractor shall contact Underground Service Alert to mark out and locate all existing utility facilities within the project area. The Contractor is responsible for repairing and restoring any damaged utility facilities to a condition satisfactory to the utility owner at no cost to the City of Roseville.

The Contractor is responsible for all material and/or equipment needed to perform the project. Should the City have to supply the Contractor with material and/or equipment to do the work, the Contractor will be charged accordingly.

Full compensation for preparing roadway and coordinating with utility companies and property owners is considered included in various bid items and no additional compensation shall be provided therefore.

Full compensation for standalone fiber kick-off meeting, workplan and schedule submittal, and City and City IT contractor coordination is considered included in Bid Item No. 83 Signal Interconnect.

5-1.07 LINES AND GRADES. The Contractor is responsible for all layout and staking. The City shall not provide these services. The Contractor shall be responsible for the accuracy of his/her own layout and staking work. The Contractor shall be responsible for the preservation of all established signal lines, grades, and layout points. Stakes damaged or destroyed by the Contractor, his/her employees, subcontractors, utility company employees, or the public shall be replaced by the Contractor at the Contractor's expense. Signal pole, cabinet, and striping locations shall be verified by the City prior to installation.

Full compensation for compliance with this section shall be paid on a lump sum basis for "Construction Staking" and no additional compensation shall be allowed.

5-1.08 INSPECTION. All work is subject to inspection and approval by the City of Roseville inspector or their representative. The Contractor shall notify the Construction Inspector, along with all affected utility companies, two working days in advance of the start of work to coordinate and schedule inspection staff.

The City will provide inspection on an eight-hour (8) day and a forty-hour (40) work week basis only. For this project, working hours will be 7:00 a.m. to 4:00 p.m. and working days will be Monday through Friday. Requests for authorization to perform work outside the allowed working hours and days shall be made to the Engineer in writing and at least 48 hours in advance. The Contractor shall reimburse the City at a rate of $175 per hour and the Resident Engineer at $225 per hour for all inspection in excess of those hours listed above, including designated holidays and weekends.

The Contractor shall provide a competent person during normal working hours to assist the Inspector, when required, for measuring quantities for payment purposes. The Contractor shall cooperate with the Engineer so that checking and measuring may be accomplished with the least interference to the Contractor's operations.

Designated holidays recognized by the City: January 1st (New Year's Day); the third Monday in January (Martin Luther King's Birthday); The third Monday in February (Presidents' Day); The last Monday in May (Memorial Day); July 4th (Independence Day); The first Monday in September (Labor Day); November 11th (Veterans Day); The day in November appointed by the President of the United States as Thanksgiving Day; The day immediately following Thanksgiving Day; December 25th (Christmas).

When a designated holiday falls on a Saturday or Sunday, the preceding Friday or following Monday (respectfully) shall be a designated holiday.

No additional compensation will be made to the Contractor for fulfilling these requirements.

5-1.20B PERMITS, LICENSES, AGREEMENTS AND CERTIFICAITONS. In addition to the requirements of Section 5.1-20B of the State Standard Specifications, the Contractor shall obtain a business license from the City of Roseville prior to performing the work.

The Contractor may use water from City of Roseville fire hydrants provided that the required permits are obtained from the City's Environmental Utilities Department and the Contractor has paid the associated fees.

Full compensation for conforming to the requirements of this Section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefore.

5-1.36F UNDERGROUND FACILITIES The City of Roseville is a member of the Underground Service Alert (U.S.A.). The Contractor shall notify U.S.A. 1-800-642-2444 at least 72 hours in advance of beginning work on the project.

The Contractor is cautioned that there may be underground and overhead utility facilities within the work area including telephone, electrical, cable television, gas, water and sanitary sewer transmission facilities, and storm drainage collection facilities.

The Contractor is responsible for locating all underground utilities (utility location, type, size, and depth) prior to any excavation and protecting facilities in place. The existing utilities shown on the plans are approximate locations established from information available and do not include all the existing utilities. The Contractor shall use extreme caution when excavating, grading, raising manholes, and paving in the vicinity of such facilities.

The Contractor shall visit the site of the proposed work and determine the quantity and location of the manholes, valve covers and utility appurtenances to be encountered in the proposed work area and his/her bid accordingly. Damage to such utilities resulting from the Contractor's operations to complete the Project shall be repaired at the Contractor's expense.

Where possible conflicts may exist, the Contractor shall verify the grade and location of existing underground utility prior to any work by careful hand digging. It is recognized by the City and the Contractor that the locations of existing utilities as shown on the plans are approximate, their actual location is unknown. Recognition is given to the fact there may be additional existing utilities unknown to either party to the contract. Location of utilities, as shown on the drawings, represent the best information obtainable from utility maps and information furnished by the various agencies and companies involved. The City warrants neither the accuracy nor the extent of the actual utilities involved.

Contractor shall be responsible for locating all existing utilities. All existing utilities within the project limits shall remain in use during construction.

In the event the Contractor discovers existing utilities within the limits of the excavation, the Contractor shall immediately notify the Engineer and the affected utility owner by the most reasonable expeditious method and later confirm in writing. All required relocation of existing facilities that interfere with the work shall be made by the owning agencies.

Facilities damaged or disturbed shall be reset, repaired, or replaced, as directed by the Engineer, at the Contractor's expense.

Prior to submitting the final payment request, the Contractor shall remove all reference markings (i.e. USA markings, striping reference points, utility reference points) placed during the course of work by pressure washing. On micro-surfaced roadways segments, remove markings by hand painting all reference markings with black paint. Paint shall be in rectangular blocks.

Full compensation for conforming to the requirements of this Section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefore.

SECTION 6. CONTROL OF MATERIALS

6-1.02 CITY-FURNISHED MATERIALS. In addition to Section 6-1.02 of the Standard Specifications, the following shall apply:

Upon 48 hour notice to the City, the equipment and materials to be provided by the City will be available for pick-up by the Contractor at the City's Corporation Yard located at 2005 Hilltop Circle, Roseville, CA 95678 (916-774-5787, Senior Electronic Technician). The Contractor shall, at the Contractor's expense, provide all labor and equipment necessary to pick up and transport the City-provided equipment and materials to the job site, and to coordinate pick-up times with the Senior Electronic Technician. Payment for said transportation shall be included in the various items of work, and no additional compensation shall be allowed therefore.

SECTION 7. LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

7-1.03 PUBLIC CONVENIENCE. In addition to Section 7-1.03 of the Standard Specifications, the following shall apply:

The Contractor shall prepare and submit to the City a traffic control plan at or before the pre-construction meeting. The Contractor shall revise the plan per the City's comments until the plan is acceptable by the City. The City will not allow construction within the City of Roseville right of way to begin until an acceptable traffic control plan is received and accepted by the City.

The traffic control plan shall include, but not necessarily be limited to, the following information and detail: Street closures and detours; construction, warning, detour and restriction signs, including "No Parking" signs; temporary striping and pavement markers; barricades; flashing arrow signs; lighted message boards; portable delineators; traffic cones; covers; lights; flares; and flaggers.

If, after the construction has started, the Contractor desires to revise the traffic control plan, the Contractor shall submit to the Engineer a revised traffic control plan for acceptance prior to implementing the revised traffic control plan.

The Contractor shall cooperate, keep current and notify the local police, City public information, public works and fire departments, ambulance services, post office, and trash collectors of his/her construction operation and traffic control changes three (3) days before work is to begin or traffic changes are made. The Contractor shall cooperate with local authorities relative to handling traffic through the area and shall make his own arrangements in keeping the working area clear of parked vehicles.

All vehicle signal faces shall be covered while the traffic signal system is turned off. Covers shall be City-approved durable canvas signal head covers or other approved equal.

Full compensation for compliance with this section shall be considered included in the various items of work and no additional compensation shall be allowed.

7-1.04 PUBLIC SAFETY. In addition to Section 7-1.04 of the Standard Specifications, the following shall apply:

The Contractor shall cooperate with and notify the local police and fire departments, refuse, ambulance services, transit, and Public Works Street Division of proposed construction operations 2 days before work is to begin.

The Contractor shall be responsible to notify and coordinate their schedule with schools that may be in or adjacent to the project area.

7-1.09 PERMITS AND LICENSES. The contractor shall obtain a business license from the City of Roseville prior to performing the work. The Contractor shall include in his bid the cost of obtaining said license, and no additional compensation shall be allowed therefore. Contractor shall obtain an encroachment permit from the City of Roseville. Encroachment permit fees will be waived, and no additional compensation shall be allowed.

7-1.10 PRESERVATION OF PROPERTY. Impacts to existing City-maintained landscapes and irrigation and privately-maintained landscapes and irrigation shall be identified in advance of starting work. Irrigation systems that supply water to undisturbed existing landscape shall remain functional during construction to maintain irrigation to landscape areas. Do not cut and cap irrigation. Coordinate with the City of Roseville Parks Inspector and private property owner prior to construction.

Contractor shall maintain, modify and promptly replace or repair all landscaping and irrigation systems damaged during construction, either purposely or accidentally, to their original condition at the contractor's expense to the satisfaction of the City. This includes impacts beyond the project boundaries if irrigation becomes non-functional due to work within the project area. All repairs shall be consistent with the latest edition of the Parks Construction Standards. No additional compensation shall be allowed.

SECTION 8. PROSECUTION AND PROGRESS

8-1.04 START OF JOB SITE ACTIVITIES. The first paragraph of Section 8-1.04 of the Standard Construction Specifications shall be amended to read:

The Contractor shall begin work within 15 days after receiving the "Notice to Proceed" letter executed by the Director of Public Works or authorized staff and shall thereafter diligently prosecute the work to completion.

8-1.05 TIME. In addition to Section 8-1.05 of the Standard Specifications, the following shall apply:

The first paragraph of Section 8-1.05 of the Standard Construction Specifications that begins with "The contract time starts…" shall be amended to read:

The Contractor shall begin work within 15 days after receiving the "Notice to Proceed" letter executed by the Director of Public Works or authorized staff and shall thereafter diligently prosecute the work to completion.

All work, including all punch list items, shall be completed within 220 working days of the first working day.

Full compensation for any additional cost occasioned by compliance with the provisions in this section shall be considered as included in the prices paid for the various contract items of work, and no additional compensation will be allowed therefore.

8-1.10 LIQUIDATED DAMAGES. In addition to Section 8-1.10 of the Standard Specifications, the following shall apply:

The Contractor shall pay to the City of Roseville the sum of **$1,500.00** per hour, each and every hour's delay past 12:01am on the Monday of the scheduled weekend work for fiber-optic cable splicing and network transition Any payment made after the completion date shall not be construed as a waiver of liquidated damages.

The Contractor shall pay to the City of Roseville the sum of **$4.000.00** per day, each and every calendar day's delay in finishing the work (regardless of weather conditions) in excess of the number of working days to complete the entire project. Any payment made after the completion date shall not be construed as a waiver of liquidated damages.

8-1.10B FAILURE TO COMPLETE WORK PARTS WITHIN SPECIFIED TIME In addition to Section 8-1.10B of the Standard Specifications, the following shall apply:
The Contractor shall stop placement of micro-surfacing 2 hours prior to the last scheduled working hour for the roadway. The Contractor shall pay to the City liquidated damages of $1,000 per hour for each hour, or portion of an hour, that micro-surfacing is placed beyond 2 hours prior to the last scheduled working hours.

The Contractor shall stop any work with sufficient time needed to reestablish approved traffic control and required number and direction of open travel way. The Contractor shall pay to the City liquidated damages of $1,000 per hour for each hour, or potion of an hour, that traffic control and required open lanes are not provided.

The roadway shall be fully opened to traffic by the end of the roadways last working hour. The Contractor shall pay to the City liquidated damages of $1,000 per hour for each hour, or portion of an hour, after the last working hour is exceeded and that a traveled lane remains closed due to the Contractor's operations.

After the working hours of the roadways are exceeded by 1 hour of the last working hour, the Contractor shall pay to the City liquidated damages of $2,000 per hour for each hour, or, portion of an hour, that a traveled lane remains closed due to the Contractor's operations.

The Engineer will provide written notice of non-conformance to the Contractor within 24 hours of the violation. All Contractor's equipment, machinery, traffic control, and personnel shall be off of the pavement and all lanes shall be open to traffic to be considered as full compliance.

8-1.12 UTILITY AND NON-HIGHWAY FACILITIES. The City of Roseville is a member of Underground Service Alert (U.S.A.). The Contractor shall notify U.S.A. (1-800-642-2444) at least 72 hours in advance of beginning work at the job site.

The Contractor is cautioned that there are underground and overhead utility facilities within the work area including, but not limited to, telephone, electrical, gas, water and sanitary sewer transmission facilities.

The locations of existing utilities as shown on the plans are approximate at best. There is no guarantee as to the accuracy or extent of the utilities shown on the plans.

The Contractor shall locate existing underground utilities and substructures by pot holing prior to installing foundations. All existing utilities are to remain in service during construction.

It is understood and agreed that the Contractor has considered in his/her bid all of the permanent and temporary utility appurtenances in their present and/or relocated positions as shown on the plans or as described in the specifications, and that no additional compensation shall be allowed for any delays, inconvenience, or damages sustained by him/her due to any interference from said appurtenances or the operation of moving them.

SECTION 9. PAYMENT

9-1.00 COST BREAK-DOWN.

The Contractor shall furnish to the Engineer a cost break-down and schedule of values as specified in Section 9-1.16B for each contract lump sum item of work described in all applicable Sections as part of this Project (Bid Item Nos. 1, 3, 4, 5, 6, 7, 8, 78, 79, 80, 81, 82 and 83). There shall be thirteen (13) lump sum bid items for this Project:

Bid Item No. 1: Mobilization

Mobilization shall consist of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site; for the establishment of all offices, buildings and other facilities necessary for work on the project; and for all other work and operations which must be performed or costs incurred prior to beginning work on the various contract items on the project site and as referenced in the General Provisions.

The Contract lump sum price for Mobilization should not exceed 5% of the total base bid contract price. Payments for the lump sum item shall be determined based on the percentage of the bid item work completed as determined by the Engineer at the time the progress payment is prepared.

Bid Item No. 3: Construction Staking
The contract lump sum price paid for Construction Staking shall include full compensation for providing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in performing the work specified in Section 5-1.26, "Construction Surveys" of the Caltrans Standard Specifications and these Special Provisions.

Bid Item No. 4: Traffic Control System

The contract lump sum price paid for Traffic Control System shall include full compensation for performing the scope of work specified in the Section 12 “Temporary Traffic Control” of the Special Provisions section and the City’s TTC Guidelines, including all necessary designation of an individual dedicated traffic control coordinator, traffic control plan submittals, project signs, construction signs, implementation and maintenance of the approved traffic control plans for all work in construction zones throughout the duration of the project. This item shall include any flagging costs and arrow boards that the contractor utilizes under the traffic control plan. This item also includes performing pedestrian safety plan submittals, and implementation and maintenance of the approved pedestrian safety plans for all work in construction zones throughout the duration of the project. This item shall include any signage, barricades, cones, k-rail, surface-mounted channelizers, temporary ramps, and all other appurtenances required to implement pedestrian safety.

Two (2) project signs shall be provided. One shall be placed facing northbound Washington Blvd traffic south of the project area, and the other shall be placed facing southbound Washington Blvd traffic north of the project area.

Payment for complying with the provisions for Temporary Traffic Control shall be paid by lump sum. Payments for the lump sum item shall be determined based on the percentage of the bid item work completed as determined by the Engineer at the time the progress payment is prepared.

Bid Item No. 5: Construction Area Signs

The contract lump sum price paid for Construction Area Signs shall include full compensation for providing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in construction area signs, complete in place, including furnishing sign panels and posts, installing and maintaining signs, and removing and relocating signs, as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer.

Bid Item No. 6: Prepare Storm Water Pollution Prevention Plan

The contract lump sum price paid for Prepare Storm Water Pollution Prevention Plan shall include full compensation for providing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in performing the work specified in Section 13, "Water Pollution Control" of these Special Provisions, including developing and implementing the water pollution prevention plan, installing and maintaining BMPs, rain event action plans, stormwater annual reports, providing a water pollution control manager, conducting water pollution control training,

and monitoring, inspecting, and correcting water pollution control practices, and complying with the project storm water pollution prevention plan.

Bid Item No. 7: Job Site Management

The contract lump sum price paid for "Job Site Management" includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in spill prevention and control, material management, waste management, non-stormwater management, and dewatering activities, including identifying, sampling, testing, handling, and disposing of hazardous waste resulting from your activities, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as ordered by the Engineer.

Bid Item No. 8: Clearing and Grubbing

The contract lump sum price paid for Clearing and Grubbing shall include full compensation for providing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in performing the work specified in Section 17, "Clearing and Grubbing" of the Standard Specifications, including consulting with Arborist, pruning prior to construction, and complying with City and County requirements relating to construction activities near oak trees.

Bid Item No. 78: Furnish and Install Landscape

The contract lump sum price paid for **"Furnish and Install Landscape"** shall include, but not be limited to, full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all work necessary to complete planting and landscaping work as described or specified in the contract documents, including 24" box trees, 15 gallon shrubs, 5 gallon shrubs, turf sod, gravel mulch, wood bark mulch, root and weed barrier, tree trimming, preparation, correction, reproduction and lamination of "as-built" drawings, and all appurtenances to the aforementioned items, as shown on the plans, as specified in Section 20, "Landscape" of the Standard Specifications, these specifications, and as directed by the Engineer. Provide a schedule of values for **Furnish and Install Landscaping** materials within 10 days of notification of award of bid. A draft schedule of values is included in Section 20. Verify and update the table as needed, adding and updating items and quantities, to create a complete cost break-down for this lump sum contract item.

Bid Item No. 79: Furnish and Install Irrigation System (Complete)

The Contract lump sum price paid for Furnish and Install Irrigation System (Complete) shall include, but not be limited to, full compensation for furnishing all labor, materials, tools, and equipment and performing all work necessary to complete, maintain, plant establishment work and guarantee the irrigation work described or specified in the contract documents including any temporary irrigation and permanent irrigation, reduced-pressure back-flow preventer, ball valves, valve assembly, electric control valves, quick couplers, control wires, pull boxes, valve boxes, all piping and sleeves, electrical conduits, irrigation heads, emitters, bubblers, connection from electrical service to irrigation electrical meter, connection from meter to irrigation controller(s),

installation of controller enclosure, concrete pads, preparation, correction, reproduction and lamination of "as-built" drawings, controller charts, assembly and submittal of the check list and operation and maintenance manuals and all appurtenances to the aforementioned items, as well as, and project guarantees. Provide a schedule of values for Furnish and Install Irrigation System (Complete) materials within 10 days of notification of award of bid by creating a complete cost break-down for this lump sum contract item and quantities. A draft schedule of values is included in Section 20. Verify and update the table as needed, adding and updating items and quantities, to create a complete cost break-down for this lump sum contract item.

Bid Item No. 80: Maintenance-Plant Establishment

The contract unit price paid for **"Maintenance-Plant Establishment"** includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in maintaining the plantings, irrigating and mulch areas, complete in place, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

Bid Item No. 81: Construct Roundabout Water Tower Feature (Complete)

The contract lump sum price paid for Construct Roundabout Water Tower Feature (Complete) shall include full compensation for providing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing the roundabout urban water tower feature, railing and concrete rail sleepers, retaining and freestanding walls, and concrete header curb, including design, plans, submittals, submittal/permit costs, design revisions, manufacturing, fabricating, and installing the roundabout urban design features, complete in place, as shown on the plans, as specified in these Special Provisions and as directed by the Engineer.

Bid Item No. 82: Street Lighting System

The contract lump sum price paid for Street Lighting System shall include full compensation for providing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing street lighting system, complete in place, including traffic control, as shown on the plans, as specified in Section 86, "General" and Section 87, "Electrical Systems" of the Special Provisions, and as directed by the Engineer.

The cost break-down and schedule of values for Bid Item No. 76, as a minimum, shall include the following items when applicable:

ITEM	UNIT	MEASURE
Foundation	Type	Each
Standards and Poles	Type	Each
Conduit	Size/Installation Method	Linear Foot
Conductors and Cables	Size/Type	Linear Foot
Pull Wire/Tracer Tape	Type	Linear Foot
Innerduct	Type	Linear Foot

Pull Boxes	Type	Each
Luminaires & Hardware	Type	Each
Photoelectric Units	Type	Each
Electrical Service Cabinet	Type	Each

Bid Item No. 83: Signal Interconnect

The contract lump sum price paid for Signal Interconnect shall include full compensation for providing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing signal interconnect, complete in place, including workplan and schedule submittals (to the satisfaction of the Engineer), standalone kickoff meeting, traffic control, testing, and coordination with City and City IT contractor, as shown on the plans, as specified in Section 86, "General" and Section 87, "Electrical Systems" of the Special Provisions, and as directed by the Engineer.

9-1.02 MEASUREMENT In addition to the requirements of Section 9-1.02 of the State Standard Specifications, the following shall apply:

Payment for all work bid at a price per unit of measurement will be based upon actual quantities of work as measured upon completion unless otherwise noted. The City does not expressly or by implication agree that the actual amount of work or materials of any class will correspond to the estimated quantities given in the proposal.

The Contractor shall make no claim for anticipated profits, or loss of profit, for damages, or for any extra payment whatever because of any difference between the amount of work actually done or materials furnished and the estimated amount.

9-1.16 PROGRESS PAYMENTS. In addition to Section 9-1.16 of the Standard Specifications, the contractor shall submit all request for progress payments using the forms included in Appendix B:

Form CC1: Progress Payment Request. This form is to be completed and signed by the contractor and attached as a cover sheet to his/her request for payment. This form will be mandatory on all contract payment request.

Form CC2: Progress Payment Request - Detail. This form may be used by the contractor to provide the detail required to verify the payment quantities.

Form CC3: Quantity Change Verification Form. This form is required before any payment can be made based on actual quantities exceeding estimated quantities.

9-1.17D FINAL PAYMENTS AND CLAIMS. In addition to Section 9-1.17D of the Standard Specifications, the Contractor shall submit Form CC4: Final Release Form. This form must accompany all request for final payment (See Appendix B).

SECTION 12. TEMPORARY TRAFFIC CONTROL

12-1.01A TRAFFIC MAINTENANCE

Attention is directed to Sections 7-1.03, "Public Convenience," 7-1.04, "Public Safety," and 12, "Temporary Traffic Control" of the State Standard Specifications and to the Section entitled "Public Safety" elsewhere in these Special Provisions. Nothing in these Special Provisions shall be construed as relieving the Contractor from the responsibilities specified in Section 7-1.03.

Lane closures on Washington Boulevard are permitted as long as there is one lane southbound and two lanes northbound open during the hours of 4:30 p.m. to 12:00 a.m. and 12:00 a.m. to 8:00 a.m, or as approved by Engineer. The number of lanes on Washington Boulevard may be reduced to one lane in each direction during the hours of 8:00 a.m. to 4:30 p.m, or as approved by Engineer.

Contractor to include two portable changeable message signs to be placed on Washington Boulevard prior to construction area signage. Submit message to be displayed in portable changeable message sign two (2) weeks in advance for approval by the City. Place portable changeable message sign as directed by the Engineer 14 calendar days prior to start of work. Contractor shall change the message as directed by the Engineer, as needed.

All channelizers or traffic barrels used for night work or remaining in the roadway overnight shall have reflective sleeves as specified in the specifications.

Section 12-3.02, “Traffic Cones,” of the State Standard Specifications is amended to read:

During the hours of darkness traffic cones shall be affixed with reflective cone sleeves. The reflective sheeting of sleeves on the traffic cones shall be visible at 1,000 feet at night under illumination of legal high beam headlights, by persons with vision of or corrected to 20/20.

Reflective cone sleeves shall conform to the following:

1. Removable flexible reflective cone sleeves shall be fabricated from the reflective sheeting specified in the Special Provisions, have a minimum height of 13 inches and shall be placed a maximum of 3 inches from the top of the cone. The sleeves shall not be in place during daylight hours.

2. Permanently affixed semitransparent reflective cone sleeves shall be fabricated from the semitransparent reflective sheeting specified in the Special Provisions, have a minimum height of 13 inches, and shall be placed a maximum of 3 inches from the top of the cone. Traffic cones with semitransparent reflective cone sleeves may be used during daylight hours.

3. Permanently affixed double band reflective cone sleeves shall have 2 white reflective bands. The top band shall be 6 inches in height, placed a maximum of 4 inches from the top of the cone. The lower band shall be 4 inches in height, placed 2 inches below the bottom of the top band. Traffic cones with double band reflective cone sleeves may be used during daylight hours.

The type of reflective cone sleeve used shall be at the option of the Contractor. Only one type of reflective cone sleeve shall be used on the Project.

The Contractor shall be responsible for informing the public of the traffic conditions existing within the construction area at all times by placement of appropriate warning and advisory signs. The Contractor shall provide and maintain all traffic control and safety items. The Contractor assumes sole and complete responsibility for job and site conditions during the course of construction, including safety of all persons and property. This requirement shall apply continuously 24 hours/day and shall not be limited to normal working hours.

Full compensation for complying with the above requirements shall be considered as included in the contract lump sum price paid for Traffic Control System and no additional compensation will be allowed.

12-1.04 PAYMENT

The cost of furnishing all flaggers, including transporting flaggers, to provide for the passage of public traffic through the work under the provisions in "Public Convenience" and "Public Safety" is to be included in the contract lump sum price paid for Traffic Control System.

Full compensation for all labor, equipment, tools, materials, services, travel, and incidentals and for doing all the work required for portable message signs is included in the payment for Traffic Control System. No other compensation will be made except for the items listed in the Bid Proposal.

12-1.05 TRAFFIC CONTROL PLAN At the pre-construction meeting, the Contractor shall submit a traffic control plan showing traffic control measures and/or, if approved, detours for vehicles and pedestrians affected by the construction work. A minimum of five (5) working days will be required to review and provide the Contractor with comments on the plan. The Contractor shall revise the plan per the City's comments until the plan is accepted by the Engineer. The Contractor will not be allowed to begin work until the Engineer has accepted the traffic control plan.

The Traffic Control Plan shall cover all stages of work, per site, and include (but not limited to) the following information and detail: (1) Street closures and detours including pedestrian access and detours; (2) construction, warning, detour and restriction signs, including "No Parking", "Loose Gravel", "Construction Area Speed limit Signs," and "Bump Ahead" signs; (3) temporary striping and pavement markers; (4) barricades; (5) flashing arrow signs; (6) lighted message boards; (7) portable delineators; (8) traffic barrels/channelizers; (9) lights, flares, flaggers, spacings, and taper lengths; (10) temporary railing (Type K) and crash cushions; (11) temporary pavement.

A copy of the accepted Traffic Control Plan must be kept at the job site at all times, including Sub-Contractors.

The Contractor shall cooperate with and notify the local police and fire department, ambulance services, post office, refuse collectors, Roseville Transit, Dry Creek School District, Roseville City School District, Eureka School District, Roseville Joint Union High School District, Roseville Transit,

and residents of proposed construction operations and traffic control operations a minimum of five working days before work is to begin in each work area. If changes are made to the traffic control plan, Contractor shall re-notify at least three (3) working days before work is to begin. In addition, the Contractor shall make available a 24-hour telephone number in case of emergencies and/or problems.

The Contractor will be responsible for notifying residents and businesses of the proposed construction. Notifications shall be distributed to residents and businesses within a 100 feet radius of the job limits, including residents and businesses located on streets adjacent to the construction.

Notifications to affected residents and businesses within the Project area shall consist of two (2) phases.

The first phase notifies the affected residents and businesses of the upcoming construction through the use of "door hanger" type formatted notifications. The notification shall state the street name, the working hours, and the anticipated begin and completion dates for each street. The Contractor shall distribute the door hanger notifications a minimum of 5 (five) working days in advance of the work.

At the pre-construction meeting, Contractor shall provide the Engineer a copy of the proposed notification for acceptance. City contact information shall be included on the door hanger notification.

Notifications shall be tucked neatly in doorjambs, handles, or partially under mats. Notifications shall not be glued, stapled, tacked, or otherwise attached to property. The Contractor shall take care to stay on designated walkways during delivery of notifications and be polite to citizens encountered.

The second phase consists of the Contractor posting "No Parking" signs on barricades 72 hours prior to the work. The "No Parking" signs shall also include the exact working day that the resurfacing and/or other work requiring "No Parking" signs will take place. A warning indicating that vehicles will be towed away at the owner's expense shall also be included on the "No Parking" signs. In addition, the Contractor shall make available a 24-hour telephone number in case of emergencies and/or problems and shall post the telephone number on the "No Parking" signs. At the pre-construction meeting, Contractor shall submit to the Engineer a sample "No Parking" sign for acceptance. The Contractor shall be responsible for placing temporary "No Parking" signs in advance of any construction activity. Barricades shall be placed a maximum of 100 feet apart, on both sides of the affected street. (Not required for streets already marked "No Parking").

The Contractor shall be responsible for placing "Construction Speed Limit" signs on both sides of the affected street one (1) hour prior to the Street being opened to traffic. The speed limit for the "Construction Speed Limit" signs cannot be reduced more than 10 mph below the posted speed. At the pre-construction meeting, Contractor shall submit to the Engineer a sample "Construction Speed Limit" sign for acceptance. Signs shall be placed a maximum of 500 feet apart, on both sides of the affected street.

Temporary traffic stripe that will be used on concrete surface shall be tape in accordance with Section 12-6, Temporary Pavement Delineation of the State Standard Specifications, the requirements set forth under these Special Provisions. The contractor shall be responsible for replacing or reapplying

tape as directed by the Engineer. Removal of temporary traffic stripe (tape) shall be included to provide a clean uniformed surface.

Emergency access to driveways, intersections, and residential streets shall be maintained at all times. If vehicles are parked in the working area, the Contractor shall not attempt to move the vehicle. The Contractor shall notify the Engineer immediately, and the Engineer shall make proper arrangements to remove the vehicle.

Lane and street closure shall not be allowed without proper advance warning devices and signing in conformance with the State Standard Specifications and these Special Provisions.

Temporary Hot Mix Asphalt shall be placed as shown on the Plans, as specified in these Special Provisions and as directed by Engineer. Payment shall include placing and removal of temporary hot mix asphalt and shall be considered included in the lump sum price paid for Traffic Control System.

No separate payment will be made for any item of Temporary Traffic Control set forth in the State Standard Specifications to be paid for as extra work. Full compensation for all Temporary Traffic Control shall be included in the bid item for Traffic Control System.
The provisions in this section will not relieve the Contractor from his/her responsibility to provide such additional devices or take such measures as may be necessary to comply with the provisions in Section 7-1.04, "Public Safety," of the State Standard Specifications.

Full compensation for complying with the above requirements shall be considered as included in the contract lump sum price paid for Traffic Control System and no additional compensation will be allowed.

12-3.11 CONSTRUCTION AREA SIGNS. In addition to Section 12-3.11 of the Standard Specifications, the following shall apply:

The base material of construction area signs shall not be plywood.

Payment for all construction area signs for temporary traffic control shall be considered included in the lump sum price paid for Traffic Control System, and no additional compensation will be allowed therefor.

SECTION 13: WATER POLLUTION CONTROL

13-01.01 GENERAL

Contractor shall place and maintain BMP's in compliance with all applicable State requirements.

Contractor shall provide a schedule of values as directed in Section 9-1.16B for BMP items identified in the project SWPPP.

All work to place and maintain BMP's shall be included in **Prepare Storm Water Pollution Prevention Plan**.

Add to section 13-1.04:

Submit a Storm Water Pollution Prevention Plan Lump Sum Cost Break-Down which itemizes the contract lump sum for water pollution control work. Use the Storm Water Pollution Prevention Plan Lump Sum Cost Break-Down provided in this section as the basis for the cost break-down. Use the Storm Water Pollution Prevention Plan Lump Sum Cost Break-Down to identify items, quantities and values for water pollution control work, including Temporary Water Pollution Control Practices. You are responsible for the accuracy of the quantities and values used in the cost break-down submitted. Partial payment for the item of water pollution control will not be made until the Storm Water Pollution Prevention Plan Cost Break-Down is approved by the Engineer.

Line items indicated in the Storm Water Pollution Prevention Plan Lump Sum Cost Break-Down in this section with a specified Estimated Quantity must be considered "Project-Specific Minimum Requirements." Incorporate Project-Specific Minimum Requirements with Contractor-designated quantities and values into the Storm Water Pollution Prevention Plan Lump Sum Cost Break-Down. Line items indicated in the Storm Water Pollution Prevention Plan Lump Sum Cost Break-Down in this section without a specified Estimated Quantity must be considered by the Contractor for selection to meet the applicable "Minimum Requirements" as defined in the Manuals, or for other water pollution control work as identified in the "Construction Site BMPs Consideration Checklist" presented in the Preparation Manual. In the Storm Water Pollution Prevention Plan Cost Break-Down, list only those water pollution control practices selected for the project, including quantities and values required to complete the work for those items.

The sum of the amounts for the items of work listed in the Storm Water Pollution Prevention Plan Cost Break-Down must be equal to the contract lump sum price bid for Storm Water Pollution Prevention Plan. Overhead and profit must be included in the individual items listed in the cost break-down.

STORM WATER POLLUTION PREVENTION PLAN
LUMP SUM COST BREAK-DOWN

ITEM	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	VALUE	AMOUNT
General					
	Prepare Storm Water Pollution Prevention Plan	EA	1		
	Stormwater Annual Report	EA	4		
	Rain Event Action Plan	EA	74		
Soil Stabilization					
ES-3	Temporary Hydraulic Mulch	SQYD	11,290		
Sediment Control					
SC-1	Temporary Silt Fence	LF	180		
SC-5	Temporary Fiber Rolls	LF	405		
SC-7	Street Sweeping	EA	1		
SC-10	Storm Drain Inlet Protection	EA	15		
Tracking Control					
TC-1	Temporary Construction Entrance	EA	1		
Wind Erosion Control					
WE-1	Wind Erosion Control	SQYD	620		
Waste Management					
WM-8	Temporary Concrete Washout Facility	EA	2		
TOTAL					

Adjustments in the items of work and quantities listed in the approved cost break-down must be made when required to address amendments to the SWPPP, except when the adjusted items are paid for as extra work.

No adjustment in compensation will be made to the contract lump sum price paid for Storm Water Pollution Prevention Plan control due to differences between the quantities shown in the approved cost break-down and the quantities required to complete the work as shown on the approved SWPPP. No adjustment in compensation will be made for ordered changes to correct SWPPP work resulting from your own operations or from your negligence.
At the Engineer's discretion, the approved cost break-down may be used to determine partial payments during the progress of the work and as the basis of calculating the adjustment in

compensation for the item or items of work due to changes ordered by the Engineer. When an ordered change increases or decreases the quantities of an approved cost break-down, the adjustment in compensation may be determined, at the Engineer's discretion, in the same manner specified for increases and decreases in the quantity of a contract item of work in section 9-1.06.

At your request and approved by the Engineer, changes to the water pollution control practices listed in the approved cost break-down, including addition of new water pollution control practices, will be allowed. Changes must be included in the approved amendment of the SWPPP. If the requested changes result in a net cost increase to the lump sum price for Storm Water Pollution Prevention Plan, an adjustment in compensation will be made without change to the water pollution control item. The net cost increase to the water pollution control item will be paid for as extra work as provided in section 4-1.05.

Payment for maintaining, removing and disposing construction site best management practices is included in the payment for Storm Water Pollution Prevention Plan.

Add to section 13-3.01A:

This project's risk level is 2.

Replace the 1st paragraph of section 13-3.01C(2)(a) with:

Within 15 days of contract approval, submit 3 copies of your SWPPP. A qualified QSD must develop the SWPPP.

Replace the 3rd paragraph of section 13-3.01C(2)(a) with:

Allow 15 days for the Department to review. The Engineer will provide comments and notify you of the date when the review stopped if revisions are required. Resubmit a revised SWPPP within 15 days of receiving the Engineer's comments. The Department's review resumes when a complete SWPPP has be resubmitted. After the plan has been approved by the Engineer, the QSP shall submit the SWPPP, Permit Registration Documents and required information to the RWQCB's SMARTS website as part of the Notice of Intent (NOI). The SMARTS website can be found at

https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.xhtml

Add between the 4th and 5th paragraphs of section 13-3.01C(2)(a):

The following RWQCBs will review the authorized SWPPP:

1. Central Valley RWQCB Region 5

Replace the 6th paragraph of section 13-3.01C(2)(a) with:

If the Regional Water Quality Control Board requires time for review, allow 30 days for review. Do not start job site activities until:

1. the SWPPP is approved by the Engineer
2. a waste discharge ID number is issued
3. SWPPP review requirements have been fulfilled

13-4 JOB SITE MANAGEMENT. In addition to Section 13-4, "Job Site Management" of the Standard Specifications, the following shall apply:

PAYMENT
The contract lump sum price paid for Job Site Management includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in spill prevention and control, material management, waste management, non-stormwater management, and dewatering activities, including identifying, sampling, testing, handling, and disposing of hazardous waste resulting from your activities, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as ordered by the Engineer.

Replace the paragraphs of section 13-5.04 with:

Not Used

Replace the paragraphs of section 13-6.04 with:

Not Used

Replace the paragraphs of section 13-7.03D with:

Not Used

SECTION 14: ENVIRONMENTAL STEWARDSHIP

14-8 NOISE AND VIBRATION. In addition to the requirements of Section 14-8 of the State Standard Specifications, noise level requirements shall apply to all equipment used on the Project including, but not limited to, trucks, transit mixers or transient equipment that may not be owned by the Contractor. The use of loud signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

The noise level from the Contractor's operations, between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday, and between the hours of 8:00 a.m. and 8:00 p.m. Saturday and Sunday, shall not exceed 86 dBA at a distance of 50 feet. This requirement in no way relieves the Contractor from responsibility for complying with local ordinances regulating noise level.

In addition, the Contractor shall conform to the Roseville Municipal Code, Chapter 9.24 "Noise Regulations" which can be viewed at the City of Roseville City Clerk's Office or City of Roseville's website at www.roseville.ca.us.

Full compensation for conforming to the requirements of this Section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefore.

SECTION 15. EXISTING FACILITIES

15-1.03 CONSTRUCTION. In addition to Section 15-1.03 of the Standard Specifications, all existing striping damaged by the Contractor shall be repaired or replaced at the Contractor's expense. This includes striping or pavement markings damaged by trenching or detector loop installation. No additional compensation for this work shall be allowed.

SECTION 17. CLEARING AND GRUBBING

17-2.03B CLEARING

Clear all construction areas above original ground of (1) all vegetation such as trees, logs, upturned stumps, roots of downed trees, brush, grass, and weeds and (2) other objectionable material including concrete, masonry, and debris.

Cut tree branches that extend over the roadway and hang within 20 feet of finished grade. Cut other branches to give each tree a balanced appearance. Cut off branches close to the trunk under section 20-3.01C(2).

17-2.03D. DISPOSAL OF MATERIALS. In addition to Section 17-2.03D of the Standard Specifications, the following shall apply:

Surplus materials resulting from clearing and grubbing, excavation, and other operations not to be reused in the project or salvaged to the City shall become the property of the Contractor unless otherwise specified, and he or she shall dispose of surplus materials off the City rights-of-way and easements. Surplus materials include 8" signal heads, plastic heads, and abandoned conductors. The disposal of such materials shall conform to all local ordinances and regulations of the City of Roseville. All costs, charges and fees associated with such disposal shall be borne by the Contractor. Surplus materials are not to be confused with salvaged materials, which shall remain the property of the City and shall be delivered to the City at no extra charge.

SECTION 19: EARTHWORK

19-1.01 GENERAL In addition to the requirements of Section 19-1.01 of the State Standard Specifications, the following shall apply:

The Contractor shall perform all excavation required for the complete Project, to the lines and grades as shown on the Project Plans, as described in these Special Provisions, and as directed by the Engineer.

19-1.03B UNSUITABLE MATERIAL. In addition to the requirements of Section 19-1.03B of the State Standard Specifications, the following shall also apply:

Should unsuitable material be encountered which, in the opinion of the Engineer, cannot be stabilized, the Contractor shall remove the unsuitable material to the dimensions and limits directed by the Engineer. The Contractor shall use extra care in excavating unsuitable materials so as not to aggravate the conditions. If, in the opinion of the Engineer, the Contractor's methods and equipment are

increasing the amount of unsuitable materials to be excavated, the Engineer will require the Contractor to take necessary steps to correct the situation. Should the problem continue, the Contractor shall pay all costs beginning from the time correction steps were last implemented.

When unsuitable material is removed and disposed of, the resulting space shall be filled with material suitable for the planned use. Unsuitable materials shall be removed from the job site.

PAYMENT
The contract unit price paid per cubic yard for Unsuitable Material shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in performing excavation of unsuitable material complete in place, including excavating, loading, hauling, and disposing, as specified in the State Standard Specifications and these Special Provisions, and as directed by the Engineer.

19-2 ROADWAY EXCAVATION. In addition to the requirements of Section 19-2 of the State Standard Specifications, the following shall also apply:

Excavated material not reused shall be disposed. If the Contractor elects to dispose of materials, the Contractor shall make arrangements for disposing of the materials outside the highway right of way and shall pay all costs involved. Arrangements shall include, but not be limited to, entering into agreements with property owners and obtaining necessary permits, licenses and environmental clearances. Before disposing of any material outside the highway right of way, the Contractor shall furnish to the Engineer satisfactory evidence that the Contractor has entered into agreements with the property owners of the site involved and has obtained the permits, licenses and clearances.

The Contractor shall do all excavation of whatever substance is encountered to the lines and grades shown on the plans. All material suitable for use as backfill shall be piled in an orderly manner a sufficient distance from the side of the excavation to avoid overloading and to prevent sliding into the excavation. The Contractor shall do such grading as is necessary to prevent surface water from entering the excavation.

Excavations adjacent to the existing roadway shall be closed at the end of each day's work. At the option of the Contractor, steel cover plates may be used at the end of each workday to cover excavations not backfilled adjacent to the roadway.

Excess excavated material suitable for use elsewhere in the construction may be reused therein. All surplus or unsuitable material shall become the property of the Contractor and shall be removed from the job site to a predetermined disposal site at the Contractor's expense.

The Contractor shall remove and dispose of all water entering excavations. Disposal of water shall be done in a manner to prevent damage or nuisance to adjacent properties.

Existing asphalt concrete pavement that is to remain intact shall be saw cut in a neat, straight, parallel line. All pavement damaged during the work shall be cut out in a rectangular pattern and removed and paved.

The maximum lift of backfill material shall depend upon the type of backfill material, relative compaction required, and proposed compaction method to be used, but in no case shall the loose lift thickness of any material exceed 8 inches.

Hazardous Material Disposition:
During the course of trenching, grading, grinding, or other excavation, should potentially hazardous materials or other questionable materials be encountered, the City's Resident Engineer shall be contacted immediately. The Contractor shall mark the site. The City will respond within 24 hours to investigate the site and render an opinion on the questionable materials regarding future action at the site. The intent is to minimize schedule delays to the construction.

Removed material will be contained in drums, or drop boxes, depending on the volume, and temporarily staged within the fenced area. The staging duration will only be long enough to obtain analytical laboratory results and confirm disposition instructions on the material. For each discovery, it is anticipated the material will be staged for less than 30 days.

PAYMENT
The contract unit price paid per cubic yard for Roadway Excavation shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in performing roadway excavation complete in place, including excavating, sloping, rounding, loading, hauling, depositing, spreading, compacting and preparing subgrade, including removing concrete curb, gutter, sidewalk, driveway, and curb ramp, as shown on the plans, as specified in the State Standard Specifications and these Special Provisions, and as directed by the Engineer. This item of work is a "Final Pay Item" as defined in Section 2-1.02C of the Standard Specifications.

SECTION 20 LANDSCAPE

20-1.01 GENERAL. In addition to the requirements of Section 20 of the State Standard Specifications, the following shall apply:

Soil Amendments
All fertilizing shall be performed in accordance with the American National Standard Industry - A300 standards.

Soil samples (two minimum at each landscaped location shown in the improvement plans) shall be taken by the Contractor and analyzed by an owner-approved agricultural soil laboratory. The soil test reports shall analyze soil texture, percent of organic material, pH, total soluble salts, electrical conductivity of soluble salts, sodium, nitrate, phosphorus, boron and potassium levels; infiltration rate/permeability characteristics; and planting soil amendment recommendations of each soil sample.

After cultivation, the soil amendments shown in Table A shall be thoroughly blended 150 mm (6") deep in all tree pit areas. Backfill for planting pits shall conform to the requirements of section 801-4.5. After surface preparation and application of the soil amendments shown in Table A the Contractor shall obtain a minimum of two tests per city block within project limits

and shall submit the results of said tests to the Engineer. The Contractor shall then adjust the soil properties to the acceptable ranges of soil properties shown in Tables B and C using such materials and methods as may be necessary. Organic soil amendment materials shall not be included in the samples used to determine compliance to the soil particle gradation requirements of Table C. Prior to the start of any planting the surface and root area shall be evenly and thoroughly moistened to no less than 75 percent of field capacity. The Contractor shall certify, in writing, that the ground surface has been prepared in accordance with this section and shall request inspection by the Engineer prior to any planting. The Contractor shall obtain the Engineer's approval before any planting.

Table A: Soil Amendments

Soil Amendment	Metric Application Rate	Approx. U.S. Application Rate
Agricultural Gypsum	500 g per square meter	100 lbs. per 1,000 square feet
Iron Sulfate	50 g per square meter	10 lbs. per 1,000 square feet
Calcium Carbonate Lime	500 g per square meter	100 lbs. per 1,000 square feet
Organic Soil Amendment	0.04115 cubic meters per square meter (average depth 41 mm)	5 cubic yards per 1,000 square feet (average depth 1 $^5/_8$")

Table B: Soil Properties

Soil Property	Acceptable Range	Test Method	Repeatability Range of Test
pH	6.5 to 7.3	Saturation Paste pH	± 0.1 pH
Dissolved Salts (Ec_e)	< 4.0 dS m^{-1}	Saturation Paste Soluble Salts	± 7%
Liquid Limit	N/A to 30	ASTM D 423	± 2
Plasticity Index	NP to 10	ASTM D 424	± 2

Table C: Soil Particle Gradation

Sieve Size	Percent Passing
19 mm ($^3/_4$")	100
9.5 mm ($^3/_8$")	95 – 100
4.75 mm (No. 4)	60 – 85
1.89 mm (No. 10)	40 – 75
475 μm (No. 40)	35 – 70
75 μm (No. 200)	30 – 70

PAYMENT
Work performed under this section shall be considered included as a part of Furnish and Install Landscape and no additional compensation will be allowed therefor.

Planting
The Contractor shall perform actual planting during those periods when weather and soil conditions are suitable and in accordance with locally accepted horticultural practice and as approved by the Engineer. No planting shall be done in any area until it has been satisfactorily prepared in accordance with these Standard Specifications. Soil moisture level prior to planting shall be no less than 75 percent of field capacity. The Contractor shall obtain the Engineer's approval of planting pits before planting operations begin. For pit planted vegetation when the soil moisture level is found to be insufficient for planting, the Contractor shall fill the planting pits with water and allow them to drain before starting planting operations. The Contractor shall plant and water all trees as herein specified immediately after removal from their containers. Containers shall not be cut prior to placing the plants in the planting area. It shall be the responsibility of the Contractor to provide continuous horticultural services and temporary and/or permanent irrigation to all planted areas so that the planted vegetation is 100 percent healthy and thriving prior to, and throughout, the landscape maintenance period.

All plant material shall meet the minimum standards set by the American Association of Nurseryman and these Standard Specifications.

Protection and Storage
The Contractor shall submit a sheltered and secure location for on-site plant storage area for the Engineer's approval prior to the delivery of any plant materials. Any plant determined by the Engineer to be wilted, broken, or otherwise damaged shall be rejected at any time during the project, whether in the ground or not. All plants shall be handled by their containers. Any plant that has been handled by its trunk or stem shall be rejected. All rejected plants shall be removed from the site immediately.

Tree Trimming
Trimming shall be limited to the minimum necessary to remove twigs and branches in the path of travel obstructing the bike path along the corridors shown in the project construction documents, Trimming may be done only with the approval of, and in the presence of, the Resident Engineer. Cuts over 19 mm (¾") shall be painted with an approved tree wound paint.

Gravel Mulch
Gravel mulch shall fall into two categories: Rock Mulch and Rock Cobble

Rock Mulch shall be 1/2"-1" 'Washed Gravel' supplied by Cascade Rock, Inc or approved equal. Rock mulch shall be installed in landscape areas as shown on plans. Rock mulch shall be installed at a 1-inch depth. Contractor shall submit a 4-lb. sample of the gravel mulch for approval by Landscape Architect and Resident Engineer prior to delivery of the material to the site.

Rock Cobble shall be ‘3”-5” ‘Washed Gravel’ supplied by Cascade Rock, Inc or approved equal. Rock cobble shall be installed in landscape areas as shown on plans at a Minimum 5” Depth. Contractor shall submit a 10-lb. sample of the rock cobble for approval by Landscape Architect and Resident Engineer prior to delivery of the material to the site.

All gravel mulch shall be installed with a weed barrier fabric below. Weed barrier fabric shall be placed loosely with longitudinal and transverse joints overlapping 8-inches. After placement, all fabric shall lay flat, smooth, and be in contact with the soil surface without wrinkles. The fabric shall be stapled/staked in place to keep the fabric in place during the rock mulch and rock cobble placement. The weed barrier fabric shall be manufactured from thermally spun bonded polypropylene fabric and shall be DeWitt Weed-Barrier PRO or approved equal.

Wood Bark Mulch
Do not use diseased plant materials, wood, plywood, recycled or painted pieces. Submit source of recycled chipped arbor wood mulch. Do not obtain wood mulch from eucalyptus, pine, bay laurel, oak or tanoak trees. Do not use Gorilla or angel hair mulch. Mulch to be natural dark brown in color. Source to be a local organic product from recycled chipped arbor wood waste. Install a 3-inch layer of wood mulch per Plans in planted areas (as called out on the drawings) up to edges of pavement, curbs, headers, and project limits. Keep mulch eight (8) inches away from tree trunks, where applicable. Rake mulch to uniform surface. Rake un-mulched areas to uniform surface. Rake mulch away from plant bases. Spread fertilizer around plant base and work into the top 2 inches of soil and then replace mulch. Submit 1-pint sample for approval prior to installation.

PAYMENT
Furnish and Install Landscape shall be measured per Lump Sum installed.

The contract lump sum price paid for Furnish and Install Landscape shall include, but not be limited to, full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all work necessary to complete planting and landscaping work as described or specified in the contract documents, including 24” box trees, 15 gallon shrubs, 5 gallon shrubs, gravel mulch, wood bark mulch, turf sod, root and weed barrier, tree trimming, preparation, correction, reproduction and lamination of “as-built” drawings, and all appurtenances to the aforementioned items, as shown on the plans, as specified in Section 20, "Landscape" of the Standard Specifications, these specifications, and as directed by the Engineer. Provide a schedule of values for Furnish and Install Landscaping materials within 10 days of notification of award of bid by creating a complete cost break-down for this lump sum contract item and quantities. A draft schedule of values is included below. Verify and update the table as needed, adding and updating items and quantities, to create a complete cost break-down for this lump sum contract item

DRAFT SCHEDULE OF VALUES			
DESCRIPTION	QTY	UNIT	UNIT PRICE
FURNISH AND INSTALL 24" BOX TREE		EA	

FURNISH AND INSTALL 15 GALLON SHRUB		EA	
FURNISH AND INSTALL 5 GALLON SHRUB		EA	
FURNISH AND INSTALL WOOD CHIP MULCH		SF	
FURNISH AND INSTALL TURF SOD		SF	
FURNISH AND INSTALL ROCK COBBLE		SF	
FURNISH AND INSTALL ROCK MULCH		SF	
FURNISH AND INSTALL ROOT CONTROL BARRIER		LF	
FURNISH AND INSTALL WEED BARRIER		SF	

Maintenance and Plant Establishment
The plant establishment shall be "Type 2," as defined in Section 20-9.01B of the 2018 Caltrans Standard Specifications and shall not be less than 90 days.

Attention is directed to "Relief From Maintenance and Responsibility" in these Special Provisions regarding relief from maintenance and protection.

Commercial fertilizer (slow release) shall be applied to trees, shrubs, vines and ground cover during the first week of September and March of each year, and every 6 weeks as specified hereinbelow. Commercial fertilizer shall be applied at the rates recommended by the owner-approved agricultural soil laboratory pursuant to testing performed in compliance with these Special Provisions, and shall be spread with a mechanical spreader wherever possible.

A watering and maintenance schedule shall be submitted on Plant Maintenance Log Sheets (see D8A, Sample Landscape Maintenance Log Sheet, and D8B, General Landscape Maintenance Requirements in Part D, REPORTS) for review and approval to the Engineer for use during the plant establishment period. These Plant Maintenance Log Sheets shall be used during the maintenance and plant establishment period to document compliance with the approved watering and maintenance schedule and shall be submitted on quarterly to the Engineer. Plants within basins shall be watered more frequently than groundcover plants, Submit the following seasonal watering schedules, March through May, June through August, September through October, and November through February, for use during the plant establishment period. Submit the first seasonal watering schedule within 10 days after the start of the plant establishment period. Subsequent seasonal schedules must be submitted within 5 days of the beginning of each seasonal period. Contractor shall inspect plants for evidence of distress a minimum of once a month; watering schedules shall be adjusted as necessary to promote healthy growth and development of plants, as determined at the sole discretion of the Engineer.

Maintenance shall be performed monthly or as directed by the Engineer and shall include repair, site cleanup, pruning of groundcover, shrubs, and trees, weed control, fertilization every 6 weeks, pest and fungi control, plant replacement, and mulch replenishment. Weeds shall be controlled by hand pulling.
Control weeds by:

1. Hand pulling:
    1.1 In plant basins and on basin walls

1.2 In ground cover planting areas

2. Killing:
   2.1 In mulched areas
   2.2 In erosion control areas with spot herbicide treatment

Pesticides used to control weeds must be limited to the following materials:

Aminopyalid	Imazapyr
Diquat	Isoxaben (preemergent)
Dithiopyr	Oryzalin (preemergent)
Clopyralid MEA	Oxyfluorfen (non-odor type)
Fluazifob-P-Butyl	Pendimethalin (preemergent)
Flumioxazin	Prodiamin (preemergent)
Glyphosate	Sethoxydim

The final inspection shall be performed in conformance with the final inspection and contract acceptance requirements of these Special Provisions.

Guarantee

The Contractor shall guarantee all plant material installed under the contract, as well as existing plant material located along the project corridor, that are or may be affected by irrigation adjustment to live and grow for one year from the day of final acceptance of the contract work. The Contractor shall replace, at its expense, all plants found to be dead, missing, or in poor condition during the maintenance period. The Engineer shall be the sole judge as to the condition of the plants. Plants found to be dead or in poor condition within the guarantee period shall be replaced by the Contractor, at its expense, within 15 days of written notification. Replacements shall be made to the same Standard Specifications required for the original plantings.

The Contractor shall submit written planting guarantee in approved form that all work showing defects in materials or workmanship will be repaired or replaced at no cost to the Engineer for a period of one year from the date of acceptance by the Engineer. The Guarantee form shall be retyped on the Contractor's letterhead and contain the following verbiage:

"GUARANTEE FOR PLANTING AND IRRIGATION FOR THE PROJECT"

We hereby guarantee that the landscape planting and irrigation we have furnished and installed for the Washington Blvd. at All-America City Blvd Roundabout Project is free from defects in materials and workmanship, and the work has been completed in accordance with the Plans and Standard Specifications. We agree to repair or replace any defect in irrigation or vegetation, material or workmanship, including that due to ordinary wear and tear, which may develop during the periods specified in the Standard Specifications and the Special Provisions of said project from date of completion of the Work or termination of any maintenance period, whichever is the later, and also to repair or replace any damage resulting from the repairing or replacing of such defects at no additional cost to the Agency. This guarantee does not extend to unusual abuse or neglect that may occur subsequent to the date of completion of the Work or termination of any maintenance period, whichever is the later. We shall make such repairs or

replacements within a reasonable time, as determined by the Engineer, after receipt of written notice. In the event of failure to make such repairs or replacements within a reasonable time after receipt of written notice from the Engineer, we authorize the Engineer to proceed to have said repairs or replacements made at our expense, and we will pay the costs and charges therefore upon demand.

Project: (Project Name)
Location: (Legal Description of Project Property)
Name of Contractor:
Address: (Of Contractor)
Telephone: (Of Contractor)
By: (Typed or printed names of signing Officer(s) of the Contractor authorized to bind the Contractor in legal matters)
Title: (Of said officer(s))
Signature(s)
Date of Execution

PAYMENT
Maintenance-Plant Establishment shall be measured per Lump Sum installed.

The contract unit price paid for **Maintenance-Plant Establishment** includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in maintaining the plantings, irrigating and mulch areas, complete in place, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

Irrigation
All materials and equipment used in irrigation work shall be new and without flaws of defects and of quality and performance as specified. Prior to installation of any irrigation work, the contractor shall submit for approval by the city, a list of all proposed materials and equipment. Should the contractor propose to use material(s) or equipment other than those as listed as “approved”, the contractor shall submit in writing, to the city, a request to deviate from the approved list. Samples of the material(s) or equipment should accompany the request to assist in the evaluation of the proposed substitution. The burden of proof shall be borne by the contractor.

Brass pipe shall be IPS standard weight 125 LB 85 percent copper and 15 percent zinc, trade designation seamless red brass pipe conforming to the requirements of ASTM B43-91. Brass pipe fittings and connections shall be Standard 125 LB class 85 percent red brass fittings and connections.

All valve boxes shall be marked “RCV”, “BV” or “QC”, “PB” respectively. In addition, remote control valves shall branded with 2” station numbers. RCV boxes shall have locking covers. Other boxes such as pull boxes, etc., shall be marked with appropriate identification.

Valve box size for any particular application shall be approved by the Resident Engineer, or designee.

Remote control valve boxes Shall be concrete with a cast iron locking lid. The contractor shall paint the identification number of the valve box. The paint shall be white or yellow aluminum asphaltic-base waterproof paint. In addition, weatherproof, plastic identification tags shall be affixed to the colored conductor in the valve box.

Valve box locking lids. The contractor shall rework the locking toggles of the concrete valve boxes by replacing the existing clevis pin and sheet metal clip with a marine-type stainless steel machine bolt and self-locking unit. Apply oil to lubricate and to prevent rust.

All electrical materials shall conform to the requirements of the National Electrical Code in effect at time of bid.

Low voltage electric wiring running from controller to the automatic control valves shall be no smaller than No. 14 solid single conductor, copper wire, 0.015 mm (60 mil) insulation, 0.015 mm (60 mil) neoprene jacket, style UF (Direct Burial), or equal, color code wires to each valve. Neutral wires shall be white, no smaller than No. 12 solid single conductor wire, 0.015 mm (60 mil) insulation, 0.015 mm (60 mil) neoprene jacket, style UF (Direct Burial).

Electrical service equipment shall incorporate the following elements:

1. One 100-amp, 120/240 volt, single-phase load center, as approved by the Resident Engineer ;
2. One 100-amp rated commercial meter socket, with provision for test block bypass having a UL listing and EUSERC approval;
3. One 15-amp circuit breaker for each irrigation controller energized by the service;
4. One 20-amp circuit breaker for the duplex receptacle.
5. The design, assembly, grounding, wiring, and components of the irrigation electrical service equipment and enclosure shall meet the requirements of the 1996 edition of the National Electrical Code.
6. Electrical service equipment shall be enclosed in a cabinet constructed entirely of anodized aluminum; anchoring points shall be inside the enclosure.
7. The cabinet shall have an aluminum or 304 stainless steel interior bulkhead separating the 120/240 volt electrical service section from the irrigation controller section.
8. No wood components shall be used in the enclosure.
9. Each section of the cabinet shall have full front opening doors with piano hinges, integral key lock and hasp and staple, or other provision, for padlock.
10. The cabinet shall be provided with cross flow ventilation. Ventilation openings shall be located and designed to preclude rain, irrigation splash, vermin, and insects from entering the cabinet.
11. The controller side door shall have provision for mounting control schematics without the use of adhesives or fasteners. The service side door

shall have a clear acrylic plastic window to allow the electrical meter to be read.

12. Concrete footings and pads supporting the Electrical service equipment shall be 560-B-3250 and shall be no less than 12“ thick.
13. Anchor bolts to secure the service equipment to the concrete pad shall be 10 mm (3/8“) diameter by 150 mm (6“) long hot dip galvanized or stainless steel headed bolts with washers, without sleeves, conforming to section 304-1.7. Anchor bolts to secure the service equipment to the concrete pad shall be embedded in the concrete slab between 65 mm and 100 mm (2½” and 4“).
14. Base of meter pedestal to be sealed with polyurethane caulking.

Existing irrigation facilities that are being connected to new facilities shall be checked for missing or damaged components and proper operation in the presence of the Resident Engineer prior to performing new irrigation system work and at least once every 30 days thereafter until completed work is accepted. A written list of existing irrigation system deficiencies shall be submitted to the Resident Engineer within 2 working days after initially checking the existing facilities. Failure of the Contractor to submit a list of deficiencies within the specified time frame shall constitute the Contractor’s declaration that the system is in working order and free of defects.

Progress inspections will be performed by the Resident Engineer for planting and irrigation system work at the designated stages during the life of the contract.

Progress inspections will not relieve the Contractor of responsibility for installation in conformance with provision in the Plans and Specifications. Work within an area shall not progress beyond each stage until the inspection has been completed, corrective work has been performed, and the work is approved, unless otherwise permitted by the Resident Engineer. The requirements for progress inspections will not preclude additional inspections of work by the Resident Engineer at other times during the life of the contract.

The Contractor shall notify the Resident Engineer, in writing, at least 4 days prior to completion of the work for each stage of an area and shall allow a minimum of 3 working days for the inspection.

Progress Inspections will be performed at the following stages of work:

1. During pressure testing of the pipelines on the supply side of control valves.
2. During testing of low voltage conductors.
3. Before planting begins and after completion of the earthwork work.
4. Before plant establishment work begins and after completion of work specified for planting in Section 308-4.
5. At intervals of one month during the plant establishment period

The Contractor shall not backfill any lines until such time as they have been tested and inspected and approved by the Resident Engineer for tightness, quality of workmanship, and materials.

The Contractor shall store all pipe and fittings under cover until used, and all pipe and fittings shall transported in a vehicle with a bed long enough to allow the length of pipe to lay flat so as not to be subjected to undue bending or concentrated external load at any point. Pipe ends and fittings shall be wiped with MEK, or equal, before welding solvent is applied. Welded joints shall be given a minimum of 15 minutes to set before moving or handling. All field cuts shall be beveled to remove burrs and excess before fitting and gluing together. The Contractor shall center load pipe with small amount of backfill to prevent arching and slipping under pressure. Joints shall be exposed for inspection during testing. Plastic-to-plastic joints shall be solvent-welded, using only solvent recommended by pipe manufacturer.

The Contractor shall cut brass piping by power hacksaw, circular cutting machine using an abrasive wheel, or hand hacksaw. No piping shall be cut with metallic wheel cutter of any description. The Contractor shall ream and remove rough edges or burrs on all pipe so that smooth and unobstructed flow is obtained, place Teflon tape, Teflon dope, or approved equal on male threads only, and tighten to prevent any leakage. The Contractor shall tighten screwed joints with tongs or wrenches. Caulking is not permitted.

Pipe sleeves shall be sch. 40 pvc, two times the pipe size diameter and extend 12" beyond each side of pavement. The letters “e” for electrical or “w” for water shall be stamped or chiseled on the pavement directly above the sleeve

The Contractor shall install each control valve in a separate valve box with a minimum of 12”separation between valves and 6” from any fixed object or structure.

The Contractor shall install no more than one valve per box.

All valve box lids shall be marked with 2” letters/numbers by “branding” method identifying the type of valve and the controller station number.

The Contractor shall install backflow preventer assembly in accordance with manufacturer's specifications and the Contract Documents. Exact location and positioning shall be approved by the Resident Engineer.

Neutral, pilot and spare wires shall be installed with a 2' - 0" coiled excess wire length at each end enclosure. Each and every wire splice shall be soldered together (using 60-40 solder), then encased in the waterproof epoxy connectors. Wire splices shall be made only in valve or pull boxes.

Each individual controller clock’s control wires shall be bundles and taped together with colored tape at intervals not exceeding 10'-0". Controller identification tape colors shall be as follow: (use as many as necessary).

CONTROLLER COLOR

"A" BLACK
"B" RED
"C" WHITE
"D" BLUE
"E" GREEN
"F" YELLOW

When all emitters are installed and the irrigation system is operating, each unit shall be adjusted and balanced, with all section control valves fully open to obtain uniform and adequate coverage.

The Contractor shall install all portions of the electrical installation with materials and methods conforming to the requirements of the edition of the National Electrical Code in effect at time of bid. The Contractor shall provide no less than one control wire and one common ground wire to service each valve in system.

Enclosures shall be sized accordingly. No 110 volt wire runs shall pass from controller cabinet to cabinet. Each controller shall have a separate electrical service through a raceway. Provide one power off-on switch for each controller.

A reduced copy of the approved as-built irrigation plan(s), color coded by stations and laminated in plastic, shall be mounted on the inside of each controller enclosure for maintenance personnel at the time of the final acceptance.

Wires shall be tested for continuity, open circuits, and unintentional grounds prior to connecting to equipment. The minimum insulation resistance to ground shall be fifty (50) megohms. Any wiring not meeting this requirement shall be replaced, at the contractor's expense

The contractor's guarantee shall consist of the standard specifications and the following: The entire irrigation system shall be guaranteed against defects in materials and workmanship for a period of one (1) year from the date of acceptance of work. Should the contractor fail during the guarantee period to expeditiously correct a defect upon written notification by the city, the city shall cause the work to be corrected and bill the actual costs incurred to the contractor. Defect corrections shall include the complete restoration of existing improvements that were damaged as a result of the defect.

PAYMENT

Furnish and Install Irrigation System shall be measured per Lump Sum. The Contract lump sum price paid for Furnish and Install Irrigation System shall include, but not be limited to, full compensation for furnishing all labor, materials, tools, and equipment and performing all work necessary to complete, maintain, plant establishment work and guarantee the irrigation work described or specified in the contract documents including any temporary irrigation and permanent irrigation, reduced-pressure back-flow preventer, ball valves, valve assembly, electric control valves, quick couplers, control wires, pull boxes, valve boxes, all piping and sleeves, electrical conduits, irrigation heads, emitters, bubblers, connection from electrical service to

irrigation electrical meter, connection from meter to irrigation controller(s), installation of controller enclosure, concrete pads, preparation, correction, reproduction and lamination of "as-built" drawings, controller charts, assembly and submittal of the check list and operation and maintenance manuals and all appurtenances to the aforementioned items, as well as, and project guarantees. Provide a schedule of values for Furnish and Install Irrigation System materials within 10 days of notification of award of bid by creating a complete cost break-down for this lump sum contract item and quantities. A draft schedule of values is included below. Verify and update the table as needed, adding and updating items and quantities, to create a complete cost break-down for this lump sum contract item

DRAFT SCHEDULE OF VALUES			
DESCRIPTION	QTY	UNIT	UNIT PRICE
DRIP CONTROL KIT		EA	
FLOW CONTROL ZONE KIT		EA	
MANUAL FLUSH VALVE		EA	
AIR/ VACUUM RELIEF VENT		EA	
PRESSURE COMPENSATING DRIPLINE		SF	
QUICK COUPLING VALVE		EA	
SHUT OFF BALL VALVE		EA	
MASTER VALVE		EA	
REDUCED PRESSURE BACKFLOW VALVE		EA	
CONTROLLER		EA	
FLOW SENSOR		EA	
WATER METER (1")		EA	
WATER METER (1-1/2")		EA	
LATERAL LINE PVC SCHEDULE 40 (1")		LF	
LATERAL LINE PVC SCHEDULE 40 (1"-1/4")		LF	
LATERAL LINE PVC SCHEDULE 40 (1"-1/2")		LF	
MAINLINE PVC SCHEDULE 40 (2")		LF	

Replace section 20-5.03D(4) Payment with:

20-5.03D(4) PAYMENT

Payment for furnishing and installing Decomposed Granite (DG) shall include all labor, materials, tools, equipment, and the placement and material as shown on the plans for DG, including decomposed granite, soil stabilizer, headerboard, and stakes, and other appurtenances required for a complete-in-place DG shoulder as indicated within these Special Provisions and as shown on the Plans. Payment shall be included in the contract unit prices paid per Square Foot for DG and no additional compensation shall be allowed, therefore.

Replace section 20-5.05 with:

20-5.05 ROUNDABOUT WATER TOWER FEATURE

20-5.05A GENERAL

Section 20-5.05 includes specifications for manufacture, fabrication, and installation of roundabout water tower feature and urban design features within the roundabout central island as shown on the plans. All components of the water tower feature and urban design features within the roundabout central island shall comply with the applicable sections of the State Standard Specifications and as shown below.

Welding must comply with Section 11.

Retaining walls must comply with Section 47-5.

Reinforcement must comply with Section 52.

Concrete header curbs must comply with Section 73.

Foundation concrete must comply with Section 90.

Contractor shall coordinate with the City on developing the roundabout water tower feature and urban design features within the roundabout central island.

20-5.05B MATERIALS

The concrete must have a minimum compressive strength of f'c = 2,500 psi and the reinforcing steel must have a yield stress Fy = 60 ksi.

20-5.05C SUBMITTALS

Submit shop drawings for roundabout water tower feature and urban design features within the roundabout central island, including details of materials, colors, anchorage systems and foundations, placement within roundabout, installation, and welding details.

20-5.05D PAMENT

The contract lump sum price paid for Construct Roundabout Water Tower Feature (Complete) shall include full compensation for providing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing the roundabout urban water tower feature, railing and concrete rail sleepers, retaining and freestanding walls, and concrete header curb, including design, plans, submittals, submittal/permit costs, design revisions, manufacturing, fabricating, and installing the roundabout urban design features, complete in place, as shown on the plans, as specified in these Special Provisions and as directed by the Engineer.

SECTION 26 AGGREGATE BASE

26-1.02 MATERIALS. In addition to the requirements of Section 26-1.02 of the State Standard Specifications, the following shall apply:

Aggregate base must comply with Section 26, "Aggregate Bases," of the State Standard Specifications and these Special Provisions.

Aggregate base must be Class 2.

Do not store reclaimed asphalt concrete or aggregate base within 100 feet measured horizontally of any culvert, watercourse, or bridge.

The contract unit price paid per cubic yard for Aggregate Base (Class 2) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in placing Aggregate Base (Class 2), as shown on the plans, as specified in the State Standard Specifications and these Special Provisions, and as directed by the Engineer.

SECTION 37 BITUMINOUS SEALS

37-3 SLURRY SEALS AND MICRO-SURFACINGS

Replace section 37-3.03 with:

37-3.03 MICRO-SURFACINGS

37-3.03A General

37-3.03A(1) Summary

Section 37-3.03 includes specifications for applying micro-surfacings.

Applying a micro-surfacing shall consist of mixing a polymer modified, cationic micro-surfacing emulsion (MSE), aggregate, mineral filler, set-control additives, and water and spreading the mixture on a pavement surface where shown on the plans, in conformance with the provisions in these Special Provisions and State Revised Standard Specifications, and as directed by the Engineer.

37-3.03B Material

37-3.03B(1) Micro-surfacing Emulsion (MSE)

Micro-surfacing emulsion (MSE) shall be homogenous and shall conform to the provisions of these Special Provisions. The polymer shall be milled or blended into the asphalt or blended into the emulsifier solution prior to the emulsification process.

The MSE shall conform to the following requirements when tested in conformance with the following test methods:

Polymer Modified, Cationic Micro-Surfacing Emulsion (MSE)

Specific Designation	Test Method	Requirement
Viscosity SSF @ 25°C	AASHTO T59	15 – 90 seconds
Sieve, max	AASHTO T59	0.30 percent
Settlement, 5 days, max	ASTM D6930 or AASHTO T59	5 percent
Storage Stability, 1 day, max	AASHTO T59	1 percent
Residue by Evaporation, min	California Test 331	64 percent
Specification Designation for Residue		
Specific Designation	Test Method	Requirement
Penetration @ 25°C, 100g, 5s, 0.1 mm	AASHTO T49	40 – 90
Softening Point, min	AASHTO T53	61°C
G*, @ 20°C, 10 rad/sec[a]	AASHTO T315	Report Only
Phase angle @ 50°C, 10 rad/sec, PA (max) – PA base[b]	AASHTO T315	Report Only
Stiffness, @ -12°C, MPa and M-value	AASHTO T315	Report Only
Torsional Recovery, %	California Test 332	>21%
Polymer Content, % (by weight)	California Test 402	>3.5%
25mm plates for the 50°C test. 8mm plates for the 20°C test.		

37-3.03B(2) Water and Additives

Water shall be of such quality that the asphalt will not separate from the MSE before the micro-surfacing is placed on the pavement. If necessary for workability, a set-control agent that will not adversely affect the micro-surfacing product may be used.

37-3.03B(3) Mineral Filler

Mineral filler shall be Portland cement or hydrated lime that is free of lumps. Portland cement shall be either Type I, Type II, or combination thereof. The type of mineral filler shall be determined by the Contractor based on laboratory mix designs. The mineral filler will be considered part of the aggregate gradation requirement.

37-3.03B(4) Aggregate

The aggregate used for micro-surfacing shall be Type II. The material shall be free from vegetation matter and other deleterious substances. Aggregate shall be free of lumps and oversize particles. The aggregate shall be 100% crushed with no rounded particles, volcanic in origin and black in color. The use of gray or light-colored aggregate shall not be allowed. The Contractor shall specify in the bid proposal the name and location of the black rock aggregate quarry and shall provide certification at the preconstruction conference that the rock was crushed a minimum of 90 days prior. The Contractor shall submit samples of the black rock aggregate to the Engineer for review and acceptance.

Aggregate, prior to the addition of the MSE, shall conform to the provisions of these Special Provisions. If aggregates are blended, each component aggregate shall conform to the Sand Equivalent and Durability Index requirements of these Special Provisions when tested in conformance with the respective California Tests.

The percentage composition by mass of the aggregate (including mineral filler) shall conform to the following grading requirements when tested in conformance with California Test 202:

Type II

Sieve Size	Percent Passing
3/8 inch (9.5 mm)	100
#4 (4.75 mm)	94 – 100
#8 (2.36 mm)	65 – 90
#16 (1.18 mm)	40 – 70
#30 (600 µm)	25 – 50
#200 (75 µm)	5 – 15

The aggregate (excluding mineral filler) shall conform to the following quality requirements:

Type II

Test	California Test	Requirement
Sand Equivalent (min)	217	70
Durability Index (min)	229	75
Percentage of Crushed Particles (min)[1]	205	100%
Los Angeles Rattler Loss at 500 Rev. (max)[2]	211	35%

[1] CT205, Section D, is amended to read: "Any particle having 2 or more freshly, mechanically fractured faces shall be considered a crushed particle."

[2] Los Angeles Rattler shall be performed on the parent aggregate before crushing.

If the results of the aggregate grading do not meet the specified gradation, the micro-surfacing represented by the test shall be removed within 5 working days of the Engineer's written notice. However, if requested in writing by the Contractor and approved by the Engineer, the micro-surfacing represented by the tests containing a percentage passing (PP) range value +/- 1 in any of the Sieve sizes, but not greater than +/-4, may remain in place. The Contractor shall pay to the City the following amount for the screenings represented by the test and left in place:

Sieve Sizes	Percentage Passing	Allowable Tolerances	Allowable Tolerances	Allowable Tolerances	Allowable Tolerances
3/8 inch (9.5 mm)	100	PP +/- 1	PP +/- 2	PP +/- 3	PP +/- 4
#4 (4.75 mm)	94 – 100	PP +/- 1	PP +/- 2	PP +/- 3	PP +/- 4
#8 (2.36 mm)	65 – 90	PP +/- 1	PP +/- 2	PP +/- 3	PP +/- 4
#16 (1.18 mm)	40 – 70	PP +/- 1	PP +/- 2	PP +/- 3	PP +/- 4
#30 (600 µm)	25 – 50	PP +/- 1	PP +/- 1	PP +/- 1	PP +/- 1
#200 (75 µm)	5 – 15	PP +/- 1	PP +/- 1	PP +/- 1	PP +/- 1
PAYMENT TO CITY		$5.00 per ton	$7.50 per ton	$10.00 per ton	$15.00 per ton

If the results of the Sand Equivalent test for aggregate do not meet the specified requirement, the micro-surfacing represented by the test shall be removed within 5 working days of the Engineer's written notice. However, if requested in writing by the Contractor and approved by the Engineer, the Micro-surfacing represented by the tests containing a sand equivalent Value below 70, but not less than 65, may remain in place. The Contractor shall pay to the City the following amount for the screenings represented by the test and left in place:

Sand Equivalent	Payment to City
70 or over	NONE
68 – 69	$5.00 per ton
66 – 67	$7.50 per ton
65	$10.00 per ton

If the results of the Durability Index test for aggregate do not meet the specified requirement, the micro-surfacing represented by the test shall be removed within 5 working days of the Engineer's written notice. However, if requested in writing by the Contractor and approved by the Engineer, the micro-surfacing represented by the tests containing a durability index value below 75, but not less than 70, may remain in place. The Contractor shall pay to the City the following amount for the screenings represented by the test and left in place:

Durability Index	Payment to City
75 or over	NONE
73 – 74	$5.00 per ton
71 – 72	$7.50 per ton
70	$10.00 per ton

When the results of 2 or all 3 of the aggregate grading, the Sand Equivalent, and Durability Index tests do not conform to the specified requirements, both or all three payments to the City shall apply. The City shall deduct these amounts from any moneys due or to become due to the Contractor.
Any progress payment made after the completion date shall not be construed as a waiver of material deductions.

No single aggregate grading, durability index or Sand Equivalent test shall represent more than 300 tons or one day's production, whichever is smaller.

37-3.03B(4)(a) Aggregate for Rut filling

Micro-surfacing (Type III) shall be used for rut filling and shall conform to these Special Provisions. The aggregate used for Type III shall be grey rock aggregate. The grey rock aggregate shall be 100% crushed with no rounded particles. The material shall be free from vegetation and other deleterious substances. The Contractor shall submit samples and test results of the grey rock aggregate to the Engineer for review and acceptance.

Aggregate, prior to the addition of the MSE, shall conform to the provisions of these Special Provisions. If aggregates are blended, each component aggregate shall conform to the Sand Equivalent and Durability Index requirements of these Special Provisions when tested in conformance with the respective California Tests.

The percentage composition by mass of the aggregate (including mineral filler) shall conform to the following grading requirements when tested in conformance with California Test 202:

Type III

Sieve Size	Percent Passing
3/8 inch (9.5 mm)	100
#4 (4.75 mm)	70 – 90
#8 (2.36 mm)	45 – 70
#16 (1.18 mm)	28 – 50
#30 (600 µm)	19 – 34
#200 (75 µm)	5 – 15

The aggregate (excluding mineral filler) shall conform to the following quality requirements:

Type III

Test	California Test	Requirement
Sand Equivalent (min)	217	70
Durability Index (min)	229	70
Percentage of Crushed Particles (min)[1]	205	100%
Los Angeles Rattler Loss at 500 Rev. (max)[2]	211	35%
[1] CT205, Section D, is amended to read: "Any particle having 2 or more freshly, mechanically fractured faces shall be considered a crushed particle." [2] Los Angeles Rattler shall be performed on the parent aggregate before crushing.		

If the results of the aggregate grading do not meet the specified gradation, the micro-surfacing represented by the test shall be removed within 5 working days of the Engineer's written notice. However, if requested in writing by the Contractor and approved by the Engineer, the micro-surfacing represented by the tests containing a percentage passing (PP) range value +/- 1 in any of the Sieve sizes, but not greater than +/-4, may remain in place. The Contractor shall pay to the City the following amount for the screenings represented by the test and left in place:

Sieve Sizes	Percentage Passing	Allowable Tolerances	Allowable Tolerances	Allowable Tolerances	Allowable Tolerances
3/8 inch (9.5 mm)	100	PP +/- 1	PP +/- 2	PP +/- 3	PP +/- 4
#4 (4.75 mm)	70 – 90	PP +/- 1	PP +/- 2	PP +/- 3	PP +/- 4
#8 (2.36 mm)	45 – 70	PP +/- 1	PP +/- 2	PP +/- 3	PP +/- 4
#16 (1.18 mm)	28 – 50	PP +/- 1	PP +/- 2	PP +/- 3	PP +/- 4
#30 (600 µm)	19 – 34	PP +/- 1	PP +/- 1	PP +/- 1	PP +/- 1
#200 (75 µm)	5 – 15	PP +/- 1	PP +/- 1	PP +/- 1	PP +/- 1
PAYMENT TO CITY		$5.00 per ton	$7.50 per ton	$10.00 per ton	$15.00 per ton

If the results of the Sand Equivalent test for aggregate do not meet the specified requirement, the micro-surfacing represented by the test shall be removed within 5 working days of the Engineer's written notice. However, if requested in writing by the Contractor and approved by the Engineer, the micro-surfacing represented by the tests containing a sand equivalent Value below 70, but not less than 65, may remain in place. The Contractor shall pay to the City the following amount for the screenings represented by the test and left in place:

Sand Equivalent	Payment to City
70 or over	NONE
68 – 69	$5.00 per ton
66 – 67	$7.50 per ton
65	$10.00 per ton

If the results of the Durability Index test for aggregate do not meet the specified requirement, the micro-surfacing represented by the test shall be removed within 5 working days of the Engineer's written notice. However, if requested in writing by the Contractor and approved by the Engineer, the micro-surfacing represented by the tests containing a durability index value below 70, but not less than 65, may remain in place. The Contractor shall pay to the City the following amount for the screenings represented by the test and left in place:

Durability Index	Payment to City
75 or over	NONE
73 – 74	$5.00 per ton
71 – 72	$7.50 per ton
70	$10.00 per ton

When the results of 2 or all 3 of the aggregate grading, the Sand Equivalent, and Durability Index tests do not conform to the specified requirements, both or all three payments to the City shall apply. The City shall deduct these amounts from any moneys due or to become due to the Contractor.
Any progress payment made after the completion date shall not be construed as a waiver of material deductions.

No single aggregate grading, durability index, or Sand Equivalent test shall represent more than 300 tons or one day's production, whichever is smaller.

37-3.03B(5) Mix Design

At least 7 working days before the micro-surfacing placement commences, the Contractor shall submit for approval of the Engineer a laboratory report of tests and a proposed mix design covering the specific materials proposed for use on the project.

The percentages of each individual material proposed in the mix design shall be shown in the laboratory report. Individual materials shall be within the following limits:

Micro-surfacing Mix Design

Material	Proportion Limits
Residual Asphalt	7.5% to 10.5% by dry mass of aggregate
Mineral Filler	0% to 3% by dry mass of aggregate
Additive	As needed
Water	As needed

Adjustments may be required during construction based on field conditions.

The mix design and aggregate tests shall be performed by a laboratory capable of performing the applicable International Slurry Surfacing Association (ISSA) tests. The proposed micro-surfacing mixture shall conform to the specified requirements when tested in conformance with the following tests:

Test	ISSA Test Method	Requirements
Wet Cohesion @ 30 minute (Set) (min) @ 60 minute (Traffic) (min)	TB* 139	 12 kg-cm 20 kg-cm
Excess Asphalt	TB* 109	540 g/m2
Wet Stripping (min)	TB* 114	90%

TB* = Technical Bulletin

Test	ISSA Test Method	Requirements
Wet Track Abrasion 6-day soak loss (max) 1-hour soak	TB* 100	 810 g/m2 538 g/m2
Displacement Lateral (max) Specific Gravity after 1000 cycles of 56.8 kg (max)	TB* 147A	 5% 2.10
Classification Compatibility	TB* 144	(AAA, BAA) 11 Grade Points
Mix Time @ 25°C	TB* 113	Controllable to 120 seconds

TB* = Technical Bulletin

The laboratory that performed the tests and designed the mixture shall sign the laboratory report. The report shall show the results of the tests on individual materials and shall compare their values to those required by these Special Provisions. The report shall clearly show the proportions of aggregate, filler (minimum and maximum), water (minimum and maximum), set control additive, and MSE solids content (minimum and maximum) based on the dry mass of aggregate. The laboratory shall report the quantitative effects of moisture content on the unit mass of the aggregate (bulking effect) in conformance with the requirements of ASTM Designation C 29M. Previous laboratory reports covering the same materials may be accepted provided the material test reports were completed within the previous 12 months. The mix design shall further show the recommended changes in mineral filler, water, and additive proportions for high temperature weather conditions by reporting proportions of materials required for 60 seconds of mix time with materials heated to 100°F. This 100°F mixing report will not be required for projects requiring nighttime application.

The component materials used in the mix design shall be representative of the micro-surfacing materials proposed by the Contractor for use on the project.

Once the mix design is approved by the Engineer, no substitution of other material will be permitted unless the materials proposed for substitution are first tested and a laboratory report is submitted for the substituted design in conformance with the provisions of these Special Provisions. Substituted materials shall not be used until the mix design for those materials has been approved by the Engineer.

The completed mixture, after addition of water and set control agent, if used, shall be such that the micro-surfacing mixture has proper workability. At the expiration of the road closure hours, in conformance with the provisions in these Special Provisions, the micro-surfacing mixture shall be sufficiently cured to support unrestricted traffic.

37-3.03C Construction

37-3.03C(1) Surface Preparation

Before placing the micro-surfacing, the pavement surface shall be cleaned by sweeping, flushing or by other means necessary to remove loose particles of paving, dirt, vegetation, and other extraneous material. When required, the roadway surface may be fogged with water ahead of the spreader box. The application of the fog spray may be adjusted to suit temperatures, surface texture, humidity and dryness of pavement.

37-3.03C(2) Weather Conditions

The micro-surfacing mixture shall not be placed when the ambient temperature is below 55°F or during unsuitable weather. Micro-surfacing shall not be placed if rain is imminent or if there is the possibility that there will be freezing temperatures within 24 hours.

37-3.03C(3) Equipment

37-3.03C(3)(a) General

The equipment used by the Contractor for pavement cleaning and excess aggregate removal shall include a self-propelled rotary power broom, mobile pick-up broom or top dumping mobile pick-up broom.

37-3.03C(3)(b) Mixing and Spreading Equipment

The micro-surfacing shall be mixed in continuous pugmill mixers of adequate size and power for the type of micro-surfacing to be placed. All indicators shall be in conformance with the provisions of these Special Provisions and shall be in working order prior to commencing mixing and spreading operations. Mixer-spreader trucks shall be equipped to proportion the MSE, water, aggregate, mineral filler, and set-control additives by volume. Rotating and reciprocating equipment on mixer-spreader trucks shall be covered with metal guards.

The mixer-spreader truck shall not be operated unless low-flow and no-flow devices and revolution counters are in good working condition and functioning and metal guards are in place. Indicators required by these Special Provisions shall be visible while walking alongside the mixer-spreader truck. Aggregate feeders shall be connected directly to the drive on the emulsion pump. The drive shaft of the aggregate feeder shall be equipped with a revolution counter reading to the nearest one-tenth of a revolution.

In addition to the requirements of the fourth paragraph of section 5-1.33, "Equipment," of the State Standard Specifications, the identifying number of mixer-spreader trucks shall be at least 3 inches in height, located on the front and rear of the vehicle.

The micro-surfacing mixture shall be spread by means of a spreader box conforming to sections 37-3.03C(3)(b)(i) and 37-3.03C(3)(b)(ii).

37-3.03C(3)(b)(i) Spreader Box

The mixture shall be agitated and spread uniformly in the surfacing box by means of motor driven twin-shafted paddles or spiral augers fixed in the spreader box. A front seal shall be provided to insure no loss of the mixture at the road contact point. The rear seal shall act as a final strike-off and shall be adjustable. The spreader box and rear strike-off shall be so designed and operated that a uniform consistency is achieved to produce a free flow of material to the rear strike-off. The spreader box shall have suitable

means provided to side shift the box to compensate for variations in the pavement geometry, the box shall be adjustable. Spreader box skids shall be maintained in such manner as to prevent chatter (wash boarding) in the finished mat. The spreader box in use shall be clean and free of micro-surfacing and MSE at the start of each work shift.

The spreader box shall have a series of strike-off devices at the rear of the box. The leading strike-off device shall be fabricated of steel, stiff rubber or other suitable material. The number of strike-off devices shall be determined by the Contractor. The first strike-off device shall be designed to maintain close contact with the pavement during the spreading operations, shall obtain the thickness required, and shall be capable of being adjusted to the various pavement cross sections for application of a uniform micro-surfacing finished surface. The final strike-off device shall be fabricated of flexible material suitable for the intended use and shall be designed and operated to ensure a uniform texture is achieved in the finished surface of the micro-surfacing. The final strike-off device shall be cleaned or changed daily if problems with longitudinal scouring occur.

Flexible fabric drags attached to the rear of the spreader box shall not be used.

37-3.03C(3)(b)(ii) Wheel Path Depression (Rut) Box

The wheel path depression (rut) box shall be designed to have adjustable strike-off devices to regulate the depth and shall have a width of between 5 feet and 6 feet. Hydraulic augers, or similar devices, shall be installed and shall be capable of moving the mixed material from the rear to the front of the filling chamber. These devices shall also be capable of guiding the larger aggregate into the center, deeper section of the wheel path depression, and forcing the finer material toward the outer edges of the spreader box.

The micro-surfacing mixture, to be spread in areas inaccessible to the controlled spreader box, may be spread by other methods upon approval of the Engineer.

Flexible fabric drags attached to the rear of the wheel path depression (rut) box shall not be used.

37-3.03C(3)(c) Mixer and Spreader Truck Calibration

Each mixer/spreader truck used on the project shall be calibrated in accordance with California Test 109. The trucks shall be calibrated for rock, emulsion, cement, additives, and any mineral filler used. Calibrations shall take place a maximum of 10 days prior to application of micro-surfacing. The Contractor shall notify the Engineer a minimum of 3 working days prior to calibration so that City representatives may make arrangements to observe.

For all material calibrated, 3 consecutive runs per gate setting shall be completed and these 3 test runs must not deviate from their combined mathematical average by more than 2.0%.

Calibrations will take place at most once a week or as required by the Engineer and no machine will be allowed to work on the project until the calibration has been completed and/or accepted 3 working days before the start of work. Weigh back tickets shall be submitted at the end of each work day that micro-surfacing is placed.

37-3.03C(4) Proportioning

Aggregate, mineral filler, MSE, water, and additives, including the set-control agent, if used, shall be proportioned by volume utilizing the mix design approved by the Engineer. If more than 1 kind of aggregate is used, the correct amount of each kind of aggregate to produce the required grading shall be

proportioned separately, prior to adding the other materials of the mixture, in a manner that will result in a uniform and homogeneous blend.

The aggregate shall be proportioned using a belt feeder operated with an adjustable cutoff gate. The height of the gate opening shall be determinable. The MSE shall be proportioned by a positive displacement pump. Variable rate emulsion pumps, if used, shall be calibrated and sealed in the pump's calibrated condition in conformance with California Test 109 prior to usage.

The delivery rate of aggregate and MSE per revolution of the aggregate feeder shall be calibrated at the appropriate gate settings for each mixer-spreader truck used on the project in conformance with California Test 109 and in conformance with the provisions of these Special Provisions.

The aggregate belt feeder shall deliver aggregate to the pugmill with such volumetric consistency that the deviation for any individual aggregate delivery rate check-run shall not exceed 2.0 percent of the mathematical average of 3 runs of at least 3 tons each. The emulsion pump shall deliver MSE to the pugmill with such volumetric consistency that the deviation for any individual delivery rate check-run shall be within 2.0 percent of the mathematical average of 3 runs of at least 300 gallons each. The water pump shall deliver water to the pugmill with such volumetric consistency that the deviation for any individual delivery rate check-run shall be within 2.0 percent of the mathematical average of 3 runs of at least 300 gallons each.

The MSE storage tank shall be located immediately before the emulsion pump and shall be equipped with a device which will automatically shut down the power to the emulsion pump and aggregate belt feeder when the MSE level is lowered to a point where the pump suction line is exposed.

A temperature-indicating device shall be installed in the emulsion storage tank at the pump suction level. The device shall indicate the temperature of the MSE and shall be accurate to within 10°F.

The belt delivering the aggregate to the pugmill shall be equipped with a device to monitor the depth of aggregate being delivered to the pugmill. The device for monitoring the depth of aggregate shall automatically shut down the power to the aggregate belt feeder whenever the depth of aggregate is less than the target depth of flow. A second device shall be located where the device will monitor the movement of the aggregate belt by detecting revolutions of the belt feeder. The devices for monitoring no flow or belt movement shall automatically shut down the power to the aggregate belt when the aggregate belt movement is interrupted. The device to detect revolutions of the belt feeder will not be required where the aggregate delivery belt is an integral part of the drive chain. To avoid erroneous shutdown by normal fluctuation, a delay of 3 seconds will be permitted between sensing and shutdown of the operation.

37-3.03C(5) Application Rate of Aggregate

Micro-surfacing spread rates must be within the ranges shown on the following table:

Micro-surfacing Type	Application Range (lb of dry aggregate/sqyd)
Type II	15 – 18
Type III	20 – 30

The micro-surfacing mixture shall be uniformly spread on the existing surfacing within the rate specified without spotting, re-handling, or otherwise shifting of the mixture.

37-3.03C(6) Repair Wheel Path Depressions

When wheel path depressions have a cross section that is deformed 1/2 inch or more, the individual wheel paths shall first be filled utilizing a wheel path depression (rut) box. The depth of the wheel path depression shall be determined after the adjacent ridges have been removed, when applicable. The maximum single application for wheel path depressions shall be 1 inch. Wheel path depressions of depths greater than 1 inch shall require multiple applications in each depression. A pneumatic tired roller shall be used after all rut filling operations. The roller shall make 2 passes at slow speed no more than 7 mph. Wheel path depressions having a cross section greater than 1/2 inch and less than 1 inch shall be paid for under the contract bid item "Micro-surfacing (Type III)".

Wheel path depression repair shall be constructed with a slight crown to allow for initial compaction by traffic on the micro-surfacing.

Freshly filled wheel path depressions shall be compacted by traffic for a minimum of 12 hours before additional lifts of micro-surfacing material are placed for rut filling purposes or as surface courses.

37-3.03C(7) Placement

Micro-surfacing shall be placed no earlier than 7 calendar days after Chip Seal operation on roads to receive the Roseville Cape Seal as shown on the plans.
Longitudinal joints shall correspond with the edges of the traffic lanes. The Engineer may permit other patterns of longitudinal joints if the patterns will not adversely affect the quality of the finished product, this shall be required for approval in writing 5 working days prior to the start of work.

Through traffic lanes shall be spread in full lane widths only. Longitudinal joints common to 2 traffic lanes shall be butt joints with overlaps not to exceed 3 inches. Building paper shall be placed at the transverse joints to avoid double placement of the micro-surfacing. Other suitable methods to avoid double placement of the micro-surfacing will be allowed. Hand tools shall be available to remove spillage.

The mixture shall be uniform and homogeneous after placing on the surfacing and shall not show separation of the MSE and aggregate after setting. The completed surface shall be of uniform texture and free from ruts, humps, depressions, or irregularities.
Adequate means shall be provided to protect the micro-surfacing from damage by traffic until such time that the mixture has cured sufficiently so that the micro-surfacing will not adhere to or be picked up by the tires of vehicles.

If the micro-surfacing is not capable of supporting unrestricted traffic at the expiration of the road closure hours, the Contractor shall pay the liquidated damaged per the provisions of these Special Provisions. Placement of the micro-surfacing shall cease before the expiration of road closure hours as specified in these Special Provisions.

37-3.03C(8) Sweeping

Initial sweeping shall begin 1 day after the micro-surfacing placement. Care shall be taken to avoid unraveling the micro-surfacing. Excessive sweeping will not be allowed.
Seven sweepings shall be considered as included in the contract price paid for micro-surfacing. The first sweeping shall be performed the day after the application is applied. The second sweeping shall be performed 3 days after the micro-surfacing application is applied. The third sweeping shall be performed

5 days after the micro-surfacing application is applied. The fourth sweeping shall be performed 7 days after the micro-surfacing is applied. The fifth sweeping shall be performed 10 days after the micro-surfacing is applied. The sixth sweeping shall be performed 15 days after the micro-surfacing is applied. The seventh sweeping shall be performed during the punch list process.

Prior to each sweeping, the Contractor shall contact the Engineer with the street's sweeping schedule. After sweeping takes place, the Contractor shall contact the Engineer for acceptance of the street sweeping.

If the sweeping is not done to the schedule listed above, the Contractor shall pay the liquidated damaged per the provisions of these Special Provisions.

The Contractor shall remove all loose aggregate from the curbs, gutters, driveways, and sidewalks prior to sweeping the roadway surface. The Contractor will be responsible to sweep abutting adjacent areas and haul routes. The Contractor shall have 1 working day to sweep the adjacent areas and haul route when requested in writing by the Engineer.

The Contractor shall sweep the micro-surfaced streets and adjacent areas with a self-propelled vacuum or regenerative air sweeper. Any additional sweepings required to remove excess material shall be performed as directed by the Engineer at no additional expense to the City.

37-3.03C(9) Test Strip

The Contractor shall construct a test strip for evaluation by the Engineer 10 working days prior to the micro-surfacing application. The test strip shall be 500 feet to 1000 feet long and shall consist of the application courses specified. The test strip shall be constructed at the same time of day or night that the full production of micro-surfacing will be placed and may be constructed in 2 days or nights when multiple course applications are specified. The location of the test strip shall be specified by the City.

The micro-surfacing test strip shall have a break time and shall be able to be open to cross traffic no greater than 1 hour after the micro-surfacing is placed. This time will be reflected on the global projects break time and capability of being open to cross traffic. The global project shall have this break time and shall be able to be open to cross traffic no greater than 1 hour after placement of the micro-surfacing. If the test strip does not meet this requirement the test strip will be rejected and shall be removed at the Contractors expense.

The Engineer will evaluate the completed test strip after 12 hours of traffic on the completed test strip to determine if the mix design and placement procedure are acceptable. If the mix design or the placement procedure is determined by the Engineer to be unacceptable, the test strip will be rejected, the Contractor shall make modifications, and a new test strip shall be constructed and evaluated by the Engineer. The cost of materials and placement of the test strips, which have been rejected, shall be borne by the Contractor and will not be considered as part of the contract work. If ordered by the Engineer, rejected test strips shall be removed at the Contractors expense.

37-3.03C(10) Repair of Early Distress

If bleeding, raveling, delamination, rutting, or washboarding occurs within 60 days after placing the micro-surfacing, the Contractor shall diligently pursue repairs by any method approved by the Engineer. The Contractor shall not be relieved from maintenance until repairs have been completed.

37-3.03D Payment

The contract price paid per square yard for Microsurfacing Type 2 shall include full compensation for providing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing microsurfacing, complete in place, including cleaning the existing surface as needed, as shown on the plans, as specified in Section 37, "Bituminous Seals" of these Technical Specifications, and as directed by the Engineer.

No payment shall be made for any area requiring re-application of slurry seal.

SECTION 39. ASPHALT CONCRETE

Add to section 39-2.01:

Produce and place HMA Type A under the section 39-3, method construction process.

Add to section 39-2.01A with:

Asphalt concrete pavement shall be Hot Mix Asphalt (Type A, 1/2" Maximum Medium Gradation) and conform to the applicable provisions in Section 71, “Streets” of the City of Roseville’s Construction Standards and Section 39 of the State Standard Specifications.

In addition to the requirements specified in this section of the State Standard Specifications, the following shall apply:

The cost for grading and compaction of existing aggregate base material, where shown on the plans, profiles, and cross sections, shall be included within the price paid for placement of Hot Mix Asphalt (Type A).

Add to section 39-2.02A(2):

processed RAP: RAP that has been fractionated.

substitution rate: Amount of RAP aggregate substituted for virgin aggregate in percent.

binder replacement: Amount of RAP binder in OBC in percent.

surface course: Upper 0.2 feet of HMA exclusive of OGFC.

Add to section 39-2.02B(3):

Asphalt binder used in HMA Type A must be PG 64-10.

Add to section 39-2.02B(4)(a):

Aggregate used in HMA Type A must comply with the 1/2-inch HMA Types A.

Add section 39-3.06:

39-3.06 PAVEMENT FAILURE REPAIR

39-3.06A General

Remove existing asphalt concrete pavement to the depth and dimensions shown on the plans and replace with HMA. The Engineer determines the exact limits of pavement failure repair. The minimum width of roadway section to be removed shall not be less than 4 feet unless otherwise noted on the plans.

The following specifications in section 39 do not apply to pavement failure repair:

1. Contractor quality control
2. Production start-up evaluation
3. Smoothness

39-3-06B Materials

HMA for pavement failure repair must be Type A.

Asphalt binder for the HMA must be PG 64-10. The minimum asphalt binder content must be 5.0 percent. If you request and if authorized, you may reduce the minimum asphalt binder content.

The aggregate for the HMA must comply with the 3/4-inch HMA Types A and B grading.

39-3-06C Construction

Place pavement failure repair under the Method construction process in Section 39-3.

Provide flaggers and/or traffic control to allow the Engineer to mark out pavement failure areas.

Remove existing roadway section by grinding with a milling machine capable of cutting to a neat line. Do not damage any pavement that is to remain in place. Minimize the disturbance of materials to be left in place during removal or roadway sections.

Dispose of removed material.

Apply tack coat to the bottom and all vertical surfaces of the existing roadway section within the pavement failure repair area. Follow the Tack Application Rates table using "Planed PCC and HMA (AC) surfaces".

The surface must be:

1. Textured uniformly
2. Compacted firmly
3. Without depressions, humps, and irregularities

If the base is excavated beyond the specified plane, replace it with HMA. The Department does not pay for this HMA. Damage to pavement which is to remain in place shall be repaired to a condition satisfactory to the Engineer, or the damaged pavement shall be removed and replaced with new HMA if ordered by the Engineer. Repairing or removing and replacing pavement damaged outside the limits of pavement to be reconstructed shall be at the Contractor's expense.

Complete pavement failure repair in a lane before the lane is specified to be opened to traffic under section 12-4.

39-3.06D Payment

Pavement failure repair is measured based on the specified dimensions and any adjustments ordered.

You will receive no additional payment for pavement failure repair beyond the area marked out by the Engineer due to availability or limitations of your equipment.

Section 9-1.06 "Changed Quantity Payment Adjustments" will not apply to the pavement failure repair item.

Add section 39-3.07:

39-3.07 BASE FAILURE REPAIR

39-3.07A General

Remove existing asphalt concrete pavement and underlying base rock to the depth and dimensions shown on the plans and replace with HMA. The Engineer determines the exact limits of base failure repair. The minimum width of roadway section to be removed shall not be less than 4 feet unless otherwise noted on the plans.

The following specifications in section 39 do not apply to base failure repair:

1. Contractor quality control
2. Production start-up evaluation
3. Smoothness

39-3.07B Materials

HMA for pavement failure repair must be Type A.

Asphalt binder for the HMA must be PG 64-10. The minimum asphalt binder content must be 5.0 percent. If you request and if authorized, you may reduce the minimum asphalt binder content.

The aggregate for the HMA must comply with the 3/4-inch HMA Types A and B grading.

39-3.07C Construction

Place base failure repair under the Method construction process in Section 39-3.

Provide flaggers and/or traffic control to allow the Engineer to mark out base failure areas.

Remove existing roadway section by grinding with a milling machine capable of cutting to a neat line. Do not damage any pavement that is to remain in place. Minimize the disturbance of materials to be left in place during removal or roadway sections.

Remove failed pavement and base rock to the required depth, then grade, water, and thoroughly compact the material remaining in place to a minimum of 95% relative compaction.

Dispose of removed material.

Apply tack coat to the bottom base rock and all vertical surfaces of the existing roadway section within the base failure repair area. Follow the Tack Application Rates table using "Planed PCC and HMA (AC) surfaces".

The surface must be:

1. Textured uniformly
2. Compacted firmly
3. Without depressions, humps, and irregularities

If the base is excavated beyond the specified plane, replace it with HMA. The Department does not pay for this HMA. Damage to pavement which is to remain in place shall be repaired to a condition satisfactory to the Engineer, or the damaged pavement shall be removed and replaced with new HMA if ordered by the Engineer. Repairing or removing and replacing pavement damaged outside the limits of pavement to be reconstructed shall be at the Contractor's expense.

Complete base failure repair in a lane before the lane is specified to be opened to traffic under section 12-4.

39-3.07D Payment

Base failure repair is measured based on the specified dimensions and any adjustments ordered.

You will receive no additional payment for base failure repair beyond the area marked out by the Engineer due to availability or limitations of your equipment.

Section 9-1.06 "Changed Quantity Payment Adjustments" will not apply to the base failure repair item.

SECTION 40: CONCRETE PAVEMENT

40-1.01 GENERAL. Portland cement concrete pavement shall conform to the provisions in Section 40, "Concrete Pavement," of the State Standard Specifications and these special provisions.

Concrete pavement shall be jointed plain concrete pavement (JPCP) and shall conform to the provisions in Section 40-4 "Jointed Plain Concrete Pavement" of the State Standard Specifications and these special provisions.

40-1.01D PAYMENT. The contract price paid per cubic yard for Jointed Plain Concrete Pavement shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing and installing jointed plain concrete pavement, complete in place, including curing compound, dowel and tie bars, and forming and filling cores, as shown on the plans, and as specified in the City of Roseville Construction Standards, the State Standard Specifications, and as directed by the Engineer.

SECTION 51: CONCRETE STRUCTURES

51-1.01 GENERAL. Portland cement concrete structures shall conform to the provisions in Section 51, "Concrete Structures," of the State Standard Specifications and these special provisions.

51-7.01A GENERAL In addition to the requirements of Section 51-7.01 of the State Standard Specifications, the following shall apply:

A. Drop Inlets
Drop inlets, drainage manholes, inlet structures, pipe outlet access control racks, concrete inlet structures, and other miscellaneous concrete structures shall conform to the Section 101—Drainage of the City of Roseville Construction Standards and Section 51—Concrete Structures of the State Standard Specifications.

Concrete aprons adjacent to drop inlets shall conform to Section 73-1.01 "Miscellaneous Concrete Construction" of these special provisions. Full compensation for concrete aprons shall be considered as included in the contract unit price paid for the adjacent inlet type and no additional compensation is allowed.

51-7.01D PAYMENT. The contract price paid per each for Drainage Inlet (Type C) and (Type F) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing and installing concrete inlet structures and other miscellaneous concrete structures, complete in place, including removal of existing drainage facilities, saw cutting, structure excavation and structure backfill, frames, grates, racks, covers, miscellaneous hardware, and adjustment of frame and grate to grade, as shown on the plans, and as specified in the City of Roseville Construction Standards, the State Standard Specifications, and as directed by the Engineer.

SECTION 52: REINFORCEMENT

Add to section 52-1.04 of the state standard specifications:

Payment for steel reinforcement used for drainage inlet is included in the payment for various types of drainage inlets involved.

SECTION 64: PLASTIC PIPE

64-1.01 GENERAL In addition to the requirements of Section 64-1.01 of the State Standard Specifications, the following shall apply:

High-density polyethylene (HDPE) shall conform to the provisions in Section 101 DRAINAGE and Section 31 TRENCH BACKFILL of the City of Roseville Construction Standards and the Standard Construction Specifications, and these special provisions.

SECTION 65: CONCRETE PIPE

65-1.01 GENERAL In addition to the requirements of Section 65-1.01 of the State Standard Specifications, the following shall apply:

Reinforced concrete pipe (RCP) shall conform to the provisions in Section 101 DRAINAGE and Section 31 TRENCH BACKFILL of the City of Roseville Construction Standards and the Standard Construction Specifications, and these special provisions.

SECTION 70: MISCELLANEOUS DRAINAGE FACILITIES

70-1.01 GENERAL In addition to the requirements of Section 70-1.01 of the State Standard Specifications, the following shall apply:

High-density polyethylene (HDPE) shall conform to the provisions in Section 101 DRAINAGE and Section 31 TRENCH BACKFILL of the City of Roseville Construction Standards and the Standard Construction Specifications, and these special provisions.

SECTION 73: CONCRETE CURBS AND SIDEWALKS

73-1.01 GENERAL In addition to the requirements of Section 73-1.01 of the State Standard Specifications, the following shall apply:

Portland Cement Concrete curbs, gutters, sidewalks, curb ramps, valley gutters and driveways shall conform to the provisions in Section 73, "Concrete Curbs and Sidewalks," of the State Standard Specifications and these special provisions.

Prefabricated detectable warning surface shall be in conformance with the requirements established by the Department of General Services, Division of State Architect and be attached in conformance with the manufacturer's recommendations. A sample of the detectable warning surface shall be provided to the Engineer and the City of Roseville for approval.

The manufacturer shall provide a written 5 year warranty for prefabricated detectable warning surfaces, guaranteeing replacement when there is defect in the dome shape, color fastness, sound on cane acoustic quality, resilience, or attachment. The warranty period shall begin upon acceptance of the contract.

All concrete shall be Class A, six sack mix unless otherwise specified. For all driveway locations, where early opening to traffic is required, concrete shall be rapid setting concrete.

All newly placed concrete shall be cured in accordance with the provisions in Section 90-1.03B(3)(b) of the State Standard Specifications, the City Standard Construction Specifications, and these Special Provisions. Concrete curing compound shall be clear with fugitive red dye (Street, Section 71-5 Materials, I: Concrete Curing Compound)).

Minor Concrete (Type 2 Vertical Curb and Gutter) shall be constructed as shown on the plans and shall conform to the City of Roseville Standard Plan ST-17.

Minor Concrete (Type 2 Barrier Curb) shall be constructed as shown on the plans and shall conform to the City of Roseville Standard Plan ST-18.

Minor Concrete (Sidewalk) shall be constructed as shown on the plans and shall conform to the City of Roseville Standard Plan ST-17.

Minor Concrete (Driveway Valley Gutter) shall be constructed as shown on the plans and shall conform to the City of Roseville Standard Plan ST-22.

Pedestrian ramps shall conform to the City of Roseville Standard Plans ST-26 and ST-27 and shall meet all requirements outlined in the City of Roseville ADA transition plan.

Pedestrian ramp detectable warning surface shall consist of raised truncated domes constructed or installed on curb ramps. Detectable warning surface shall be a prefabricated surface installed on the curb ramp, in accordance with the approved materials within the City of Roseville.

Steel dowel bars connecting curb to existing or previously poured concrete pavement must be epoxy coated complying with section 40-1.02C(3). The dowel bar must be installed complying with section 40-1.03D except exposed portion must not be lubricated.

Apply a bonding agent between curb placed on existing or previously poured concrete pavement in accordance with section 41-1.02D.

Replace 1st paragraph of section 73-1.02A with:

Comply with section 90-2 "Minor Concrete" except as follows:

1. For all miscellaneous concrete work except valley gutters, cementitious material content of concrete must be at least 505 lb/cu yd.
2. For valley gutters, cementitious material content of concrete must be at least 590 lb/cu yd.
3. The maximum size of aggregate used for miscellaneous concrete construction shall be 1 inch.

73-1.03A GENERAL In addition to the requirements of Section 73-1.03A of the State Standard Specifications, the following shall apply:

Construct new sidewalk and new curb monolithically.

Do not deviate the shape and design of curb ramps and driveways with sidewalk from the standard plans unless noted on the project plans or approved by the Engineer. Do not free form these facilities.

Clean all sawcuts by abrasive blasting or other methods approved by the Engineer.

If new curb, sidewalk or driveway is constructed adjacent to existing curb, sidewalk or driveway, dowel the existing concrete to the new concrete with #4 reinforcing bars as shown.

For new curb ramps, detectable warning surfaces shall be prefabricated tiles set directly in newly poured concrete; surface applied tiles or stamped into surface detectable warning surfaces will not be allowed.

Reference out and restore any curb markings (S-indicating sanitary sewer lateral; W-indicating water service lateral; arrows and Roman Numerals-indicating ties to water main valves; high-pressure gas main) that may be destroyed by its work. In the case of construction of curb ramps where the vertical curb is eliminated new ties to water valves shall be made on the closest available vertical curb with proper direction of arrows and proper distances from water valve to tie indicated in three-inch (3") high Roman Numerals.

WATER TEST – FLAT GUTTERS

Prior to final acceptance, or as part of the preliminary final inspection, the Contractor, as directed by the Engineer, shall water test curbs with gutters on slopes of 0.75% or flatter and paved surfaces to verify proper drainage. Any ponding of water greater than ¼ inch depth will be considered as evidence of poor work techniques and shall be corrected by removing and replacing those portions of curb and gutter as necessary to comply with the requirements of this special provision, at no additional expense to the Agency.

73-2.04 PAYMENT

The contract unit prices paid per linear foot for Minor Concrete Type 2 Barrier Curb), Minor Concrete (Type 2 Vertical Curb and Gutter), Minor Concrete (Valley Gutter), Minor Concrete (Mountable Curb), and Minor Concrete (Bus Turn Out Curb) shall include full compensation for all labor, materials, tools, complying with ADA requirements, placing concrete, compaction, incidentals and equipment required to complete these items of the work, as shown on the plans, as specified in the City of Roseville Design and Construction Standards, the State Standard Specifications and these special provisions and as directed by the Engineer.

The contract unit price paid per square foot for Minor Concrete (Sidewalk), Minor Concrete (Bus Pad), and Hardscape shall include full compensation for all labor, materials, tools, aggregate base and placement, complying with ADA requirements, placing concrete, compaction, raising existing facilities to grade, incidentals and equipment required to complete these items of the work, including adjacent retaining curb, as shown on the plans, as specified in the City of Roseville Design and Construction Standards, the State Standard Specifications and these special provisions and as directed by the Engineer.

The contract unit price paid per each for Minor Concrete (Curb Ramp) and Minor Concrete (Curb Ramp (Bike)) shall include full compensation for all labor, materials, tools, aggregate base and placement, complying with ADA requirements, placing concrete, compaction, raising existing facilities to grade, incidentals and equipment required to complete these items of the work, including adjacent retaining curb and tooled joints, as shown on the plans, as specified in the City of Roseville Design and Construction Standards, the State Standard Specifications and these special provisions and as directed by the Engineer. Detectable Warning Surface is paid separately.

The contract unit price paid per square foot for Detectable Warning Surface shall include full compensation for all labor, materials, tools, placement, incidentals and equipment required to complete detectable warning surface, as shown on the plans, as specified in the City of Roseville Design and Construction Standards, the State Standard Specifications and these special provisions and as directed by the Engineer.

The contract unit price paid per cubic yard for Minor Concrete (Truck Apron) shall include full compensation for all labor, materials, tools, aggregate base and placement, placing concrete, compaction, raising existing facilities to grade, incidentals and equipment required to complete these items of the work, as shown on the plans, as specified in the City of Roseville Design and Construction Standards, the State Standard Specifications and these special provisions and as directed by the Engineer.

SECTION 77. LOCAL INFRASTRUCTURE

77-1.01 GENERAL

Water items shall conform the provisions in Section 81 DOMESTIC WATER SUPPLY SYSTEM CONSTRUCTION Section 31 TRENCH BACKFILL of the City of Roseville's Construction Standards.

Removal of Facilities shall conform to Section 15 of the State Standard Specifications.

Water lines shall be ductile iron pipe (DIP) with mechanical restrained joints.

The Contractor shall furnish all labor, materials, equipment and incidentals required and install complete and ready for operation and test all valves as shown on the Drawings and as specified herein. The equipment shall include, but not be limited to, the following; however, all items specified herein may not be included in this project:

- Valve Actuators - General
- Butterfly Valves for Fluid Service (Metal Body)
- Corporation Stop Valves
- Combination Air Release/Vacuum Valves
- Reducers
- Ball joints and Flexible Expansion Joints
- Test Stations
- Air Release Valve
- Blow Off
- Steel Casing
- Insulation Joints

77-1.01C Submittals

The Contractor shall submit materials required to establish compliance with this Section.

Submittals shall include the following:

1. Certified drawings showing all important details of construction and dimensions.
2. Descriptive literature, bulletins, and/or catalogs of the equipment.
3. The total weight of each item.
4. A complete bill of materials.
5. Additional submittal data, where noted with individual pieces of equipment.
6. Test Reports: Provide certified hydrostatic test data, per manufacturer’s standard procedure or MSS-SP-61 for all valves.
7. Certificates: For each valve specified to be manufactured, tested, and/or installed in accordance with ANSI/AWWA and other standards, submit an affidavit of compliance with the appropriate standards, including certified results of required tests and certification of proper installation.
8. Manufacturer’s Installation and Application Data.

9. Operating and Maintenance Data: Operating and maintenance instructions shall be furnished to the Engineer. The instructions shall be prepared specifically for this installation and shall include all required cuts, drawings, equipment lists, descriptions and other information required to instruct operating and maintenance personnel unfamiliar with such equipment.
10. Warranty: All equipment provided in accordance with this Section must meet one year warranty

77-1.01D Quality Assurance
Provide the services of a qualified and factory-trained service representative of the manufacturer to provide operational and maintenance instruction, for a 1 day, 8 hour period for: combination air/vacuum valves.

Inspection of the units may be made by the Engineer or other representative of the Owner after delivery. The equipment shall be subject to rejection at any point due to failure to meet any of the specified requirements, even though submittal data may have been accepted previously. Equipment rejected after delivery shall be marked for identification and shall be removed from the jobsite at once.

77-1.01D (2) Qualifications
Valves and appurtenances shall be products of well established firms who are fully experienced, (minimum of 10 years), reputable, and qualified in the manufacture of the particular equipment to be furnished.

The equipment shall be designed, constructed, and installed in accordance with the best practices and methods and shall comply with this Section, as applicable.
All units of the same type shall be the product of one manufacturer.

77-1.03 CONSTRUCTION
Notify the city and the Engineer at least 10 working days before the intended shutdowns. Keep the duration of shutdowns to a minimum. The 16" main is limited to a 48 continuous hour shutdown for tie-in. The 8" can be shutdown for no more than 4 hours and shall occur at night, unless approved by the City. All parts for reconnection must be on-site and ready for installation before shutdown. After dewatering, contractor will have 48 hours to complete tie-in work before the main needs to be refilled and ready to be returned to service. All valve operations (including shutdowns) shall be conducted by City staff only. If intermittent shutdowns are required while working next to pipelines, Contractor shall coordinate with the City as directed above.

SECTION 80. FENCES

80-1.01 GENERAL. In addition to the requirements of Section 80 of the State Standard Specifications and the City of Roseville Standard Chain Link Fence Detail, the following shall apply:

Chain link fence fabric shall be aluminized and coated with standard black PVC fabric, which shall have a bonded and fused finish. The fence fabric shall be 9-guage core wire. Terminal posts and all fence appurtenances shall be per size and spacing as shown on City of Roseville Construction Standard drawing CST LS-28 and per the Standard Specifications.

Decorative fencing will be a "Fortress" style fence by Dura Fence Company, or approved equal, meeting the below specifications. An example of the fencing may be viewed at Roseville High School located at 601 Tahoe Avenue near cross street Campo St and Coronado Ave.

80-1.02 MATERIALS

Fence posts from 3" square, 11 gauge wall. Flo-coat galvanized with pressed steel post caps. Horizontal rails: Pre-galvanized 11 gauge formed with 1-1/16" square holes punched at 4-15/16" centers. Picket material: 1" square 16 gauge. Flo-coat galvanized steel welded to horizontal rails. Rings: 3-7/8" O.D. solid aluminum with two steel weldable tabs welded to back side of pickets. Finish: Polyester powder coated. Colors to be RAL standard.

80-1.03 INSTALLATION

Installation: To be per manufacturer's recommendations.

80-1.04 PAYMENT

The contract unit price paid per linear foot for Decorative Fence shall include full compensation for all labor, materials, tools, incidentals and equipment required, complete in place, including manufacture, transport, and installation of decorative fence, as shown on the plans, as specified in the City of Roseville Design and Construction Standards, the State Standard Specifications and these special provisions and as directed by the Engineer.

SECTION 82. SIGNS AND MARKERS

82-1.01 GENERAL. In addition to the requirements of Section 82-1.01 of the State Standard Specifications, the following shall apply:

Signs and markers shall conform to the provisions in Section 56 SIGNS and Section 82 MARKERS AND DELINEATORS of the City of Roseville Construction Standards and the Standard Construction Specifications, and these special provisions.

The Contractor shall perform the installation of traffic signs as called for on the plans and these special provisions. All existing traffic signs, which are in conflict with the proposed work as shown on the plans shall be removed by the Contractor and returned to the City. The Engineer shall make the final decision if a question arises as to what represents said conflict. All work described above shall conform to the Caltrans Traffic Manual.

Project Information Sign

The Contractor shall furnish and install two (2) project information signs. The sign shall be 8’ wide by 4’ in height. The City will provide the sign graphics and content in electronic format. The project information sign shall be installed prior to beginning any other work at the project intersection. Final location of the project information signs shall be confirmed by the Inspector. Project Information Signs are to be removed by Contractor at completion of project or as directed by the Engineer.

82-1.04 PAYMENT

The contract unit price paid per each for Project Information Sign shall include full compensation for all labor, materials, tools, incidentals and equipment required to complete these items of the work, as specified in the City of Roseville Design and Construction Standards, the State Standard Specifications and these special provisions and as directed by the Engineer.

The contract unit price paid per each for Roadside Sign shall include full compensation for all labor, materials, tools, incidentals and equipment required to complete these items of the work, as shown on the plans, as specified in the City of Roseville Design and Construction Standards, the State Standard Specifications and these special provisions and as directed by the Engineer.

SECTION 83. RAILINGS AND BARRIERS

83-2.09 GENERAL. In addition to the requirements of Section 83-2.09A of the State Standard Specifications, the following shall apply:

Pipe handrailing to match the material, size, style, and color of the existing pipe handrailing at the Woodbridge Elementary School entrance on All America City Boulevard, as directed by the Engineer. Contractor to submit shop drawings for City approval.

83-2.09D PAYMENT

The contract unit price paid per linear foot for Pipe Handrailing shall include full compensation for all labor, materials, tools, incidentals and equipment required, complete in place, including manufacture, transport, and installation of pipe handrailing, including kick-plate/toe board, as shown on the plans, as specified in the City of Roseville Design and Construction Standards, the State Standard Specifications and these special provisions and as directed by the Engineer.

SECTION 84. MARKINGS

84-1.01 GENERAL. In addition to the requirements of Section 84-1.01 of the State Standard Specifications, the following shall apply:

Traffic stripes, pavement markings, and pavement markers shall conform to the provisions in Section 84 TRAFFIC STRIPES AND PAVEMENT MARKINGS and Section 85 MARKERS of the City of Roseville Construction Standards and the Standard Construction Specifications, and these special provisions.

The Contractor shall install temporary pavement striping and markings as necessary during construction. All temporary pavement striping and marking shall be refreshed as needed or when directed by the Engineer, at the Contractor's expense, until permanent pavement striping and marking is installed.

All pavement markings and pavement stripes on concrete surfaces (unless otherwise noted) shall be methyl methacrylate (MMA), or equivalent in place of thermoplastic material and shall require 1 inch

black borders when located on concrete pavement. The 1 inch black borders shall be in addition to the required width of the stripe.

84-1.04 PAYMENT

The contract unit price paid per square foot for Thermoplastic Pavement Marking shall include full compensation for all labor, materials, tools, incidentals and equipment required to complete these items of the work, as shown on the plans, as specified in the City of Roseville Design and Construction Standards, the State Standard Specifications and these special provisions and as directed by the Engineer.

The contract unit price paid per linear foot for 6" Thermoplastic Striping - White, 6" Thermoplastic Striping - Yellow, 8" Thermoplastic Striping - White, and 12" Thermoplastic Striping - White (Yield Line) shall include full compensation for all labor, materials, tools, incidentals and equipment required to complete these items of the work, as shown on the plans, as specified in the City of Roseville Design and Construction Standards, the State Standard Specifications and these special provisions and as directed by the Engineer.

The contract unit price paid per each for Pavement Markers (Retroreflective) and Pavement Markers (Non-Retroreflective) shall include full compensation for all labor, materials, tools, incidentals and equipment required to complete these items of the work, as shown on the plans, as specified in the City of Roseville Design and Construction Standards, the State Standard Specifications and these special provisions and as directed by the Engineer.

Replace 84-2.02H with:

84-2.02H Methyl Methacrylate Marking

84-2.02H(1) General

The material for striping on the concrete pavement must be methyl methacrylate conforming to this section. Material must be anti-slip treated methyl methacrylate.

The manufacturer must be ISO 9001:2008 certified for design, development and manufacturing of colored pavement materials, and provide proof of current certification.

84-2.02H(2) System Description

Properly designed roadway pavement coatings have been scientifically formulated to provide the optimal balance of performance properties for a durable, long lasting color and texture to a roadway pavement surface. Some of these key properties include wear and crack resistance, color retention, adhesion, minimal water absorption and increased friction properties. As well, the roadway pavement coating must be environmentally safe and meet EPA requirements for Volatile Organic Compounds (VOC).

A. The material shall be capable of being applied on bituminous and/or Portland cement concrete pavements and must be able to be applied after 30 days of placement. The use of a compactor or similar equipment shall not be necessary. The material must be able to be

applied to asphalt and concrete surfaces without preheating the application surface to a specific temperature.

B. The material must be capable of conforming to pavement contours, breaks and faults through the action of traffic at normal pavement temperatures. It shall not be necessary to use a grid template or to make pattern grooves or other indentations in the asphalt or concrete surface prior to applying the material. It shall not be necessary to inlay the material in grooves or indentations. It shall not be necessary to heat the pavement or application surface to a specific temperature.

84-2.02H(3) Submittals

A. Confirmation of coating color.

The color must meet the FHWA guidance for the chromaticity coordinates for pavement striping. Material shall be tested according to ASTM D 154 Exposure Condition Cycle 1 D65/2 Daytime Chromaticity at 144 hours of exposure.

B. Confirmation of anti-skid / anti-slip properties of coating material.

C. Material Warranty

1. Manufacturer provides a full warranty covering 100 percent of the pavement marking materials for one year.

2. Contractor is responsible for quality control of the proper placement of the materials and all other factors that affect the service life of the materials.

3. Contractor removes and replaces 100 percent of the markings for all failed sections at no cost to OWNER in the event of a performance failure.

84-2.02H(4) Delivery, Storage, and Handling

A. According to manufacturer's recommendations.

B. Provide Material Safety Data Sheets (MSDS) when material is delivered.

84-2.02H(5) Acceptance

Provide documentation of the manufacturer and production batch identification for the covering used.

84-2.02H(6) Material

A. The Methyl Methacrylate (MMA) Acrylic Resin Material shall be a 98:2 formulated material capable of being sprayed. No other substitutes (i.e. 4:1, 1:1) MMA material formulations shall be permissible. Material shall be Color-Safe as manufactured by Transpo Industries, Inc..

B. Must be resistant to the detrimental effects of motor fuels, antifreeze, lubricants, hydraulic fluids composed of an ester modified rosin impervious to degradation by motor fuels, lubricants, etc. in conjunction with aggregates, pigments, binders, and anti-skid/anti-slip elements.

C. Pigments and anti-skid/anti-slip elements must be uniformly distributed throughout the material.

Pigments: The pigment system must not contain heavy metals nor any carcinogen, as defined in 29 CFR 1910.1200 in amounts exceeding permissible limits as specified in relevant Federal Regulations.

D. Skid Resistance: Upon application the material shall provide a minimum skid resistance value of 60 BPN when tested according to ASTM E 303 or minimum value of 40 when tested according to ASTM E 274.

E. Hardness: The material must meet a minimum hardness value of 55-60 per ASTM D2240.

F. Environmental Resistance: The material must be resistant to deterioration due to exposure to sunlight, water, salt or adverse weather conditions and impervious to oil and gasoline.

G. The material must be able to be applied in temperatures down to 40 ºF.

H. Performance Measures for Durability.

1. Minimum Durability – 90 percent of each colored area, legend, or symbol must be present.

2. Failure to meet any of the specified performance measures on at least 90 percent of the colored area is considered a failure. ENGINEER may require partial or complete replacement of the colored area under the warranty terms.

3. Failure to meet any of the specified performance measures on at least 90 percent of the legend or symbol is considered a complete failure of that legend or symbol. Replace under the warranty terms.

I. Elongation of material resin should have a minimum of 30% when tested in accordance with ASTM D638 Type I.

J. Compressive Strength of mixed material shall be between 2000-3000psi when tested in accordance with ASTM 579 Method B.

K. Water Absorption shall be a maximum of 0.25% when tested in accordance with ASTM D570.

L. Solids Content should be a minimum of 99% when tested in accordance with ASTM D1644.

M. Aggregate: A minimum of 7.0 on the Mohs Hardness Scale and Specific Gravity of 2.65 when tested by ASTM C128..

84-2.02H(7) Execution

84-2.02H(7)(a) Preparation

A. Depending upon the condition and age, existing roadway pavement may or may not be suitable for the successful application of pavement coating. CONTRACTOR can advise whether the roadway pavement is suitable or not. ENGINEER shall make the final determination as to the suitability of the existing roadway pavement.

B. CONTRACTOR is responsible for all surface preparation such as de-greasing, sweeping, power blowing, shot-blasting or power washing, in accordance with manufacturer's instructions.

C. Line control.

1. Establish control points prior to application.

2. Pavement markings that are to be left in place, utilities, drainage structures, curbs and any other structure within or adjacent to the treatment location shall be masked to protect from application. Masking material to be removed with no damage after material is placed.

3. Maintain line within 2 inches of the established control points and mark the roadway between control points as needed. Remove paint that is not placed within tolerance of the established control points and replace at no expense to the OWNER.

84-2.02H(7)(b) Application Guideline

A. A certified applicator shall install or an approved manufacturer's representative shall be present on the jobsite for the first day of application of the methyl-methacrylate based colored pavement material. The manufacturer's representative shall provide the Engineer and Contractor with a copy of written recommendations, technical data sheet complete with application instructions and a product safety data sheet available to anyone that will be exposed to the methyl-methacrylate colored pavement marking system. The manufacturer's representative must

have extensive application experience in the installation of methyl-methacrylate colored pavement systems and provide a resume of project completed.

B. The substrate must be completely dry and the surface thoroughly clean before application of the methyl-methacrylate Pavement Marking System coating. The material must cover the entire application area and be flush across the surface. Once applied, no part of the pavement surface must be visible in the application area.

C. Asphalt: The material shall be applied using equipment recommended by the Manufacturer's instructions. The material must be able to be applied at ambient and road temperatures down to 40 ºF without any preheating of the pavement to a specific temperature. A sealer or primer specified by the manufacturer may be applied to the Asphalt prior to material application to ensure proper adhesion, and to provide reinforcement for larger volumes of material. A thermometer shall not be required during the application process. The pavement shall be clean, dry and free of debris.

D. Portland Cement Concrete: The same application procedure shall be used as described above in C. When applying to PCC pavement, a Methyl-Methacrylate Primer shall be used. Primer shall be mixed and applied according to manufacturers recommended instructions and completely cured before application of the Pavement Marking material.

E. No Track Topcoat: Upon and/or during cure (i.e. wet-on-wet) of the Pavement Marking Material, a Methyl-methacrylate based No Track Topcoat shall be mixed and applied (rolled or sprayed) according to manufacturers recommended instructions.

F. Catalyst for the methyl-methacrylate Pavement Marking Material System will be added at the recommendation of the manufacturer dependent on ambient and pavement temperature for methyl-methacrylate Primer, Pavement Marking Material and Top Coat.

G. Final thickness:

1. The material must be supplied at a minimum thickness of 80 mils.

H. Equipment: Application/spray equipment shall utilize static mixers for thorough mixing of the of resin and BPO catalyst. Resin and BPO shall not come in contact until just prior to entering the static mixer. A reversible spray tip shall be mounted directly at output of static mixer. Equipment with mixed resin and catalyst in hoses downstream of static mixer will not be accepted. Equipment must have an electronic, adjustable over and under pressure safety circuit in place on the catalyst pump that will stop the machine if the set pressure is exceeded. In addition machine must have an audible low pressure alarm that sounds if the pressure drops below the setpoint (usually about 1000 PSI). Equipment without an electronic over pressure failsafe and audible low pressure alarm will not be accepted. A factory technician must be on site during project to assure proper use and operation of the equipment.

84-2.02H(7)(c) Opening to Traffic

A. Minimally, the material must cure before the area is opened to traffic.

Add to section 84-2.03A:

Do not apply thermoplastic or methyl methacrylate striping using hand cart methods.

84-2.04 PAYMENT

Add to section 84-2.04:

The contract unit price paid per linear foot for 6" MMA Striping - White, 6" MMA Striping - Yellow, 8" MMA Striping - White, and 12" MMA Striping - White (Yield Line) shall include full compensation for all labor, materials, tools, incidentals and equipment required to complete these items of the work, as shown on the plans, as specified in the City of Roseville Design and Construction Standards, the State Standard Specifications and these special provisions and as directed by the Engineer.

The contract unit price paid per square foot for MMA Pavement Marking shall include full compensation for all labor, materials, tools, incidentals and equipment required to complete these items of the work, as shown on the plans, as specified in the City of Roseville Design and Construction Standards, the State Standard Specifications and these special provisions and as directed by the Engineer.

Replace section 84-3 with:

84-3 CONTRAST STRIPING

84-3.01 GENERAL

84-3.01A Summary

Section 84-3 includes specifications for applying contrast striping.

84-3.01B Definitions

contrast striping: Black striping placed on each side or end of a white traffic stripe.

84-3.01C Submittals

Not Used

84-3.01D Quality Assurance

Not Used

84-3.02 MATERIALS

Thermoplastic must comply with section 84-2.02B.

You may use permanent tape instead of paint or thermoplastic. Permanent tape must be on the Authorized Material List for signing and delineation materials. Apply the tape under the manufacturer's instructions.

Do not use glass beads or other reflective elements in contrast striping material.

84-3.03 CONSTRUCTION

Apply contrast striping under section 84-2.03.

84-3.04 PAYMENT

Payment for contrast treatment shall be considered as included in the prices paid for the Bid Items, and no additional compensation will be allowed therefor.

SECTION 86. SIGNALS, LIGHTING, AND ELECTRICAL SYSTEMS

In addition to Section 86 of Roseville Construction Standards and the Standard Specifications 86-2.14C Functional Testing, the following applies:

Functional Testing

All lighting systems shall be ready for functional testing five working days prior to signal turn-on.

Utility Locating

The Contractor is solely responsible to provide all labor and equipment necessary to locate existing underground facilities beyond the information provided by U.S.A. Markings include, but are not limited to, metal detectors, wire locations, and potholing.

Payment for lighting and electrical systems shall be included in the lump sum cost Street Lighting System. Full compensation for all additional materials and labor, not shown on the plans or specified, which are necessary to complete the installation of signals, lighting, and electrical systems, shall be considered as included in the prices paid for the Bid Items, or units thereof, and no additional compensation will be allowed therefor.

SECTION 87. ELECTRICAL SYSTEMS

In addition to Section 86 of Roseville Construction Standards and the Caltrans Standard Specifications 87-1.03B Conduit Installation, the following applies:

Conduit Installation (Horizontal Directional Drilling Method)

Install all conduit under existing pavement using the Horizontal Directional Drilling Method. Install a conduit to a minimum depth of 4 feet and maximum depth of 6 feet. If you must install a conduit less than 4 feet in depth or greater than 6 feet in depth, the installation must be authorized.

The diameter of the bore hole must be no larger than 1.5 times the outside diameter of the conduit.

Water-based mineral slurry or wetting solution may be used to lubricate the boring tool and stabilize the soil surrounding the boring path.

Disposal of residue must comply with section 13-4.03D of the Caltrans Standard Specifications.

The horizontal directional drilling equipment must have directional control of the boring tool and have an electronic boring tool location detection system. During operation, the equipment must be able to determine the location of the tool both horizontally and vertically.

Do not use slurry cement backfill.

Use a mandrel to prove the conduit is free and clear of dirt, rocks, and other debris after installation.

APPENDIX A

Washington Boulevard at All America City Boulevard

Roundabout Project

SCH # 2020100313

MITIGATION MONITORING AND REPORTING PROGRAM

Introduction

Public Resources Code section 21081.6 and section 15097 of the California Environmental Quality Act (CEQA) Guidelines require public agencies to adopt a monitoring or reporting program for projects approved on the basis of an environmental impact report that requires implementation of mitigation measures as part of project approval.

The following is the Mitigation Monitoring and Reporting Program (MMRP) for the Washington Boulevard at All America City Project (proposed project). The intent of the MMRP is to aid the City of Roseville with its implementation and monitoring of mitigation measures adopted from the Final Mitigated Negative Declaration (MND).

Mitigation Measures

The following mitigation measures are from the Washington Boulevard at All America City Project Final MND and are the responsibility of the City to implement. The MMRP describes the actions that must take place to implement each mitigation measure, the timing of those actions, and the entities responsible for implementing and monitoring the actions.

MMRP Components

The components of the attached table, which contains applicable mitigation measures, are addressed briefly, below.

Impact: This column summarizes the impact stated in the Final MND.

Mitigation Measure: All mitigation measures identified in the Washington Boulevard at All America City Project Draft MND are presented, as revised in the Final MND.

Action(s): For every mitigation measure, one or more actions are described. The actions delineate the means by which the mitigation measures will be implemented, and, in some instances, the criteria for determining whether a measure has been successfully implemented. Where mitigation measures are particularly detailed, the action may refer back to the measure for specifics.

Implementing Party: This item identifies the entity that will undertake the required action.

Timing: Implementation of the action must occur prior to or during some part of project approval, project design or construction or on an ongoing basis. The timing for each measure is identified.

Monitoring Party: The City of Roseville Department of Public Works is primarily responsible for ensuring that mitigation measures are successfully implemented. Within the City of Roseville, a number of departments and divisions would have responsibility for monitoring some aspect of the overall project. Other agencies, such as the California Department of Fish and Game, may also be responsible for monitoring the implementation of mitigation measures. As a result, more than one monitoring party may be identified.

Washington Boulevard at All America City Boulevard (WAAC) Roundabout Project, Mitigation Monitoring and Reporting Program					
Impact	**Mitigation Measures**	**Action(s)**	**Implementing Party**	**Timing**	**Monitoring Party**
Air Quality					
Impact AQ-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	**Mitigation Measure AQ-1: Construction Air Quality Mitigation Measures** Prior to any grading activities, the contractor shall prepare and implement a Construction Management Plan that includes the PCAPCD Recommended Construction Mitigation Measures to minimize construction-related emissions. This shall plan shall first be reviewed and approved by the Public Works Director or designee. The PCAPCD Construction Mitigation Measures are: 1. Prior to approval of Improvement Plans, the contractor shall ensure that Construction Emission/Dust Control Plan is submitted to the PCAPCD. Project construction shall not commence prior to receiving PCAPCD approval of the Construction Emission / Dust Control Plan. 2. The prime contractor shall submit to the PCAPCD a comprehensive inventory (i.e. make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used in aggregate of 40 or more hours for the construction project. If any new equipment is added after submission of the inventory, the prime contractor shall contact the PCAPCD prior to the new equipment being utilized. At least three business days prior to the use of subject heavy-duty off-road equipment, the project representative shall provide the PCAPCD with the anticipated construction timeline including start date, name, and phone number of the property owner, project manager, and on-site foreman. 3. The contractor shall use CARB ultra-low sulfur diesel fuel for all diesel-powered equipment. 4. In order to control dust, an operational watering truck shall be on site during construction hours. In addition, dry, mechanical sweeping is prohibited. Watering of a construction site shall be carried out in compliance with all pertinent PCAPCD rules. 5. The prime contractor shall be responsible for keeping adjacent public thoroughfares clean of silt, dirt, mud, and debris, and shall "wet broom" the streets (or use another method to control dust as approved by the individual jurisdiction) if silt, dirt, mud or debris is carried over to adjacent public thoroughfares. (Based on PCAPCD Rule 228 / section 401.5) 6. The contractor shall apply water or use other method to control dust impacts offsite. Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt from being released or tracked off-site. (Based on PCAPCD Rule 228 / section 401.1, 401.4) 7. During construction, traffic speeds on all unpaved surfaces shall be limited to 15 miles per hour or less. (Based on PCAPCD Rule 228/section 401.5) 8. The prime contractor shall suspend all grading operations when wind speeds (including instantaneous gusts) are excessive and dust is impacting adjacent properties. (Based on PCAPCD Rule 228) 9. In order to minimize wind driven dust during construction, the prime contractor shall apply methods such as surface stabilization, establishment of a vegetative cover, paving, (or use another method to control dust as approved by the individual jurisdiction). (Based on PCAPCD Rule 228 / section 402) 10. The contractor shall suspend all grading operations when fugitive dust exceeds PCAPCD Rule 228 (Fugitive Dust) limitations. The prime contractor shall be responsible for having an individual who is CARB-certified to perform Visible Emissions Evaluations (VEE). This individual shall evaluate compliance with Rule 228 on a weekly basis. It is to be noted that fugitive dust is not to exceed 40 percent opacity and not go beyond the property boundary at any time. Lime or other drying agents utilized to dry out wet grading areas shall not exceed PCAPCD Rule 228 Fugitive Dust limitations. Operators of vehicles and equipment found to exceed opacity limits will be notified by PCAPCD and the equipment must be repaired within 72 hours. (Based on PCAPCD Rule 228) 11. Construction equipment exhaust emissions shall not exceed PCAPCD Rule 202 Visible Emission limitations. Operators of vehicles and equipment found to exceed opacity limits are to be immediately notified by PCAPCD to cease operations and the equipment must be repaired within 72 hours. (Based on PCAPCD Rule 202) 12. The contractor shall not discharge into the atmosphere volatile organic compounds (VOCs) caused by the use or manufacture of Cutback or Emulsified asphalts for paving, road construction or road maintenance, unless such manufacture or use complies with the provisions of Rule 217. (Based on PCAPCD Rule 217). 13. During construction the contractor shall utilize existing power sources (e.g., power poles) or clean fuel (i.e. gasoline, biodiesel, natural gas) generators rather than temporary diesel power generators. 14. During construction, the contractor shall minimize idling time to a maximum of 5 minutes for all diesel-powered equipment. 15. During construction, no open burning of removed vegetation shall be allowed unless permitted by the PCAPCD. All removed vegetative material shall be either chipped on site or taken to an appropriate recycling site, or if a site is not available, a licensed disposal site. (Based on PCAPCD Rule 310).	Construction contractor shall be responsible for preparing a Construction Management Plan that includes the PCAPCD Recommended Construction Mitigation Measures. The Public Works Director or designee shall be responsible for reviewing and approving the plan.	Construction Contractor	Prior to grading activities	City of Roseville Development Services Department
Biological Resources					
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	**Mitigation Measure BIO-1: Conduct Environmental Awareness Training for Construction Personnel** Prior to the commencement of construction activities, including grading and equipment staging, construction personnel shall participate in an environmental awareness training program. The program shall include a description of sensitive resources on and adjacent to the site including Waters of the U.S. and State, protected trees and nesting birds and raptors. Permit conditions identified by state and federal agencies regarding the avoidance of these resources shall be discussed and explained during the training.	Conduct environmental awareness training for construction personnel.	City of Roseville Development Services Department	Prior to construction	City of Roseville Development Services Department

Washington Boulevard at All America City Boulevard (WAAC) Roundabout Project, Mitigation Monitoring and Reporting Program					
Impact	**Mitigation Measures**	**Action(s)**	**Implementing Party**	**Timing**	**Monitoring Party**
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	**Mitigation Measure BIO-2: Conduct Pre-Construction Nesting Bird Surveys** If construction is proposed to begin within 14 days of the nesting season (February 1 through August 31), a nesting bird survey shall be required. The survey shall be conducted prior to any ground disturbance or other construction activities. The pre-construction nesting bird surveys shall be conducted by a qualified biologist to the satisfaction of CDFW. If nesting birds, to include burrowing owl, are found during the survey, the nests shall be flagged and CDFW will be contacted for guidance. The City shall work with CDFW to develop a mitigation plan to ensure no unpermitted take occurs. Standards of the mitigation plan may include but not be limited to; postponing construction until the young have fledged; maintaining a 50-200-foot buffer depending on the species; relocation of species; habitat preservation or rehabilitation of the site for future use of the species.	Conduct pre-construction nesting bird surveys and implement mitigation measures in consultation with CDFW.	Qualified Biologist	Conduct pre-construction nesting bird surveys within 14 days of the nesting season (February 1 through August 31)	City of Roseville Development Services Department
Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	**Mitigation Measure BIO-3: Prepare a Tree Protection Plan** Prior to the issuance of any grading permit, a tree protection plan shall be submitted for review and approval by the City. The tree protection plan will consist of measures such as using high visibility ESA fencing to surround trees that are to be retained and denote areas that are not to be disturbed from construction activities. The plan shall not allow vehicle parking, equipment storage, vegetation or ground disturbing activities in any fenced area.	Prepare a Tree Protection Plan for review and approval by the City.	City of Roseville Development Services Department	Prior to issuance of any grading permit	City of Roseville Development Services Department
Cultural Resources					
Impact CUL-2: Potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.	**Mitigation Measure CUL-1: Stop Work if Cultural Resources are Encountered During Ground-Disturbing Activities** The improvement plans shall include a statement that if any archaeological artifacts, exotic rock (non-native), or unusual amounts of shell or bone are uncovered during any on-site construction activities, all work shall be stopped immediately within a 100-foot radius of the find and a qualified archaeologist retained to evaluate the deposit. If the discovery consists of human remains, the Placer County Coroner and Native American Heritage Commission must also be contacted. Work in the area may only proceed after authorization is granted by the City of Roseville Engineering Division. Following a review of the new find and consultation with appropriate experts, if necessary, the authority to proceed may be accompanied by the addition of development requirements that provide protection of the site and/or additional mitigation measures necessary to address the unique or sensitive nature of the site.	Stop work if cultural resources are encountered during ground-disturbing activities and have a qualified archaeologist evaluate the find and develop a response plan after the review. The Placer County Coroner and NAHC shall be contacted if the discovery consists of human remains.	Qualified Archaeologist, City of Roseville Development Services Department, County Coroner, City of Roseville Engineering Division	During construction	Contractor, City of Roseville Development Services Department
Impact CUL-2: Potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.	**Mitigation Measure CUL-2: Conduct Discovery of Artifacts Training for Construction Personnel** Prior to the start of ground disturbance, all construction personnel involved with earth-moving activities should be informed that artifacts protected by law could be discovered during excavating. The contractor shall be responsible for providing training shall include the appearance of common artifacts and proper notification procedures should artifacts be discovered. This worker training shall be prepared and presented by a qualified archaeological professional.	Conduct training for discovery of artifacts for construction personnel.	Contractor, Qualified Archaeologist, City of Roseville Development Services Department	Prior to the start of ground disturbance	Contractor, City of Roseville Development Services Department
Impact CUL-2: Potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.	**Mitigation Measure CUL-3: Develop an Operating Procedure and Schedule to Minimize Possible Impacts to Cultural Resources** Prior to the start of ground disturbance, develop a standard operating procedure, points of contact, timeline and schedule for the project, to avoid or minimize possible damages and assess possible alternatives if needed. If potential archaeological resources cultural resources, articulated, or disarticulated human remains are discovered by Native American Representatives or Monitors from interested Native American Tribes, qualified cultural resources specialists or other project personnel during construction activities, work will cease in the immediate vicinity of the find (based on the apparent distribution of cultural resources), whether or not a Native American Monitor from an interested Native American Tribe is present. A qualified cultural resources specialist and Native American Representatives and Monitors from culturally affiliated Native American Tribes will assess the significance of the find and make recommendations for further evaluation and treatment as necessary. These recommendations will be documented in the project record. For any recommendations made by interested Native American Tribes which are not implemented, a justification for why the recommendation was not followed will be provided in the project record. If adverse impacts to tribal cultural resources, unique archeology, or other cultural resources occurs, then consultation with UAIC regarding mitigation contained in the Public Resources Code sections 21084.3(a) and (b) and CEQA Guidelines section 15370 should occur, in order to coordinate for compensation for the impact by replacing or providing substitute resources or environments.	Develop a standard operating procedure, points of contact, schedule for the project. Stop work if cultural resources or human remains are discovered during ground-disturbing activities and have a qualified archaeologist evaluate the find and develop a response plan after the review.	Qualified Archaeologist, NAHC, Native American Representatives or Native American Monitor, City of Roseville Development Services Department	Prior to the start of ground disturbance	Contractor, City of Roseville Development Services Department

Washington Boulevard at All America City Boulevard (WAAC) Roundabout Project, Mitigation Monitoring and Reporting Program					
Impact	**Mitigation Measures**	**Action(s)**	**Implementing Party**	**Timing**	**Monitoring Party**
Impact CUL-2: Potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.	**Mitigation Measure CUL-4: Implement Measures to Protect Previously Unidentified Cultural Resources** The City shall ensure that construction specifications include the following information in the grading notes. • Construction shall stop if potential cultural resources are encountered. It is possible that previous activities have obscured surface evidence of cultural resources. If signs of an archeological site, such as any unusual amounts of stone, bone, or shell, are uncovered during grading or other construction activities, work will be halted within 100 feet of the find and the City of Roseville will be notified. A qualified archeologist will be consulted for an onsite evaluation. If the site appears to be eligible for listing in state or federal registers, additional mitigation, such as further testing for evaluation or data recovery, may be necessary. • In the event resources are discovered, the City will retain a qualified archaeologist to assess the find and to determine whether the resource requires further study. Any previously undiscovered resources found during construction will be recorded on appropriate California Department of Parks and Recreation 523 forms and evaluated for significance under all applicable regulatory criteria. • All work will stop in the immediate vicinity of the find, and, if the find is determined to be an important cultural resource, the City will make available contingency funding and a time allotment sufficient to allow recovery of an archaeological sample or to implement an avoidance measure. Construction work may continue on other parts of the project while archaeological mitigation takes place.	Stop work if cultural resources are encountered during ground-disturbing activities and have a qualified archaeologist evaluate the find and develop a response plan after the review.	Qualified Archaeologist, City of Roseville Development Services Department	During construction	City of Roseville Development Services Department
Impact CUL-3: Disturbance of any human remains, including those interred outside of dedicated cemeteries.	**Mitigation Measure CUL-5: Implement Measures if Construction Activities Inadvertently Discover or Disturb Human Remains** The City shall ensure that construction specifications include the following in the grading notes. • If human remains are discovered during any phase of construction, including disarticulated or cremated remains, the construction contractor will immediately cease all ground-disturbing activities within 100 feet of the remains and notify the City of Roseville. • In accordance with California State Health and Safety Code Section 7050.5, no further disturbance will occur until the following steps have been completed: o The County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. o If the remains are determined by the County Coroner to be Native American, NAHC will be notified within 24 hours, and the treatment and disposition of the remains will comply with NAHC guidelines. • It is further recommended that a professional archaeologist with Native American burial experience conduct a field investigation of the specific site and consult with the Most Likely Descendant (MLD), if any, identified by NAHC. As necessary and appropriate, a professional archaeologist may provide technical assistance to the MLD, including excavation and removal of the human remains.	Implement appropriate treatment for discovery of human remains and contact the Placer County coroner. If remains are Native American, the coroner shall contact the NAHC which will appoint an MLD to provide treatment recommendations. Develop an agreement for the dignified treatment of human remains and associated or unassociated funerary objects and implement provision of the agreement.	Qualified Archaeologist, County Coroner, NAHC, MLD, and City of Roseville Development Services Department	During construction	City of Roseville Development Services Department
Geological Resources					
Impact GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	**Mitigation Measure GEO-1: If Paleontological Resources Found Cease Work until Review Conducted by Qualified Paleontologist and Recommendations Implemented** Should evidence of sensitive paleontological resources (e.g., fossils) be encountered during grading or excavation, work shall be suspended within 100 feet of the find, and the City of Roseville shall be immediately notified. At that time, the City shall coordinate all necessary investigation of the site with a qualified paleontologist to assess the resource and provide proper management recommendations. Possible management recommendations for sensitive resources could include resource avoidance or data recovery excavations. The contractor shall implement any measures deemed necessary by the paleontologist for the protection of sensitive paleontological resources.	Stop work if paleontological materials are encountered during construction and have a qualified paleontologist assess the resource, provide proper management recommendations and implement recommendations.	Contractor, Qualified Paleontologist, and City of Roseville Development Services Department	During construction	Contractor, City of Roseville Development Services Department
Impact GEO-6: Direct or indirect destruction of a unique paleontological resource or site or unique geologic feature.	**Mitigation Measure GEO-2: Prepare and Implement a Worker Education Program for Those Involved with Earthwork** A worker education program, prepared by a qualified professional paleontologist, shall review applicable local, state, and federal ordinances, laws, and regulations pertaining to paleontological resources; describe the types of fossils that can be encountered and their general appearance; discuss site avoidance requirements and notification procedures to be followed in the event that a sensitive paleontological resource is found during construction; and describe disciplinary and other actions that can be taken against persons violating such laws.	Prepare and implement a worker education program for those involved with earthwork.	Contractor and City of Roseville Development Services Department	Prior to and during construction	City of Roseville Development Services Department

Washington Boulevard at All America City Boulevard (WAAC) Roundabout Project, Mitigation Monitoring and Reporting Program					
Impact	**Mitigation Measures**	**Action(s)**	**Implementing Party**	**Timing**	**Monitoring Party**
Hazardous Resources					
Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	**Mitigation Measure HAZ-1: Develop a Soil Management Plan** Prior to any project related ground disturbance activities, a Soil Management Plan for the proposed project site shall be prepared by the contractor to evaluate the potential for upset or release of hazardous materials to the environment. The Soil Management Plan shall identify the nearby contaminated site(s), affected media, and corresponding contaminants of concern. Specific procedures shall be identified for handling the potentially impacted media during construction. The Soil Management Plan shall contain a contingency plan in the event that gross contamination is discovered during construction. The Soil Management Plan shall also outline health and safety concerns for workers that may come in contact with potentially contaminated media.	Prepared and implement a Soil Management Plan	Contractor and City of Roseville Development Services Department	Prior to any project related ground disturbance activities	Contractor, City of Roseville Development Services Department
Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	**Mitigation Measure HAZ-2: Perform Testing for Vapor Encroachment Conditions** The contractor shall retain a licensed hazardous materials professional to test for vapor encroachment conditions (VEC) on the proposed project site. If the licensed professional finds that VEC conditions do exist or are likely to occur, the licensed professional or other qualified party at the request of the contractor and to the satisfaction of the City of Roseville, shall install a vapor mitigation system (such as a vapor barrier or other mechanism) in order to mitigate potential risks to human health and safety. The plan for implementation and remediation shall conform to all applicable local and state hazardous materials requirements. A complete report of all findings and any measures taken to reduce risk shall be submitted to the Public Works Director for review and approval prior to initiation of any other project related ground disturbance.	Retain a licensed hazardous materials professional to test for vapor encroachment conditions on the project site and implement a plan to conform with all applicable local and state hazardous materials requirements. .	Contractor and City of Roseville Development Services Department	Prior to any project related ground disturbance activities	Contractor, City of Roseville Development Services Department
Noise					
Impact NOI-1: Creation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies	**Mitigation Measure NOI-1: Employ Noise-Reducing Construction Practices** Prior to the start of ground disturbing activities the contractor, shall demonstrate, to the satisfaction of the Public Works Director, or designee, that the project complies with the following: • Construction contracts specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state required noise attenuation devices. • Property owners and occupants located within 200 feet of the proposed project boundary shall be sent a notice, at least 15 days prior to commencement of construction of each phase, regarding the construction schedule of the proposed project. A sign, legible at 50 feet shall also be posted at the project construction site. All notices and signs shall be reviewed and approved by the of Public Works Director or Designee, prior to mailing or posting and shall indicate the dates and duration of construction activities, as well as provide a contact name and a telephone number where residents can inquire about the construction process and register complaints. • Prior to the start of ground disturbing activities, the contractor shall provide evidence that a construction staff member will be designated as a Noise Disturbance Coordinator and will be present on-site during construction activities. The Noise Disturbance Coordinator is responsible for responding to local complaints about construction noise. When a complaint is received, the Noise Disturbance Coordinator shall notify the City within 24-hours of the complaint, determine the cause (e.g. starting too early, bad muffler, etc.), and implement reasonable measures to resolve the complaint as deemed acceptable by the Public Works Department. All notices sent to residential units surrounding the construction site and all signs posted at the construction site shall include the contact name and the telephone number for the Noise Disturbance Coordinator. • Prior to the start of ground disturbing activities, the contractor shall demonstrate to the satisfaction of the Public Works Director or designee that construction noise reduction methods shall be used where feasible. These reduction methods include shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and electric air compressors and similar power tools. • Construction haul routes shall be designed to avoid noise sensitive uses (e.g. residences, convalescent homes, etc.) and comply with the City approved truck routes to the extent feasible. • During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.	Employ noise-reducing construction practices; City to review and approve contractor proposed methods. Noise Disturbance Coordinator to notify City within 24-hours of any complaints about construction noise coming from project site. All notices sent and all signs posted at the construction site shall include the contact name and the telephone number for the Noise Disturbance Coordinator.	Contractor, Noise Disturbance Coordinator, and City of Roseville Development Services Department	Prior to any project related ground disturbance activities	City of Roseville Development Services Department
Tribal Cultural Resources					
Impact TRC-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place,	**Mitigation Measure TRC-1: Implement Measures to Protect Previously Unidentified Tribal Cultural Resources** If subsurface deposits believed to be cultural or human in origin, or tribal cultural resources, are discovered during construction, all work shall halt within a 100-foot radius of the discovery, and the Construction Manager shall immediately notify the City of Roseville Development Services Director by phone. The Construction Manager shall also immediately coordinate with the monitoring archeologist or project archaeologist, or, in the absence of either, contact a qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for archaeology and subject to approval by the City and the consulting tribes, to evaluate the significance of the find and develop appropriate	Stop work if tribal cultural resources are encountered during construction and have a qualified archaeologist assess the resource, provide proper management recommendations	Qualified Archaeologist, County Coroner, NAHC, MLD, Construction Manager, City of Roseville	During construction	City of Roseville Development Services Department

Washington Boulevard at All America City Boulevard (WAAC) Roundabout Project, Mitigation Monitoring and Reporting Program					
Impact	**Mitigation Measures**	**Action(s)**	**Implementing Party**	**Timing**	**Monitoring Party**
cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).	management recommendations. All management recommendations shall be provided to the City in writing for the City's review and approval. If recommended by the qualified professional and consulting tribes, and approved by the City, this may include modification of the no-work radius. The professional archaeologist must make a determination, based on professional judgement and supported by substantial evidence, within one business day of being notified, as to whether or not the find represents a cultural resource or has the potential to be a tribal cultural resource. The subsequent actions will be determined by the type of discovery, as described below. These include: 1) a work pause that, upon further investigation, is not actually a discovery and the work pause was simply needed in order to allow for closer examination of soil (a "false alarm"); 2) a work pause and subsequent action for discoveries that are clearly not related to tribal resources, such as can and bottle dumps, artifacts of European origin, and remnants of built environment features; and 3) a work pause and subsequent action for discoveries that are likely related to tribal resources, such as midden soil, bedrock mortars, groundstone, or other similar expressions. Whenever there is question as to whether or not the discovery represents a tribal resource, culturally affiliated tribes shall be consulted in making the determination. The following processes shall apply, depending on the nature of the find, subject to the review and approval of the City: • Response to False Alarms: If the professional archaeologist determines that the find is negative for any cultural indicators, then work may resume immediately upon notice to proceed from the City's representative. No further notifications or tribal consultation is necessary, because the discovery is not a cultural resource of any kind. The professional archaeologist shall provide written documentation of this finding to the City. • Response to Non-Tribal Discoveries: If at the time of discovery a professional archaeologist determines that the find represents a non-tribal cultural resource from any time period or cultural affiliation, the City shall be notified immediately, to consult on a finding of eligibility and implementation of appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines. The professional archaeologist shall provide a photograph of the find and a written description to the City of Roseville. The City of Roseville will notify any [tribe(s)] who, in writing, requested notice of unanticipated discovery of non-tribal resources. Notice shall include the photograph and description of the find, and a tribal representative shall have the opportunity to determine whether or not the find represents a tribal cultural resource. If a response is not received within 24 hours of notification (none of which time period may fall on weekends or City holidays), the City will deem this portion of the measure completed in good faith as long as the notification was made and documented. If requested by a [tribe(s)], the City may extend this timeframe, which shall be documented in writing (electronic communication may be used to satisfy this measure). If a notified tribe responds within 24 hours to indicate that the find represents a tribal cultural resource, then the Response to Tribal Discoveries portion of this measure applies. If the tribe does not respond or concurs that the discovery is non-tribal, work shall not resume within the no-work radius until the City, through consultation as appropriate, determines that the site either: 1) is not a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines; or 2) that the treatment measures have been completed to its satisfaction. • Response to Tribal Discoveries: If the find represents a tribal or potentially tribal cultural resource that does not include human remains, the [tribe(s)] and City shall be notified. The City will consult with the tribe(s) on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be either a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines, or a Tribal Cultural Resource, as defined in Section 21074 of the Public Resources Code. Preservation in place is the preferred treatment, if feasible. Work shall not resume within the no-work radius until the City, through consultation as appropriate, determines that the site either: 1) is not a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines; or 2) not a Tribal Cultural Resource, as defined in Section 21074 of the Public Resources Code; or 3) that the treatment measures have been completed to its satisfaction. If a potential tribal cultural resources (TCRs), archaeological resources are discovered during ground disturbing construction activities, in addition to ceasing all work within 100 feet of the find (or an appropriate distance based on the apparent distribution of the TCR), and notifications as identified above, a qualified cultural resources specialist meeting the Secretary of Interior's Standards and Qualifications for Archaeology, as well as Native American Representatives from traditionally and culturally affiliated Native American Tribes that have engaged in consultation for the Project will assess the significance of the find and make recommendations for further evaluation and treatment as necessary. Culturally appropriate treatment may include, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, or returning objects to a location within the Project area where they will not be subject to future impacts. The United Auburn Indian Community of the Auburn Rancheria (Tribe) does not consider curation of TCR's to be appropriate or respectful and request that materials not be permanently curated, unless requested by the Tribe. The types of treatment preferred by UAIC that protects, preserves or restores the integrity of a TRC may include Tribal Monitoring, or recovery of cultural objects, and reburial of cultural objects or cultural soil that is done in a culturally appropriate manner. Recommendations of the treatment of a TCR will be documented in the project record. For any recommendations made by traditionally and culturally affiliated Native American Tribes that are not implemented, a justification for why the recommendation was not followed will be provided in the project record. If adverse impacts to TCRs, unique archeology, or other cultural or archaeological resources occurs, then consultation shall commence with UAIC and other traditionally and culturally affiliated Native American Tribes. In order to coordinate for compensation for the impact to a TCR, the Tribal consultation will be regarding mitigation contained in the Public Resources Code sections 21084.3(a) and (b). • Response to Human Remains: If the find includes human remains, or remains that are potentially human, the construction supervisor or on-site archaeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641) and shall	and implement recommendations. Implement appropriate treatment for discovery of human remains and contact the Placer County coroner. If remains are Native American, the coroner shall contact the NAHC which will appoint an MLD to provide treatment recommendations. Develop an agreement for the dignified treatment of human remains and associated or unassociated funerary objects and implement provision of the agreement.	Development Services Department		

Washington Boulevard at All America City Boulevard (WAAC) Roundabout Project, Mitigation Monitoring and Reporting Program					
Impact	**Mitigation Measures**	**Action(s)**	**Implementing Party**	**Timing**	**Monitoring Party**
	notify the City and Placer County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California Public Resources Code, and Assembly Bill 2641 shall be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the Native American Heritage Commission (NAHC), which then will designate a Native American Most Likely Descendant (MLD) for the project (§ 5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. Public Resources Code § 5097.94 provides structure for mediation through the NAHC if necessary. If no agreement is reached, the City shall rebury the remains in a respectful manner where they will not be further disturbed (§ 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work shall not resume within the no-work radius until the City, through consultation as appropriate, determines that the treatment measures have been completed to its satisfaction.				

APPENDIX B

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

December 15, 2020

Regulatory Division (SPK-2020-00760)

City of Roseville
Attn: Ms. Terri Shirhall
311 Vernon Street
Roseville, California 95678

Dear Ms. Shirhall:

We are responding to your September 23, 2020, request for an approved jurisdictional determination for the Washington Boulevard at All American City Boulevard Roundabout Project site. The approximately 6.55-acre project site is located near Dry Creek, Section 34, Township 11 North, Range 6 East, Mount Diablo Base and Meridian, Latitude 38.75713°, Longitude -121.28888°, within the City of Roseville, Placer County, California.

Based on available information, we concur with your aquatic resources delineation for the site, as depicted on the enclosed September 23, 2020, *Figure 4, Aquatic Resources Delineation: Washington Boulevard at All American City Boulevard Roundabout Project* drawing prepared by ECORP Consulting, Inc. (enclosure 1). Approximately 0.11 acre of vegetated ditches are present within the survey area. This letter verifies that the location and boundaries of wetlands were delineated consistent with the wetland definition at 33 CFR §328.3(c)(16), the 1987 *Corps of Engineers Wetlands Delineation Manual* (Wetlands Research Program Technical Report Y-87-1) and the applicable regional supplements; the location and boundaries of non-tidal waters conform with the ordinary high water mark definition at 33 CFR §328.3(c)(7), Regulatory Guidance Letter 05-05, and any applicable regional guide.

Of these aquatic resources, we have determined that those features Ditch, 1, Ditch 2, and Ditch 3 totaling 0.11 acre are not waters of the U.S. regulated under Section 404 of the Clean Water Act or under Section 10 of the Rivers and Harbors Act because they are ephemeral ditches and excluded under (b)(5) of 33 CFR 328.3.

We are enclosing a copy of the *Approved Jurisdictional Determination Form* for your site (enclosure 2).

This approved jurisdictional determination is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 Code of Federal Regulations (CFR) Part 331. A *Notification of Appeal Process (NAP) and Request for Appeal (RFA) Form* is enclosed (enclosure 3). If you request to appeal this determination, you must submit a completed RFA form to the South Pacific Division Office at the following address: Administrative Appeal Review Officer,

Army Corps of Engineers, South Pacific Division, CESPD-PDO, 1455 Market Street, 2052B, San Francisco, California 94103-1399, Telephone: 415-503-6574, FAX: 415-503-6646.

In order for an RFA to be accepted by the Corps, we must determine that the form is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that the form was received by the Division Office within 60 days of the date of the NAP. It is not necessary to submit an RFA form to the Division Office unless you object to the determination in this letter.

We recommend that you provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

The delineation included herein has been conducted to identify the location and extent of the aquatic resource boundaries and/or the jurisdictional status of aquatic resources for purposes of the Clean Water Act for the particular site identified in this request. This delineation and/or jurisdictional determination may not be valid for the Wetland Conservation Provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should discuss the applicability of a certified wetland determination with the local USDA service center, prior to starting work.

We appreciate feedback, especially about interaction with our staff and our processes.

Please refer to identification number SPK-2020-00760 in any correspondence concerning this project. If you have any questions, please contact Hillary Kraft at 310 Hemsted Drive, Suite 310, Redding CA 96002, by telephone at (530) 223-9536, or by email at *Hillary.H.Kraft@usace.army.mil*. For program information or to complete our Customer Survey, visit our website at *www.spk.usace.army.mil/Missions/Regulatory.aspx*.

Sincerely,

Nancy A. Haley
Chief, CA North Section

Enclosures

Cc (w/o encls):
Mr. Peter Balfour, ECORP Consulting, pbalfour@ecorpconsluting.com

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: City of Roseville, Attn: Ms. Terri Shirhall	File No.: SPK-2020-00760	Date: December 15, 2020
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
→	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at *http://www.usace.army.mil/cecw/pages/reg_materials.aspx* or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Hillary H. Kraft
Project Manager
CA North Section
U.S. Army Corps of Engineers
310 Hemsted Drive, Suite 310
Redding CA 96002
Phone: (530) 223-9536, FAX 916-557-7803
Email: Hillary.H.Kraft@usace.army.mil

If you only have questions regarding the appeal process you may also contact:

Thomas J. Cavanaugh
Administrative Appeal Review Officer
U.S. Army Corps of Engineers
South Pacific Division
1455 Market Street, 2052B
San Francisco, California 94103-1399
Phone: 415-503-6574, FAX: 415-503-6646)
Email: Thomas.J.Cavanaugh@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		

Map Features

- Study Area - 6.55 ac.
- Culvert
- Reference Coordinate (NAD83)

Three-criteria Sample Points

- Upland Point
- Waters Point

Aquatic Resources - 0.114 ac. [1] *

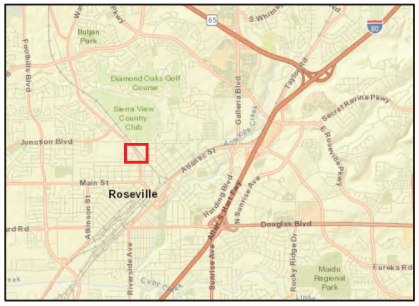
Waters

- Ditch - 0.114 ac.

Photo Source: City of Roseville, 2019
Boundary and Topo Source: Kimley-Horn
Delineator(s): K. Kwan
Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

[1] *Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0 as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program as amended on February 10, 2016, and conforms to Sacramento District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.*

** The acreage value for each feature has been rounded to the nearest 1/1000 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.*



ECORP N:\2016\2016-138.04 KH Washington Blvd All America City Blvd\MAPS\Jurisdictional_Delineation\WASHBLVD_ARD_20200407.mxd (JDS)-JSwager 4/13/2020

Map Date: 4/13/2020

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 100

Figure 4. Aquatic Resources Delineation

2016-138.04 Washington Blvd All America City Blvd

Enclosure 1

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): December 11, 2020.
ORM Number: SPK-2020-00760.
Associated JDs: N/A.
Review Area Location[1]: State/Territory: California. City: Roseville. County/Parish/Borough: Placer.
Center Coordinates of Review Area: Latitude 38.75713. Longitude -121.28889.

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- ☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A.
- ☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- ☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- ☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

[1] Map(s)/figure(s) are attached to the AJD provided to the requestor.

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)[2]

§ 10 Name	§ 10 Size		§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	acres	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters):[3]				
(a)(1) Name	(a)(1) Size		(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	acres	N/A.	N/A.

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination
N/A.	N/A.	acres	N/A	N/A.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):				
(a)(3) Name	(a)(3) Size		(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	acres	N/A	N/A.

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
N/A.	N/A.	acres	N/A	N/A.

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)):[4]

[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.
[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.

Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
Ditch 1.	0.01	acres	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).	The feature known as Ditch 1, only temporarily holds water for short durations in direct response to precipitation events. There is no hydrologic surface water connection between the ditches and an (a)(1) – (a)(3) water in a typical year. Based on historical aerials and the US Topo map, Ditch 1 was constructed in uplands.
Ditch 2	0.03	acres	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).	The feature known as Ditch 2, only temporarily holds water for short durations in direct response to precipitation events. There is no hydrologic surface water connection between the ditches and an (a)(1) – (a)(3) water in a typical year. Based on historical aerials and the US Topo map, Ditch 1 was constructed in uplands.
Ditch 3	0.07	acres	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).	The feature known as Ditch 3, only temporarily holds water for short durations in direct response to precipitation events. There is no hydrologic surface water connection between the ditches and an (a)(1) – (a)(3) water in a typical year. Based on historical aerials and the US Topo map, Ditch 1 was constructed in uplands.

[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

☒ Information submitted by, or on behalf of, the applicant/consultant: Aquatic Resources Delineation: Washington Boulevard at All American City Boulevard Roundabout Project, dated September 23, 2020, prepared by ECORP Consulting, Inc.
This information is. sufficient for purposes of this AJD.
Rationale: N/A .

☐ Data sheets prepared by the Corps: .

☒ Photographs: Aerial and Other. 1) Ground Photos: Aquatic Resources Delineation dated September 23, 2020. 2) Aerial Imagery: GoogleEarth 7.3.3.7692. (2017 April 19) Placer County, California. Latitude 38.75713 longitude -121.28888, Retrieved December 10, 2020, from http://www.earth.google.com. 3) historicalaerials.com (1947-1993) 4) LiDAR: "Washington Boulevard at All American City Boulevard Roundabout Project: SPK-2020-00760 Ditch," scale 1:1000, dated December 10, 2020,prepared by USACE.

☐ Corps site visit(s) conducted on: .

☐ Previous Jurisdictional Determinations (AJDs or PJDs): .

☐ Antecedent Precipitation Tool: *provide detailed discussion in Section III.B*.

☐ USDA NRCS Soil Survey: .

☒ USFWS NWI maps: USFWS. (n.d.). National Wetland Inventory. Project area: Roseville, Placer County, California. Source imagery date: 1983. Washington, D.C.: U.S. Fish and Wildlife Service, Dept. of the Interior. Retrieved December 10, 2020, from Wetland Mapper: https://www.fws.gov/wetlands/data/mapper.html. .

☒ USGS topographic maps: USGS. (2011). Roseville California-Placer Co. 1:24,000 scale. 2015. Reston, VA, USA: U.S. Dept. Of the Interior. Retrieved from https://ngmdb.usgs.gov/topoview/viewer/#12/38.7571/-121.2889.

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	N/A.
Other Issues	N/A.

B. Typical year assessment(s): N/A.

C. Additional comments to support AJD: There was LiDAR available for the 6.55-acre study area. LiDAR showed the three ditches and how they are physically seperated from all other aquatic resources. Prior to

the ditches' construction and the construction of the surrounding infrastructure, historical aerials dated 1947, show that the surrounding area was uplands. The 2015 U.S topographical map did not display any perennial or intermittent streams located within the project area.

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California Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
North Central Region
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670-4599
916-358-2900
www.wildlife.ca.gov

***GAVIN NEWSOM**, Governor*
CHARLTON H. BONHAM, Director

5/24/2021

Dominick Casey
City of Roseville
Development Services Department
Planning Division
311 Vernon Street
Roseville, CA 95678
CityManager@roseville.ca.us

Dear Mr. Casey:

Notification of Lake or Streambed Alteration
EPIMS Notification No. PLA-14659-R2
Washington Boulevard at All American City Boulevard Roundabout

The California Department of Fish and Wildlife (CDFW) had until April 20, 2021 to submit a draft Lake or Streambed Alteration Agreement (Agreement) to you or inform you that an Agreement is not required. CDFW did not meet that date. As a result, by law, you may now proceed with the project described in your Notification without an Agreement.

Please note pursuant to Fish and Game Code section 1602, subdivision (a)(4)(D), if you proceed with this project, it must be the same as described and conducted in the same manner as specified in the Notification and any modifications to that Notification received by CDFW on or before April 20, 2021. This includes completing the project within the proposed term and seasonal work period and implementing all avoidance and mitigation measures to protect fish and wildlife resources specified in the Notification. If the term proposed in your Notification has expired, you will need to re-notify CDFW before you may begin your project. Beginning or completing a project that differs in any way from the one described in the Notification may constitute a violation of Fish and Game Code section 1602.

Your Notification includes, but is not limited to, the following information: the project includes the construction of a multi-lane roundabout at the Washington Boulevard/All America City Boulevard/Lincoln Street intersection in the City of Roseville, Placer County, California. The proposed project would restore or install new drainages or drainage facilities. Project grading would consist of cuts to install utilities and fills to smooth development areas and ensure proper drainage of roadways. Project grading would result in permanent impacts to 0.114-acres of roadside ditches. No riparian trees will be removed as part of the project. If construction activities are to occur between February 1 and August 31, pre-construction surveys for nesting birds will be conducted by a qualified biologist 14 days prior to the start of construction. If nesting birds are found within or adjacent to the Project, appropriate work windows and buffer areas will

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be established by the biologist. In accordance with Fish and Game Code section 1605 subdivision (a)(1), the project term is from April 20, 2021 to April 20, 2026.

Also note that while you are entitled to complete the project without an Agreement, you are still responsible for complying with other applicable local, state, and federal laws. These include, but are not limited to, Fish and Game Code sections 2080 *et seq*. (species listed as threatened or endangered, or a candidate for listing under the California Endangered Species Act); section 1908 (rare native plants); sections 3511, 4700, 5050, and 5515 (fully protected species); section 3503 (bird nests and eggs); section 3503.5 (birds of prey); section 5650 (water pollution); section 5652 (refuse disposal into water); section 5901 (fish passage); section 5937 (sufficient water for fish); and section 5948 (obstruction of stream).

Finally, if you decide to proceed with your project without an Agreement, you must have a copy of this letter and your Notification with all attachments available at all times at the work site.

If you have questions regarding this letter, please contact Patrick Moeszinger, Senior Environmental Scientist (Specialist), at (916)767-3935 or by email at patrick.moeszinger@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Kristen Sheridan for
3052529B61FC469...

Kelley Barker
Environmental Program Manager

ec: Patrick Moeszinger, Senior Environmental Scientist (Specialist)
patrick.moeszinger@wildlife.ca.gov

Zach Kearns, Environmental Scientist
zachary.kearns@wildlife.ca.gov

APPENDIX C

CITY OF ROSEVILLE
CALIFORNIA

Department of Public Works
311 Vernon Street
Roseville, CA 95678

MONTHLY PROJECT PAYMENT ESTIMATE SUMMARY

Payment Estimate No: _____

Work Performed Through: _____

Contractor: _____ Project: _____

Address: _____ Acct.No: _____

Contract Summary		
Original Contract Amount:	(1)	
Approved Change Orders through #: _____	(2)	
Quantity Changes (Requires Project Engineer/Inspector verification):	(3)	
Total Contract Amount to Date:	(4)	

Payment Summary	CURRENT PAY PERIOD AMOUNT	PREVIOUS AMOUNT	TO DATE AMOUNT
Contract Payments (Payment through PP#_____)			
Change Order Payments (CCO#_____ through _____)			
Total Earnings			
Less: Retention: (5%) In escrow account Yes ☐ No ☐			
Less: Administrative Deductions (Deducted from PP# _____)			
Payment Due to Contractor			

The undersigned Contractor or Contractor's Authorized Representative certifies that to the best of his knowledge, information, and belief, the work covered in this application for payment has been completed in accordance with the contract documents and the costs shown are true and correct.

Resident Engineer:	**Senior Engineer:**	**Contractor:**
Date:	**Date:**	**Date:**

CITY OF ROSEVILLE CALIFORNIA

Department of Public Works
311 Vernon Street
Roseville, CA 95678

Project: _____

Acct#: _____

Contrac: _____

PROJECT PAYMENT ESTIMATE

Payment Estimate No: _____

Work Performed Through: _____

Item No.	Item Description	Unit	Estimated Quantity	Unit Cost	Contract Amount	This Estimate		Previous Estimates		Work Completed		Work Remaining	
						Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
					$ -		$ -	0	$ -	0%	$ -	0%	$ -
					$ -		$ -	0	$ -	0%	$ -	0%	$ -
					$ -		$ -	0	$ -	0%	$ -	0%	$ -
					$ -		$ -	0	$ -	0	$ -	0	$ -
					$ -		$ -	0	$ -	0	$ -	0	$ -
					$ -		$ -	0	$ -	0	$ -	0	$ -
					$ -		$ -	0	$ -	0	$ -	0	$ -
					$ -		$ -	0	$ -	0	$ -	0	$ -
					$ -		$ -	0	$ -	0	$ -	0	$ -
					$ -		$ -	0	$ -	0	$ -	0	$ -
					$ -		$ -	0	$ -	0	$ -	0	$ -
					$ -		$ -	0	$ -	0	$ -	0	$ -
TOTALS:					$ -		$ -		$ -		$ -		$ -

CITY OF ROSEVILLE
CALIFORNIA

Department of Public Works
311 Vernon Street
Roseville, CA 95678

Project: _____

Acct.No: _____

Contractor: _____

_____

QUANTITY ADJUSTMENT FORM

Payment Estimate No: _____

Work Performed Through: _____

INSTRUCTIONS

This form is to accompany Progress Payments or the Final Payment where there are quantity changes (variations in quantities) authorized by the Department of Public Works that adjust the Total Contract Amount.

Quantity Changes in the amount of:
Accompanying Progress Payment # (or Final Payment) _____ **have been reviewed and the actual quantities verified.**

Item No.	Item Description	Unit	Unit Cost	Contract Quantity Adjustments								
				This Estimate			Previous Estimates			To-Date Totals		
				Quantity	Increase (Decrease)	Amount	Quantity	Increase (Decrease)	Amount	Quantity	Increase (Decrease)	Amount
						$ -			$ -	0		$ -
						$ -			$ -	0		$ -
						$ -			$ -	0		$ -
						$ -			$ -	0		$ -
						$ -			$ -	0		$ -
						$ -			$ -	0		$ -
						$ -			$ -	0		$ -
Totals						$ -			$ -			$ -

Contractor Signature **Date**

Resident Engineer Signature **Date**

CONDITIONAL WAIVER AND RELEASE ON FINAL PAYMENT

NOTICE: THIS DOCUMENT WAIVES THE CLAIMANT'S LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS EFFECTIVE ON RECEIPT OF PAYMENT. A PERSON SHOULD NOT RELY ON THIS DOCUMENT UNLESS SATISFIED THAT THE CLAIMANT HAS RECEIVED PAYMENT.

From: _____
Name of Contractor/Claimant

_____
Address

Date: _____

Payment Request No: _____

Acct.No: _____

Project Name: _____

To/Owner: CITY OF ROSEVILLE
Department of Public Works
Engineering Division
311 Vernon Street
Roseville, CA 95678

Conditional Waiver and Release

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below This document is effective only on the claimant's receipt of payment from the financial institution on which the following check is drawn:

Maker of Check: _____

Amount of Check: _____

Check Payable To: _____

Exceptions

Signature

Claimant Signature _____ **Print Name:** _____

Claimant Title _____ **Date:** _____

CITY OF ROSEVILLE
CALIFORNIA

CONTRACT CHANGE ORDER

Change Order No. _____

Date Prepared: _____

Department of Public Works
311 Vernon Street
Roseville, CA 95678

Contractor: _____

Address: _____

Project: _____

Acct.No: _____

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract.

Description of work to be done, estimate of quantities, and prices to be paid:

Segregate between additional work at contract price, agreed price, and force account.
Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time.

Estimated Cost: ☐ ***Decrease*** ☐ ***Increase*** **$** **-**

By reason of this order, the time of completion will be adjusted as follows:

Original Contract Amount:

Total Change by Previous Change Orders and/or Quantity Adjustment: $ -

Contract Amount Prior to this Change Order:

Contract Amount to be (*Increased/Decreased)* _____ by this Change Order: $ -

Adjusted Contract Amount Including this Change Order:

SIGNATURE	(PRINT NAME & TITLE)	DATE

CITY APPROVAL BY:

SIGNATURE	(PRINT NAME & TITLE)	DATE

We, the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment, therefore, the prices shown above. **NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.**

CONTRACTOR ACCEPTANCE BY:

SIGNATURE	(PRINT NAME & TITLE)	DATE

APPENDIX D

EXHIBIT 12-G REQUIRED FEDERAL-AID CONTRACT LANGUAGE

(For Local Assistance Construction Projects)

The following language must be incorporated into all Local Assistance Federal-aid construction contracts. The following language, with minor edits, was taken from the Code of Federal Regulations.

MAINTAIN RECORDS AND SUBMIT REPORTS DOCUMENTING YOUR PERFORMANCE UNDER THIS SECTION

1. DISADVANTAGED BUSINESS ENTERPRISES (DBE) 2
   - A. NONDISCRIMINATION STATEMENT 2
   - B. CONTRACT ASSURANCE 3
   - C. PROMPT PROGRESS PAYMENT 3
   - D. PROMPT PAYMENT OF WITHHELD FUNDS TO SUBCONTRACTORS 3
   - E. TERMINATION AND SUBSTITUTION OF DBE SUBCONTRACTORS 4
   - F. COMMITMENT AND UTILIZATION 5
   - G. DBE RUNNING TALLY OF ATTAINMENTS 6

2. BID OPENING 6
3. BID RIGGING 6
4. CONTRACT AWARD 6
5. CONTRACTOR LICENSE 6
6. CHANGED CONDITIONS 6
   - A. DIFFERING SITE CONDITIONS 6
   - B. SUSPENSIONS OF WORK ORDERED BY THE ENGINEER 6
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7. BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES 7
8. BUY AMERICA 7
9. QUALITY ASSURANCE 8
10. PROMPT PAYMENT FROM THE AGENCY TO THE CONTRACTORS 8
11. FORM FHWA-1273 REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONTRACTS 8
12. FEMALE AND MINORITY GOALS 21
13. TITLE VI ASSURANCES 22
14. USE OF UNITED STATES-FLAG VESSELS (CARGO PREFERENCE ACT) 23
15. FEDERAL TRAINEE PROGRAM 23

1. DISADVANTAGED BUSINESS ENTERPRISES (DBE)

The contractor, subrecipient or subcontractor shall take necessary and reasonable steps to ensure that DBEs have opportunity to participate in the contract (49 CFR 26). To ensure equal participation of DBEs provided in 49 CFR 26.5, the Agency shows a contract goal for DBEs. The prime contractor shall make work available to DBEs and select work parts consistent with available DBE subcontractors and suppliers.

The prime contractor shall meet the DBE goal shown elsewhere in these special provisions or demonstrate that they made adequate good faith efforts to meet this goal.

It is the prime contractor's responsibility to verify that the DBE firm is certified as DBE at date of bid opening and document the record by printing out the California Unified Certification Program (CUCP) data for each DBE firm. A list of DBEs certified by the CUCP can be found here.

All DBE participation will count toward the California Department of Transportation's federally mandated statewide overall DBE goal.

Credit for materials or supplies the prime contractor purchases from DBEs counts towards the goal in the following manner:

- 100 percent counts if the materials or supplies are obtained from a DBE manufacturer.
- 60 percent counts if the materials or supplies are obtained from a DBE regular dealer.
- Only fees, commissions, and charges for assistance in the procurement and delivery of materials or supplies count if obtained from a DBE that is neither a manufacturer nor regular dealer. 49 CFR 26.55 defines "manufacturer" and "regular dealer."

The prime contractor receives credit towards the goal if they employ a DBE trucking company that performs a commercially useful function as defined in 49 CFR 26.55(d)(1) as follows:

- The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.
- The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
- The DBE receives credit for the total value of the transportation services it provides on the Contract using trucks it owns, insures, and operates using drivers it employs.
- The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the Contract.
- The DBE may lease trucks without drivers from a non-DBE truck leasing company. If the DBE leases trucks from a non-DBE truck leasing company and uses its own employees as drivers, it is entitled to credit for the total value of these hauling services.
- A lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

a. Nondiscrimination Statement

The contractor, subrecipient or subcontractor will never exclude any person from participation in, deny any person the benefits of, or otherwise discriminate against anyone in connection with the award and performance of any contract covered by 49 CFR 26 on the basis of race, color, sex, or national origin. In administering the Local Agency components of the DBE Program Plan, the contractor, subrecipient or subcontractor will not, directly, or through contractual or other arrangements, use criteria or methods of administration that have the effect of defeating or substantially impairing accomplishment of the objectives of the DBE Program Plan with respect to individuals of a particular race, color, sex, or national origin.

b. Contract Assurance

Under 49 CFR 26.13(b):

The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federal-aid contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

(1) Withholding monthly progress payments;

(2) Assessing sanctions;

(3) Liquidated damages; and/or

(4) Disqualifying the contractor from future bidding as non-responsible.

c. Prompt Progress Payment

The prime contractor or subcontractor shall pay to any subcontractor, not later than **seven days** after receipt of each progress payment, unless otherwise agreed to in writing, the respective amounts allowed the contractor on account of the work performed by the subcontractors, to the extent of each subcontractor's interest therein. In the event that there is a good faith dispute over all or any portion of the amount due on a progress payment from the prime contractor or subcontractor to a subcontractor, the prime contractor or subcontractor may withhold no more than 150 percent of the disputed amount. Any violation of this requirement shall constitute a cause for disciplinary action and shall subject the licensee to a penalty, payable to the subcontractor, of 2 percent of the amount due per month for every month that payment is not made.

In any action for the collection of funds wrongfully withheld, the prevailing party shall be entitled to his or her attorney's fees and costs. The sanctions authorized under this requirement shall be separate from, and in addition to, all other remedies, either civil, administrative, or criminal. This clause applies to both DBE and non-DBE subcontractors.

d. Prompt Payment of Withheld Funds to Subcontractors

The Agency may hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by the Agency, of the contract work, and pay retainage to the prime contractor based on these acceptances. The Agency shall designate one of the methods below in the contract to ensure prompt and full payment of any retainage kept by the prime contractor or subcontractor to a subcontractor. The Agency shall include either Method 1, Method 2, or Method 3 below and delete the other two.

Method 1: No retainage will be held by the Agency from progress payments due to the prime contractor. Prime contractors and subcontractors are prohibited from holding retainage from subcontractors. Any delay or postponement of payment may take place only for good cause and with the Agency's prior written approval. Any violation of these provisions shall subject the violating contractor or subcontractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business and Professions Code and Section 10262 of the California Public Contract Code. This requirement shall not be construed to limit or impair any contractual, administrative or judicial remedies, otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the contractor, deficient subcontractor performance and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.

Method 2: No retainage will be held by the Agency from progress payments due to the prime contractor. Any retainage kept by the prime contractor or by a subcontractor must be paid in full to the earning subcontractor within seven (7) days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment may take place only for good cause and with the Agency's prior written approval. Any violation of these provisions shall subject the violating contractor or subcontractor to the penalties, sanctions, and remedies specified in Section 7108.5 of the California Business and Professions Code and Section 10262 of the California Public Contract Code. This requirement shall not be construed to limit or impair any contractual, administrative or judicial remedies, otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the contractor, deficient subcontractor performance and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.

Method 3: The Agency shall hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by the Agency of the contract work and pay retainage to the prime contractor based on these acceptances. The prime contractor or subcontractor shall return all monies withheld in retention from all subcontractors within seven (7) days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the Agency. Any delay or postponement of payment may take place only for good cause and with the Agency's prior written approval. Any violation of these provisions shall subject the violating prime contractor or subcontractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business and Professions Code and Section 10262 of the California Public Contract Code. This requirement shall not be construed to limit or impair any contractual, administrative or judicial remedies otherwise available to the contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the contractor; deficient subcontractor performance and/or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.

Any violation of these provisions shall subject the violating prime contractor or subcontractor to the penalties, sanctions and other remedies specified therein. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the prime contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime contractor, deficient subcontract performance, or noncompliance by a subcontractor.

e. Termination and Substitution of DBE Subcontractors

The prime contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains the Agency's written consent. The prime contractor shall not terminate or substitute a listed DBE for convenience and perform the work with their own forces or obtain materials from other sources without prior written authorization from the Agency. Unless the Agency's prior written consent is provided, the contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE on the Exhibit 15-G Construction Contract DBE Commitment form, included in the Bid.

The Agency authorizes a request to use other forces or sources of materials if the bidder shows any of the following justifications:

1. Listed DBE fails or refuses to execute a written contract based on plans and specifications for the project.
2. The Local Agency stipulated that a bond is a condition of executing the subcontract and the listed DBE fails to meet the Local Agency's bond requirements.
3. Work requires a contractor's license and listed DBE does not have a valid license under Contractors License Law.
4. Listed DBE fails or refuses to perform the work or furnish the listed materials (failing or refusing to perform is not an allowable reason to remove a DBE if the failure or refusal is a result of bad faith or discrimination).
5. Listed DBE's work is unsatisfactory and not in compliance with the contract.
6. Listed DBE is ineligible to work on the project because of suspension or debarment.
7. Listed DBE becomes bankrupt or insolvent.
8. Listed DBE voluntarily withdraws with written notice from the Contract
9. Listed DBE is ineligible to receive credit for the type of work required.
10. Listed DBE owner dies or becomes disabled resulting in the inability to perform the work on the Contract.
11. The Agency determines other documented good cause.

The prime contractor shall notify the original DBE of the intent to use other forces or material sources and provide the reasons, allowing the DBE 5 days to respond to the notice and advise the prime contractor and the Agency of the reasons why the use of other forces or sources of materials should not occur.

The prime contractor's request to use other forces or material sources must include:

1. One or more of the reasons listed in the preceding paragraph.
2. Notices from the prime contractor to the DBE regarding the request.
3. Notices from the DBEs to the prime contractor regarding the request.

If a listed DBE is terminated or substituted, the prime contractor must make good faith efforts to find another DBE to substitute for the original DBE. The substitute DBE must perform at least the same amount of work as the original DBE under the contract to the extent needed to meet or exceed the DBE goal.

f. Commitment and Utilization

Note: In the Agency's reports of DBE participation to Caltrans, the Agency must display both commitments and attainments.

The Agency's DBE program must include a monitoring and enforcement mechanism to ensure that DBE commitments reconcile to DBE utilization.

The bidder shall submit the Exhibit 15-G Construction Contract DBE Commitment, included in the Bid book. This exhibit is the bidder's DBE commitment form. If the form is not submitted with the bid, the bidder must remove the form from the Bid book before submitting their bid.

The bidder shall complete and sign Exhibit 15-G Construction Contract DBE Commitment included in the contract documents regardless of whether DBE participation is reported. The bidder shall provide written confirmation from each DBE that the DBE is participating in the Contract. A copy of a DBE's quote serves as written confirmation. If a DBE is participating as a joint venture partner, the bidder shall submit a copy of the joint venture agreement.

If the DBE Commitment form, Exhibit 15-G, is not submitted with the bid, it must be completed and submitted by all bidders to the Agency within five (5) days of bid opening. If the bidder does not submit the DBE Commitment form within the specified time, the Agency will find the bidder's bid nonresponsive.

The prime contractor shall use each DBE subcontractor as listed on Exhibit 12-B Bidder's List of Subcontractors (DBE and Non-DBE), and Exhibit 15-G Construction Contract DBE Commitment form unless they receive authorization for a substitution.

The Agency shall request the prime contractor to:

1. Notify the Resident Engineer or Inspector of any changes to its anticipated DBE participation
2. Provide this notification before starting the affected work
3. Maintain records including:
    - Name and business address of each 1st-tier subcontractor
    - Name and business address of each DBE subcontractor, DBE vendor, and DBE trucking company, regardless of tier
    - Date of payment and total amount paid to each business (see Exhibit 9-F Monthly Disadvantaged Business Enterprise Payment)

If the prime contractor is a DBE contractor, they shall include the date of work performed by their own forces and the corresponding value of the work.

Before the 15th of each month, the prime contractor shall submit a Monthly DBE Trucking Verification (LAPM Exhibit 16-Z1) form.

If a DBE is decertified before completing its work, the DBE must notify the prime contractor in writing of the decertification date. If a business becomes a certified DBE before completing its work, the business must notify the prime contractor in writing of the certification date. The prime contractor shall submit the notifications. Upon work completion, the prime contractor shall complete a Disadvantaged Business Enterprises (DBE) Certification Status Change, Exhibit 17-O, form and submit the form within 30 days of contract acceptance.

Upon work completion, the prime contractor shall complete Exhibit 17-F Final Report – Utilization of Disadvantaged Business Enterprises (DBE), First-Tier Subcontractors and submit it within 90 days of contract acceptance. The Agency will withhold $10,000 until the form is submitted. The Agency releases the withhold upon submission of the completed form.

g. DBE RUNNING TALLY OF ATTAINMENTS

After submitting an invoice for reimbursement that includes a payment to a DBE, but no later than the 10th of the following month, the prime contractor/consultant shall complete and email the Exhibit 9- F: Disadvantaged Business Enterprise Running Tally of Payments to business.support.unit@dot.ca.gov with a copy to the Agency.

2. **BID OPENING** The Agency publicly opens and reads bids at the time and place shown on the Notice to Contractors.

3. **BID RIGGING** The U.S. Department of Transportation (DOT) provides a toll-free hotline to report bid rigging activities. Use the hotline to report bid rigging, bidder collusion, and other fraudulent activities. The hotline number is (800) 424-9071. The service is available 24 hours 7 days a week and is confidential and anonymous. The hotline is part of the DOT's effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General.

4. **CONTRACT AWARD** If the Agency awards the contract, the award is made to the lowest responsible and responsive bidder.

5. **CONTRACTOR LICENSE**

   The Contractor must be properly licensed as a contractor from contract award through Contract acceptance (Public Contract Code § 10164).

6. **CHANGED CONDITIONS**

   a. Differing Site Conditions

   1. During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before the site is disturbed and before the affected work is performed.
   2. Upon written notification, the engineer will investigate the conditions, and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding anticipated profits, will be made and the contract modified in writing accordingly. The engineer will notify the contractor of the determination whether or not an adjustment of the contract is warranted.
   3. No contract adjustment which results in a benefit to the contractor will be allowed unless the contractor has provided the required written notice.
   4. No contract adjustment will be allowed under this clause for any effects caused on unchanged work. (This provision may be omitted by the Local Agency, at their option.)

   b. Suspensions of Work Ordered by the Engineer

   1. If the performance of all or any portion of the work is suspended or delayed by the engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the contractor shall submit to the engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.
   2. Upon receipt, the engineer will evaluate the contractor's request. If the engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the engineer will make an adjustment (excluding profit) and modify the contract in

writing accordingly. The contractor will be notified of the engineer's determination whether or not an adjustment of the contract is warranted.

3. No contract adjustment will be allowed unless the contractor has submitted the request for adjustment within the time prescribed.

4. No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided or excluded under any other term or condition of this contract.

c. Significant Changes in the Character of Work

1. The engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the contractor agrees to perform the work as altered.

2. If the alterations or changes in quantities significantly change the character of the work under the contract, whether such alterations or changes are in themselves significant changes to the character of the work or by affecting other work cause such other work to become significantly different in character, an adjustment, excluding anticipated profit, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the contractor in such amount as the engineer may determine to be fair and equitable.

3. If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.

4. The term “significant change” shall be construed to apply only to the following circumstances:

   - When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or
   - When a major item of work, as defined elsewhere in the contract, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.

7. BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES

The Contractor shall begin work within 15 calendar days after the issuance of the Notice to Proceed.

This work shall be diligently prosecuted to completion before the expiration of_____WORKING DAYS beginning on the fifteenth calendar day after the date shown on the Notice to Proceed.

The Contractor shall pay to the City/County_____the sum of $_____per day, for each and every calendar days’ delay in finishing the work in excess of the number of working days prescribed above.

8. BUY AMERICA

Furnish steel and iron materials to be incorporated into the work with certificates of compliance and certified mill test reports. Mill test reports must indicate where the steel and iron were melted and manufactured. Steel and iron materials must be produced in the U.S. except:

1. Foreign pig iron and processed, pelletized, and reduced iron ore may be used in the domestic production of the steel and iron materials [60 Fed Reg 15478 (03/24/1995)];

2. If the total combined cost of the materials does not exceed the greater of 0.1 percent of the total bid or $2,500, materials produced outside the U.S. may be used.

Production includes:

1. Processing steel and iron materials, including smelting or other processes that alter the physical form or shape (such as rolling, extruding, machining, bending, grinding, and drilling) or chemical composition;
2. Coating application, including epoxy coating, galvanizing, and painting, that protects or enhances the value of steel and iron materials.

9. QUALITY ASSURANCE

The Local Agency uses a Quality Assurance Program (QAP) to ensure a material is produced to comply with the Contract. The Local Agency may examine the records and reports of tests the prime contractor performs if they are available at the job site. Schedule work to allow time for QAP.

10. PROMPT PAYMENT FROM THE AGENCY TO THE CONTRACTORS

The Agency shall make any progress payment within 30 days after receipt of an undisputed and properly submitted payment request from a contractor on a construction contract. If the Agency fails to pay promptly, the Agency shall pay interest to the contractor, which accrues at the rate of 10 percent per annum on the principal amount of a money judgment remaining unsatisfied. Upon receipt of a payment request, the Agency shall act in accordance with both of the following:

1. Each payment request shall be reviewed by the Agency as soon as practicable after receipt for the purpose of determining that it is a proper payment request.
2. Any payment request determined not to be a proper payment request suitable for payment shall be returned to the contractor as soon as practicable, but not later than seven (7) days, after receipt. A request returned pursuant to this paragraph shall be accompanied by a document setting forth in writing the reasons why the payment request is not proper.

11. FORM FHWA-1273 REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONTRACTS

(Excluding ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS)

[The following 12 pages must be physically inserted into the contract without modification.]

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REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. No segregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Government wide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

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2. EEO Officer: The contractor will designate and make known to the contracting officers and EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting and active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

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7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

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IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

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2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

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4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

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8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

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X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed information of participant is not required to exceed that which is $100,000 and that all such recipients shall certify and disclose accordingly.

12. FEMALE AND MINORITY GOALS

To comply with Section II, "Nondiscrimination," of "Required Contract Provisions Federal-Aid Construction Contracts," the following are for female and minority utilization goals for Federal-aid construction contracts and subcontracts that exceed $10,000:

The nationwide goal for female utilization is 6.9 percent.

The goals for minority utilization [45 Fed Reg 65984 (10/3/1980)] are as follows:

MINORITY UTILIZATION GOALS

Economic Area		Goal (Percent)
174	Redding CA: Non-SMSA (Standard Metropolitan Statistical Area) Counties: CA Lassen; CA Modoc; CA Plumas; CA Shasta; CA Siskiyou; CA Tehama	6.8
175	Eureka, CA Non-SMSA Counties: CA Del Norte; CA Humboldt; CA Trinity	6.6
176	San Francisco-Oakland-San Jose, CA: SMSA Counties: 7120 Salinas-Seaside-Monterey, CA CA Monterey 7360 San Francisco-Oakland CA Alameda; CA Contra Costa; CA Marin; CA San Francisco; CA San Mateo 7400 San Jose, CA CA Santa Clara, CA 7485 Santa Cruz, CA CA Santa Cruz 7500 Santa Rosa CA Sonoma 8720 Vallejo-Fairfield-Napa, CA CA Napa; CA Solano Non-SMSA Counties: CA Lake; CA Mendocino; CA San Benito	 28.9 25.6 19.6 14.9 9.1 17.1 23.2
177	Sacramento, CA: SMSA Counties: 6920 Sacramento, CA CA Placer; CA Sacramento; CA Yolo Non-SMSA Counties CA Butte; CA Colusa; CA El Dorado; CA Glenn; CA Nevada; CA Sierra; CA Sutter; CA Yuba	 16.1 14.3
178	Stockton-Modesto, CA: SMSA Counties: 5170 Modesto, CA CA Stanislaus 8120 Stockton, CA CA San Joaquin Non-SMSA Counties CA Alpine; CA Amador; CA Calaveras; CA Mariposa; CA Merced; CA Tuolumne	 12.3 24.3 19.8
179	Fresno-Bakersfield, CA SMSA Counties: 0680 Bakersfield, CA CA Kern 2840 Fresno, CA	 19.1 26.1

	CA Fresno Non-SMSA Counties: CA Kings; CA Madera; CA Tulare	23.6
180	Los Angeles, CA: SMSA Counties: 0360 Anaheim-Santa Ana-Garden Grove, CA CA Orange 4480 Los Angeles-Long Beach, CA CA Los Angeles 6000 Oxnard-Simi Valley-Ventura, CA CA Ventura 6780 Riverside-San Bernardino-Ontario, CA CA Riverside; CA San Bernardino 7480 Santa Barbara-Santa Maria-Lompoc, CA CA Santa Barbara Non-SMSA Counties CA Inyo; CA Mono; CA San Luis Obispo	11.9 28.3 21.5 19.0 19.7 24.6
181	San Diego, CA: SMSA Counties 7320 San Diego, CA CA San Diego Non-SMSA Counties CA Imperial	16.9 18.2

For the last full week of July during which work is performed under the contract, the prime contractor and each non material-supplier subcontractor with a subcontract of $10,000 or more must complete Form FHWA PR-1391 (Appendix C to 23 CFR 230). Submit the forms by August 15.

13. TITLE VI ASSURANCES

During the performance of this Agreement, the contractor, for itself, its assignees and successors in interest (hereinafter collectively referred to as CONTRACTOR) agrees as follows:

a. Compliance with Regulations: CONTRACTOR shall comply with the regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the REGULATIONS), which are herein incorporated by reference and made a part of this agreement.

b. Nondiscrimination: CONTRACTOR, with regard to the work performed by it during the AGREEMENT, shall not discriminate on the grounds of race, color, sex, national origin, religion, age, or disability in the selection and retention of sub-applicants, including procurements of materials and leases of equipment. CONTRACTOR shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the agreement covers a program set forth in Appendix B of the Regulations.

c. Solicitations for Sub-agreements, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by CONTRACTOR for work to be performed under a Sub- agreement, including procurements of materials or leases of equipment, each potential sub-applicant or supplier shall be notified by CONTRACTOR of the CONTRACTOR'S obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

d. Information and Reports: CONTRACTOR shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the California Department of Transportation or FHWA to be pertinent to ascertain compliance with such

Regulations or directives. Where any information required of CONTRACTOR is in the exclusive possession of another who fails or refuses to furnish this information, CONTRACTOR shall so certify to the California Department of Transportation or the FHWA as appropriate, and shall set forth what efforts CONTRACTOR has made to obtain the information.

e. Sanctions for Noncompliance: In the event of CONTRACTOR's noncompliance with the nondiscrimination provisions of this agreement, the California Department of Transportation shall impose such agreement sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
   i. withholding of payments to CONTRACTOR under the Agreement within a reasonable period of time, not to exceed 90 days; and/or
   ii. cancellation, termination or suspension of the Agreement, in whole or in part.

f. Incorporation of Provisions: CONTRACTOR shall include the provisions of paragraphs (1) through (6) in every sub-agreement, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

CONTRACTOR shall take such action with respect to any sub-agreement or procurement as the California Department of Transportation or FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance, provided, however, that, in the event CONTRACTOR becomes involved in, or is threatened with, litigation with a sub-applicant or supplier as a result of such direction, CONTRACTOR may request the California Department of Transportation enter into such litigation to protect the interests of the State, and, in addition, CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

14. USE OF UNITED STATES-FLAG VESSELS (CARGO PREFERENCE ACT)

The CONTRACTOR agrees-

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carries, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
2. To Furnish within 20 days following the date of loading for shipments originating within the United State or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.
3. To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

Federal Trainee Program Special Provisions
(to be used when applicable)

15. FEDERAL TRAINEE PROGRAM

For the Federal training program, the number of trainees or apprentices is___.

This section applies if a number of trainees or apprentices is specified in the special provisions.

As part of the prime contractor's equal opportunity affirmative action program, provide on-the-job training to develop full journeymen in the types of trades or job classifications involved.

The prime contractor has primary responsibility for meeting this training requirement.

If the prime contractor subcontracts a contract part, they shall determine how many trainees or apprentices are to be trained by the subcontractor. Include these training requirements in each subcontract.

Where feasible, 25 percent of apprentices or trainees in each occupation must be in their 1st year of apprenticeship or training.

Distribute the number of apprentices or trainees among the work classifications on the basis of the prime contractor's needs and the availability of journeymen in the various classifications within a reasonable recruitment area.

Before starting work, the prime contractor shall submit to the City/County of_____ :

1. Number of apprentices or trainees to be trained for each classification
2. Training program to be used
3. Training starting date for each classification

The prime contractor shall obtain the City/County of _____approval for this submitted information before the prime contractor starts work. The City/County of_____credits the prime contractor for each apprentice or trainee the prime contractor employs on the job who is currently enrolled or becomes enrolled in an approved program.

The primary objective of this section is to train and upgrade minorities and women toward journeyman status. The prime contractor shall make every effort to enroll minority and women apprentices or trainees, such as conducting systematic and direct recruitment through public and private sources likely to yield minority and women apprentices or trainees, to the extent they are available within a reasonable recruitment area and show that they have made the efforts. In making these efforts, the prime contractor shall not discriminate against any applicant for training.

The prime contractor shall not employ as an apprentice or trainee an employee:

1. In any classification in which the employee has successfully completed a training course leading to journeyman status or in which the employee has been employed as a journeyman
2. Who is not registered in a program approved by the US Department of Labor, Bureau of Apprenticeship and Training

The prime contractor shall ask the employee if the employee has successfully completed a training course leading to journeyman status or has been employed as a journeyman. The prime contractor's records must show the employee's answers to the questions.

In the training program, the prime contractor shall establish the minimum length and training type for each classification. The City/County of _____ and FHWA approves a program if one of the following is met:

1. It is calculated to:
   - Meet the your equal employment opportunity responsibilities
   - Qualify the average apprentice or trainee for journeyman status in the classification involved by the end of the training period
2. It is registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, and it is administered in a way consistent with the equal employment responsibilities of Federal-aid highway construction contracts

The prime contractor shall obtain the State's approval for their training program before they start work involving the classification covered by the program.

The prime contractor shall provide training in the construction crafts, not in clerk-typist or secretarial-type positions. Training is allowed in lower level management positions such as office engineers, estimators, and timekeepers if the training is oriented toward construction applications. Training is allowed in the laborer classification if significant and meaningful training is provided and approved by the division office. Off-site training is allowed if the training is an integral part of an approved training program and does not make up a significant part of the overall training.

The City/County of_____reimburses the prime contractor 80 cents per hour of training given an employee on this contract under an approved training program:

1. For on-site training
2. For off-site training if the apprentice or trainee is currently employed on a Federal-aid project and prime contractor does at least one of the following:
    a. Contribute to the cost of the training
    b. Provide the instruction to the apprentice or trainee
    c. Pay the apprentice's or trainee's wages during the off-site training period
3. If the prime contractor complies with this section.

Each apprentice or trainee must:

1. Begin training on the project as soon as feasible after the start of work involving the apprentice's or trainee's skill
2. Remain on the project as long as training opportunities exist in the apprentice's or trainee's work classification or until the apprentice or trainee has completed the training program

The prime contractor shall furnish the apprentice or trainee with a copy of the program that the prime contractor will comply with in providing the training

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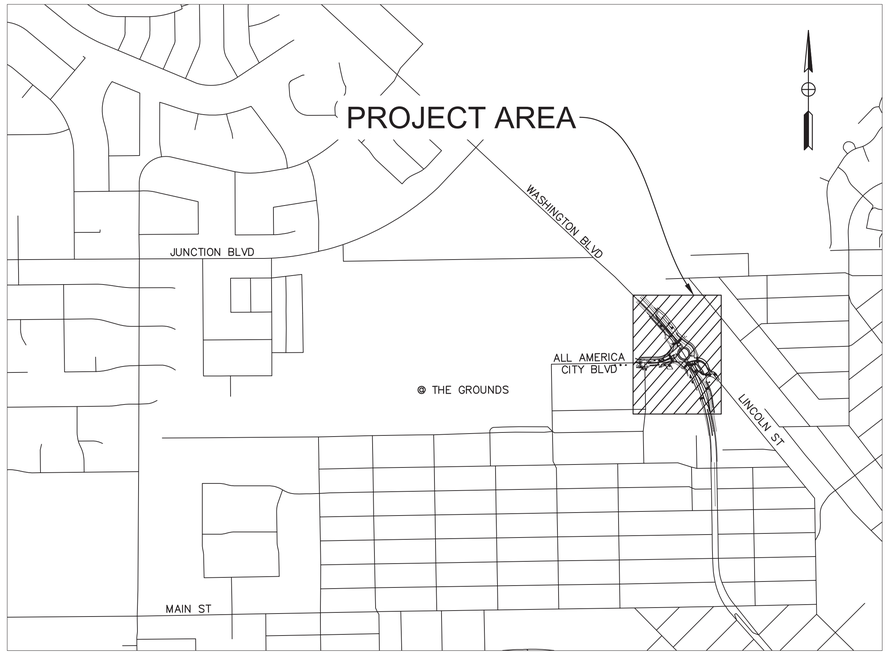
ABBREVIATIONS

BOC	BACK OF CURB
BOW	BACK OF WALK
℄	CENTER LINE
C&G	CURB AND GUTTER
DP	DRAINAGE PROFILE
DU	DRAINAGE AND UTILITY
EG	EXISTING GROUND
FOC	FACE OF CURB
LF	LINEAR FEET
MMA	METHYL METHACRYLATE
MPH	MILES PER HOUR
PD	PAVEMENT DELINEATION
PED	PEDESTRIAN
PP	POWERPOLE
PROP	PROPOSED
SDMH	STORM DRAIN MANHOLE
TC	TOP OF CURB

CITY OF ROSEVILLE, CALIFORNIA

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

CITY PROJECT NUMBER: 500070
FEDERAL ID NUMBER: CML 5182 (079)



VICINITY MAP
NO SCALE

BENCHMARK DESCRIPTION

CITY B.M. 9 EL=162.418

3-1/4" BRASS DISK TOP OF CURB AT D.I. WEST SIDE OF WASHINGTON BLVD. APPROX. 80' SOUTH OF ALL AMERICAN CITY BLVD.

CITY OF ROSEVILLE			
UTILITY REPRESENTATIVES/CONTACTS			
UTILITY	REPRESENTATIVES		PHONE
U.S.A.	U.S.A.		(800) 642-2444
ELECTRIC	ROSEVILLE ELECTRIC	JOEY MCKINNEY	(916) 774-5618
WATER	CITY OF ROSEVILLE	SEAN BIGLEY	(916) 774-5513
SEWER	CITY OF ROSEVILLE	KEN GLOTZBACH	(916) 774-5754
DRAINAGE	CITY OF ROSEVILLE	JERRY DANKBAR	(916) 746-5790
PARKS	CITY OF ROSEVILLE	JOEL DE JONG	(916) 223-7757
FIBER OPTIC	CITY OF ROSEVILLE	EDSON GUILLEN	(916) 774-5465
GAS	PACIFIC GAS & ELECTIC	DAVE BOND	(530) 889-3261
TV/TELEPHONE	CONSOLIDATED COMMUNICATIONS	HANK BRAZ	(916) 786-1783
TELE	XO COMMUNICATIONS	STEVE LEOHNER	(408) 817-2800
TELE	XFINITY	STEVE ABELIA	(916) 830-6757
TELE	CENTURY LINK	CALEB KING	(918) 547-0007
JOINT TRENCH	VERIZON MCI	STEVE LEOHNER	(408) 817-2800
JOINT TRENCH	WOODMAN TELECOM	MIC WOODMAN	(801) 618-4664
JOINT TRENCH	ZAYO	MANUEL VALENCIA	(925) 413-0170

CITY OF ROSEVILLE
DEPARTMENT OF PUBLIC WORKS

ENGINEER IN RESPONSIBLE CHARGE:

DANIEL CARLEY, P.E.
KIMLEY-HORN AND ASSOCIATES, INC.

JUNE 22, 2021
DATE

APPROVAL RECOMMENDED BY:

Stefanie A. Kemen
Digitally signed by Stefanie A. Kemen
Date: 2021.07.28 08:12:24 -07'00'

STEFANIE KEMEN, P.E.
ENGINEERING MANAGER
CITY OF ROSEVILLE
RCE 72653

DATE

APPROVED BY:

Jason Shykowski
Digitally signed by Jason Shykowski
Date: 2021.07.28 15:02:37 -07'00'

JASON SHYKOWSKI, P.E.
PUBLIC WORKS DIRECTOR
CITY OF ROSEVILLE
RCE 58234

DATE

ROSEVILLE PROJECT NUMBER: 500070
DATE IMPROVEMENT COMPLETED:

Know what's below. Call before you dig.

NO.	REVISIONS	DATE	BY

Kimley»Horn
555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

REGISTERED PROFESSIONAL ENGINEER DANIEL C. CARLEY No. C76394 CIVIL STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT
CV-01
COVER SHEET
CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
1 OF 60

K:\SAC_TPTO\ROSEVILLE WASHINGTON @ ALL AMERICA RAB - 097918026\08 CADD\PLANSHEETS\CV-01 COVER SHEET.DWG
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K:\SAC_TPT\ROSEVILLE WASHINGTON @ ALL AMERICA RAB - 097918026\08 CADD\PLANSHEETS\GN-01 GENERAL NOTES.DWG
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GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THESE PLANS. THE LATEST EDITION AND AMENDMENTS OF THE CITY OF ROSEVILLE DESIGN AND CONSTRUCTION STANDARDS, AND THE LATEST EDITION OF THE CALTRANS STANDARD PLANS AND STANDARD SPECIFICATIONS.
2. THE CITY OF ROSEVILLE IS A MEMBER OF THE UNDERGROUND SERVICE ALERT (U.S.A.) ONE-CALL SYSTEM. THE CONTRACTORS SHALL NOTIFY THE U.S.A. CENTER 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK BY CALLING 1-800-227-2600.
3. THE CONTRACTOR SHALL MARK IN WHITE PAINT ALL AREAS TO BE EXCAVATED PRIOR TO CONTACTING U.S.A. ANY AREAS NOT MARKED WILL NOT BE SUBJECT TO U.S.A., AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM EXCAVATION.
4. THE CONTRACTOR SHALL EXPOSE AND VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION OF THE NEW IMPROVEMENTS CONNECTING TO OR IN THE VICINITY OF THE SAME.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING MONUMENTS AND OTHER SURVEY MARKERS ON THE JOB SITE.
6. THE CONTRACTOR SHALL PLACE BOXED SURVEY MONUMENTS WITH 1-1/2" BRONZE HEAD SET IN CONCRETE (STD. DWG. ST-36) AT LOCATIONS SHOWN ON THESE PLANS.
7. A.C. SURFACE SHALL BE CUT TO A NEAT, STRAIGHT LINE PARALLEL WITH THE STREET CENTERLINE AND THE EXPOSED EDGE SHALL BE TACKED WITH EMULSION PRIOR TO PAVING. THE EXPOSED BASE MATERIAL SHALL BE GRADED, RE-COMPACTED, AND RESEALED PRIOR TO PAVING.
8. ANY EXISTING CONCRETE SURFACE TO BE REMOVED SHALL BE SAW CUT TO A NEAT, STRAIGHT LINE.
9. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN THAT SHALL BE ACCEPTED BY THE TRAFFIC ENGINEERING DIVISION OF PUBLIC WORKS BEFORE START OF WORK IN RIGHT-OF-WAY AND SHALL BE IN ACCORDANCE WITH CALIFORNIA MUTCD LATEST EDITION. AT LEAST ONE LANE IN EACH DIRECTION SHALL REMAIN OPEN TO TRAFFIC UNLESS OTHERWISE SHOWN ON THE PLANS. TRAFFIC CONTROL HOURS ARE SUBJECT TO LIMITATION BY THE CITY. TRAFFIC CONTROL WITH LANE CLOSURES THAT AFFECT TRAFFIC FLOW MAY REQUIRE NIGHT WORK. IF, AS A PART OF TRAFFIC CONTROL MEASURES, A ROADWAY CLOSURE HAS BEEN APPROVED, THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER 72 HOURS IN ADVANCE OF SETTING UP THIS CLOSURE.
10. CURB RAMPS CONFORMING TO ALL ADA AND TITLE 24 REQUIREMENTS SHALL BE PLACED AT ALL NEW STANDARD CURB RETURNS (STANDARD DRAWING ST-27) AND STANDARD TYPE A-7 DRIVEWAYS. WHERE EXISTING RAMPS DO NOT MEET CURRENT ADA AND TITLE 24 REQUIREMENTS, THE RAMPS SHALL BE UPGRADED IN CONFORMANCE WITH MINIMUM TITLE 24 REQUIREMENTS. WHERE EXISTING RAMPS DO NOT INCLUDE DETECTABLE WARNING PANELS (TRUNCATED DOMES), PANELS SHALL BE RETROFITTED PER THE CONSTRUCTION STANDARDS.
11. DRAIN INLETS NOT WITHIN A PAVED AREA SHALL HAVE A 12" WIDE COLLAR OF 6" THICK P.C.C. OR 2" THICK A.C.
12. ALL UNDERGROUND UTILITIES WITHIN EXISTING OR PROPOSED CITY OF ROSEVILLE EASEMENTS SHALL REQUIRE A MINIMUM OF 90% COMPACTION ON THE TRENCH BACKFILL. COMPACTION OF BACKFILL BY JETTING IS NOT PERMITTED IN CITY OF ROSEVILLE RIGHT OF WAY AND EASEMENT AREAS OR WITHIN DEDICATED RECLAIMED WATER, STORM, SEWER OR WATER EASEMENTS AND MAINS.
13. THE CITY PROJECT ENGINEER SHALL CONDUCT A PRE-CONSTRUCTION MEETING ONE-WEEK PRIOR TO STARTING WORK. MEMBERS OF THE CITY OF ROSEVILLE DEVELOPMENT SERVICES DEPARTMENT, ENVIRONMENTAL UTILITIES DEPARTMENT AND ALL OTHER UTILITY REPRESENTATIVES SHALL BE NOTIFIED BY THE ENGINEER AS TO THE DATE AND LOCATION OF THE MEETING.
14. PRIOR TO EXCAVATION OF TRENCHES 5 FEET OR DEEPER, THE CONTRACTOR SHALL SUBMIT TO THE PUBLIC WORKS DEPARTMENT ENGINEER A COPY OF THE COMPANY'S ANNUAL CALOSHA TRENCHING PERMIT AND A COPY OF THE COMPANY'S LETTER INFORMING CALOSHA OF THE TIME THE TRENCHING IS COMMENCING AND THE LOCATION OF THE WORK.
15. ALL PAINTED TRAFFIC STRIPES, ARROWS, AND PAVEMENT MARKINGS OUTSIDE OF THE CONCRETE PAVEMENT LIMIT SHALL BE CONSTRUCTED WITH THERMOPLASTIC MATERIAL TO THE SPECIFICATIONS SET FORTH IN CHAPTER 3 OF THE CALIFORNIA MUTCD LATEST EDITION. ALL PAINTED TRAFFIC STRIPES, ARROWS, AND PAVEMENT MARKINGS WITHIN THE CONCRETE PAVEMENT LIMIT IS TO BE METHYL METHACRYLATE (MMA) WITH 1-INCH BLACK BORDERS PER CITY OF ROSEVILLE DESIGN AND CONSTRUCTION STANDARDS. NON-REFLECTIVE PAVEMENT MARKERS SHALL CONSIST OF CERAMIC MARKERS ONLY CONFORMING TO CHAPTER 3 OF THE CALIFORNIA MUTCD LATEST EDITION.
16. THE CONTRACTOR SHALL TAKE EXTREME CARE TO PROTECT EXISTING SITE AND ADJACENT IMPROVEMENTS FROM DAMAGE. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR MAKE REPLACEMENT OF ALL CRACKED AND OTHERWISE PRE-EXISTING DAMAGED PUBLIC IMPROVEMENTS ALONG THE FRONTAGE OF THE PROJECT SITE AND ANY DAMAGE RESULTING FROM CONSTRUCTION TO CURRENT CITY STANDARDS AND AT THEIR OWN EXPENSE. THE EXTENT OF THE REPAIRS SHALL BE DETERMINED BY THE CITY ENGINEER AND SHALL BE COMPLETED PRIOR TO THE CITY ACCEPTANCE OF THE IMPROVEMENTS.
17. WHERE COMBINATIONS OF SIDEWALK OR CURB AND GUTTER ARE PLACED CONTIGUOUS TO EXISTING, ALL ADJOINING EXISTING CONCRETE VERTICAL FACES SHALL BE DOWELED. ALL ABUTTING SIDEWALK ENDS SHALL BE DOWELED MID-SECTION VERTICALLY WITH TWO DOWELS FOR FOUR THROUGH SIX-FOOT WIDE SIDEWALK AND THREE DOWELS FOR WIDER SIDEWALK. ABUTTING CURB AND GUTTER ENDS SHALL BE DOWELED TWICE, 18 INCHES APART AT GUTTER PAN MID-SECTION. DOWEL CONNECTIONS OF LONGITUDINAL RUNS OF SIDEWALK TO BACK OF CURB SHALL BE THREE FEET ON CENTER. ALL DOWELS SHALL BE 16 INCHES LONG, GRADE 60; #4 REBAR PENETRATING FOUR INCHES. THE DOWEL HOLE SHALL BE 5/8-INCH DIAMETER AT A SLIGHT HORIZONTAL ANGLE FROM PERPENDICULAR. THE PENETRATING PORTION OF THE DOWEL AND THE ENTIRE (CLEANED) VERTICAL SURFACE OF THE ADJOINING, EXISTING CONCRETE SHALL BE THOROUGHLY COATED WITH STATE STANDARD TWO-PART EPOXY.
18. WHEN SAWCUTTING WITHIN THE STREET FOR TRENCHING OR OTHER PURPOSES, CONTRACTOR SHALL GRIND 1½" OF PAVEMENT BETWEEN THE LANE LINES (FROM LANE STRIPE TO LANE STRIPE) UPON COMPLETION OF THE SAWCUTTING AND OR TRENCHING WORK. WHERE THE SAWCUTTING OCCURS BETWEEN THE CURB AND GUTTER AND NEAREST LANE STRIPE (INCLUDING BIKE LANES), THE SAME 1-½" GRIND SHALL BE REQUIRED. CONTRACTOR TO PLACE A PETROMAT FABRIC OR APPROVED EQUAL BY THE CITY OF ROSEVILLE AND OVERLAY FROM LANE STRIPE TO LANE STRIPE, OR CURB TO LANE STRIPE AND RESTRIPE OR REPLACE ANY DELINEATORS REMOVED DURING THE GRIND.

DESIGN ENGINEER NOTES

1. THE TERM "DESIGN ENGINEER" USED HEREIN SHALL MEAN THE ENGINEER WHO HAS SIGNED AND SEALED THESE PLANS AND IS IN RESPONSIBLE CHARGE OF THE ENGINEERING DESIGN. THE TERM "CONTRACTOR" USED HEREIN SHALL MEAN ANY GENERAL CONTRACTOR OR SUBCONTRACTOR USING THESE PLANS. ANY AGENCY SIGNATURE OR APPROVAL ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF ANY OF THESE NOTES.
2. THE DESIGN ENGINEER WILL NOT PROVIDE, OBSERVE, COMMENT ON OR ENFORCE ANY SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY MEASURES AND SHALL BE SOLELY RESPONSIBLE FOR SAME AND COMPLYING WITH ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS, AND REGULATIONS. THE CONTRACTOR AGREES THAT SHE/HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS AND SAFETY OF ALL PERSONS AND PROPERTY DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
3. THE DESIGN ENGINEER SHALL HAVE NO RESPONSIBILITY FOR ANY OF THE CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION, TECHNIQUES, EQUIPMENT CHOICE AND USAGE, SEQUENCE, SCHEDULE, SAFETY PROGRAMS, OR SAFETY PRACTICES, NOR SHALL THE DESIGN ENGINEER HAVE ANY AUTHORITY OR RESPONSIBILITY TO STOP OR DIRECT THE WORK OF ANY CONTRACTOR.
4. THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE DESIGN ENGINEER AND OWNER, THEIR AGENTS AND EMPLOYEES, HARMLESS FROM ANY AND ALL CLAIMS, DEMANDS, JUDGMENTS, LOSS, DAMAGES, COSTS, EXPENSES, FEES OR LIABILITY WHATSOEVER, REAL OR ALLEGED, IN CONNECTION WITH, IN WHOLE OR IN PART, DIRECTLY OR INDIRECTLY, THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE DESIGN ENGINEER.
5. IF THERE ARE ANY QUESTIONS REGARDING THESE PLANS, THE CONTRACTOR SHALL REQUEST IN WRITING FROM THE DESIGN ENGINEER AND THE OWNER, AN INTERPRETATION BEFORE DOING ANY RELATED OR IMPACTED WORK.
6. THE CONTRACTOR SHALL TAKE THE NECESSARY STEPS TO PROTECT THE PROPERTY FROM ANY EROSION AND SILTATION THAT RESULT FROM CONTRACTOR OPERATIONS BY APPROPRIATE MEANS UNTIL SUCH TIME THAT THE PROJECT IS COMPLETED AND ACCEPTED FOR MAINTENANCE BY WHOMEVER IS TO BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE.
7. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO STARTING WORK NEAR THEIR FACILITIES AND SHALL COORDINATE WORK WITH UTILITY COMPANY REPRESENTATIVES.
8. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED FROM A SEARCH OF READILY AVAILABLE RECORDS. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN HEREON AND ANY OTHERS NOT OF RECORD OR NOT SHOWN ON THESE PLANS. ALL DAMAGES THERETO CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE APPROPRIATE SPECIFICATIONS AND STANDARDS AT THE SOLE EXPENSE OF THE CONTRACTOR.
9. THE LOCATION, ELEVATIONS, SIZE, TYPE AND CONDITION OF EXISTING IMPROVEMENTS ADJACENT TO THE PROPOSED WORK INDICATED ON THESE PLANS SHALL BE CONFIRMED BY THE CONTRACTOR BY FIELD MEASUREMENTS AND OBSERVATIONS PRIOR TO CONSTRUCTION OF NEW WORK. THE CONTRACTOR WILL IMMEDIATELY INFORM THE DESIGN ENGINEER IN WRITING IF ANY DISCREPANCIES OR CONFLICTING INFORMATION IS FOUND.
10. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES AS NEEDED, SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY DUE TO THE ACTUAL LOCATION, SIZE, TYPE, OR CONDITION OF EXISTING FACILITIES DIFFERING FROM WHAT IS SHOWN ON THESE PLANS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ANY DAMAGE TO THE EXISTING IMPROVEMENTS AND REPLACEMENT TO THE SATISFACTION OF THE OWNER.
12. SHOULD CONFLICTING INFORMATION BE FOUND ON THE PLANS THE CONTRACTOR SHALL NOTIFY THE REGISTERED ENGINEER IN WRITING IMMEDIATELY BEFORE PROCEEDING WITH THE WORK IN QUESTION.
13. ANYTHING MENTIONED IN THE SPECIFICATIONS, IF ANY, AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH.

811 Know what's below. Call before you dig.

No.	REVISIONS	DATE	BY

Kimley»Horn
555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

REGISTERED PROFESSIONAL ENGINEER DANIEL C. CARLEY No. C76394 CIVIL STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

GN-01

GENERAL NOTES

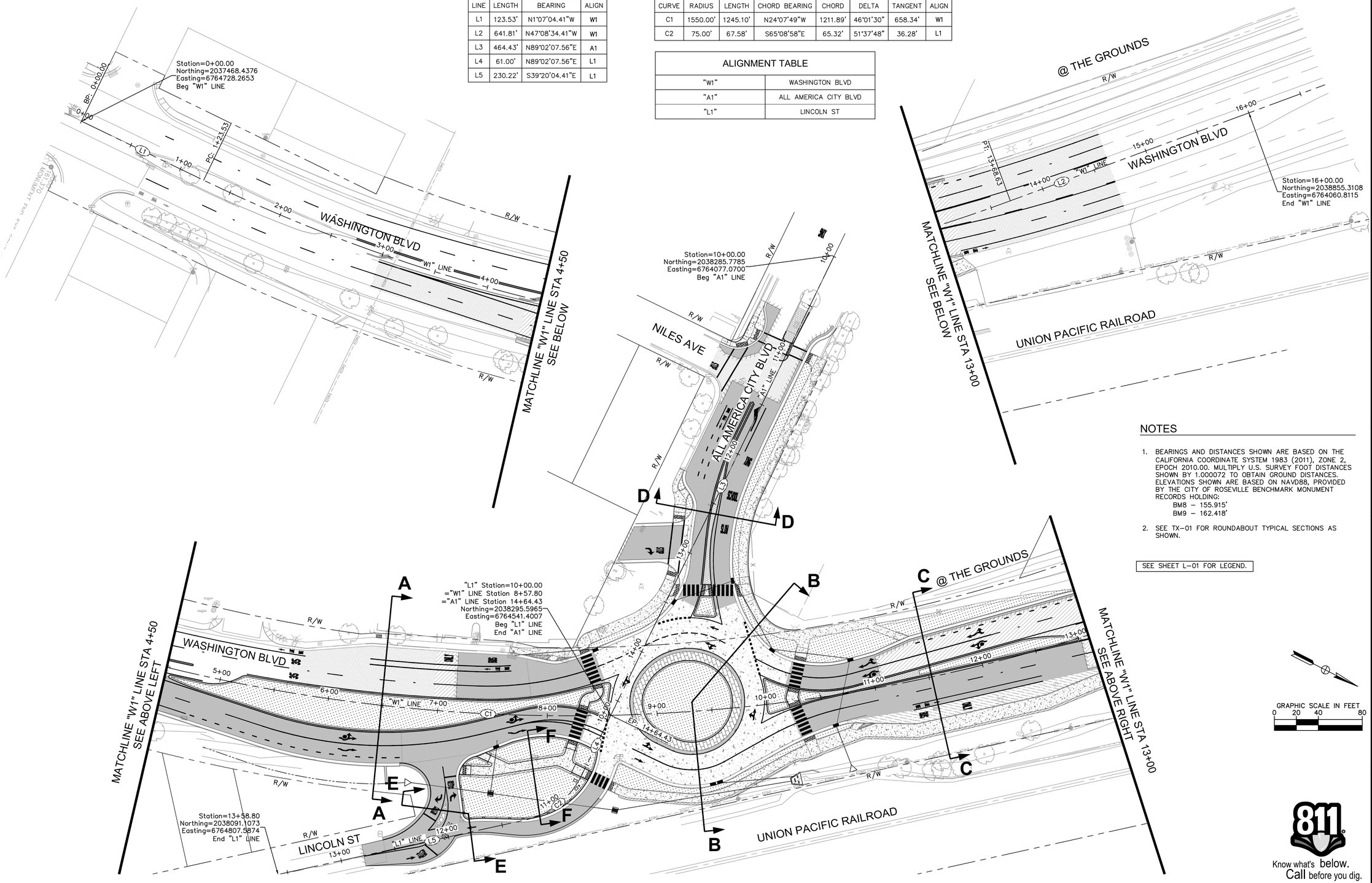
CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
2 OF 60

LINE TABLE			
LINE	LENGTH	BEARING	ALIGN
L1	123.53'	N1°07'04.41"W	W1
L2	641.81'	N47°08'34.41"W	W1
L3	464.43'	N89°02'07.56"E	A1
L4	61.00'	N89°02'07.56"E	L1
L5	230.22'	S39°20'04.41"E	L1

CURVE TABLE							
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT	ALIGN
C1	1550.00'	1245.10'	N24°07'49"W	1211.89'	46°01'30"	658.34'	W1
C2	75.00'	67.58'	S65°08'58"E	65.32'	51°37'48"	36.28'	L1

ALIGNMENT TABLE	
"W1"	WASHINGTON BLVD
"A1"	ALL AMERICA CITY BLVD
"L1"	LINCOLN ST



NOTES

1. BEARINGS AND DISTANCES SHOWN ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM 1983 (2011), ZONE 2, EPOCH 2010.00. MULTIPLY U.S. SURVEY FOOT DISTANCES SHOWN BY 1.000072 TO OBTAIN GROUND DISTANCES. ELEVATIONS SHOWN ARE BASED ON NAVD88, PROVIDED BY THE CITY OF ROSEVILLE BENCHMARK MONUMENT RECORDS HOLDING:
   BM8 – 155.915'
   BM9 – 162.418'
2. SEE TX-01 FOR ROUNDABOUT TYPICAL SECTIONS AS SHOWN.

SEE SHEET L-01 FOR LEGEND.

GRAPHIC SCALE IN FEET
0 20 40 80

Know what's below. Call before you dig.

No.	REVISIONS	DATE	BY

Kimley»Horn
555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

PROFESSIONAL ENGINEER
REGISTERED
DANIEL C. CARLEY
No. C76394
CIVIL
STATE OF CALIFORNIA

KHA PROJECT	097918026
DATE	JUNE 2021
SCALE	AS SHOWN
DESIGNED BY	SH/DC
DRAWN BY	MD/MB
CHECKED BY	DC

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

HC-01

HORIZONTAL CONTROL

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
3 OF 60

K:\SAC_TPTO\ROSEVILLE WASHINGTON @ ALL AMERICA RAB – 097918026\08 CADD\PLANSHEETS\HC-01 HORIZONTAL CONTROL.DWG
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NOTES

1. DESIGN DESIGNATION:
   R – VALUE: 20
   TRAFFIC INDEX (TI) ROADWAY = 9.0
2. SEE CD–SHEETS FOR DETAILS NOT SHOWN HERE, INCLUDING WORK AT INTERSECTION CORNER LOCATIONS, TRUCK APRON, AND RETAINING WALL.
3. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT (EP) UNLESS OTHERWISE INDICATED.
4. SEE LANDSCAPE PLANS FOR ADDITIONAL DETAILS ON TREATMENT OF MEDIAN ISLANDS.
5. LANE WIDTHS VARY, SEE SIGNING AND STRIPING PLANS FOR DETAILS.
6. PAVEMENT STRUCTURAL SECTIONS PROVIDED ARE BASED ON RECOMMENDATIONS AS PROVIDED IN GEOTECHNICAL REPORT DATED 10–02–19 BY BLACKBURN CONSULTING.
7. ANY IMPORT FILL SHALL HAVE AN R–VALUE GREATER THAN OR EQUAL TO 20.
8. SEE SPECIFICATIONS FOR ADDITIONAL DETAILS FOR PAVEMENT SECTION AND SURFACE PREPARATION.
9. SEE MOUNTABLE CURB DETAIL SHEET CD–07.

EXISTING PAVEMENT STRUCTURAL SECTIONS

A
- 0.25' AC
- 1.0' AB

*EXISTING PAVEMENT SECTIONS FROM AS–BUILTS AND POTHOLE INFORMATION. ACTUAL EXISTING PAVEMENT SECTION MAY VARY. CONTRACTOR TO NOTIFY ENGINEER OF ACTUAL EXISTING PAVEMENT SECTIONS DURING CONSTRUCTION.

PAVEMENT STRUCTURAL SECTIONS

1
- 0.45' HMA (TYPE A)
- 1.35' AB (CLASS 2)

2
- 0.75' JPCP
- 1.00' AB (CLASS 2)

3
- 0.33' PCC
- 0.33' AB (CLASS 2)

4
- 0.2' COLD PLANE & HMA OVERLAY

5
- TRUCK APRON
- SEE SHEET CD–07 FOR DETAILS

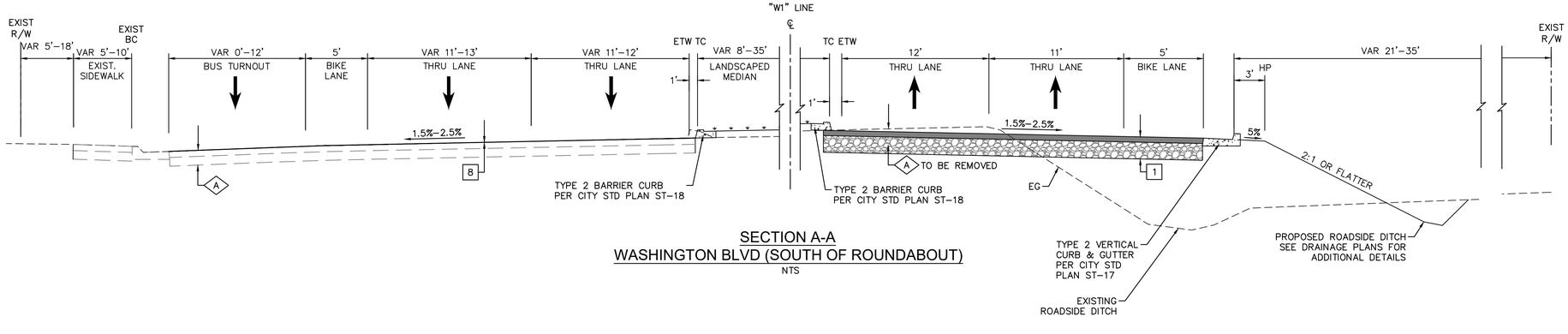
6
- 0.67' CONCRETE WITH #4, GRADE 60 REBAR
- 0.5' AB (3/4 INCH)
- SEE CITY STD PLAN ST–29

7
- 0.33' DG
- 0.33' AB (CLASS 2) 90% COMPACTED
- SEE DECOMPOSED GRANITE PED PATH DETAIL ON SHEET CD–07

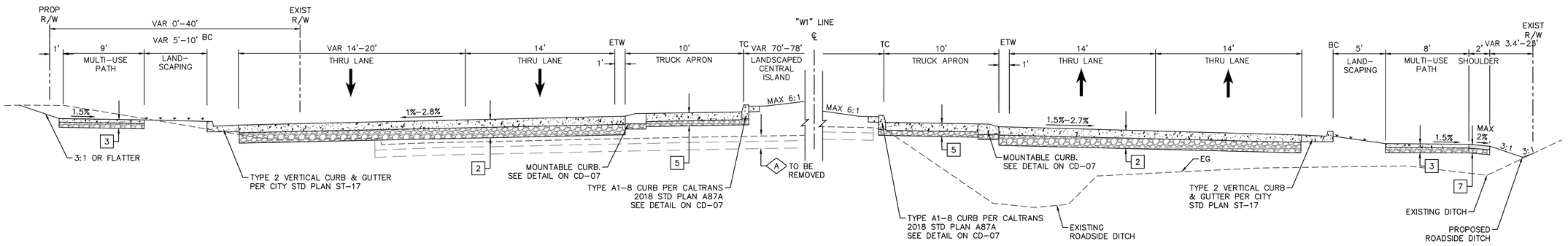
8
- MICRO–SURFACING TYPE II

LEGEND

- X — PROPOSED STRUCTURAL SECTION
- A — EXISTING STRUCTURAL SECTION
- HMA (TYPE A)
- PCC AND JPCC
- AB (CLASS 2)



SECTION A-A
WASHINGTON BLVD (SOUTH OF ROUNDABOUT)
NTS



SECTION B-B
WASHINGTON BLVD (AT ROUNDABOUT)
NTS

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555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

REGISTERED PROFESSIONAL ENGINEER DANIEL C. CARLEY No. C76394 CIVIL STATE OF CALIFORNIA

KHA PROJECT	097918026
DATE	JUNE 2021
SCALE	AS SHOWN
DESIGNED BY	SH/DC
DRAWN BY	MD/MB
CHECKED BY	DC

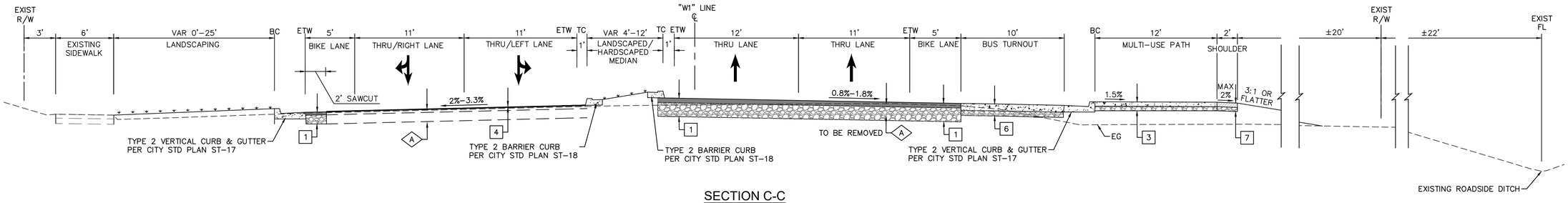
WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

TX-01

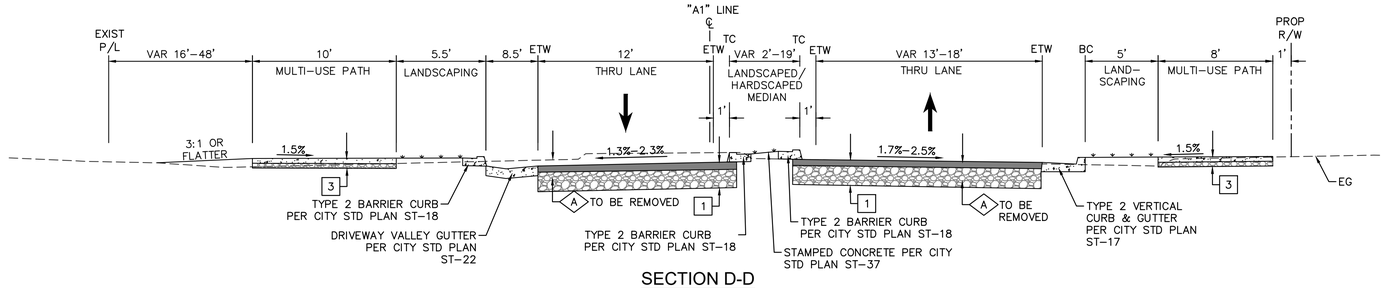
TYPICAL SECTIONS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

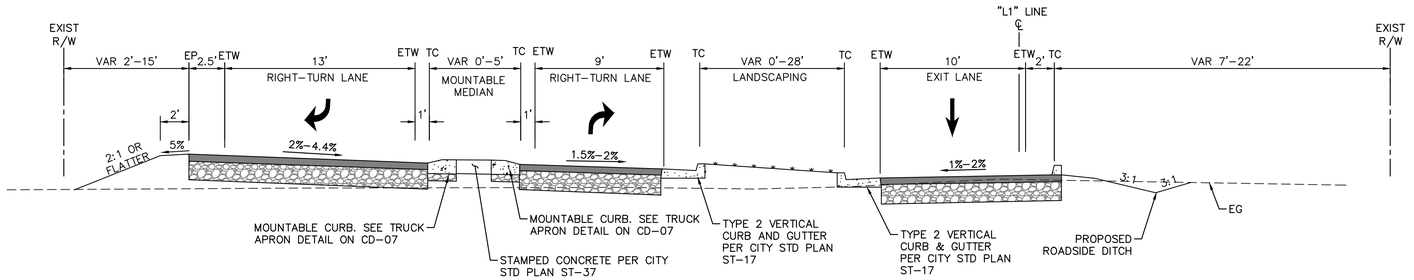
SHEET NUMBER
4 OF 60



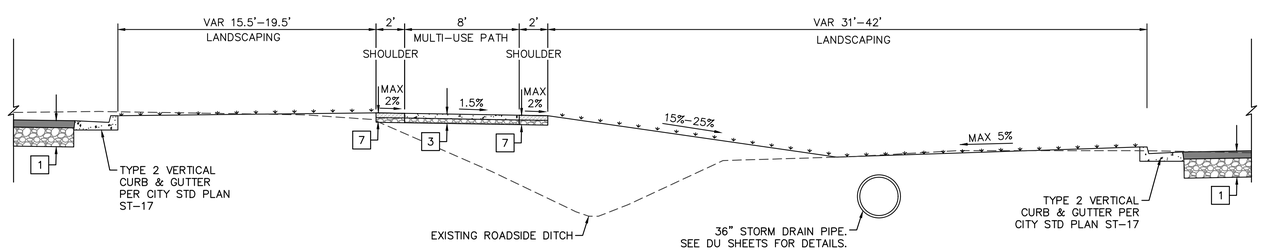
SECTION C-C
WASHINGTON BLVD (NORTH OF ROUNDABOUT)
NTS



SECTION D-D
ALL AMERICA CITY BLVD
NTS



SECTION E-E
LINCOLN ST
NTS



SECTION F-F
PROPOSED STORM DRAIN PIPE
NTS

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WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

TX-02

TYPICAL SECTIONS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 5 OF 60

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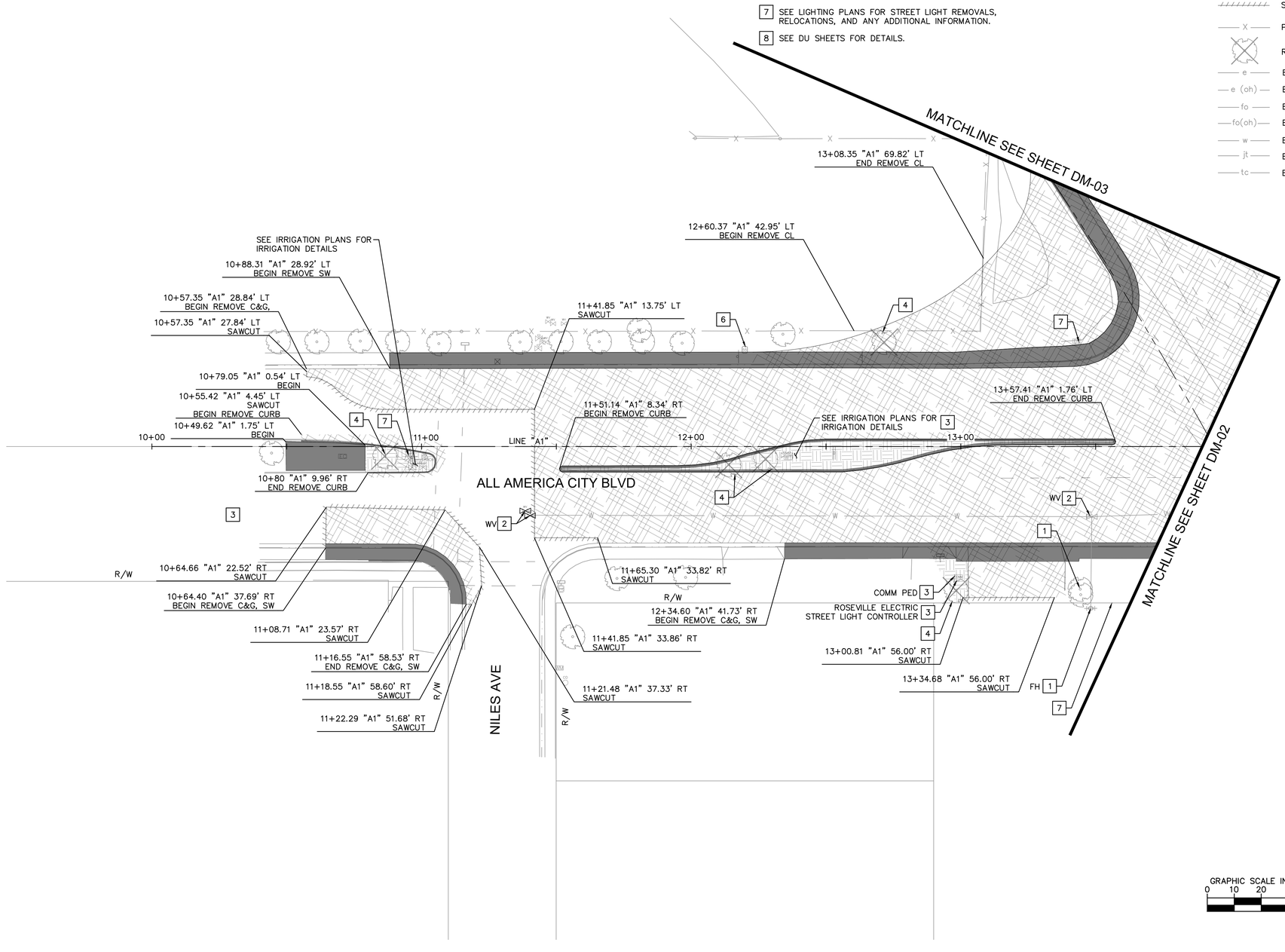
DEMOLITION NOTES

1. EXIST TO REMAIN.
2. ADJUST TO FINISHED GRADE (SEE DU-01).
3. RELOCATE.
4. REMOVE TREE.
5. REMOVE DRAINAGE FACILITY (SEE DU AND DP SHEETS).
6. REMOVE EXIST SIGN.
7. SEE LIGHTING PLANS FOR STREET LIGHT REMOVALS, RELOCATIONS, AND ANY ADDITIONAL INFORMATION.
8. SEE DU SHEETS FOR DETAILS.

LEGEND

- ROADWAY EXCAVATION
- REMOVE CONCRETE SIDEWALK, CURB, CURB & GUTTER, DRIVEWAY, AND CURB RAMP
- 0.2' COLD PLANE AC
- CLEAR AND GRUB
- SAWCUT
- PROPERTY FENCE LINE
- REMOVE TREE
- EXISTING ELECTRICAL
- EXISTING OVERHEAD ELECTRICAL
- EXISTING FIBER OPTIC
- EXISTING OVERHEAD FIBER OPTIC
- EXISTING WATER LINES
- EXISTING JOINT TRENCH
- EXISTING TELECOM



GRAPHIC SCALE IN FEET
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WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

DM-01

DEMOLITION PLAN

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 6 OF 60

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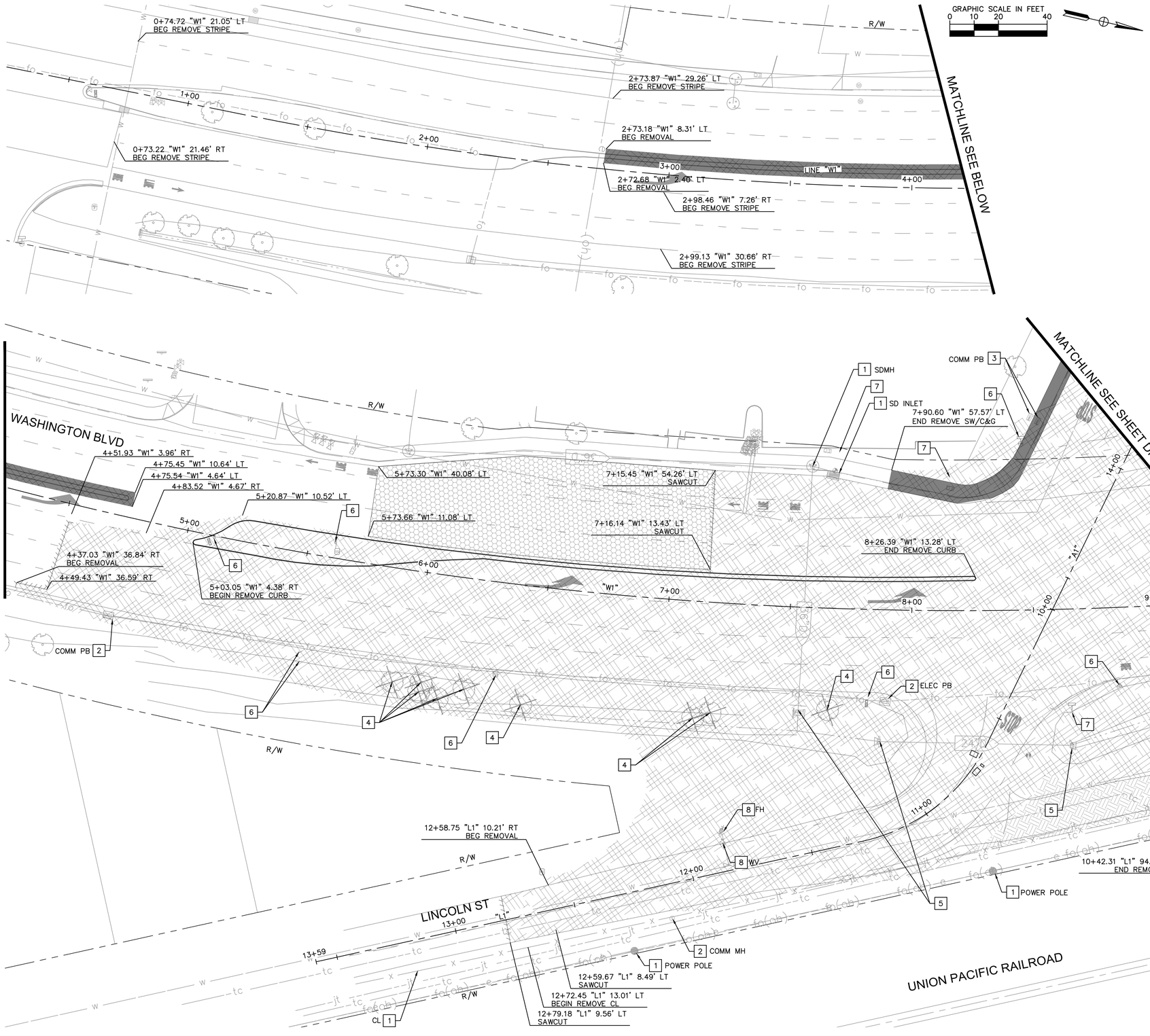

LEGEND

- ROADWAY EXCAVATION
- REMOVE CONCRETE SIDEWALK, CURB, CURB & GUTTER, DRIVEWAY, AND CURB RAMP
- 0.2' COLD PLANE AC
- CLEAR AND GRUB
- SAWCUT
- X — PROPERTY FENCE LINE
- REMOVE TREE
- e — EXISTING ELECTRICAL
- e (oh) — EXISTING OVERHEAD ELECTRICAL
- fo — EXISTING FIBER OPTIC
- fo(oh) — EXISTING OVERHEAD FIBER OPTIC
- w — EXISTING WATER LINES
- jt — EXISTING JOINT TRENCH
- tc — EXISTING TELECOM

DEMOLITION NOTES

1. EXIST TO REMAIN.
2. ADJUST TO FINISHED GRADE (SEE DU-01).
3. RELOCATE.
4. REMOVE TREE.
5. REMOVE DRAINAGE FACILITY (SEE DU AND DP SHEETS).
6. REMOVE EXIST SIGN.
7. SEE LIGHTING PLANS FOR STREET LIGHT REMOVALS, RELOCATIONS, AND ANY ADDITIONAL INFORMATION.
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WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

DM-02

DEMOLITION PLAN

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

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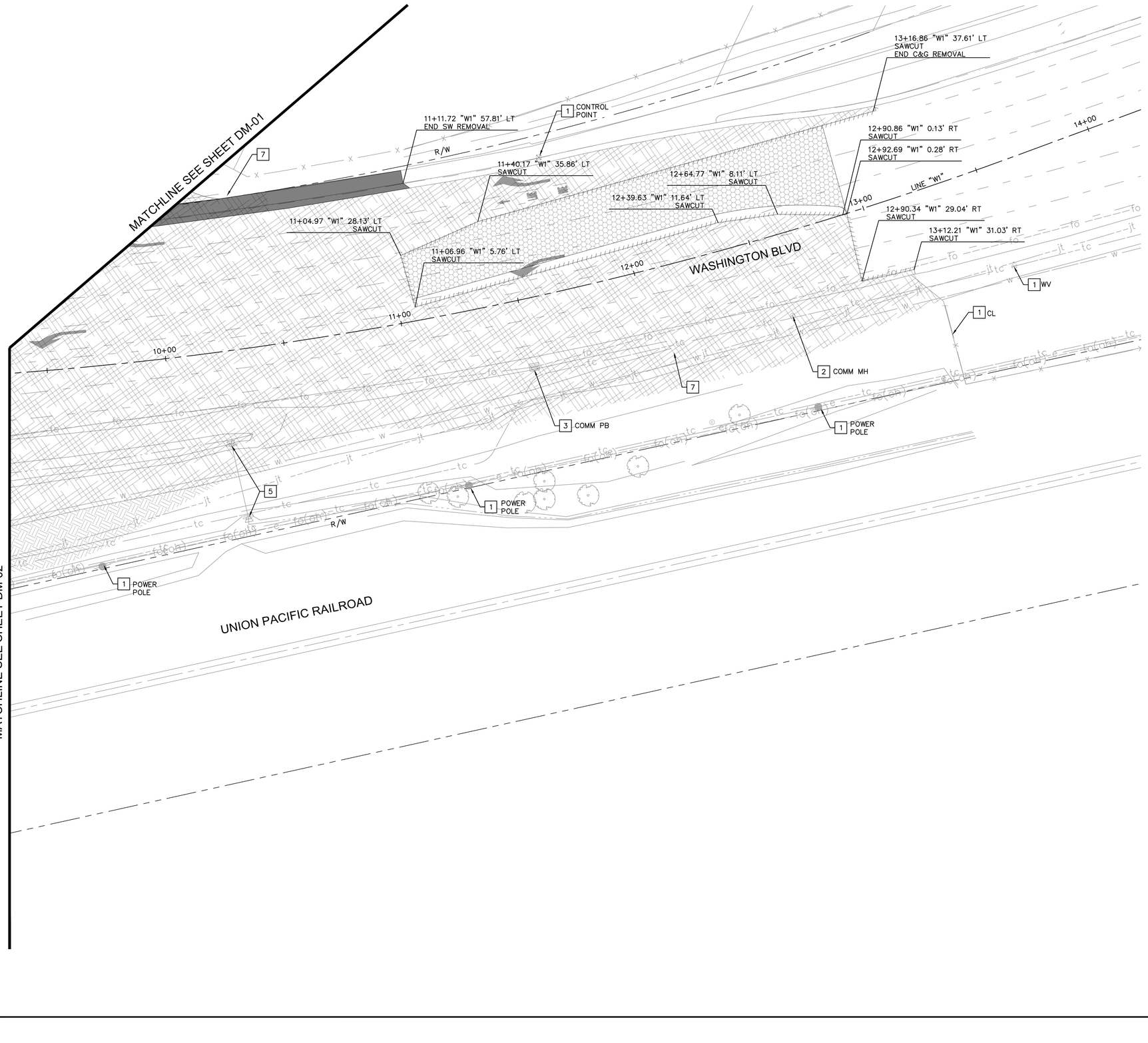

LEGEND

- ROADWAY EXCAVATION
- REMOVE CONCRETE SIDEWALK, CURB, CURB & GUTTER, DRIVEWAY, AND CURB RAMP
- 0.2' COLD PLANE AC
- CLEAR AND GRUB
- SAWCUT
- X — PROPERTY FENCE LINE
- REMOVE TREE
- e — EXISTING ELECTRICAL
- e (oh) — EXISTING OVERHEAD ELECTRICAL
- fo — EXISTING FIBER OPTIC
- fo(oh) — EXISTING OVERHEAD FIBER OPTIC
- w — EXISTING WATER LINES
- jt — EXISTING JOINT TRENCH
- tc — EXISTING TELECOM

DEMOLITION NOTES

1. EXIST TO REMAIN.
2. ADJUST TO FINISHED GRADE (SEE DU-01).
3. RELOCATE.
5. REMOVE DRAINAGE FACILITY (SEE DU AND DP SHEETS).
7. SEE LIGHTING PLANS FOR STREET LIGHT REMOVALS, RELOCATIONS, AND ANY ADDITIONAL INFORMATION.

GRAPHIC SCALE IN FEET
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WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

DM-03

DEMOLITION PLAN

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 8 OF 60

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CONSTRUCTION NOTES

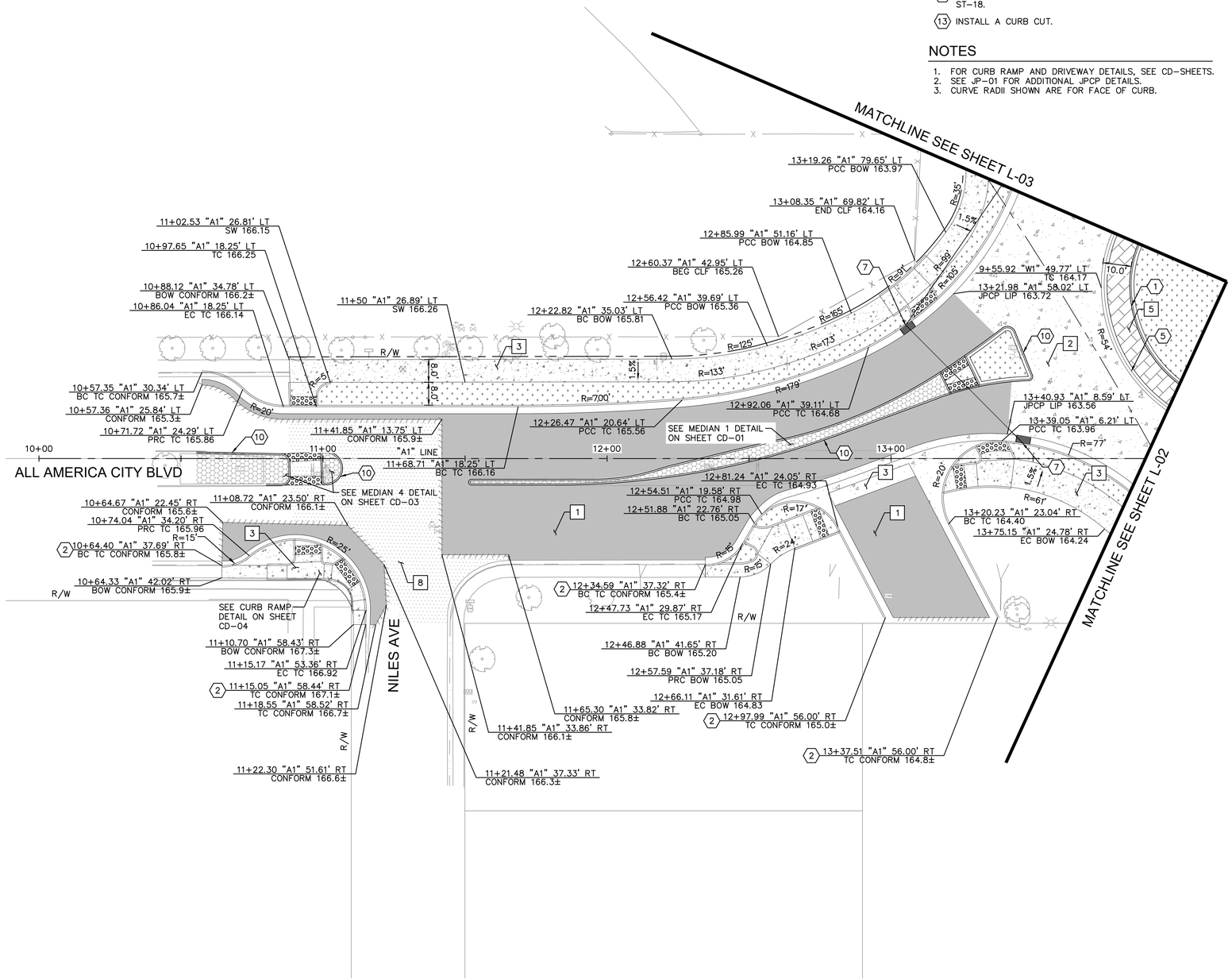
1. INSTALL TYPE 2 BARRIER CURB PER CITY STD PLAN ST-18.
2. INSTALL TYPE 2 CURB AND GUTTER PER CITY STD PLAN ST-17.
5. INSTALL MOUNTABLE ROUNDABOUT CURB PER DETAIL ON SHEET TX-02.
7. INSTALL SURFACE DRAINAGE FEATURE. SEE DU SHEETS FOR DETAILS.
8. INSTALL 3' X 5' CONCRETE PAD. SEE CD-05 FOR DETAILS.
10. INSTALL TYPE 1 BARRIER CURB PER CITY STD PLAN ST-18.
13. INSTALL A CURB CUT.

NOTES

1. FOR CURB RAMP AND DRIVEWAY DETAILS, SEE CD-SHEETS.
2. SEE JP-01 FOR ADDITIONAL JPCP DETAILS.
3. CURVE RADII SHOWN ARE FOR FACE OF CURB.

LEGEND

- HMA PAVEMENT [1]
- JPCP PAVEMENT [2]
- PCC SIDEWALK OR DRIVEWAY [3]
- COLD PLANE & HMA OVERLAY [4]
- TRUCK APRON [5]
- BUS PAD [6]
- DECOMPOSED GRANITE [7]
- MICROSURFACING TYPE II [8]
- HARDSCAPE
- LANDSCAPING (SEE LS SHEETS)
- ROCK COBBLE HARDSCAPING (SEE LS SHEETS)
- DETECTABLE WARNING SURFACE (DWS)
- SAWCUT
- [X] PAVEMENT SECTION No. (SEE TX-01)
- GRADE BREAK
- FLOW DIRECTION



GRAPHIC SCALE IN FEET
0 10 20 40

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REGISTERED PROFESSIONAL ENGINEER
DANIEL C. CARLEY
No. C76394
CIVIL
STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
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DRAWN BY
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WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

L-01
LAYOUT PLAN
CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
9 OF 60

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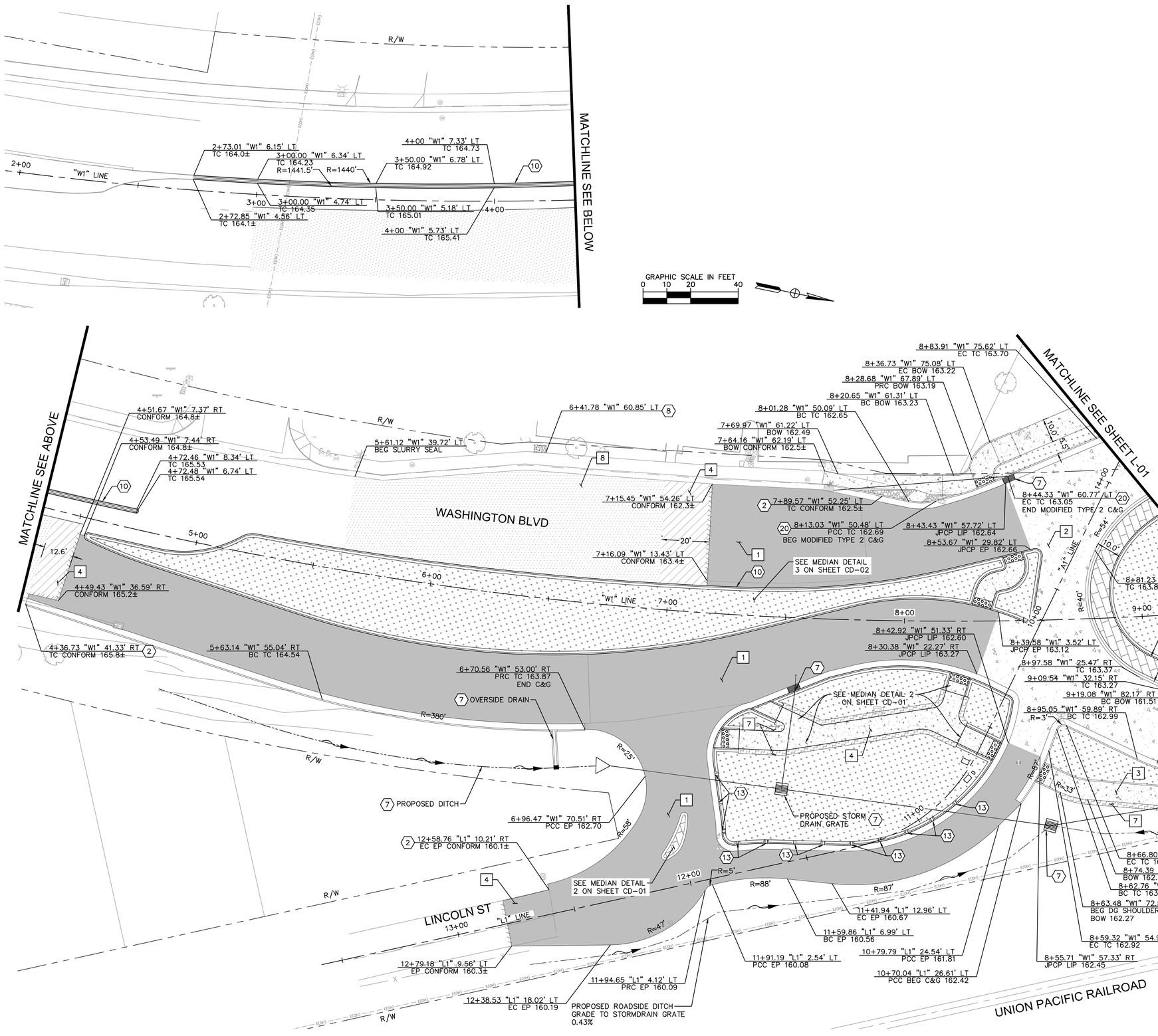

LEGEND

- HMA PAVEMENT [1]
- JPCP PAVEMENT [2]
- PCC SIDEWALK OR DRIVEWAY [3]
- COLD PLANE & HMA OVERLAY [4]
- TRUCK APRON [5]
- BUS PAD [6]
- DECOMPOSED GRANITE [7]
- MICROSURFACING TYPE II [8]
- HARDSCAPE
- LANDSCAPING (SEE LS SHEETS)
- ROCK COBBLE HARDSCAPING (SEE LS SHEETS)
- DETECTABLE WARNING SURFACE (DWS)
- SAWCUT
- [X] PAVEMENT SECTION No. (SEE TX-01)
- GRADE BREAK
- FLOW DIRECTION

CONSTRUCTION NOTES

1. INSTALL TYPE 2 BARRIER CURB PER CITY STD PLAN ST-18.
2. INSTALL TYPE 2 CURB AND GUTTER PER CITY STD PLAN ST-17.
5. INSTALL MOUNTABLE ROUNDABOUT CURB PER DETAIL ON SHEET TX-02.
7. INSTALL SURFACE DRAINAGE FEATURE. SEE DU SHEETS FOR DETAILS.
8. INSTALL 3' X 5' BUS STOP CONCRETE PAD. SEE CD-07 FOR DETAILS.
10. INSTALL TYPE 1 BARRIER CURB PER CITY STD PLAN ST-18.
13. INSTALL A 1' WIDE CURB CUT.
20. INSTALL MODIFIED TYPE 2 CURB AND GUTTER. SEE CD-05 RAMP DETAIL E FOR ADDITIONAL STATION OFFSET CALLOUTS AND GUTTER LIP RADII.

NOTES

1. FOR CURB RAMP AND DRIVEWAY DETAILS, SEE CD-SHEETS.
2. SEE JP-01 FOR ADDITIONAL JPCP DETAILS.
3. CURVE RADII SHOWN ARE FOR FACE OF CURB.

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REGISTERED PROFESSIONAL ENGINEER — DANIEL C. CARLEY — No. C76394 — CIVIL — STATE OF CALIFORNIA

KHA PROJECT	097918026
DATE	JUNE 2021
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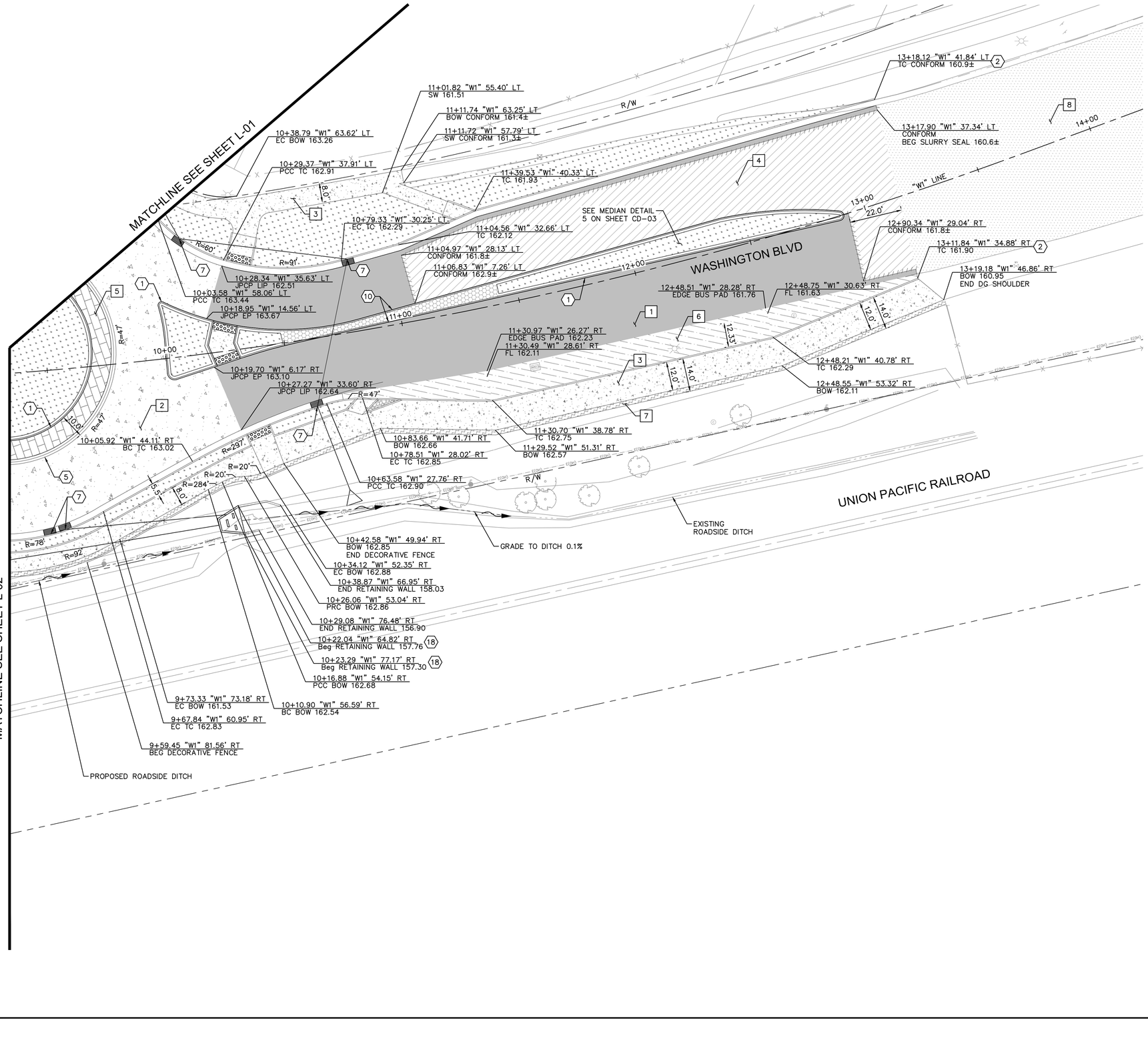
WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

L-02

LAYOUT PLAN

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA



LEGEND

- HMA PAVEMENT [1]
- JPCP PAVEMENT [2]
- PCC SIDEWALK OR DRIVEWAY [3]
- COLD PLANE & HMA OVERLAY [4]
- TRUCK APRON [5]
- BUS PAD [6]
- DECOMPOSED GRANITE [7]
- MICROSURFACING TYPE II [8]
- HARDSCAPE
- LANDSCAPING (SEE LS SHEETS)
- ROCK COBBLE HARDSCAPING (SEE LS SHEETS)
- DETECTABLE WARNING SURFACE (DWS)
- SAWCUT
- [X] PAVEMENT SECTION No. (SEE TX-01)
- GRADE BREAK
- FLOW DIRECTION

CONSTRUCTION NOTES

1. INSTALL TYPE 2 BARRIER CURB PER CITY STD PLAN ST-18.
2. INSTALL TYPE 2 CURB AND GUTTER PER CITY STD PLAN ST-17.
5. INSTALL MOUNTABLE ROUNDABOUT CURB PER DETAIL ON SHEET TX-02.
7. INSTALL SURFACE DRAINAGE FEATURE. SEE DU SHEETS FOR DETAILS.
8. INSTALL 3' X 5' BUS STOP CONCRETE PAD. SEE CD-07 FOR DETAILS.
10. INSTALL TYPE 1 BARRIER CURB PER CITY STD PLAN ST-18.
13. INSTALL A CURB CUT.
18. 2' RETAINING WALL. SEE DETAIL ON SHEET CD-07.

NOTES

1. FOR CURB RAMP AND DRIVEWAY DETAILS, SEE CD-SHEETS.
2. SEE JP-01 FOR ADDITIONAL JPCP DETAILS.
3. CURVE RADII SHOWN ARE FOR FACE OF CURB.

GRAPHIC SCALE IN FEET
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WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

L-03

LAYOUT PLAN

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 11 OF 60

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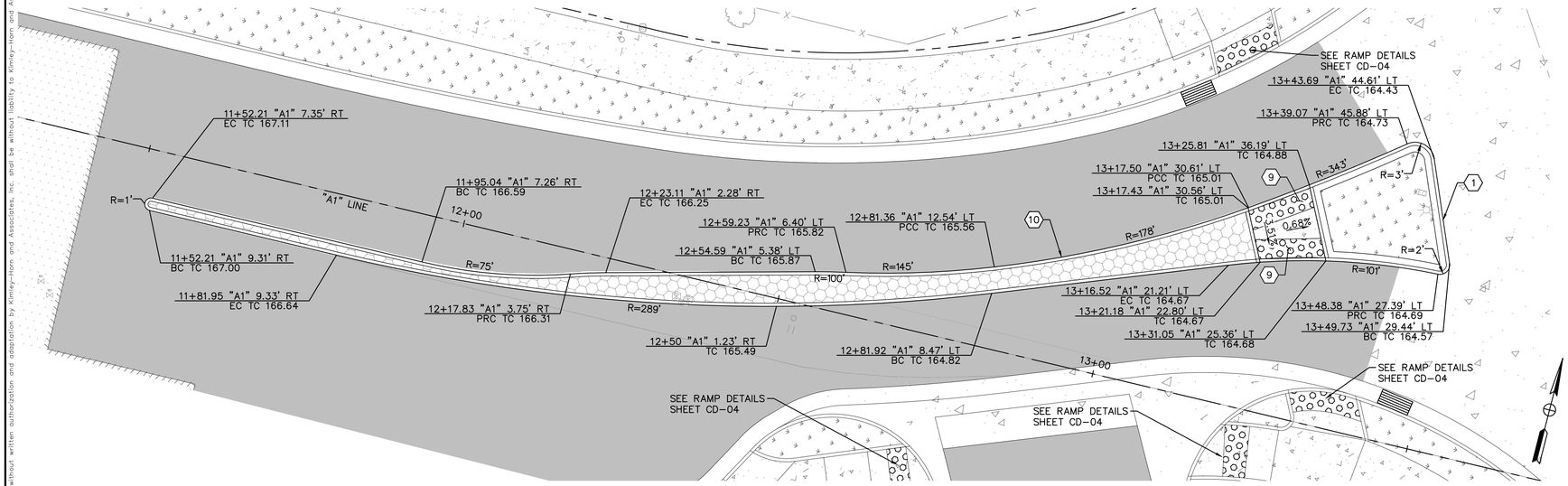
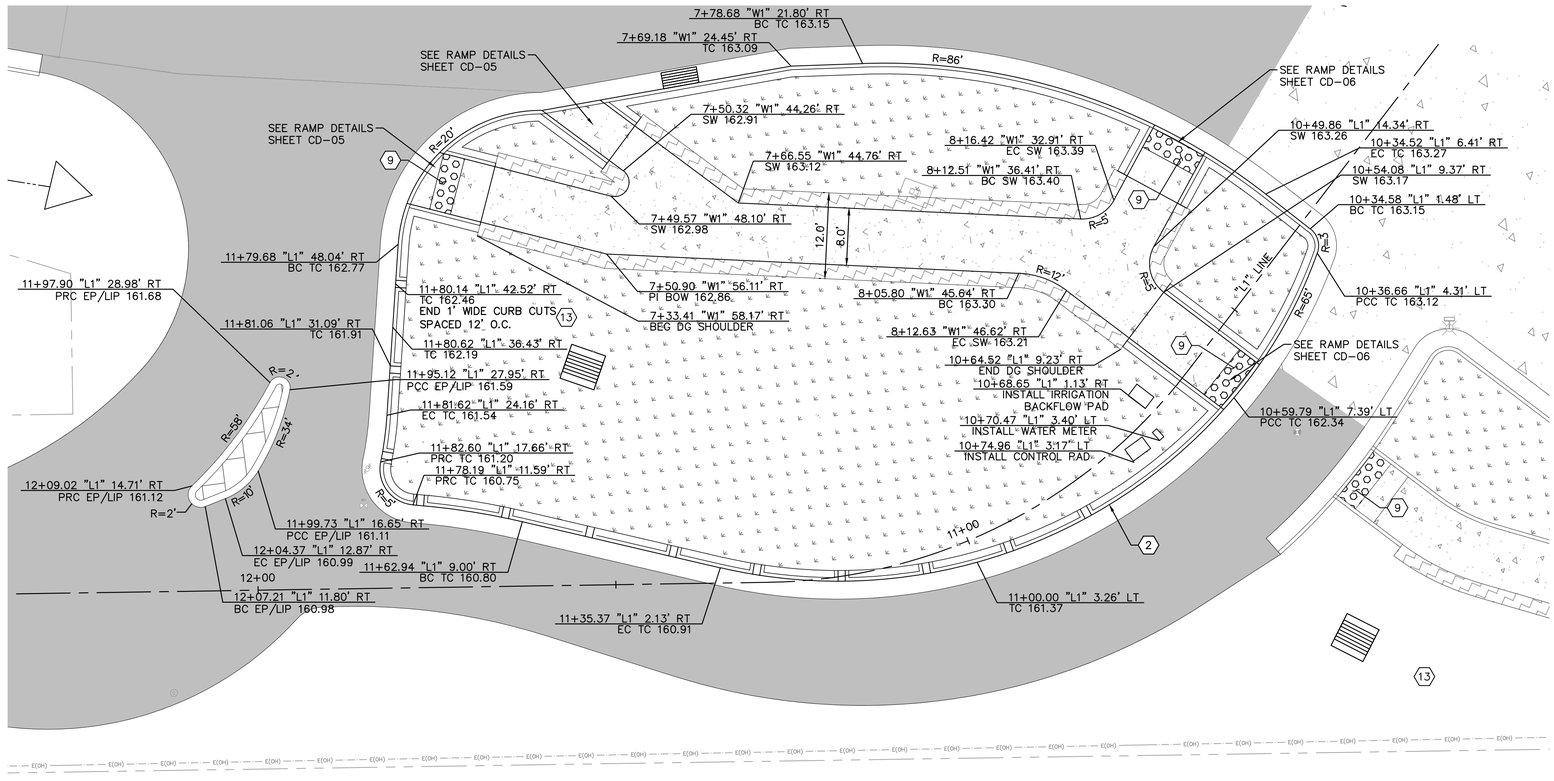


MEDIAN DETAIL 1
HORIZ: 1"=10'



MEDIAN DETAIL 2
HORIZ: 1"=10'

LEGEND

- HMA PAVEMENT [1]
- JPCP PAVEMENT [2]
- PCC SIDEWALK OR DRIVEWAY [3]
- COLD PLANE & HMA OVERLAY [4]
- TRUCK APRON [5]
- BUS PAD [6]
- DECOMPOSED GRANITE [7]
- MICROSURFACING TYPE II [8]
- HARDSCAPE
- LANDSCAPING (SEE LS SHEETS)
- ROCK COBBLE HARDSCAPING (SEE LS SHEETS)
- DETECTABLE WARNING SURFACE (DWS)
- SAWCUT
- [X] PAVEMENT SECTION No. (SEE TX-01)
- GRADE BREAK

CONSTRUCTION NOTES

(1) INSTALL TYPE 2 BARRIER CURB PER CITY STD PLAN ST-18.

(2) INSTALL TYPE 2 CURB AND GUTTER PER CITY STD PLAN ST-17.

(9) INSTALL ADA COMPLIANT DWS.

(10) INSTALL TYPE 1 BARRIER CURB PER CITY STD PLAN ST-18.

(13) INSTALL A 1' WIDE CURB CUT.

NOTES

1. CURVE RADII SHOWN ARE FOR FACE OF CURB.

GRAPHIC SCALE IN FEET
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WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

CD-01

CONSTRUCTION DETAILS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
12 OF 60

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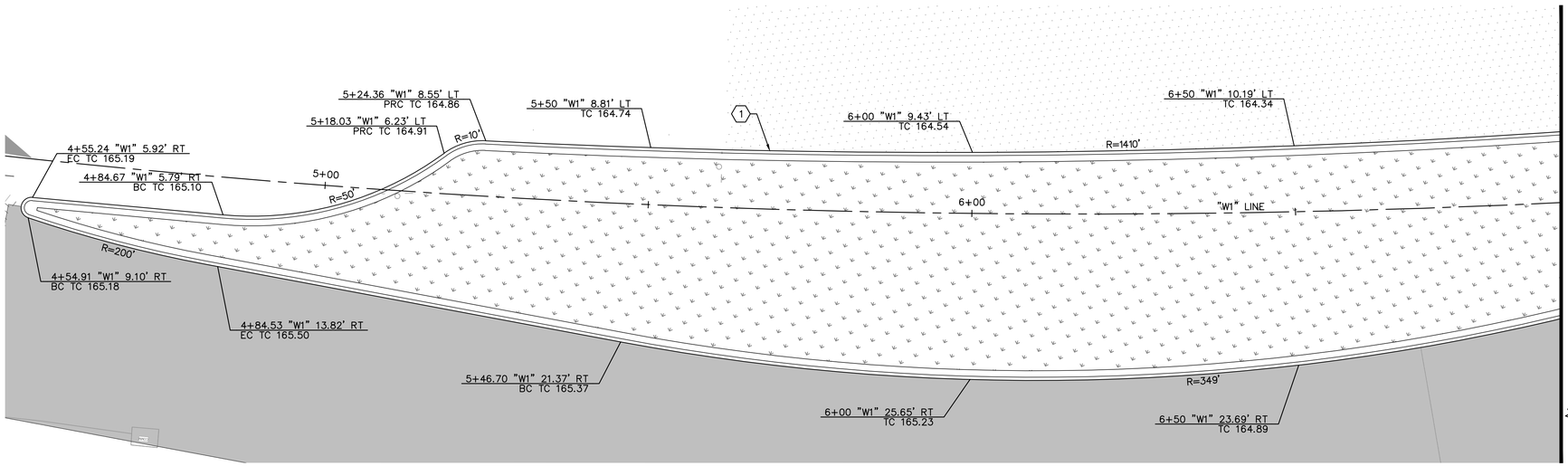
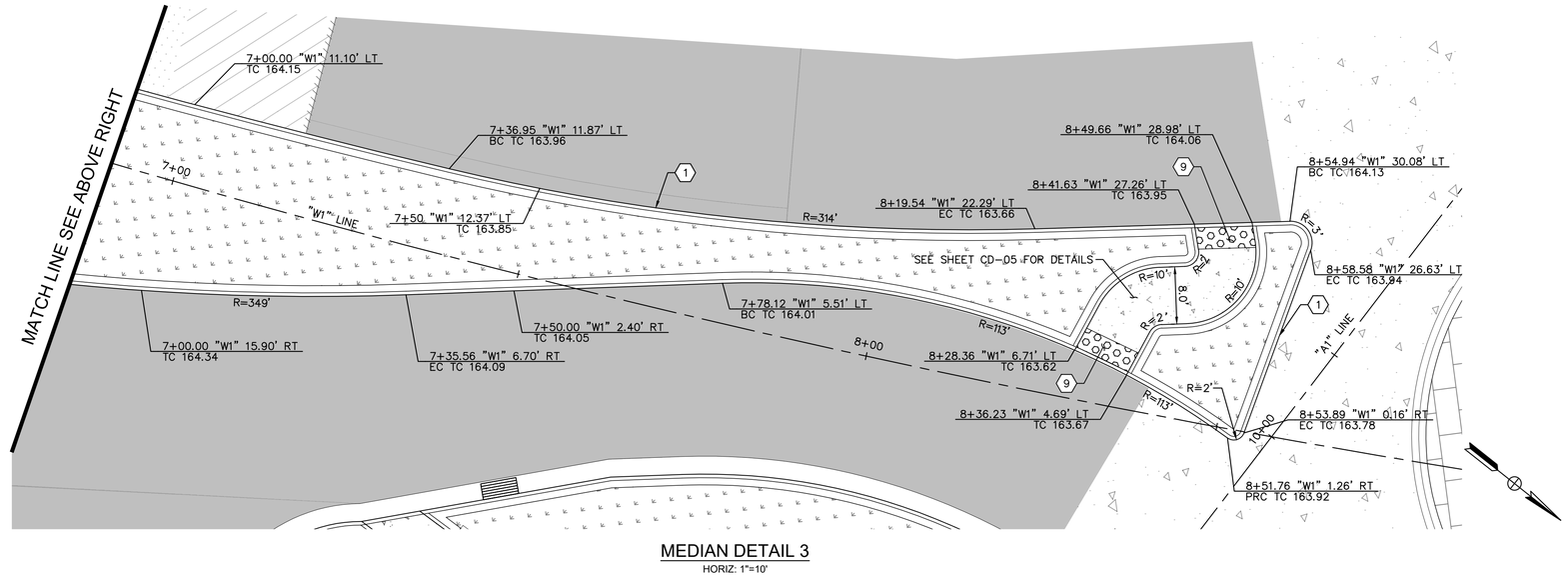


MEDIAN DETAIL 3
HORIZ: 1"=10'



MEDIAN DETAIL 3
HORIZ: 1"=10'

LEGEND

- HMA PAVEMENT [1]
- JPCP PAVEMENT [2]
- PCC SIDEWALK OR DRIVEWAY [3]
- COLD PLANE & HMA OVERLAY [4]
- TRUCK APRON [5]
- BUS PAD [6]
- DECOMPOSED GRANITE [7]
- MICROSURFACING TYPE II [8]
- HARDSCAPE
- LANDSCAPING (SEE LS SHEETS)
- ROCK COBBLE HARDSCAPING (SEE LS SHEETS)
- DETECTABLE WARNING SURFACE (DWS)
- SAWCUT
- [X] PAVEMENT SECTION No. (SEE TX-01)
- GRADE BREAK

CONSTRUCTION NOTES

1. INSTALL TYPE 2 BARRIER CURB PER CITY STD PLAN ST-18.
9. INSTALL ADA COMPLIANT DWS.

NOTES

1. CURVE RADII SHOWN ARE FOR FACE OF CURB.

GRAPHIC SCALE IN FEET
0 5 10 20

811 Know what's below. Call before you dig.

No.	REVISIONS	DATE	BY

Kimley»Horn
555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

REGISTERED PROFESSIONAL ENGINEER DANIEL C. CARLEY No. C76394 CIVIL STATE OF CALIFORNIA

KHA PROJECT	097918026
DATE	JUNE 2021
SCALE	AS SHOWN
DESIGNED BY	SH/DC
DRAWN BY	MD/MB
CHECKED BY	DC

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

CD-02

CONSTRUCTION DETAILS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 13 OF 60

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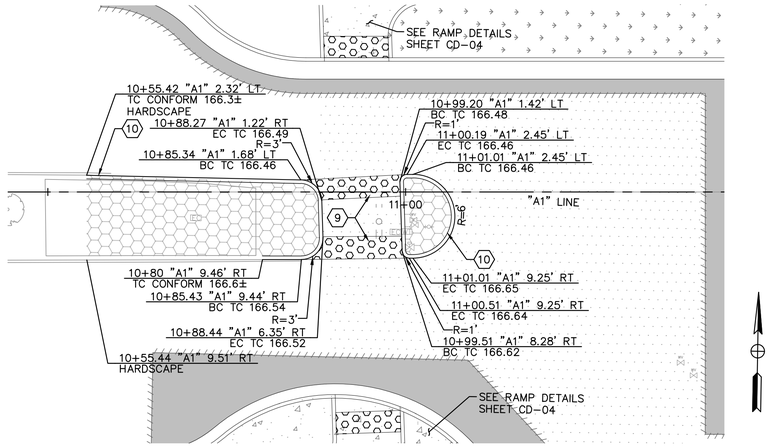


MEDIAN DETAIL 4

HORIZ: 1"=10'

NOTES

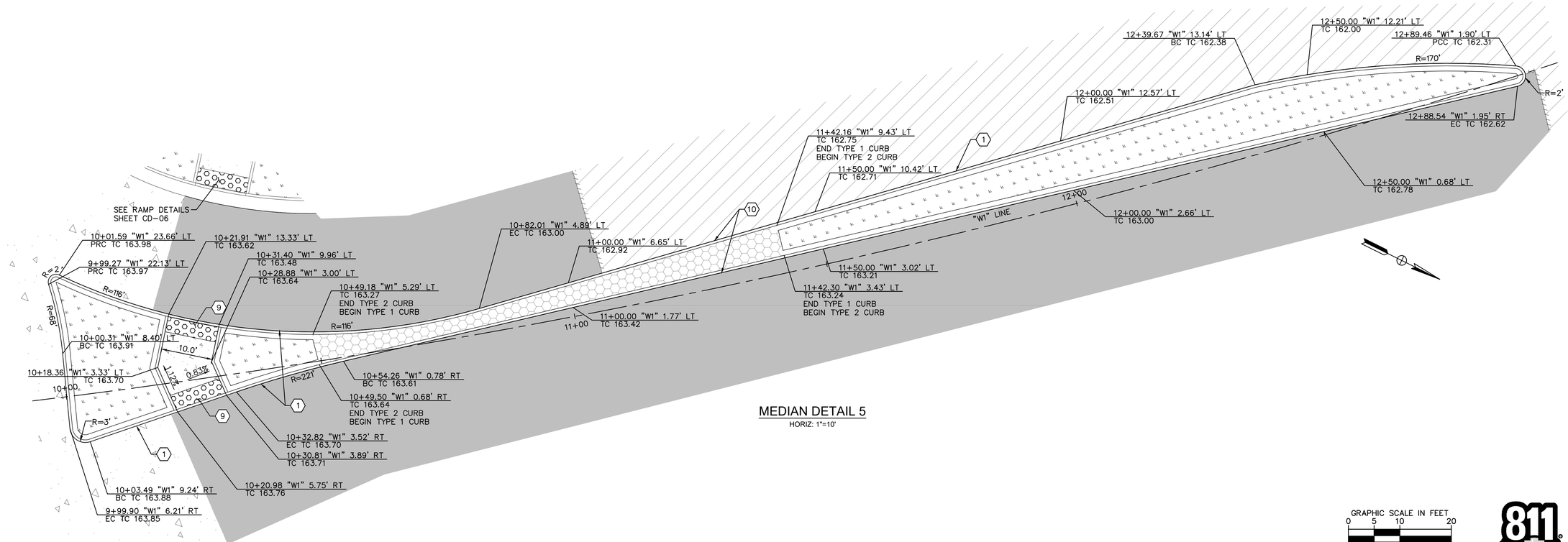
1. CURVE RADII SHOWN ARE FOR FACE OF CURB.

LEGEND

- HMA PAVEMENT [1]
- JPCP PAVEMENT [2]
- PCC SIDEWALK OR DRIVEWAY [3]
- COLD PLANE & HMA OVERLAY [4]
- TRUCK APRON [5]
- BUS PAD [6]
- DECOMPOSED GRANITE [7]
- MICROSURFACING TYPE II [8]
- HARDSCAPE
- LANDSCAPING (SEE LS SHEETS)
- ROCK COBBLE HARDSCAPING (SEE LS SHEETS)
- DETECTABLE WARNING SURFACE (DWS)
- SAWCUT
- [X] PAVEMENT SECTION No. (SEE TX-01)
- GRADE BREAK

CONSTRUCTION NOTES

1. INSTALL TYPE 2 BARRIER CURB PER CITY STD PLAN ST-18.
9. INSTALL ADA COMPLIANT DWS.
10. INSTALL TYPE 1 BARRIER CURB PER CITY STD PLAN ST-18.



MEDIAN DETAIL 5

HORIZ: 1"=10'

GRAPHIC SCALE IN FEET
0 5 10 20

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KHA PROJECT	097918026
DATE	JUNE 2021
SCALE	AS SHOWN
DESIGNED BY	SH/DC
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WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

CD-03

CONSTRUCTION DETAILS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
14 OF 60

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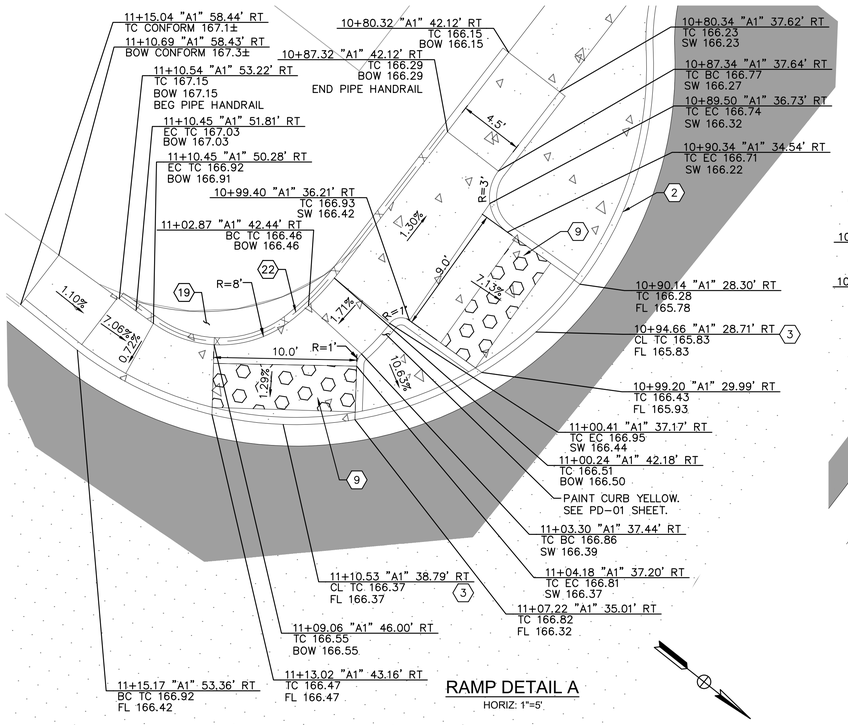

RAMP DETAIL A
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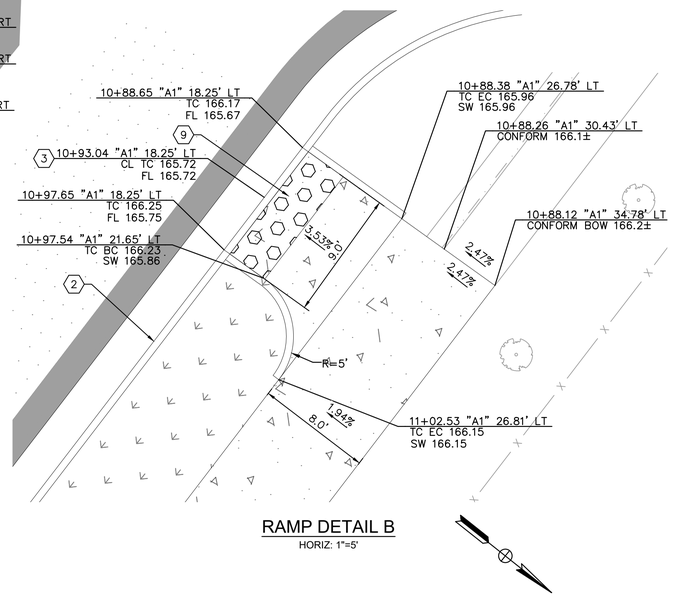
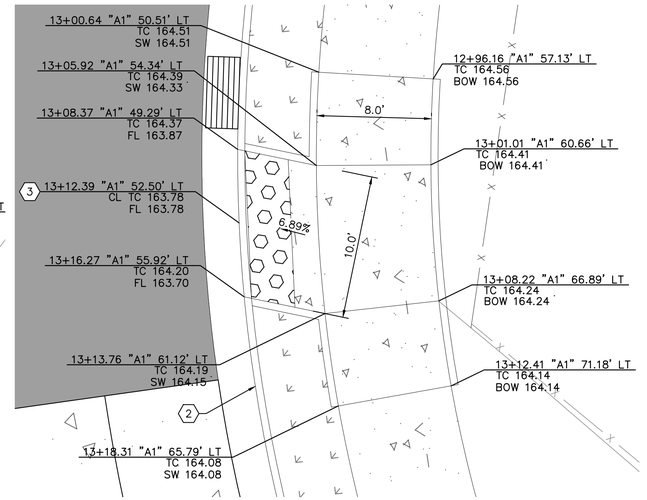
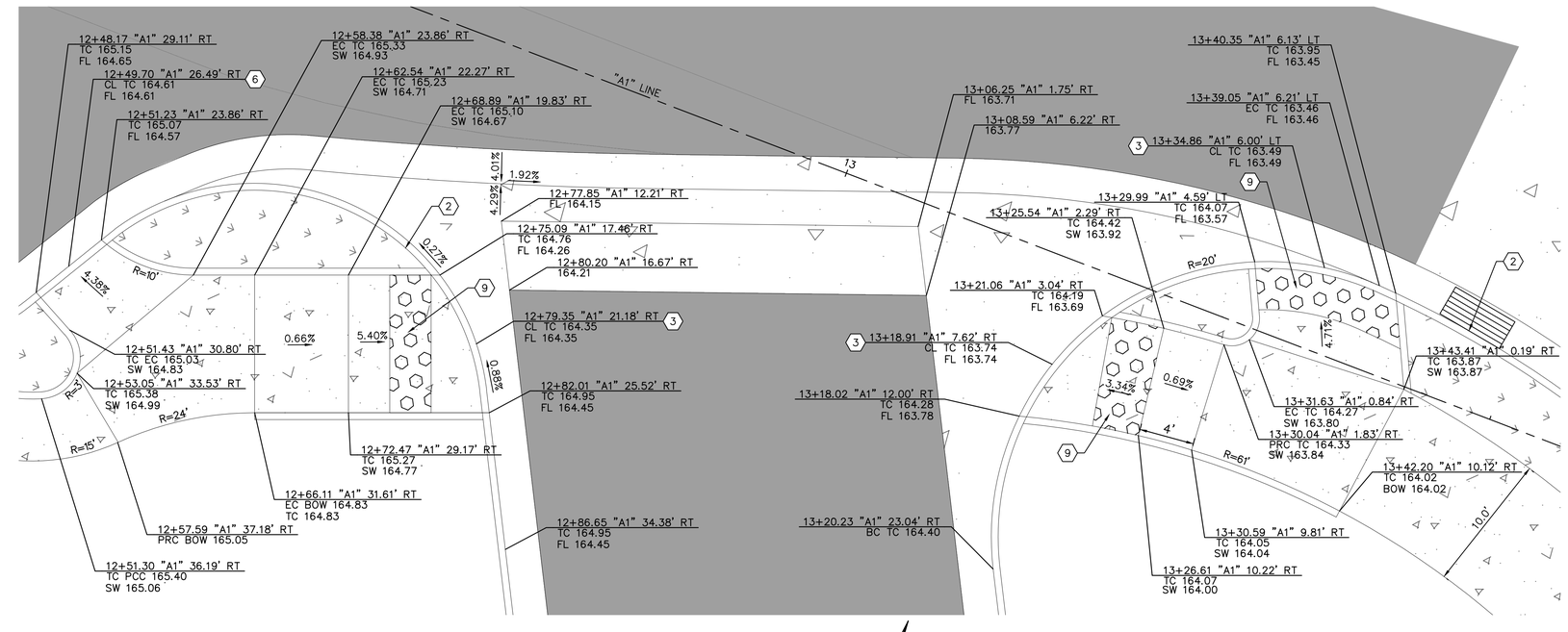


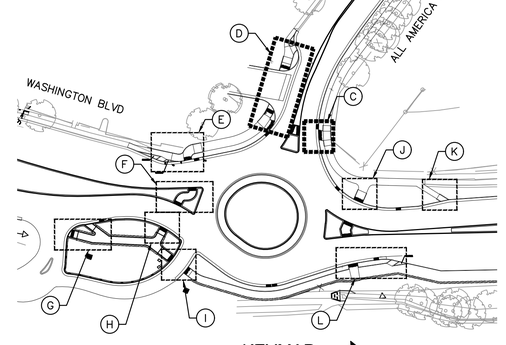
RAMP DETAIL B
HORIZ: 1"=5'



RAMP DETAIL C
HORIZ: 1"=5'



RAMP DETAIL D
HORIZ: 1"=5'



KEYMAP
NTS

CONSTRUCTION NOTES

(2) INSTALL TYPE 2 CURB AND GUTTER PER CITY STD PLAN ST-17.

(3) INSTALL ADA COMPLIANT CURB RAMP PER CALTRANS STD A88A.

(6) INSTALL BIKE RAMP.

(9) INSTALL ADA COMPLIANT DWS.

(19) FILL IN THE AREA BETWEEN EXISTING AND PROPOSED RETAINING CURBS WITH PCC CONCRETE.

(22) INSTALL PIPE HANDRAIL. HANDRAIL TO MATCH COLOR AND STYLE OF EXISTING HANDRAIL ALONG THE NORTH ENTRY OF ELEMENTARY SCHOOL.

NOTES

1. CURVE RADII SHOWN ARE FOR FACE OF CURB.

GRAPHIC SCALE IN FEET
0 2.5 5 10

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REGISTERED PROFESSIONAL ENGINEER DANIEL C. CARLEY No. C76394 CIVIL STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

CD-04

CONSTRUCTION DETAILS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
15 OF 60

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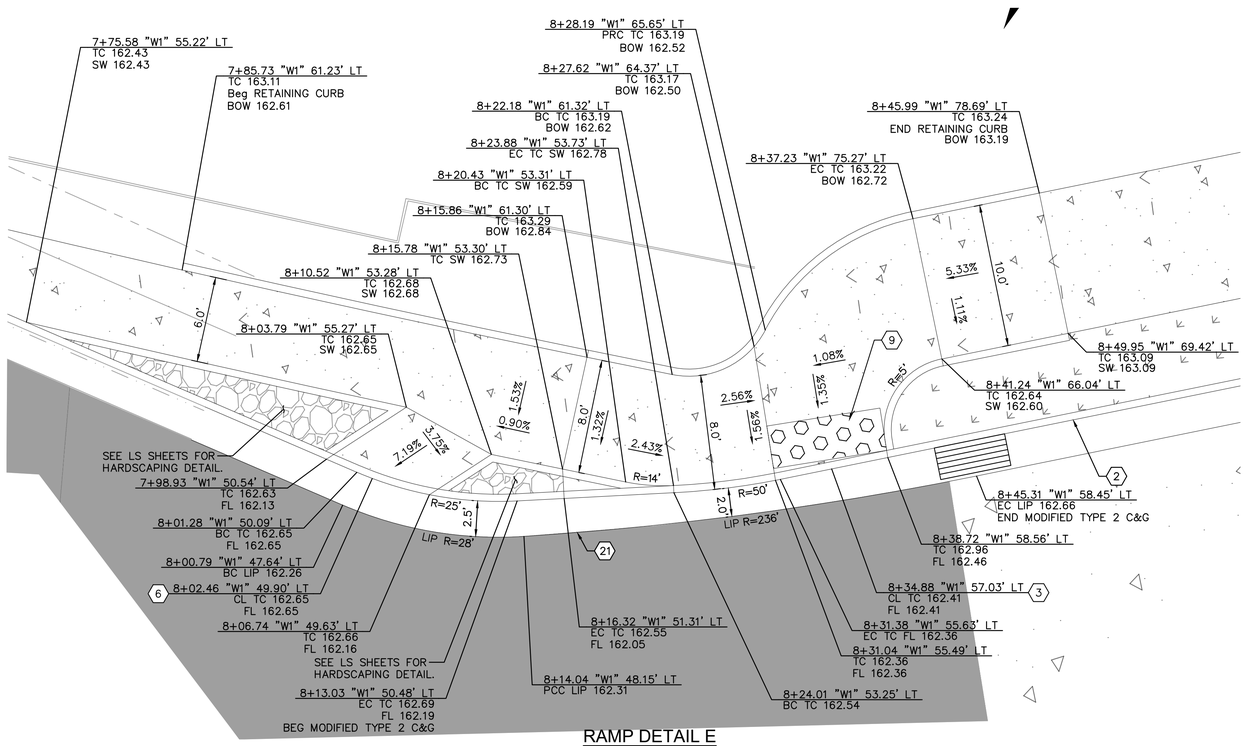
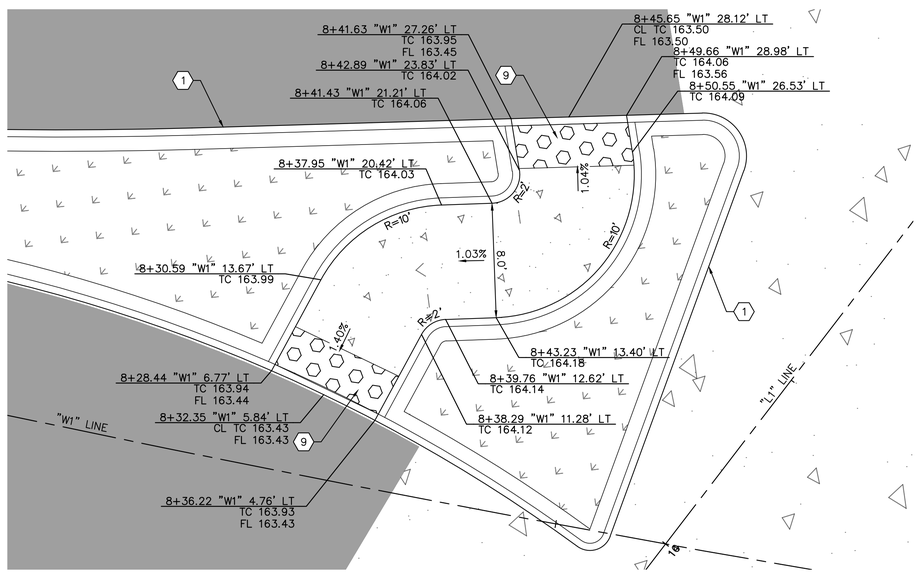


RAMP DETAIL E
HORIZ: 1"=5'



RAMP DETAIL F
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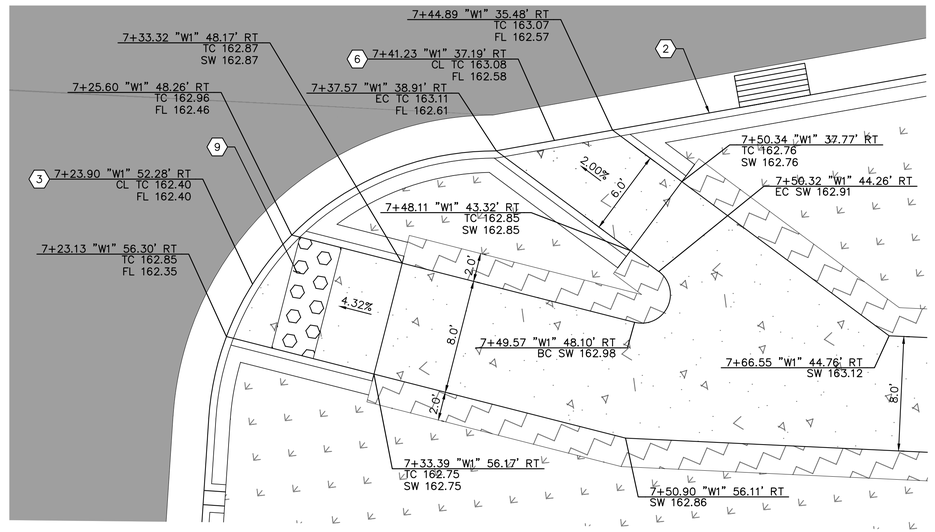
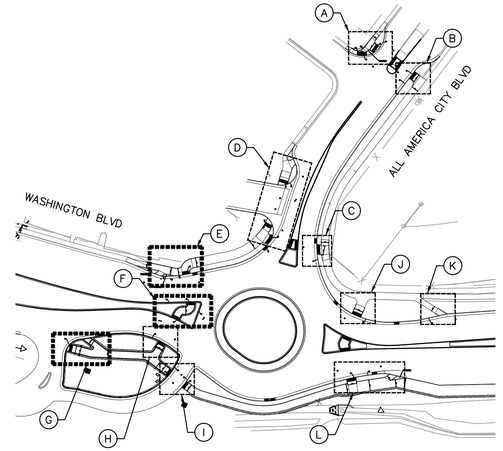


RAMP DETAIL G
HORIZ: 1"=5'



KEYMAP
NTS

CONSTRUCTION NOTES

1. INSTALL TYPE 2 BARRIER CURB PER CITY STD PLAN ST-18.
2. INSTALL TYPE 2 CURB AND GUTTER PER CITY STD PLAN ST-17.
3. INSTALL ADA COMPLIANT CURB RAMP PER CALTRANS STD A88A.
6. INSTALL BIKE RAMP.
9. INSTALL ADA COMPLIANT DWS.
21. INSTALL MODIFIED TYPE 2 CURB AND GUTTER.

NOTES

1. CURVE RADII SHOWN ARE FOR FACE OF CURB UNLESS NOTED OTHERWISE.

GRAPHIC SCALE IN FEET
0 2.5 5 10

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KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

CD-05

CONSTRUCTION DETAILS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
16 OF 60

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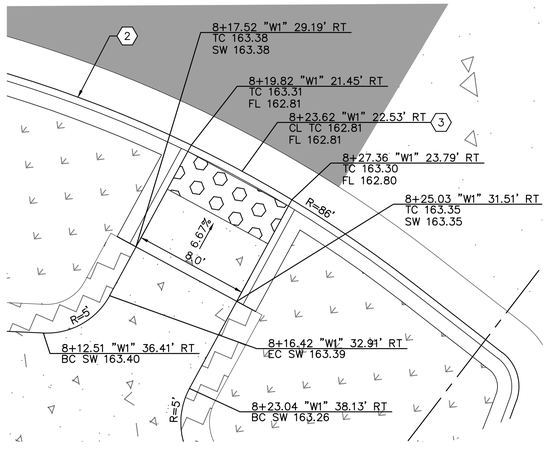
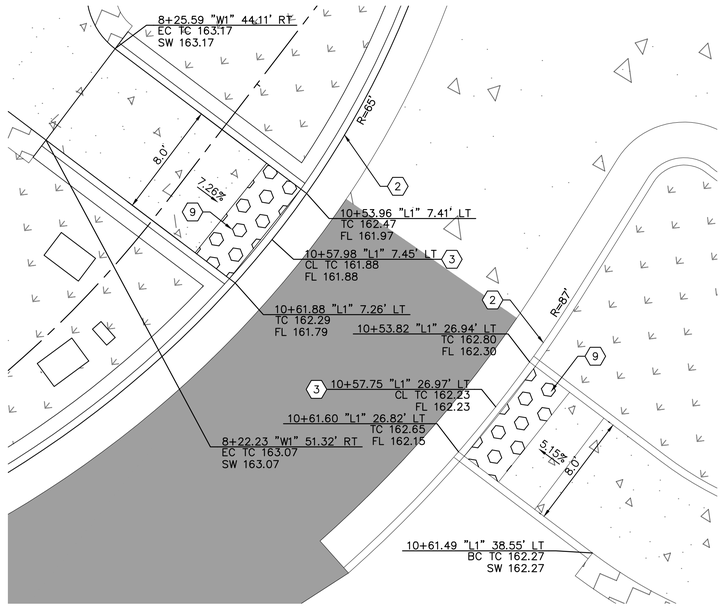


RAMP DETAIL H

HORIZ: 1"=5'



RAMP DETAIL I

HORIZ: 1"=5'

CONSTRUCTION NOTES

(2) INSTALL TYPE 2 CURB AND GUTTER PER CITY STD PLAN ST-17.

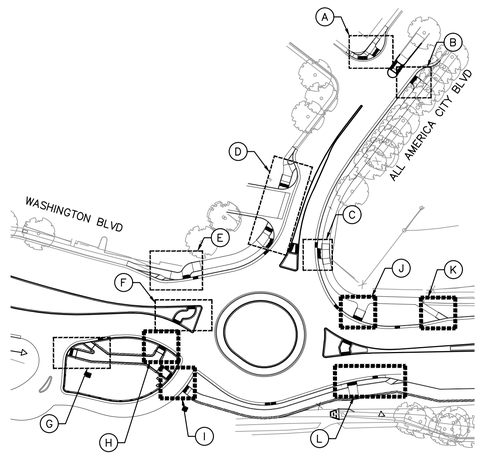
(3) INSTALL ADA COMPLIANT CURB RAMP PER CALTRANS STD A88A.

(6) INSTALL BIKE RAMP.

(9) INSTALL ADA COMPLIANT DWS.

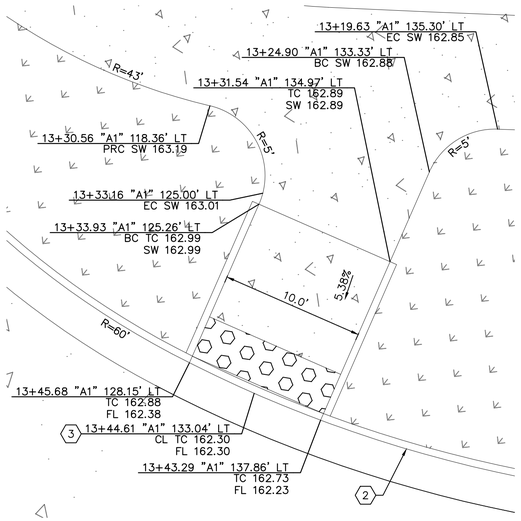
NOTES

1. CURVE RADII SHOWN ARE FOR FACE OF CURB.



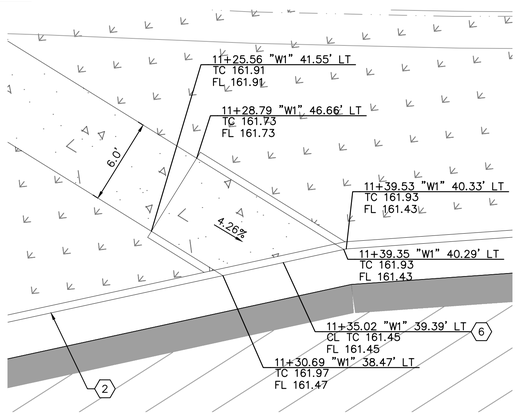
KEYMAP

NTS



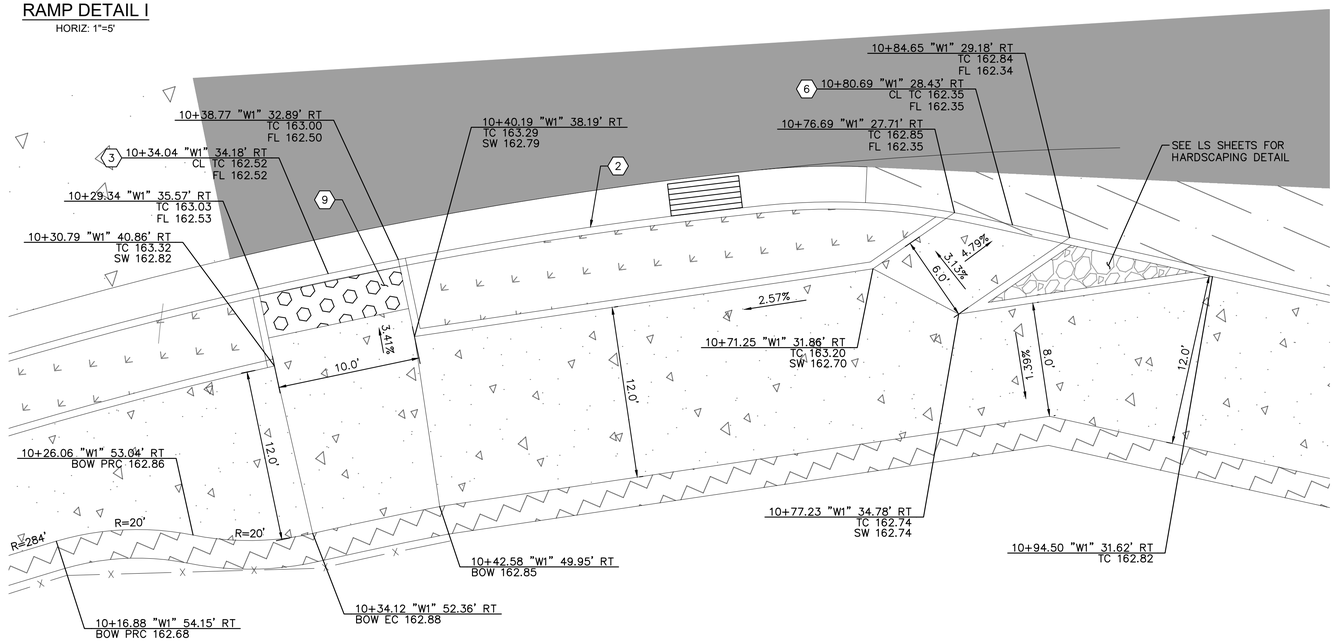
RAMP DETAIL J

HORIZ: 1"=5'



RAMP DETAIL K

HORIZ: 1"=5'



RAMP DETAIL L

HORIZ: 1"=5'

GRAPHIC SCALE IN FEET
0 2.5 5 10

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555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
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REGISTERED PROFESSIONAL ENGINEER
JEFFREY C. CARLEY
No. C76394
CIVIL
STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

CD-06

CONSTRUCTION DETAILS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
17 OF 60

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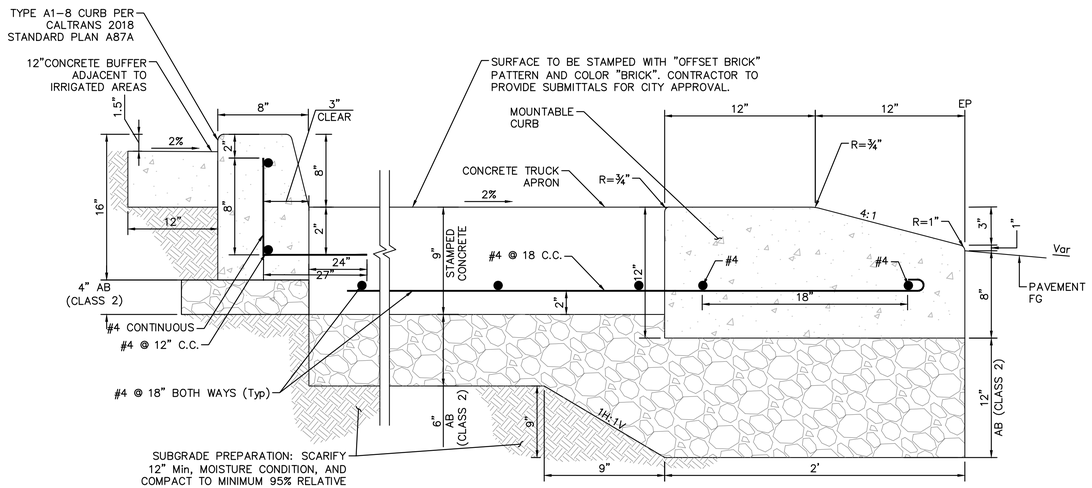
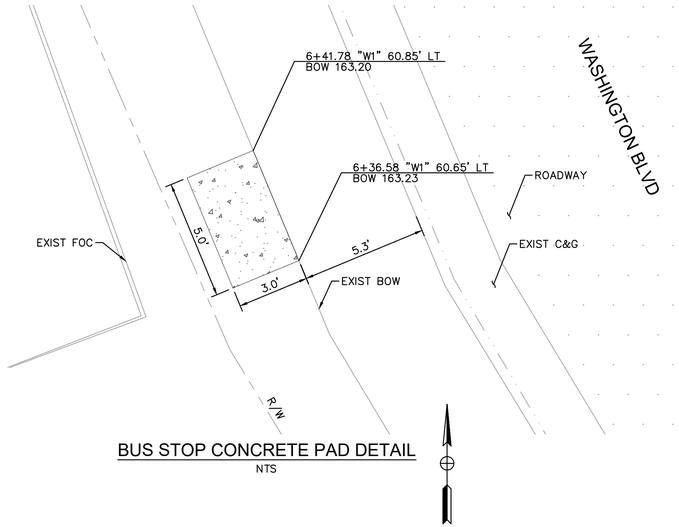


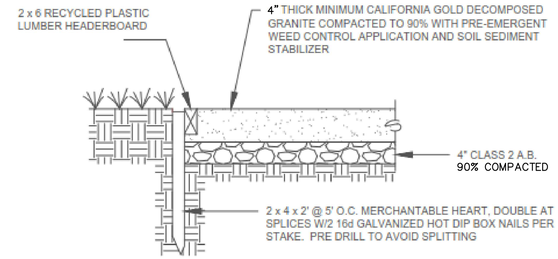
TRUCK APRON AND MOUNTABLE CURB DETAIL

NTS



BUS STOP CONCRETE PAD DETAIL

NTS

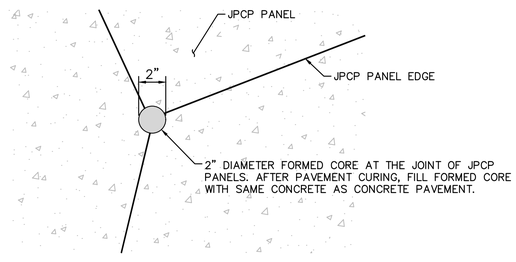


DECOMPOSED GRANITE PED PATH DETAIL

NTS

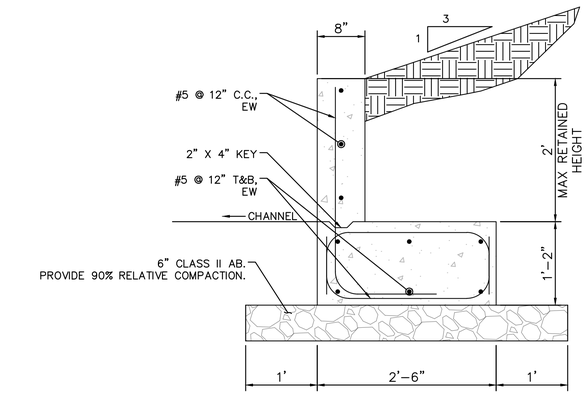
NOTES:

1. ALL PED PATHS SHALL HAVE A MINIMUM 4' CLEAR PASSAGE, FREE OF OBSTRUCTIONS AND/OR HINDRANCES, AS OUTLINED IN TITLE 24 OF CALIFORNIA BUILDING CODE.
2. ALL DECOMPOSED GRANITE PED PATHS SHALL BE CALIFORNIA GOLD DECOMPOSED GRANITE.



JPCP 2" FORMED CORE DETAIL

NTS



NOTES:

1. DOWEL #5 HORIZONTAL REINFORCEMENT 24" INTO ADJACENT HEADWALL.
2. CONCRETE COMPRESSIVE STRENGTH, F'C, SHALL BE 3000 PSI.

2' RETAINING WALL DETAIL

NTS

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KHA PROJECT	097918026
DATE	JUNE 2021
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	
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WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

CD-07

CONTRUCTION DETAILS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 18 OF 60

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CONSTRUCTION NOTES

(11) INSTALL TERMINAL JOINT TYPE 1 PER CALTRANS STD PLAN P30.

(17) INSTALL 2" DIAMETER FORMED CORE AT THE CORNER JOINT OF THE PANELS. SEE CD-07 FOR DETAILS.

NOTES

1. REFER TO CALTRANS STD PLAN SHEET P1 FOR JOINTED PLAIN CONCRETE PAVEMENT (JPCP) NEW CONSTRUCTION DETAILS.
2. REFER TO CALTRANS STD PLAN SHEET P10 FOR TRANSVERSE JOINT AND DOWEL BAR DETAILS.
3. REFER TO CALTRANS STD PLAN SHEET P15 FOR TIE BAR DETAILS.
4. REFER TO CALTRANS STD PLAN SHEETS P45 AND P46 FOR POURING JPCP AROUND DRAINAGE INLETS.
5. REFER TO CALTRANS STD PLAN SHEET P18 DETAIL "A" FOR ISOLATION JOINT DETAIL.

LEGEND

ISOLATION JOINTS

GRAPHIC SCALE IN FEET
0 5 10 20

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REGISTERED PROFESSIONAL ENGINEER DANIEL C. CARLEY No. C76394 CIVIL STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
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WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

JP-01

JOINTING PLANS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
19 OF 60

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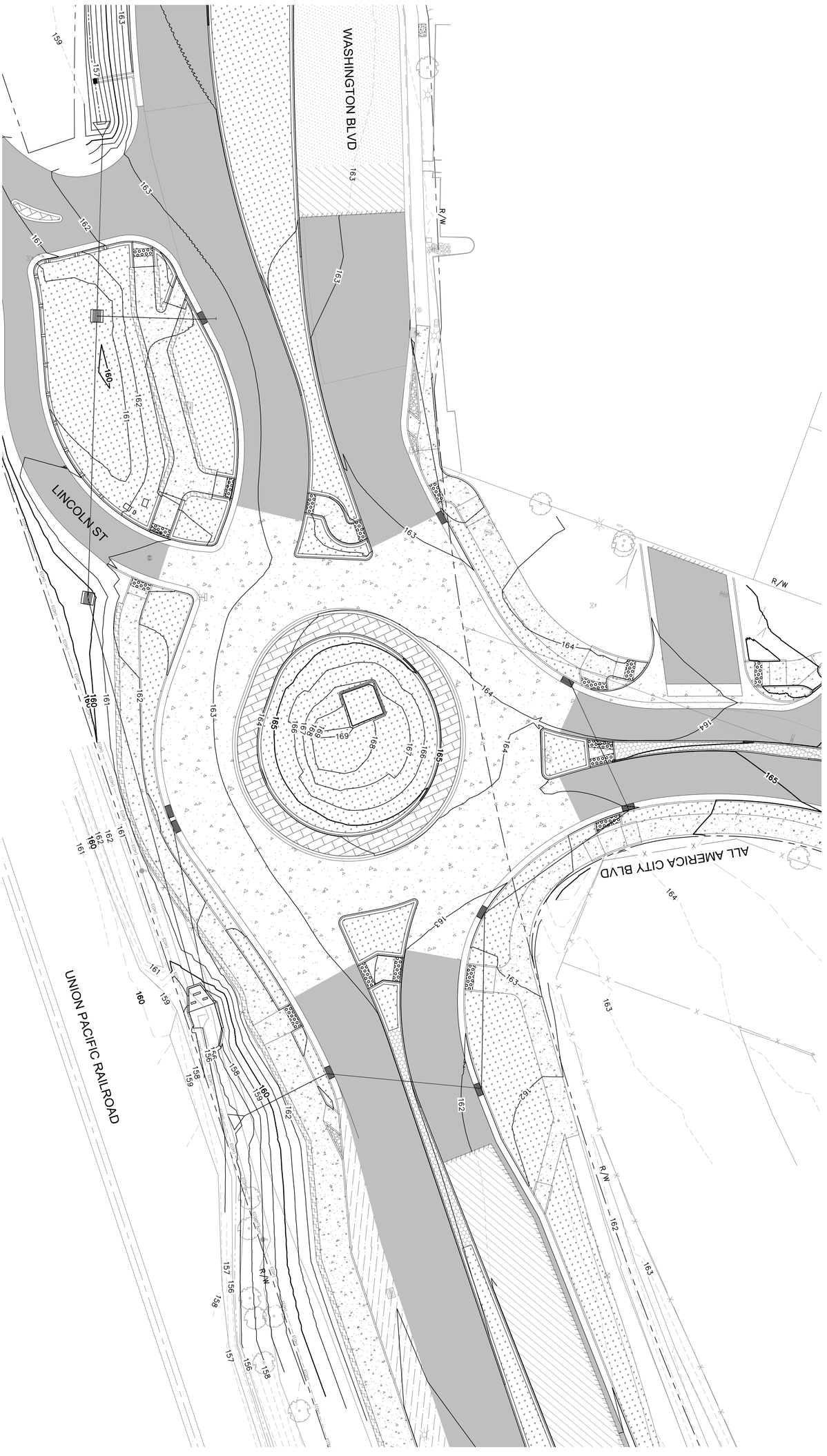

GRAPHIC SCALE IN FEET
0 10 20 40

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SHEET NUMBER 20 OF 60

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

CG-01

CONTOUR GRADING

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

KHA PROJECT	097918026
DATE	JUNE 2021
SCALE	AS SHOWN
DESIGNED BY	SH/DC
DRAWN BY	MD/MB
CHECKED BY	DC

REGISTERED PROFESSIONAL ENGINEER DANIEL C. CARLETON No. C76394 CIVIL STATE OF CALIFORNIA

Kimley»Horn
555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

No.	REVISIONS	DATE	BY

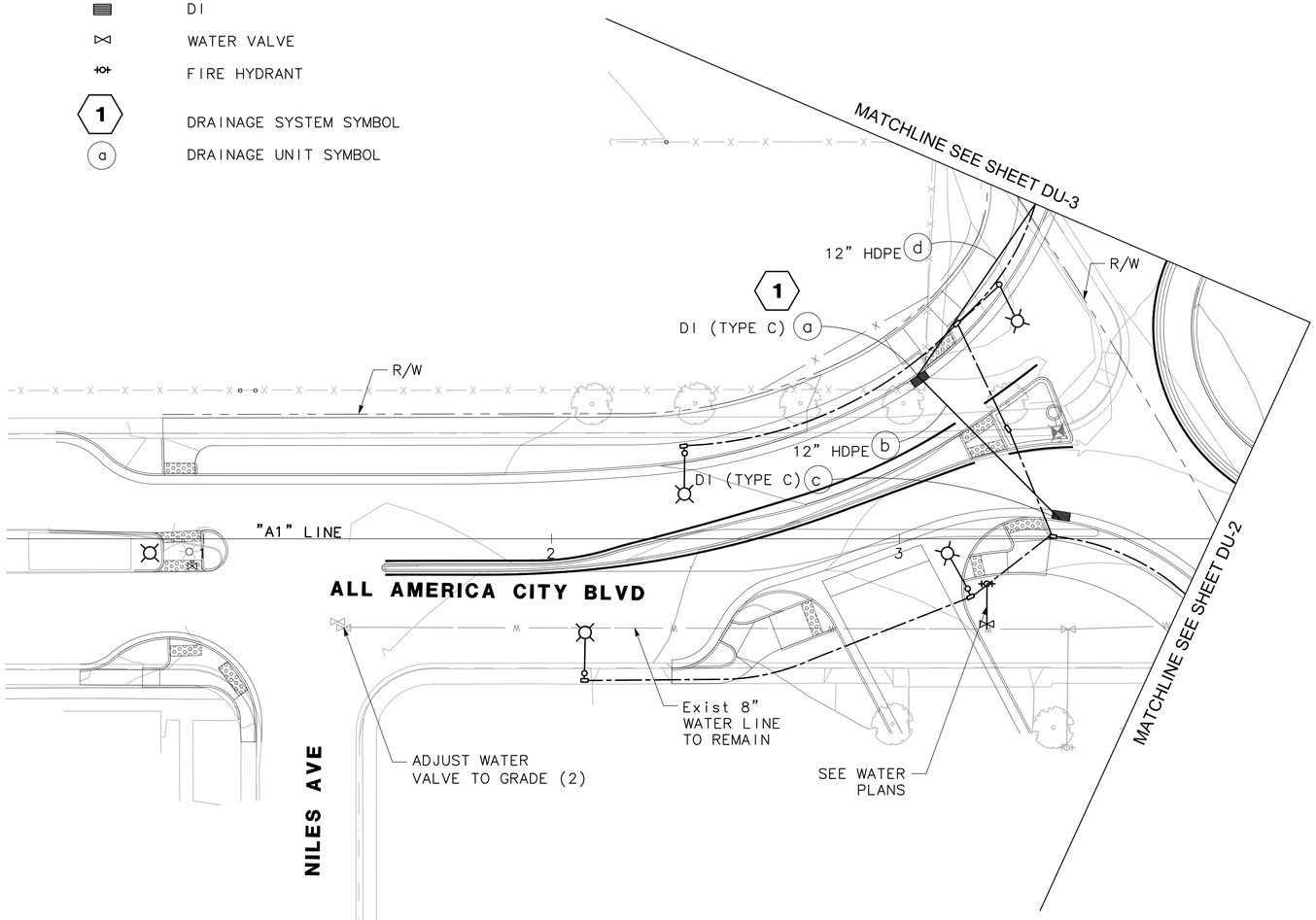
EN20-271

NOTES:

1. LOCATIONS AND ELEVATIONS OF UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO WORK.
2. CONSTRUCT PIPE INLET STRUCTURE AND INLET TRASH RACK PER ROSEVILLE STANDARD PLAN DR-13 & DR-15.
3. CONSTRUCT 12" FLARED END SECTION PER 2018 CALTRANS STANDARD PLAN D94B.
4. CONSTRUCT HEADWALL PER ROSEVILLE STANDARD PLAN DR-12. HEADWALLS OVER 30" SHALL INCLUDE SAFETY RAILING.
5. CONSTRUCT DI TYPE C AND TYPE F PER ROSEVILLE STANDARD PLAN DR-1 AND DR-3.
6. CONSTRUCT MH PER ROSEVILLE STANDARD PLAN DR-4.
7. FOR PROPOSED WATER LINE, WATER PLANS.
8. FOR PROPOSED AND EXISTING STREET LIGHTING, SEE LIGHTING PLANS.

LEGEND:

- EXIST UG ELECTRICAL (ROSEVILLE ELECTRIC)
- EXIST OH ELECTRICAL (ROSEVILLE ELECTRIC)
- EXIST FIBER OPTIC (CITY OF ROSEVILLE)
- EXIST JOINT TRENCH (CENTURY LINK/VERIZON/WOODMAN/ZAYO)
- EXIST WATER (CITY OF ROSEVILLE)
- EXIST TELECOMMUNICATION (XO COMMUNICATIONS)
- EXIST TELEPHONE LINE (COMCAST)
- DITCH FLOW LINE
- EXISTING STREET LIGHTING
- PROPOSED STREET LIGHTING
- MANHOLE
- DI
- WATER VALVE
- FIRE HYDRANT
- (1) DRAINAGE SYSTEM SYMBOL
- (a) DRAINAGE UNIT SYMBOL



GRAPHIC SCALE IN FEET
0 10 20 40

Know what's below. Call before you dig.

DU-1

J:\KIMLEY-HORN-SA-19130-ROSEVILLE-ALL AMERICAN DR ROUNDABOUT\CADD_2018\SHEETS\RWB_DU.DWG

No.	REVISIONS	DATE	BY

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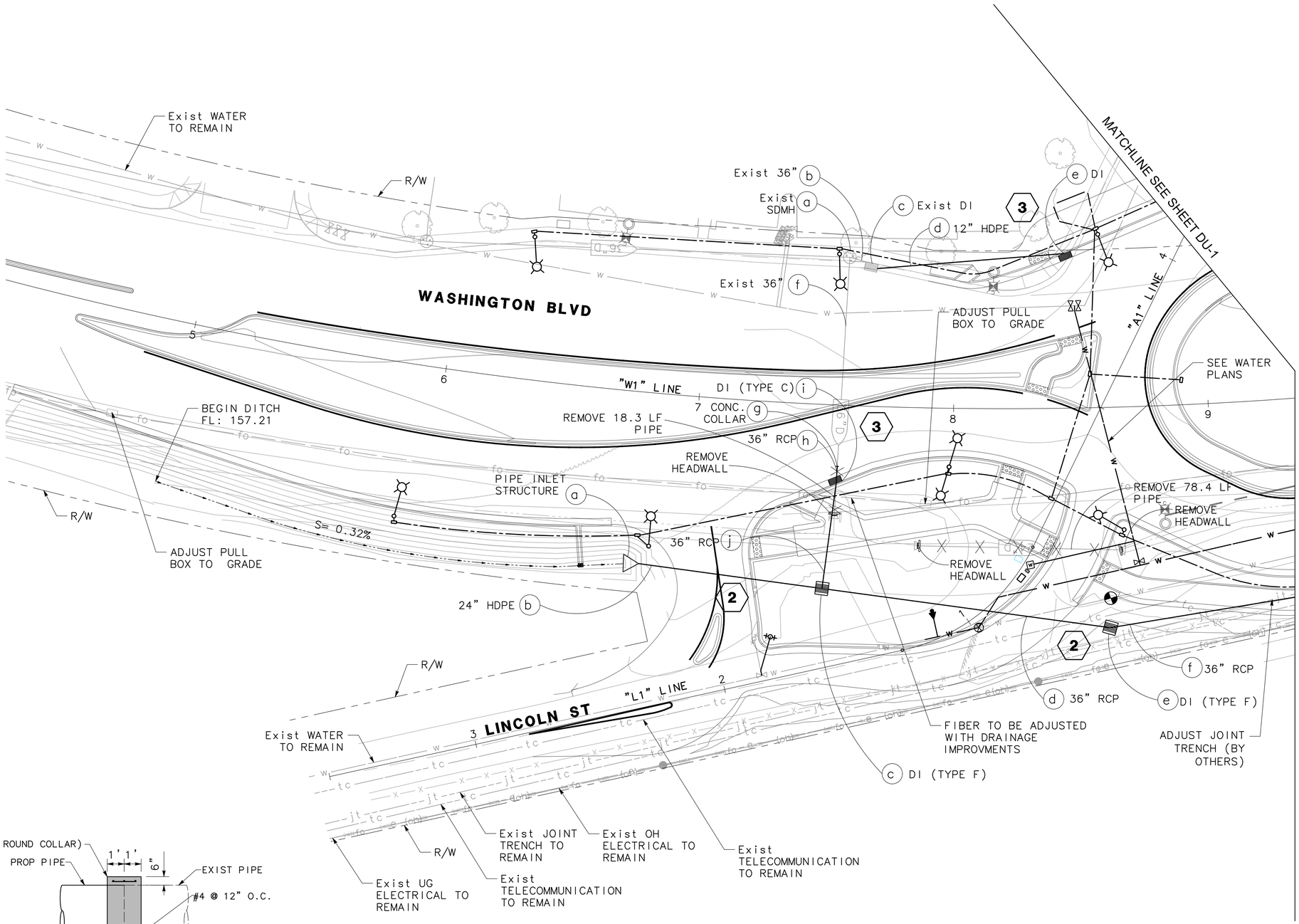
KHA PROJECT 097918026
DATE MAY 2021
SCALE 1" = 20'
DESIGNED BY FM
DRAWN BY JZ
CHECKED BY AS

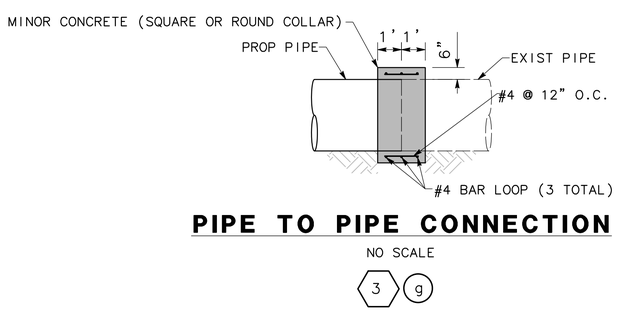
WASHINGTON BLVD AT ALL AMERICA CITY BLVD (WAAC) ROUNDABOUT PROJECT

DRAINAGE & UTILITIES PLAN

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
21 OF 60





PIPE TO PIPE CONNECTION

NO SCALE

3 g

GRAPHIC SCALE IN FEET
0 10 20 40

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DU-2

J:\KIMLEY-HORN-SA-19130-ROSEVILLE-ALL AMERICAN DR ROUNDABOUT\CADD_2018\SHEETS\RWB_DU.DWG

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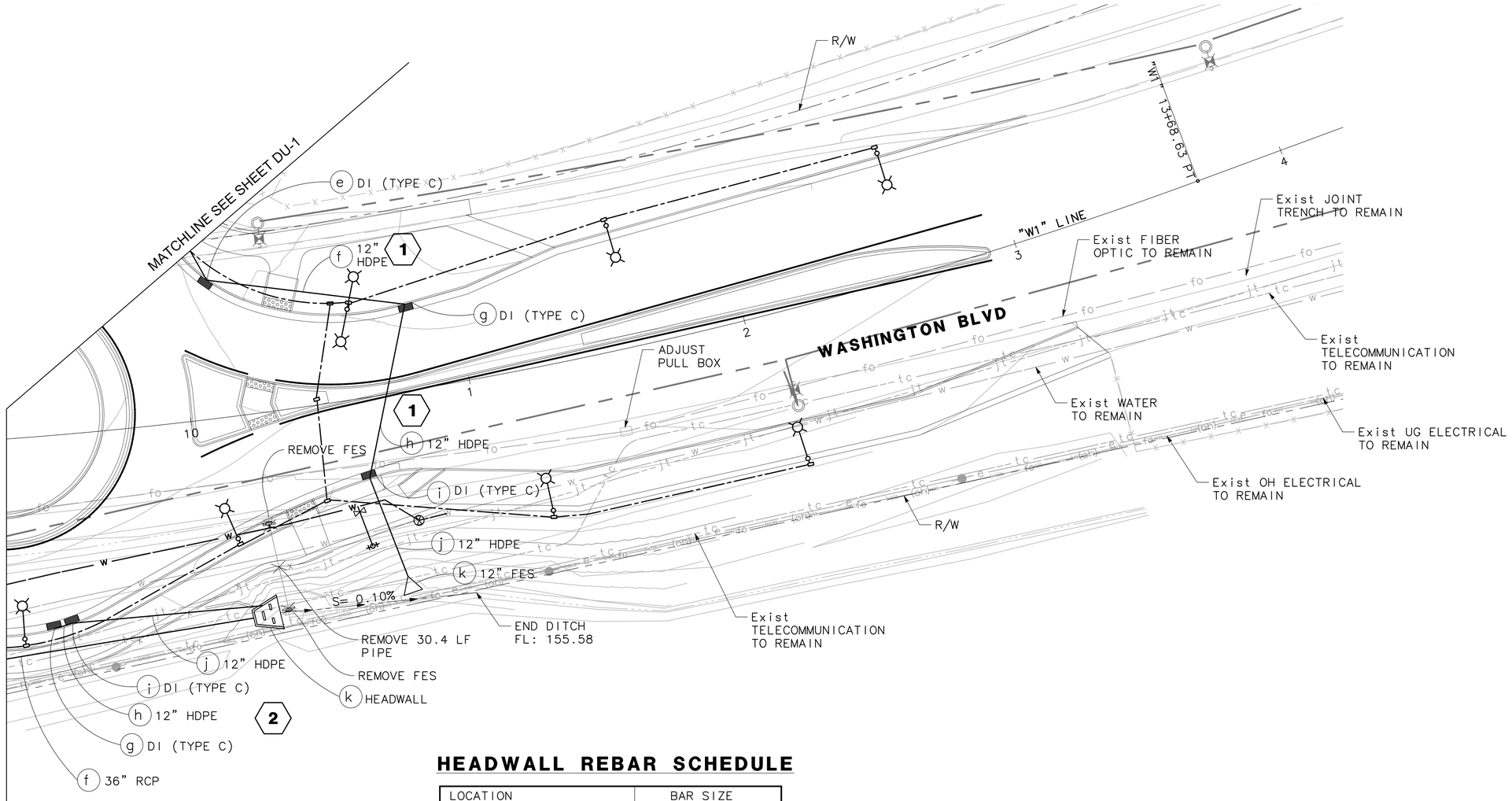
WASHINGTON BLVD AT ALL AMERICA CITY BLVD (WAAC) ROUNDABOUT PROJECT

DRAINAGE & UTILITIES PLAN

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
22 OF 60



HEADWALL REBAR SCHEDULE

LOCATION	BAR SIZE
FRONT FACE	#4 @ 12" O.C.
HORIZONTAL BACK FACE	#4 @ 12" O.C.
VERTICAL BACK FACE	#5 @ 12" O.C.

NOTE:
1. ADJACENT TO EACH OPENING, PLACE ADDITIONAL REINFORCEMENT EQUIVALENT TO HALF THE INTERRUPTED MAIN REINFORCEMENT. EXTEND BARS ONE DEVELOPMENT LENGTH PAST THE INTERSECTION WITH THE ADJACENT DIAGONAL BAR, OR WHERE BARS INTERSECT MID THICKNESS OF ADJACENT WALL, BOTTOM SLAB OR AT TOP OF WALL, BEND ENDS AS REQUIRED INTO SAME PLANE.

GRAPHIC SCALE IN FEET
0 10 20 40

Know what's below. Call before you dig.

DU-3

J:\KIMLEY-HORN-SA-19130-ROSEVILLE-ALL AMERICAN DR ROUNDABOUT\CADD_2018\SHEETS\RWB_DU.DWG

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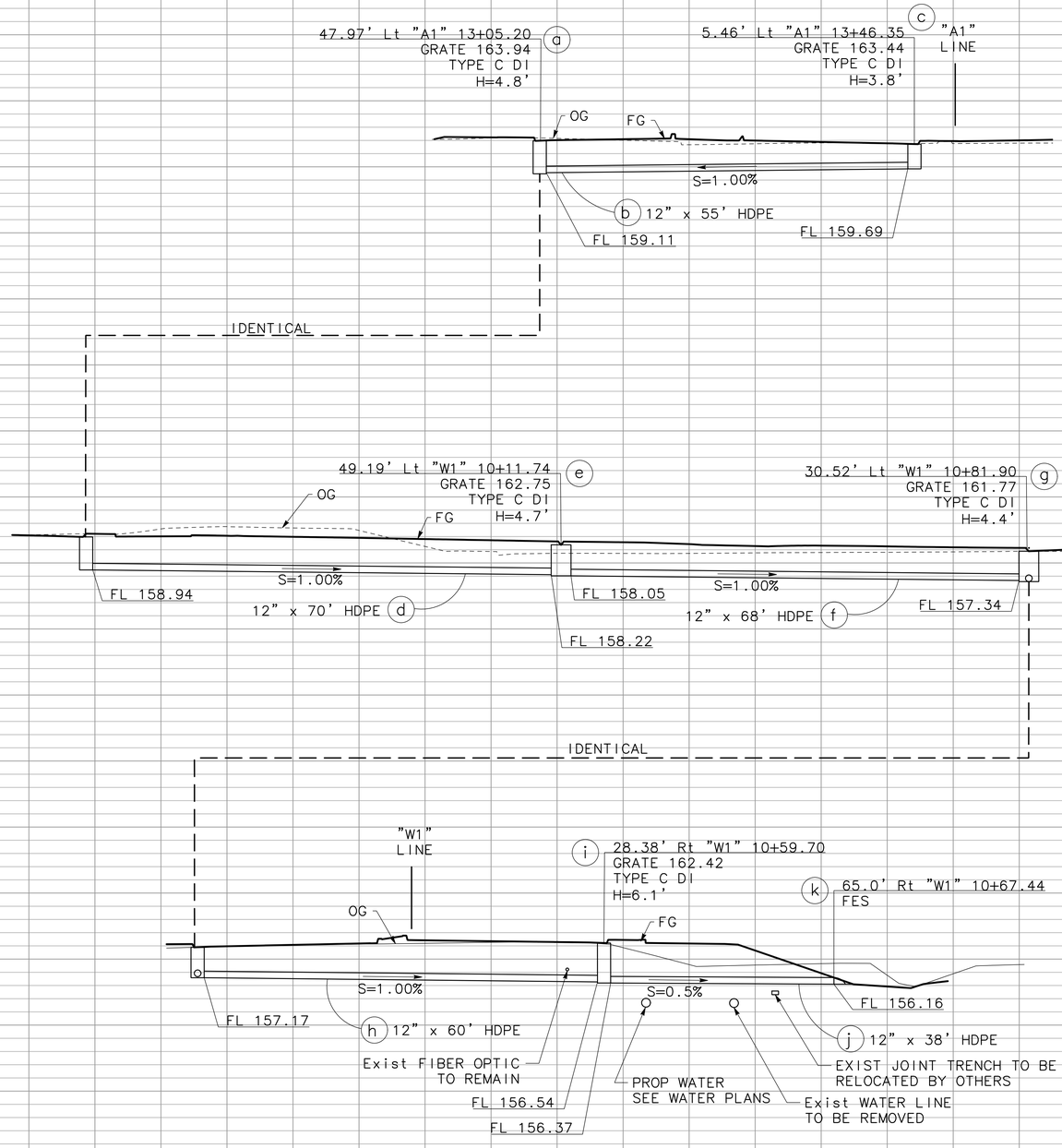
DRAINAGE & UTILITIES PLAN

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
23 OF 60



DRAINAGE SYSTEM No. 1

J:\KIMLEY-HORN-SA-19130-ROSEVILLE-ALL AMERICAN DR ROUNDABOUT\CADD_2018\SHEETS\RWB_DP.DWG

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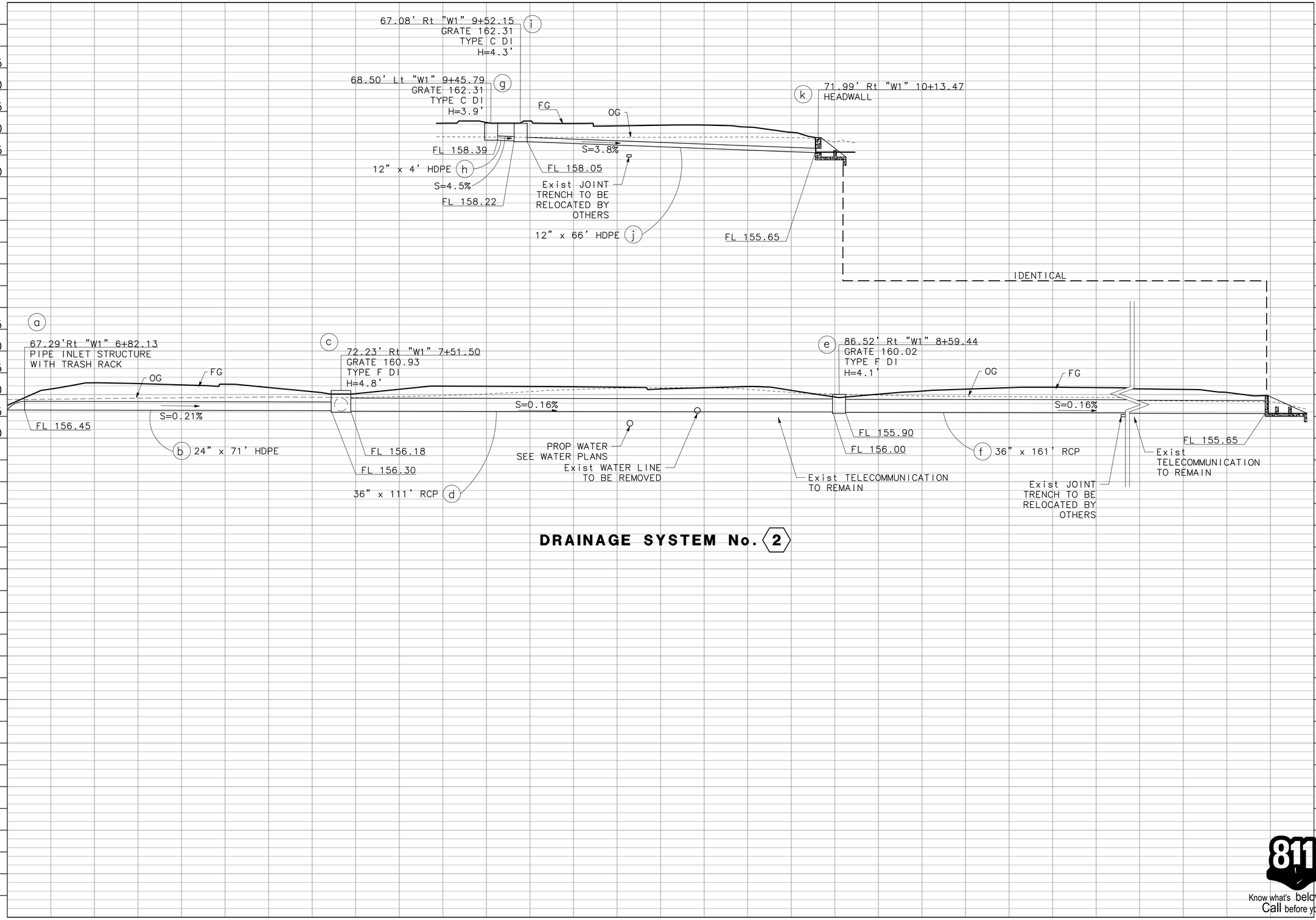
WASHINGTON BLVD AT ALL AMERICA CITY BLVD (WAAC) ROUNDABOUT PROJECT

DRAINAGE PROFILES

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

811 Know what's below. Call before you dig.

SHEET NUMBER
24 OF 60



DRAINAGE SYSTEM No. 2

J:\KIMLEY-HORN-SA-19130-ROSEVILLE-ALL AMERICAN DR ROUNDABOUT\CADD_2018\SHEETS\RWB_DP.DWG

DP-2

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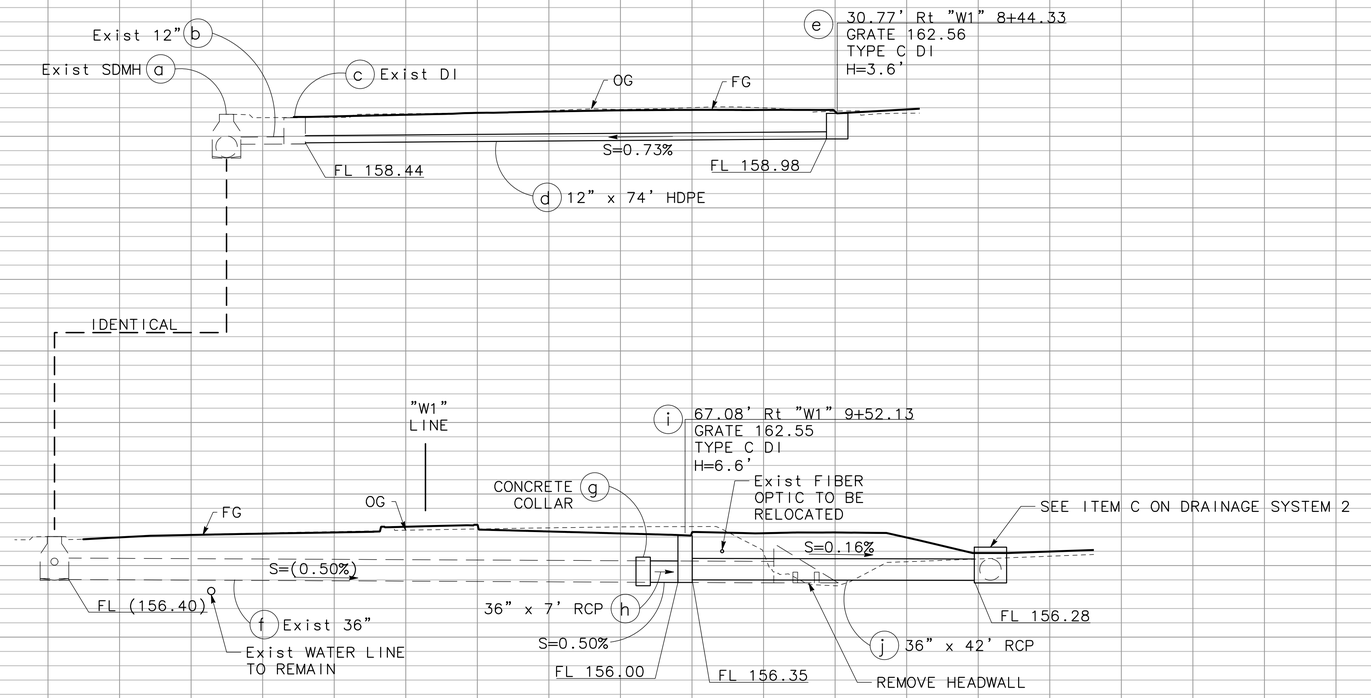
WASHINGTON BLVD AT ALL AMERICA CITY BLVD (WAAC) ROUNDABOUT PROJECT

DRAINAGE PROFILES

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
25 OF 60



DRAINAGE SYSTEM No. 3

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DP-3

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WASHINGTON BLVD AT ALL AMERICA CITY BLVD (WAAC) ROUNDABOUT PROJECT

DRAINAGE PROFILES

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
26 OF 60

NOTES:

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THESE PLANS AND THE LATEST EDITION AND AMENDMENTS OF THE CITY OF ROSEVILLE DESIGN AND CONSTRUCTION STANDARDS.
2. ACCURACY OF THE PROPOSED WATER LINE AND INFORMATION SHOWN HAVE BEEN BASED ON POTHOLING LIMITATIONS, NUMBER OF LOCATIONS, AS WELL AS UTILITY MAPPING PROVIDED BY UTILITY OWNER'S. LOCATIONS OF EXISTING FACILITIES SHOWN IN THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION BEGINNING.
3. THE CONTRACTOR SHALL EXPOSE AND VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION OF THE NEW IMPROVEMENTS CONNECTING TO OR IN THE VICINITY OF THE SAME.
4. THE CONTRACTOR SHALL MAINTAIN CONTINUOUS SERVICE TO THE AGENCY'S CUSTOMERS, EXCEPT DURING SCHEDULED SHORT TERM OUTAGES. THE CONTRACTOR SHALL PROMPTLY REPAIR ANY DAMAGE OBSTRUCTION TO PRIVATE PIPELINES TO THE SATISFACTION OF THE AGENCY AND ITS CUSTOMER. SCHEDULED OUTAGES REQUIRE A MINIMUM OF 10 WORKING DAYS ADVANCE NOTICE TO THE AGENCY OF THE REQUESTED OUTAGE TIME AND DATE(S). OUTAGES MAY BE SCHEDULED AT LEAST DISRUPTIVE TIMES, THE ABOVE RESTRICTIONS MAY BE ALTERED BY THE AGENCY AT ITS SOLE DISCRETION.
5. FOR INFORMATION ON EXISTING UTILITIES (NON-WATER), AND OTHER RELATED PROPOSED (NON-WATER) UTILITIES SHOWN IN THESE WATER SHEETS, SEE DRAINAGE AND UTILITIES SHEETS.
6. DUCTILE IRON PIPE SHALL BE CLASS 350 AND RATED TO HANDLE TEST PRESSURE OF 250 PSI. ALL PIPE JOINTS AND FITTINGS SHALL BE MECHANICALLY RESTRAINED.
7. THE PROPOSED WATER LINE CROSSING OVER THE DRAINIAGE SHALL HAVE A FULLY MECHANICALLY RESTRAINED 18-FOOT LENGTH OF DUCTILE IRON PIPE CLASS 350 CENTERED AT THE CROSSING. THE PIPES WILL BE CENTERED ON THE CROSSING AND IN BOTH DIRECTIONS SO THE JOINTS ARE SPACED TO THEIR MAXIMUM IN ORDER TO REDUCE THE RISK THAT NON-POTABLE FLUIDS ENTERING THE WATER MAIN.
8. PROVIDE A MINIMUM HORIZONTAL SEPARATION OF 5 FEET BETWEEN WATER AND STORM DRAIN LINES.
9. PROVIDE A MINIMUM OF 12 INCHES CLEARANCE AT LATERAL CROSSINGS.
10. ALL WET UTILITIES CROSSING WATER FACILITIES MUST NOT CROSS AT AN ANGLE GREATER THAN 45 DEGREES FROM WHAT WOULD BE A PERPENDICULAR CROSSING.
11. PIPE AND APPURTENANCES TO BE 30-INCHES MINIMUM BELOW FINAL GRADE.
12. TRANSMISSION MAIN BLOW OFF VALVES TO BE INSTALLED PER CITY OF ROSEVILLE STANDARD DRAWING NO. W-31.
13. FIRE HYDRANTS TO BE INSTALLED PER CITY OF ROSEVILLE STANDARD DRAWING NO. W-13.
14. AIR RELEASE VALVES TO BE INSTALLED PER CITY OF ROSEVILLE STANDARD DRAWING NO. W-33.
15. LANDSCAPE IRRIGATION SERVICE TO BE INSTALLED PER CITY OF ROSEVILLE STANDARD DRAWING NO. W-7. SEE LANDSCAPE PLANS FOR ADDITIONAL DETAILS.

LEGEND:

- [#] POTHOLE NUMBER
- POTHOLE LOCATION
- GATE VALVE
- AIR RELEASE VALVE
- BLOW OFF VALVE
- REMOVE PIPE
- [W] 1 ½" WATER SERVICE PER CITY STANDARD W-7
- FIRE HYDRANT
- BUTTERFLY VALVE

- ——W—— PROPOSED WATERLINE
- ——— PROPOSED DRAINAGE
- ——fo—— (E) FIBER OPTIC (CITY FIBER)
- ——tc—— (E) TELECOMMUNICATION (CCI & XO)
- ——jt—— (E) JOINT TRENCH (CENTURYLINK, MCI, WOODMAN, ZAYO)

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W-1

J:\KIMLEY-HORN-SA-19130-ROSEVILLE-ALL AMERICAN DR ROUNDABOUT\CADD_2018\SHEETS\RWB_W.DWG

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DATE	JUNE 2021
SCALE	
DESIGNED BY	FM
DRAWN BY	JZ
CHECKED BY	AS

WASHINGTON BLVD AT ALL AMERICA CITY BLVD (WAAC) ROUNDABOUT PROJECT

Water Plan

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

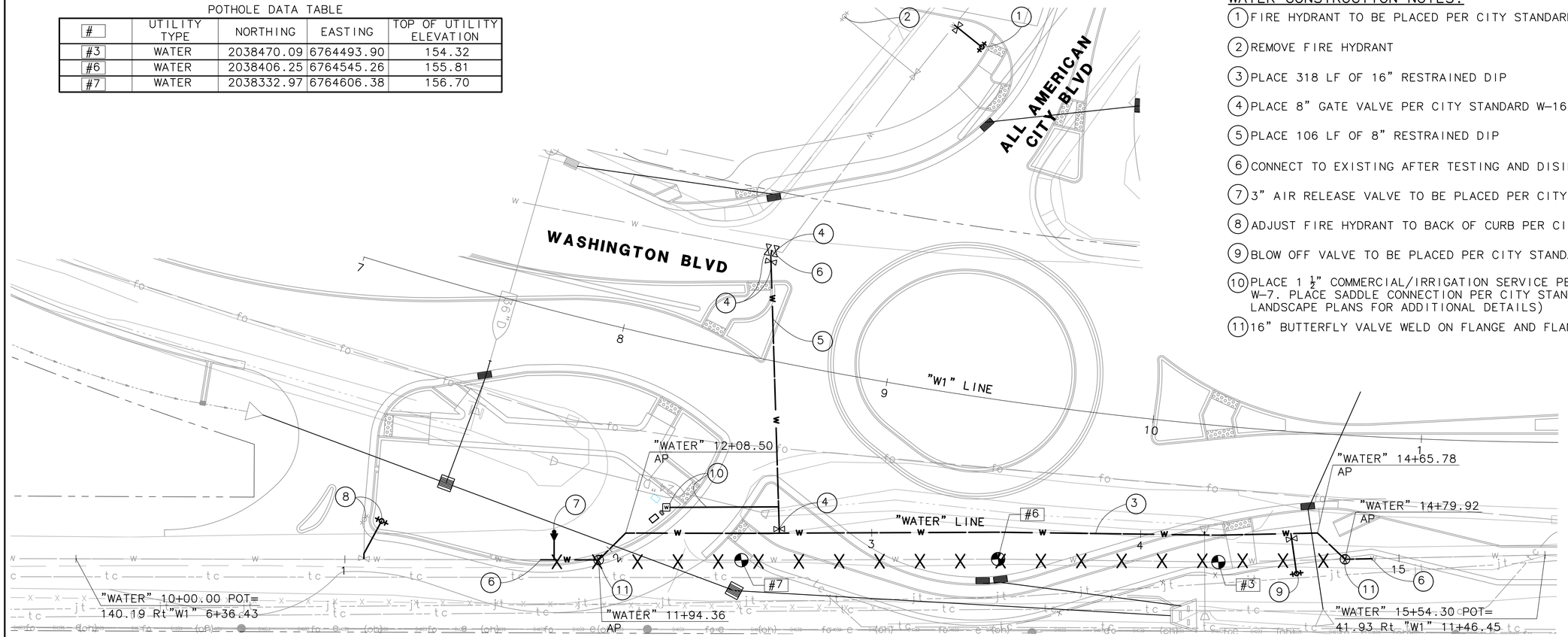
SHEET NUMBER
27 OF 60

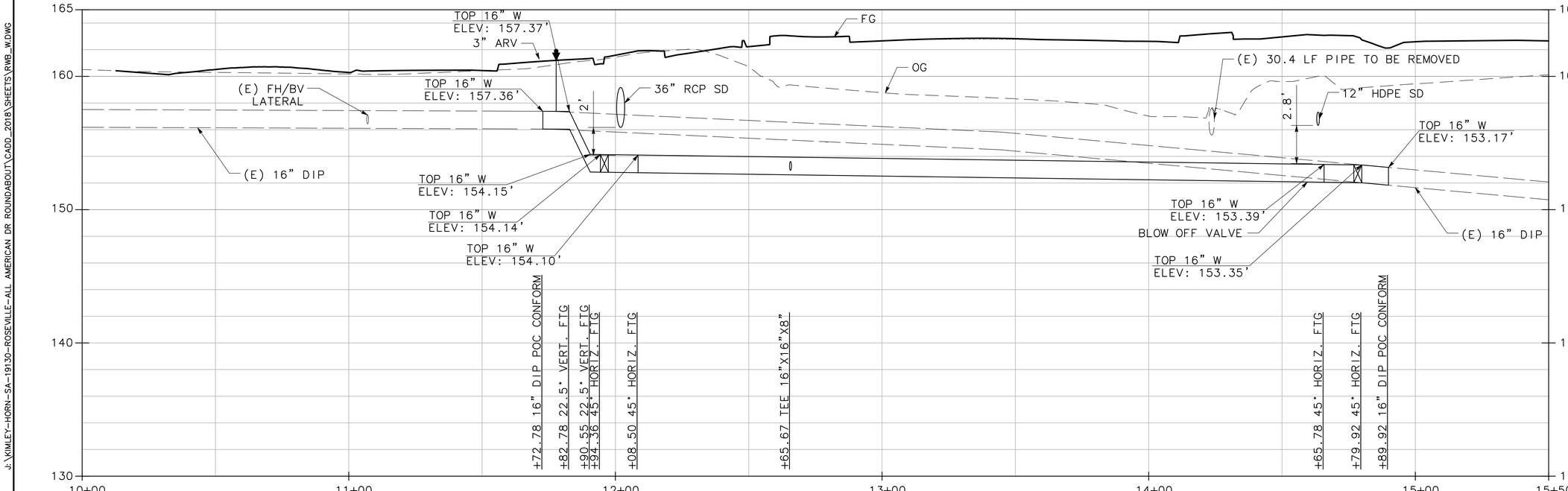
POTHOLE DATA TABLE

#	UTILITY TYPE	NORTHING	EASTING	TOP OF UTILITY ELEVATION
#3	WATER	2038470.09	6764493.90	154.32
#6	WATER	2038406.25	6764545.26	155.81
#7	WATER	2038332.97	6764606.38	156.70

WATER CONSTRUCTION NOTES:

1. FIRE HYDRANT TO BE PLACED PER CITY STANDARD W-13
2. REMOVE FIRE HYDRANT
3. PLACE 318 LF OF 16" RESTRAINED DIP
4. PLACE 8" GATE VALVE PER CITY STANDARD W-16
5. PLACE 106 LF OF 8" RESTRAINED DIP
6. CONNECT TO EXISTING AFTER TESTING AND DISINFECTION
7. 3" AIR RELEASE VALVE TO BE PLACED PER CITY STANDARD W-33
8. ADJUST FIRE HYDRANT TO BACK OF CURB PER CITY STANDARD W-32
9. BLOW OFF VALVE TO BE PLACED PER CITY STANDARD W-32
10. PLACE 1 ½" COMMERCIAL/IRRIGATION SERVICE PER CITY STANDARD W-7. PLACE SADDLE CONNECTION PER CITY STANDARD W-26. (SEE LANDSCAPE PLANS FOR ADDITIONAL DETAILS)
11. 16" BUTTERFLY VALVE WELD ON FLANGE AND FLANGE X 45





Know what's below. Call before you dig.

W-2

J:\KIMLEY-HORN-SA-19130-ROSEVILLE-ALL AMERICAN DR ROUNDABOUT\CADD_2018\SHEETS\RWB_W.DWG

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WASHINGTON BLVD AT ALL AMERICA CITY BLVD (WAAC) ROUNDABOUT PROJECT

Water Plan

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
28 OF 60

LEGEND

- REMOVE PRIOR TO THIS STAGE
- BUILD IN THIS STAGE
- CONCRETE SECTION
- TEMPORARY AC
- PROPOSED DITCH
- PROPOSED STORM DRAIN PIPE
- CHANNELIZER (SURFACE MOUNTED,25' OC)
- DIRECTION OF TRAFFIC
- DETAIL NUMBER (XX / T)
- LIMIT
- CONSTRUCTION AREA SIGN
- DRAINAGE INLET
- FIELD INLET
- ANGLE POINT
- BC/EC
- HEADWALL
- FLARED END SECTION

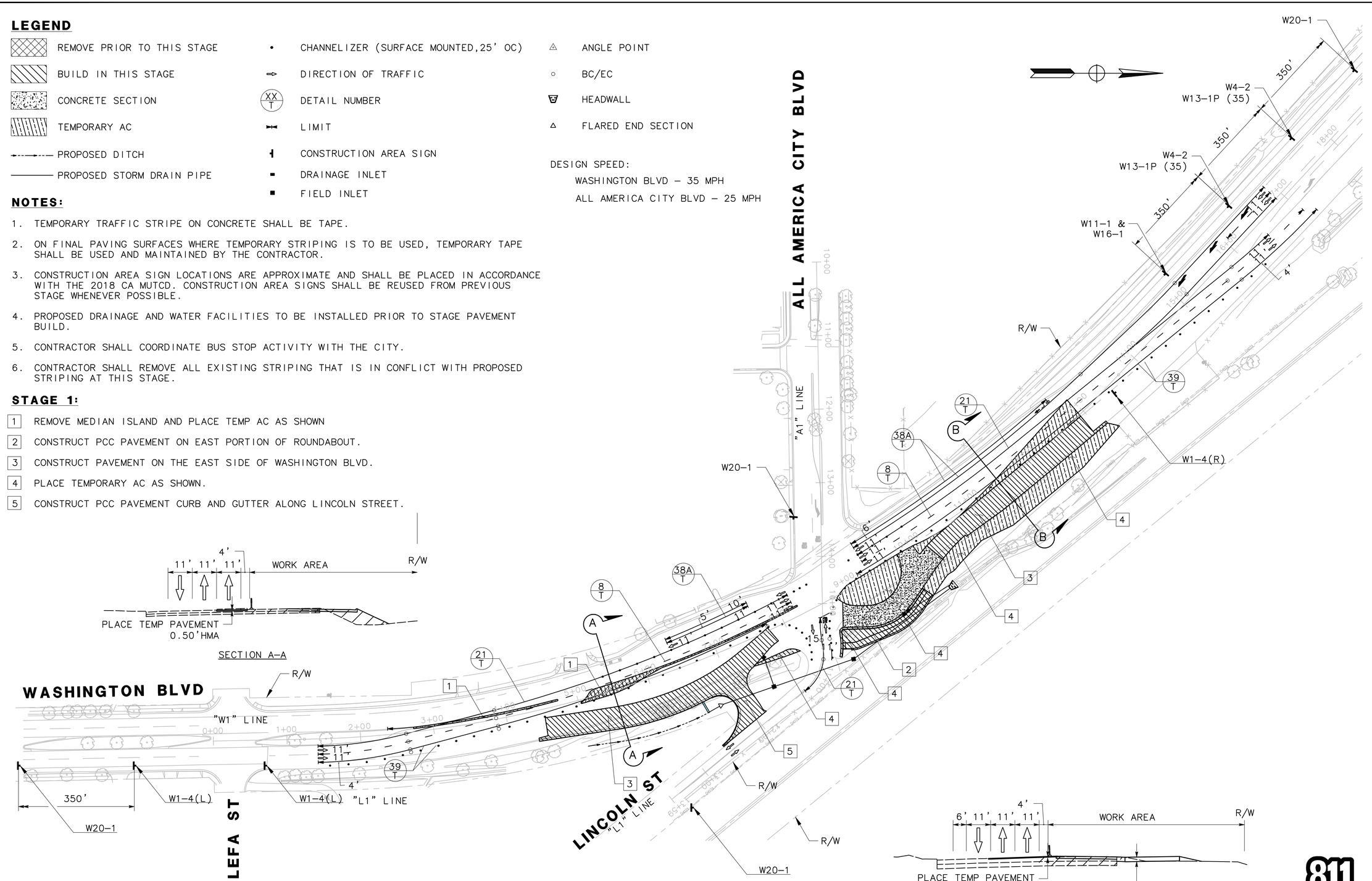
DESIGN SPEED:
WASHINGTON BLVD – 35 MPH
ALL AMERICA CITY BLVD – 25 MPH

NOTES:

1. TEMPORARY TRAFFIC STRIPE ON CONCRETE SHALL BE TAPE.
2. ON FINAL PAVING SURFACES WHERE TEMPORARY STRIPING IS TO BE USED, TEMPORARY TAPE SHALL BE USED AND MAINTAINED BY THE CONTRACTOR.
3. CONSTRUCTION AREA SIGN LOCATIONS ARE APPROXIMATE AND SHALL BE PLACED IN ACCORDANCE WITH THE 2018 CA MUTCD. CONSTRUCTION AREA SIGNS SHALL BE REUSED FROM PREVIOUS STAGE WHENEVER POSSIBLE.
4. PROPOSED DRAINAGE AND WATER FACILITIES TO BE INSTALLED PRIOR TO STAGE PAVEMENT BUILD.
5. CONTRACTOR SHALL COORDINATE BUS STOP ACTIVITY WITH THE CITY.
6. CONTRACTOR SHALL REMOVE ALL EXISTING STRIPING THAT IS IN CONFLICT WITH PROPOSED STRIPING AT THIS STAGE.

STAGE 1:

1. REMOVE MEDIAN ISLAND AND PLACE TEMP AC AS SHOWN
2. CONSTRUCT PCC PAVEMENT ON EAST PORTION OF ROUNDABOUT.
3. CONSTRUCT PAVEMENT ON THE EAST SIDE OF WASHINGTON BLVD.
4. PLACE TEMPORARY AC AS SHOWN.
5. CONSTRUCT PCC PAVEMENT CURB AND GUTTER ALONG LINCOLN STREET.



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WASHINGTON BLVD AT ALL AMERICA CITY BLVD (WAAC) ROUNDABOUT PROJECT

TRAFFIC HANDLING PLAN

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

Know what's below. Call before you dig.

SHEET NUMBER
29 OF 60

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LEGEND

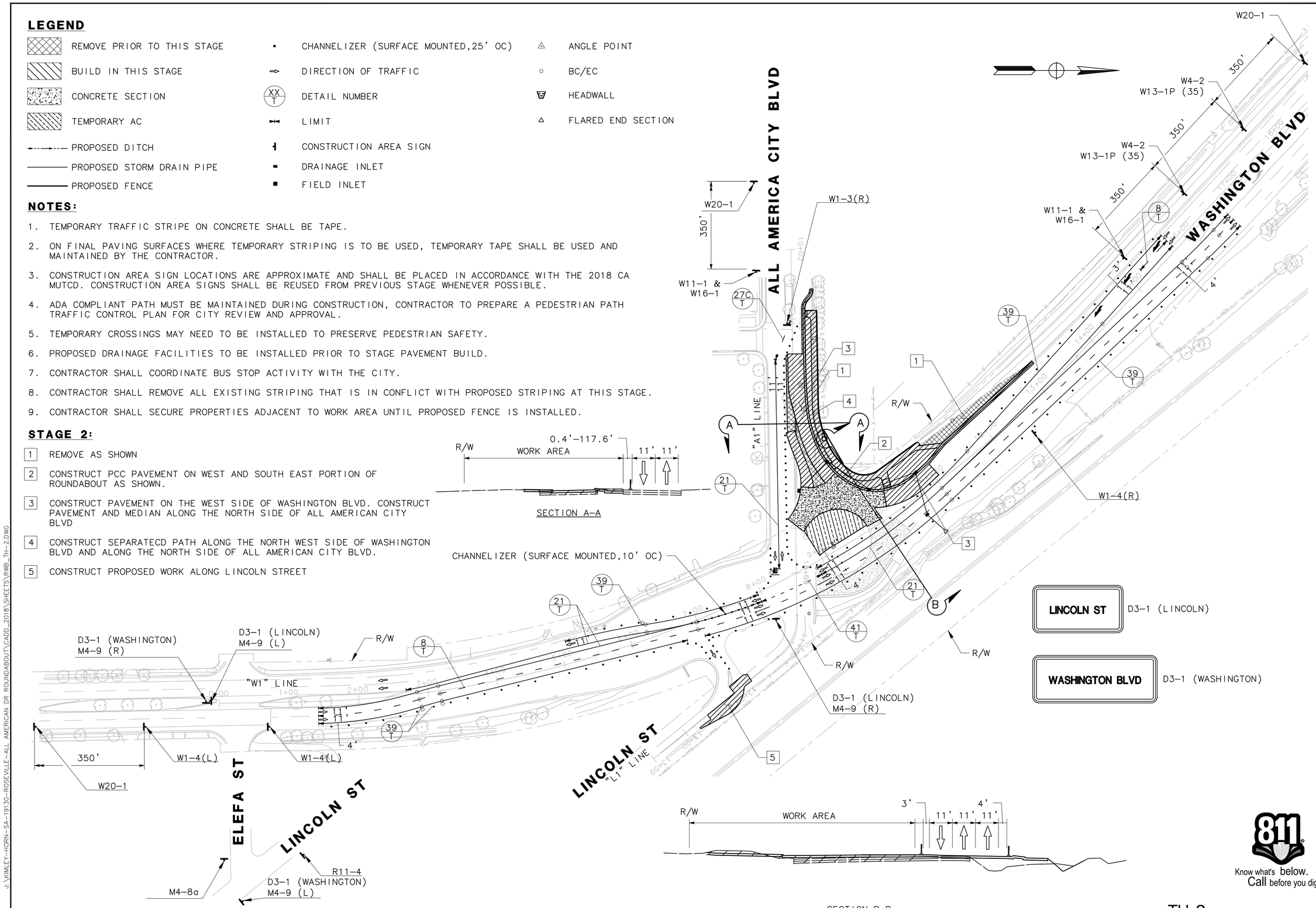
REMOVE PRIOR TO THIS STAGE	•	CHANNELIZER (SURFACE MOUNTED,25' OC)	ANGLE POINT
BUILD IN THIS STAGE	⇨	DIRECTION OF TRAFFIC	BC/EC
CONCRETE SECTION	XX / T	DETAIL NUMBER	HEADWALL
TEMPORARY AC	⊢	LIMIT	FLARED END SECTION
PROPOSED DITCH	⊣	CONSTRUCTION AREA SIGN	
PROPOSED STORM DRAIN PIPE	▪	DRAINAGE INLET	
PROPOSED FENCE	■	FIELD INLET	

NOTES:

1. TEMPORARY TRAFFIC STRIPE ON CONCRETE SHALL BE TAPE.
2. ON FINAL PAVING SURFACES WHERE TEMPORARY STRIPING IS TO BE USED, TEMPORARY TAPE SHALL BE USED AND MAINTAINED BY THE CONTRACTOR.
3. CONSTRUCTION AREA SIGN LOCATIONS ARE APPROXIMATE AND SHALL BE PLACED IN ACCORDANCE WITH THE 2018 CA MUTCD. CONSTRUCTION AREA SIGNS SHALL BE REUSED FROM PREVIOUS STAGE WHENEVER POSSIBLE.
4. ADA COMPLIANT PATH MUST BE MAINTAINED DURING CONSTRUCTION, CONTRACTOR TO PREPARE A PEDESTRIAN PATH TRAFFIC CONTROL PLAN FOR CITY REVIEW AND APPROVAL.
5. TEMPORARY CROSSINGS MAY NEED TO BE INSTALLED TO PRESERVE PEDESTRIAN SAFETY.
6. PROPOSED DRAINAGE FACILITIES TO BE INSTALLED PRIOR TO STAGE PAVEMENT BUILD.
7. CONTRACTOR SHALL COORDINATE BUS STOP ACTIVITY WITH THE CITY.
8. CONTRACTOR SHALL REMOVE ALL EXISTING STRIPING THAT IS IN CONFLICT WITH PROPOSED STRIPING AT THIS STAGE.
9. CONTRACTOR SHALL SECURE PROPERTIES ADJACENT TO WORK AREA UNTIL PROPOSED FENCE IS INSTALLED.

STAGE 2:

1. REMOVE AS SHOWN
2. CONSTRUCT PCC PAVEMENT ON WEST AND SOUTH EAST PORTION OF ROUNDABOUT AS SHOWN.
3. CONSTRUCT PAVEMENT ON THE WEST SIDE OF WASHINGTON BLVD. CONSTRUCT PAVEMENT AND MEDIAN ALONG THE NORTH SIDE OF ALL AMERICAN CITY BLVD
4. CONSTRUCT SEPARATECD PATH ALONG THE NORTH WEST SIDE OF WASHINGTON BLVD AND ALONG THE NORTH SIDE OF ALL AMERICAN CITY BLVD.
5. CONSTRUCT PROPOSED WORK ALONG LINCOLN STREET



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WASHINGTON BLVD AT ALL AMERICA CITY BLVD (WAAC) ROUNDABOUT PROJECT

TRAFFIC HANDLING PLAN

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 30 OF 60

J:\KIMLEY-HORN-SA-19130-ROSEVILLE-ALL AMERICAN DR ROUNDABOUT\CADD_2018\SHEETS\RWB_TH-2.DWG

LEGEND

- REMOVE PRIOR TO THIS STAGE
- BUILD IN THIS STAGE
- CONCRETE SECTION
- TEMPORARY AC
- PROPOSED DITCH
- PROPOSED STORM DRAIN PIPE
- CHANNELIZER (SURFACE MOUNTED,25' OC)
- DIRECTION OF TRAFFIC
- XX/T DETAIL NUMBER
- LIMIT
- CONSTRUCTION AREA SIGN
- DRAINAGE INLET
- FIELD INLET
- ANGLE POINT
- BC/EC
- HEADWALL
- FLARED END SECTION

NOTES:

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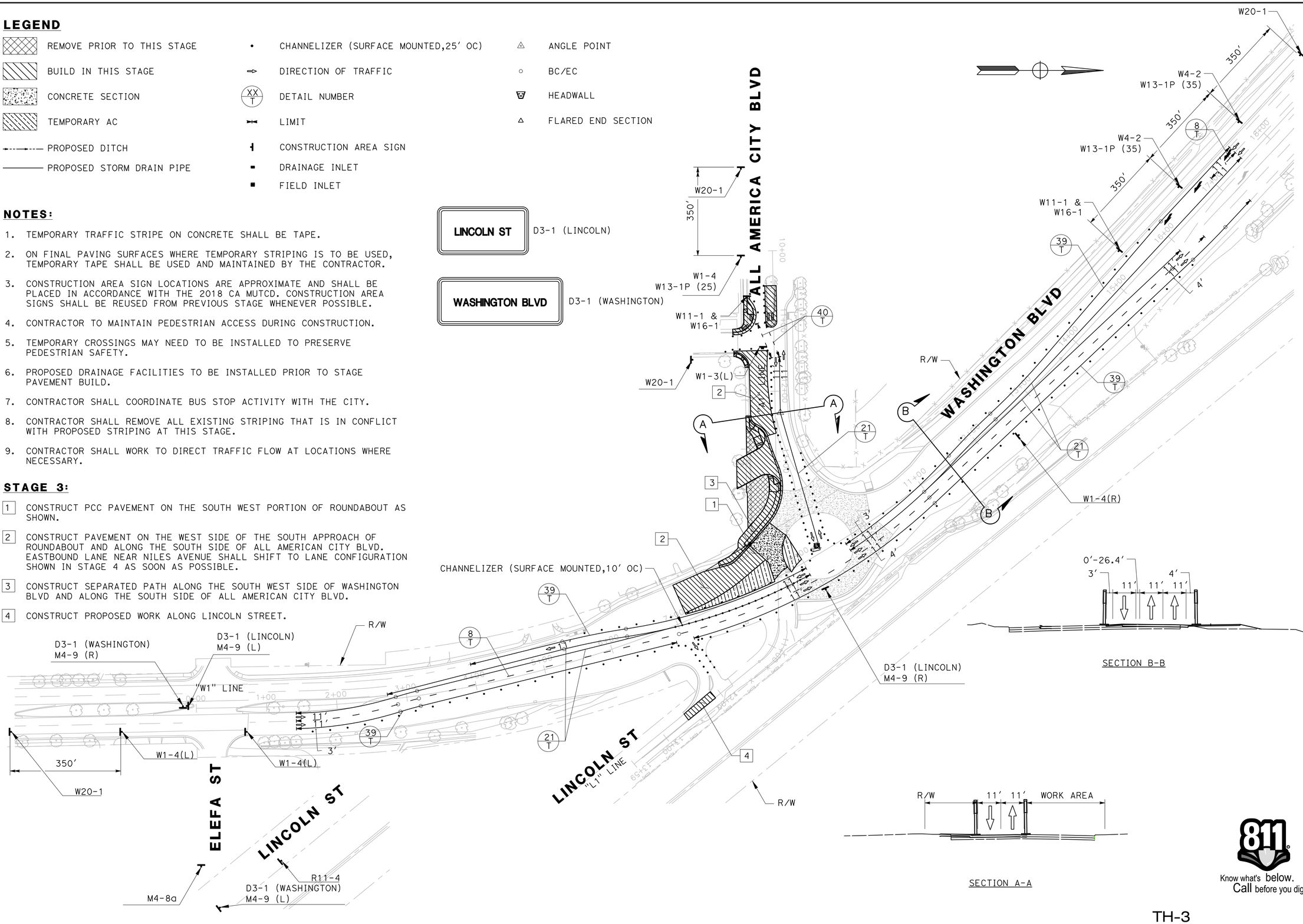
2. ON FINAL PAVING SURFACES WHERE TEMPORARY STRIPING IS TO BE USED, TEMPORARY TAPE SHALL BE USED AND MAINTAINED BY THE CONTRACTOR.
3. CONSTRUCTION AREA SIGN LOCATIONS ARE APPROXIMATE AND SHALL BE PLACED IN ACCORDANCE WITH THE 2018 CA MUTCD. CONSTRUCTION AREA SIGNS SHALL BE REUSED FROM PREVIOUS STAGE WHENEVER POSSIBLE.
4. CONTRACTOR TO MAINTAIN PEDESTRIAN ACCESS DURING CONSTRUCTION.
5. TEMPORARY CROSSINGS MAY NEED TO BE INSTALLED TO PRESERVE PEDESTRIAN SAFETY.
6. PROPOSED DRAINAGE FACILITIES TO BE INSTALLED PRIOR TO STAGE PAVEMENT BUILD.
7. CONTRACTOR SHALL COORDINATE BUS STOP ACTIVITY WITH THE CITY.
8. CONTRACTOR SHALL REMOVE ALL EXISTING STRIPING THAT IS IN CONFLICT WITH PROPOSED STRIPING AT THIS STAGE.
9. CONTRACTOR SHALL WORK TO DIRECT TRAFFIC FLOW AT LOCATIONS WHERE NECESSARY.

STAGE 3:

1. CONSTRUCT PCC PAVEMENT ON THE SOUTH WEST PORTION OF ROUNDABOUT AS SHOWN.
2. CONSTRUCT PAVEMENT ON THE WEST SIDE OF THE SOUTH APPROACH OF ROUNDABOUT AND ALONG THE SOUTH SIDE OF ALL AMERICAN CITY BLVD. EASTBOUND LANE NEAR NILES AVENUE SHALL SHIFT TO LANE CONFIGURATION SHOWN IN STAGE 4 AS SOON AS POSSIBLE.
3. CONSTRUCT SEPARATED PATH ALONG THE SOUTH WEST SIDE OF WASHINGTON BLVD AND ALONG THE SOUTH SIDE OF ALL AMERICAN CITY BLVD.
4. CONSTRUCT PROPOSED WORK ALONG LINCOLN STREET.

LINCOLN ST D3-1 (LINCOLN)

WASHINGTON BLVD D3-1 (WASHINGTON)



TH-3

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WWW.MARKTHOMAS.COM

REGISTERED PROFESSIONAL ENGINEER — MATTHEW MAGAW — No. 87451 — Exp. 9/30/21 — CIVIL — STATE OF CALIFORNIA

No.	REVISIONS	DATE	BY

KHA PROJECT 097918026
DATE MAY 2021
SCALE 1" = 60'
DESIGNED BY FM
DRAWN BY JZ
CHECKED BY AS

WASHINGTON BLVD AT ALL AMERICA CITY BLVD (WAAC) ROUNDABOUT PROJECT

TRAFFIC HANDLING PLAN

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

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SHEET NUMBER 31 OF 60

J:\KIMLEY-HORN-SA-19130-ROSEVILLE-ALL AMERICAN DR ROUNDABOUT\CADD_2018\SHEETS\PWB_TH-3.DWG

LEGEND

REMOVE PRIOR TO THIS STAGE	•	CHANNELIZER (SURFACE MOUNTED,25' OC)	◬	ANGLE POINT
BUILD IN THIS STAGE	⇨	DIRECTION OF TRAFFIC	○	BC/EC
CONCRETE SECTION	XX/T	DETAIL NUMBER		
TEMPORARY AC	⊢⊣	LIMIT		
	┤	CONSTRUCTION AREA SIGN		

NOTES:

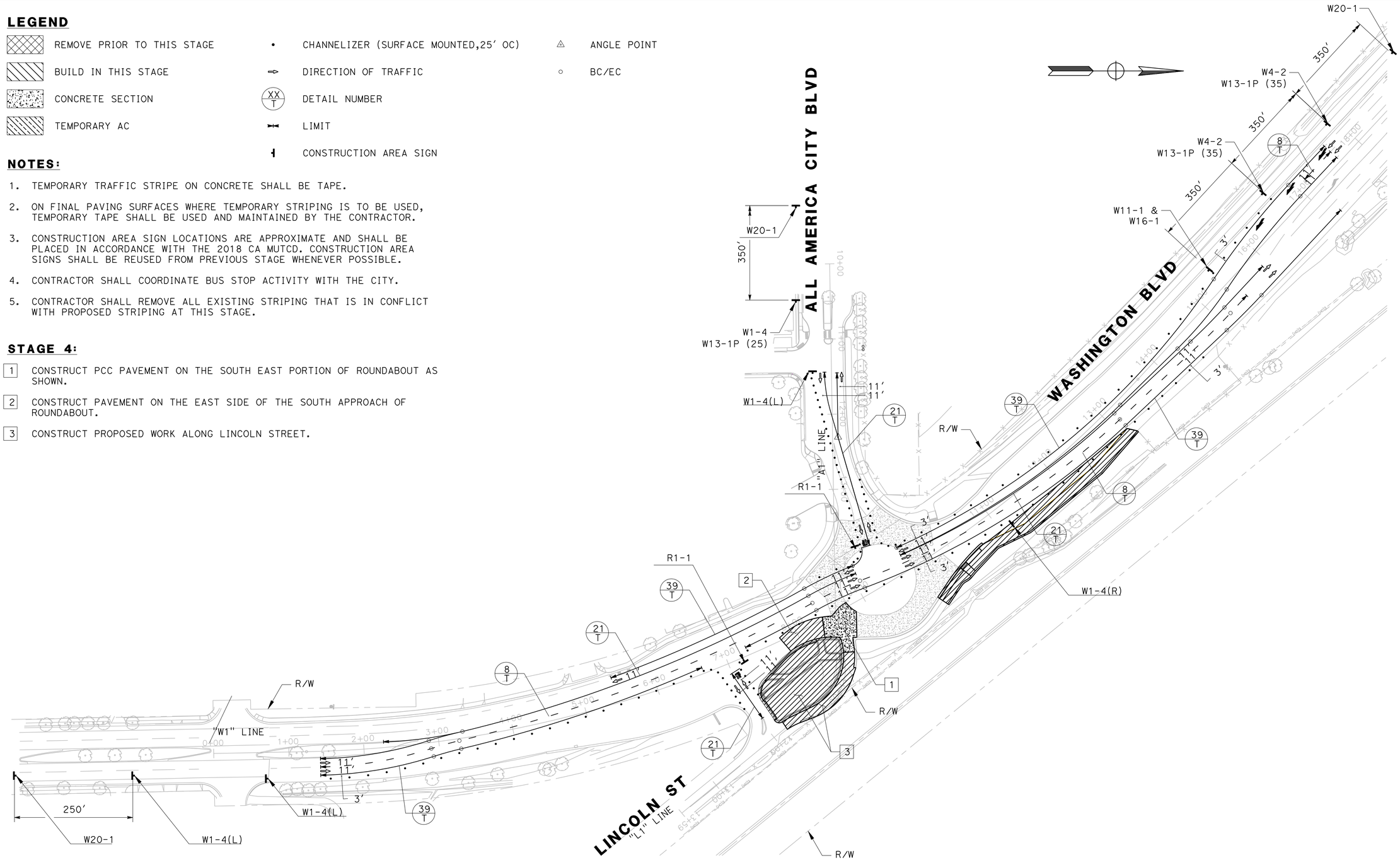
1. TEMPORARY TRAFFIC STRIPE ON CONCRETE SHALL BE TAPE.
2. ON FINAL PAVING SURFACES WHERE TEMPORARY STRIPING IS TO BE USED, TEMPORARY TAPE SHALL BE USED AND MAINTAINED BY THE CONTRACTOR.
3. CONSTRUCTION AREA SIGN LOCATIONS ARE APPROXIMATE AND SHALL BE PLACED IN ACCORDANCE WITH THE 2018 CA MUTCD. CONSTRUCTION AREA SIGNS SHALL BE REUSED FROM PREVIOUS STAGE WHENEVER POSSIBLE.
4. CONTRACTOR SHALL COORDINATE BUS STOP ACTIVITY WITH THE CITY.
5. CONTRACTOR SHALL REMOVE ALL EXISTING STRIPING THAT IS IN CONFLICT WITH PROPOSED STRIPING AT THIS STAGE.

STAGE 4:

[1] CONSTRUCT PCC PAVEMENT ON THE SOUTH EAST PORTION OF ROUNDABOUT AS SHOWN.

[2] CONSTRUCT PAVEMENT ON THE EAST SIDE OF THE SOUTH APPROACH OF ROUNDABOUT.

[3] CONSTRUCT PROPOSED WORK ALONG LINCOLN STREET.



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TH-4

J:\KIMLEY-HORN-SA-19130-ROSEVILLE-ALL AMERICAN DR ROUNDABOUT\CADD_2018\SHEETS\RMB_TH-4.DWG

No.	REVISIONS	DATE	BY

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PROFESSIONAL ENGINEER — REGISTERED — MATTHEW MAGAW — No. 87451 — Exp. 9/30/21 — CIVIL — STATE OF CALIFORNIA

KHA PROJECT	097918026
DATE	MAY 2021
SCALE	1" = 60'
DESIGNED BY	FM
DRAWN BY	JZ
CHECKED BY	AS

WASHINGTON BLVD AT ALL AMERICA CITY BLVD (WAAC) ROUNDABOUT PROJECT

TRAFFIC HANDLING PLAN

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
32 OF 60

LEGEND

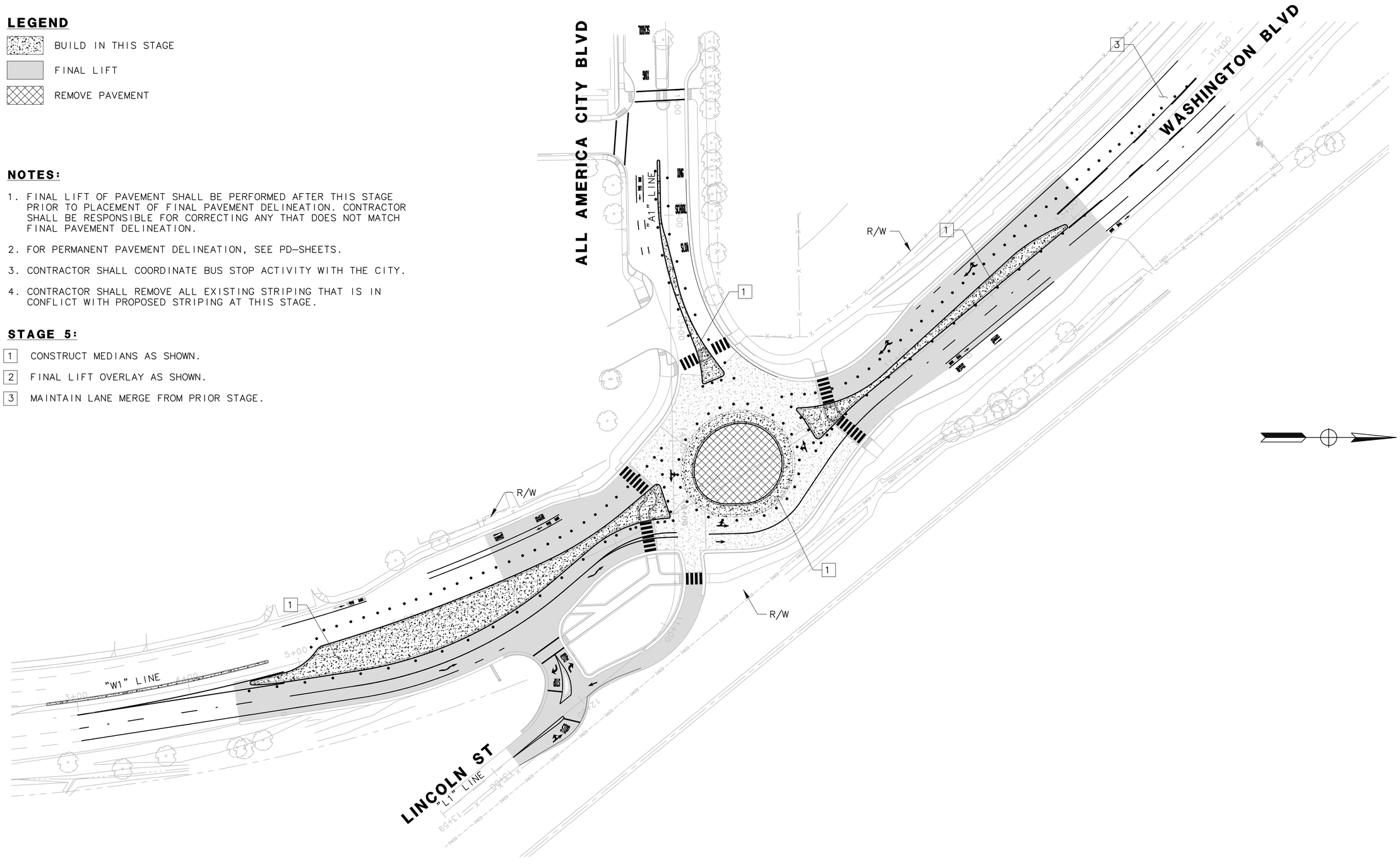
- BUILD IN THIS STAGE
- FINAL LIFT
- REMOVE PAVEMENT

NOTES:

1. FINAL LIFT OF PAVEMENT SHALL BE PERFORMED AFTER THIS STAGE PRIOR TO PLACEMENT OF FINAL PAVEMENT DELINEATION. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY THAT DOES NOT MATCH FINAL PAVEMENT DELINEATION.
2. FOR PERMANENT PAVEMENT DELINEATION, SEE PD-SHEETS.
3. CONTRACTOR SHALL COORDINATE BUS STOP ACTIVITY WITH THE CITY.
4. CONTRACTOR SHALL REMOVE ALL EXISTING STRIPING THAT IS IN CONFLICT WITH PROPOSED STRIPING AT THIS STAGE.

STAGE 5:

1. CONSTRUCT MEDIANS AS SHOWN.
2. FINAL LIFT OVERLAY AS SHOWN.
3. MAINTAIN LANE MERGE FROM PRIOR STAGE.



TH-5

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STATE OF CALIFORNIA

No.	REVISIONS	DATE	BY

KHA PROJECT 097918026
DATE MAY 2021
SCALE 1" = 40'
DESIGNED BY FM
DRAWN BY JZ
CHECKED BY AS

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TRAFFIC HANDLING PLAN

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 33 OF 60

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K:\SAC_TPTO\ROSEVILLE WASHINGTON @ ALL AMERICA RAB - 097918026\08 CADD\PLANSHEETS\SS-01 STRIPING.DWG
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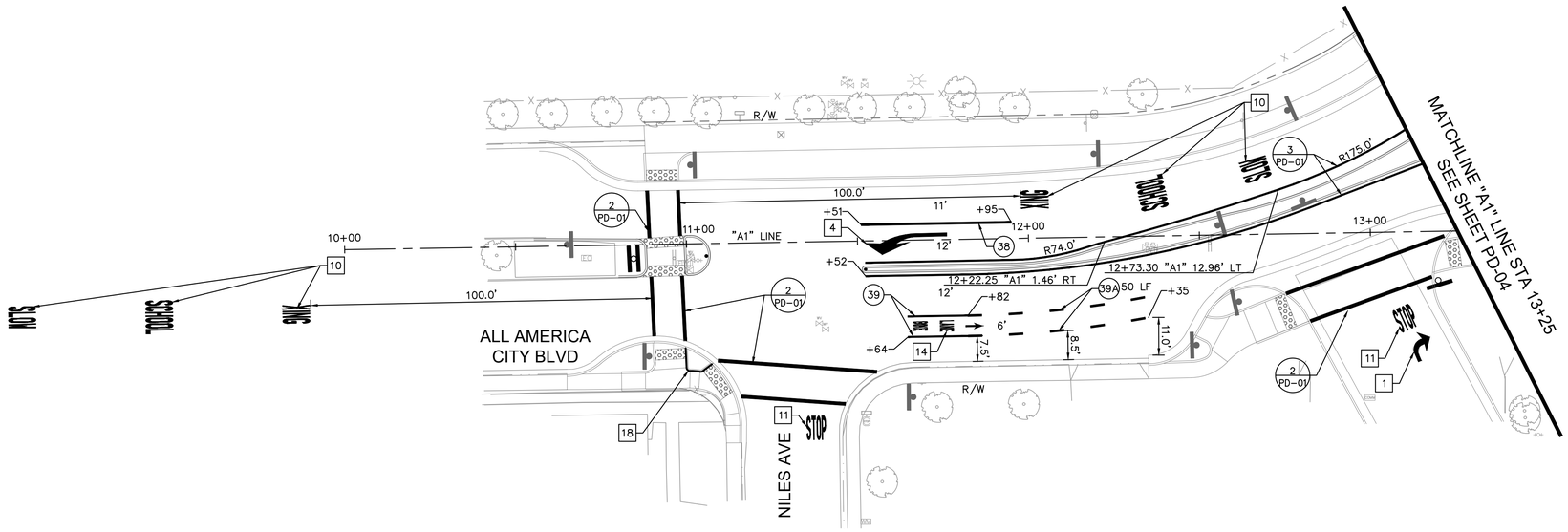
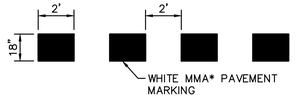
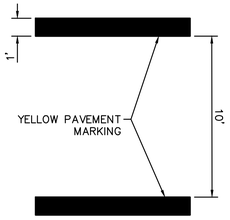
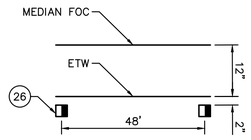




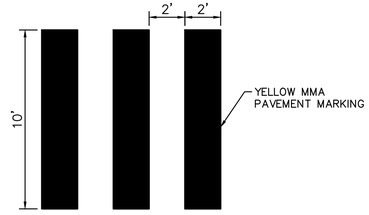
1 PD-01 ROUNDABOUT YIELD LINE DETAIL
NO SCALE



2 PD-01 YELLOW SCHOOL CROSSWALK DETAIL
NO SCALE

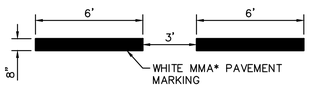


3 PD-01 LEFT EDGE STRIPE DETAIL
NO SCALE

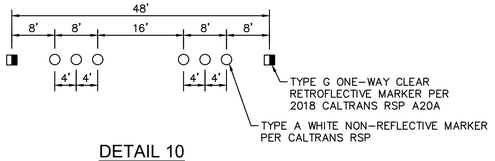


4 PD-01 ROUNDABOUT CROSSWALK DETAIL
NO SCALE

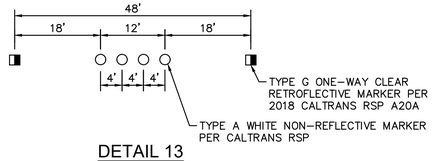
*METHYL METHACRYLATE (MMA)



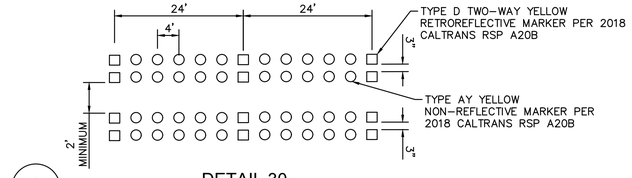
5 PD-01 ROUNDABOUT STRONG DASH DETAIL
NO SCALE



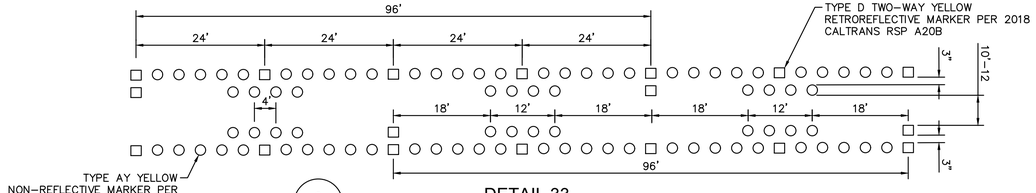
6 PD-01 DETAIL 10
(PER CALTRANS 2010 STANDARD PLAN)
NO SCALE



7 PD-01 DETAIL 13
(PER CALTRANS 2010 STANDARD PLAN)
NO SCALE



8 PD-03 DETAIL 30
(PER CALTRANS 2010 STANDARD PLAN)
NO SCALE



9 PD-03 DETAIL 33
(PER CALTRANS 2010 STANDARD PLAN)
NO SCALE

LEGEND

X / PD-XX	STRIPING DETAIL
(XX)	PROPOSED CALTRANS STRIPING DETAIL. SEE 2018 CALTRANS RSP
(XX)	EXISTING CALTRANS STRIPING DETAIL. SEE 2018 CALTRANS RSP
XX	EXISTING CALTRANS STRIPING DETAIL. SEE 2010 CALTRANS RSP.
+XX	BEGIN/END STRIPING STATION VALUE
	BREAK IN PAVEMENT DELINEATION
	ROADSIDE SIGN (SEE SIGNING PLAN)
	LIGHT POLE SIGN (SEE SIGNING PLAN)
	EXISTING ROADSIDE SIGN (SEE SIGNING PLAN)
•	TYPE Q (CA) OBJECT MARKER PER CALTRANS 2018 STD PLAN A73A. (SEE SIGNING PLAN)
MMA	METHYL METHACRYLATE

GENERAL NOTES

1. ALL STRIPING CONFLICTING WITH PROPOSED STRIPING SHALL BE REMOVED PRIOR TO NEW STRIPING INSTALLATION.
2. CONTRACTOR TO LAYOUT (CAT TRACK) STRIPING AND HAVE ENGINEER APPROVE PRIOR TO INSTALLING PAVEMENT MARKINGS.
3. SEE 2018 CALTRANS STANDARD PLANS FOR PAVEMENT MARKING SYMBOLS AND LEGENDS DETAILS.
4. SEE SHEET PD-04 FOR ROUNDABOUT STRIPING DETAILS.
5. STRIPING AND PAVEMENT MARKINGS WITHIN JPCP TO BE MMA.

* LANE WIDTHS ARE MEASURED TO LIP OF GUTTER AND/OR CENTER OF STRIPES.

STRIPING NOTES

1. INSTALL TYPE IV ARROW PER CALTRANS STD PLAN A24A.
4. INSTALL TYPE III ARROW PER CALTRANS STD PLAN A24B.
10. INSTALL YELLOW "SLOW SCHOOL XING" PAVEMENT MARKINGS PER CALTRANS STD PLAN A24D.
11. INSTALL PAVEMENT MARKING WORD PER CALTRANS 2018 STD PLAN A24D.
14. INSTALL "BIKE" "LANE" AND BIKE LANE ARROW PER CALTRANS STD PLAN A24A AND A24D.
18. INSTALL YELLOW REFLECTIVE PAINT ON ISLAND CURB AS SHOWN.

GRAPHIC SCALE IN FEET
0 10 20 40

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REGISTERED PROFESSIONAL ENGINEER
DANIEL C. CARLEY
No. C76394
CIVIL
STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

PD-01

PAVEMENT DELINEATION PLANS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

NOTES

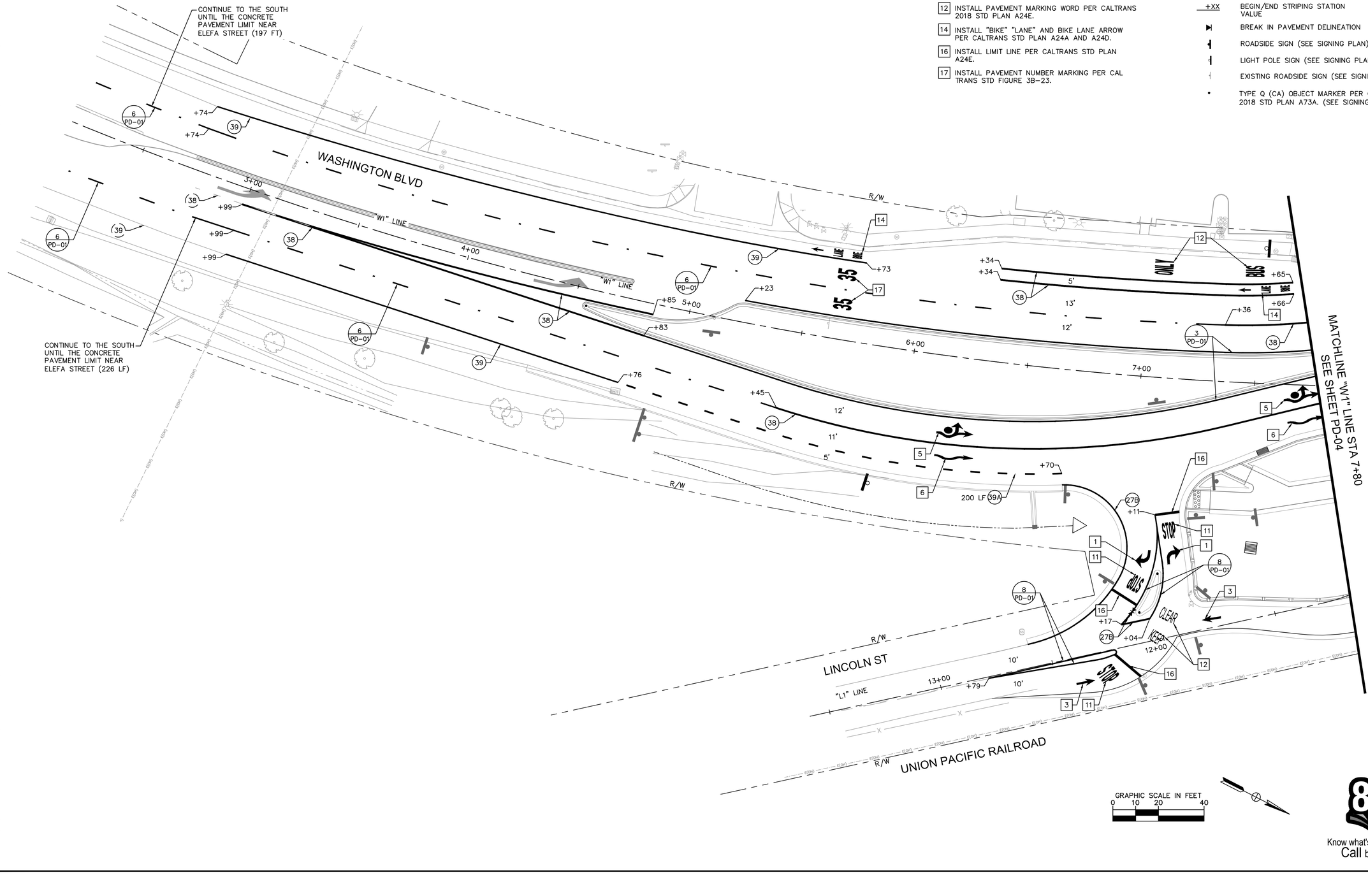
1. REFER TO SHEET PD-01 FOR GENERAL NOTES FOR STRIPING SHEETS.
2. SEE SHEETS PD-04 FOR ROUNDABOUT STRIPING DETAILS.

STRIPING NOTES

- 1 INSTALL TYPE IV ARROW PER CALTRANS STD PLAN A24A.
- 3 INSTALL TYPE I 10'-0" ARROW PER CALTRANS STD PLAN A24A.
- 5 INSTALL INNER CIRCULATORY LANE THRU/LEFT FISHHOOK ARROW PER DETAIL ON SHEET S-05.
- 6 INSTALL OUTER CIRCULATORY LANE THRU FISHHOOK ARROW PER DETAIL ON SHEET S-05.
- 11 INSTALL PAVEMENT MARKING WORD PER CALTRANS 2018 STD PLAN A24D.
- 12 INSTALL PAVEMENT MARKING WORD PER CALTRANS 2018 STD PLAN A24E.
- 14 INSTALL "BIKE" "LANE" AND BIKE LANE ARROW PER CALTRANS STD PLAN A24A AND A24D.
- 16 INSTALL LIMIT LINE PER CALTRANS STD PLAN A24E.
- 17 INSTALL PAVEMENT NUMBER MARKING PER CAL TRANS STD FIGURE 3B-23.

LEGEND

- X / PD-XX — STRIPING DETAIL
- (XX) — PROPOSED CALTRANS STRIPING DETAIL. SEE 2018 CALTRANS RSP
- (XX) — EXISTING CALTRANS STRIPING DETAIL. SEE 2018 CALTRANS RSP
- XX — EXISTING CALTRANS STRIPING DETAIL. SEE 2010 CALTRANS RSP.
- +XX — BEGIN/END STRIPING STATION VALUE
- BREAK IN PAVEMENT DELINEATION
- ROADSIDE SIGN (SEE SIGNING PLAN)
- LIGHT POLE SIGN (SEE SIGNING PLAN)
- EXISTING ROADSIDE SIGN (SEE SIGNING PLAN)
- TYPE Q (CA) OBJECT MARKER PER CALTRANS 2018 STD PLAN A73A. (SEE SIGNING PLAN)



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No.	REVISIONS	DATE	BY

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DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
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WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

PD-02

PAVEMENT DELINEATION PLANS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

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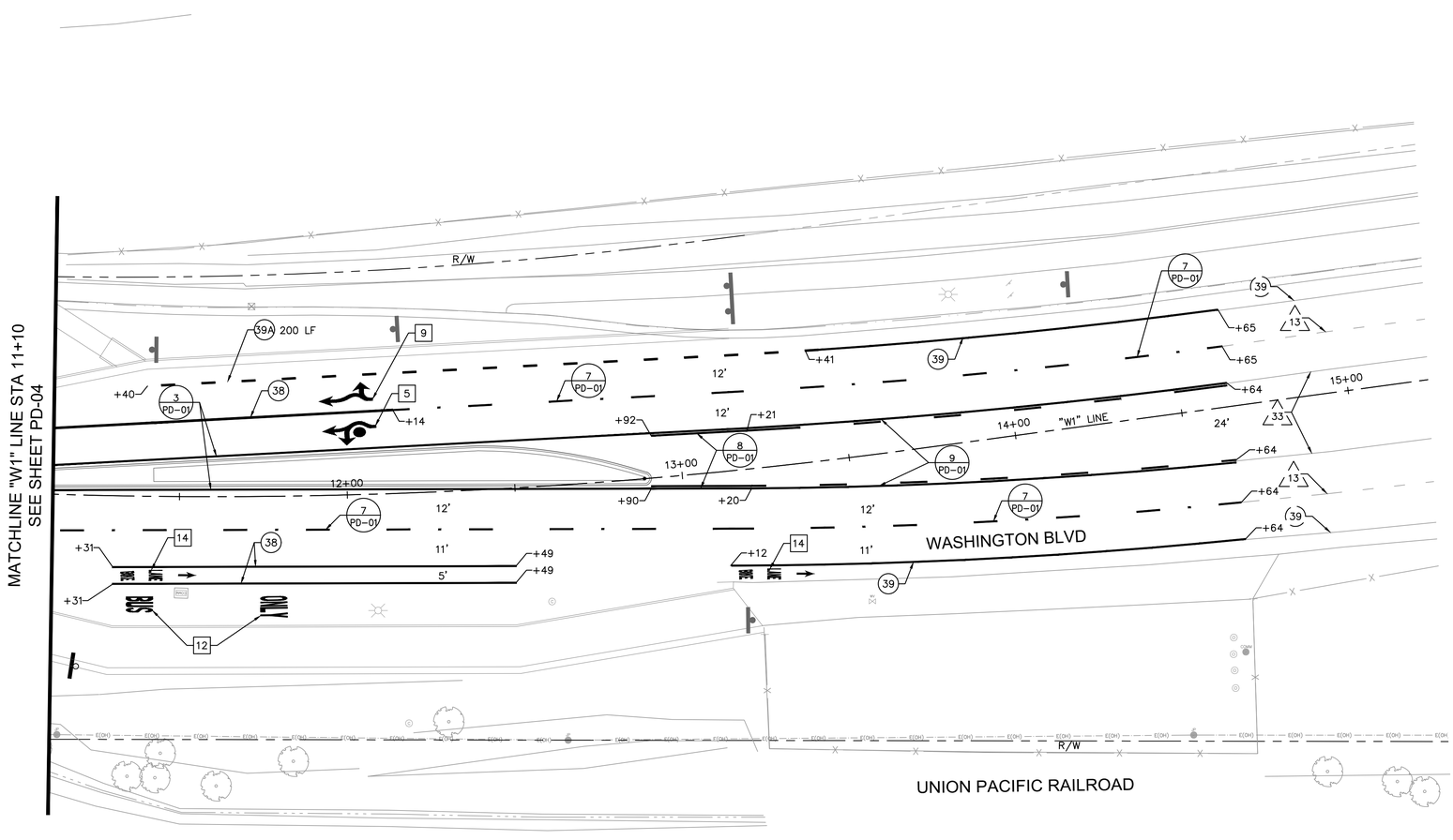

LEGEND

X / PD-XX	STRIPING DETAIL
(XX)	PROPOSED CALTRANS STRIPING DETAIL. SEE 2018 CALTRANS RSP
(XX)	EXISTING CALTRANS STRIPING DETAIL. SEE 2018 CALTRANS RSP
XX	EXISTING CALTRANS STRIPING DETAIL. SEE 2010 CALTRANS RSP.
+XX	BEGIN/END STRIPING STATION VALUE
	BREAK IN PAVEMENT DELINEATION
	ROADSIDE SIGN (SEE SIGNING PLAN)
	LIGHT POLE SIGN (SEE SIGNING PLAN)
	EXISTING ROADSIDE SIGN (SEE SIGNING PLAN)
	TYPE Q (CA) OBJECT MARKER PER CALTRANS 2018 STD PLAN A73A. (SEE SIGNING PLAN)

NOTES

1. REFER TO SHEET PD-01 FOR GENERAL NOTES FOR STRIPING SHEETS.
2. SEE SHEETS PD-04 FOR ROUNDABOUT STRIPING DETAILS.

STRIPING NOTES

5 INSTALL INNER CIRCULATORY LANE THRU/LEFT FISHHOOK ARROW PER DETAIL ON SHEET S-05.

9 INSTALL OUTER CIRCULATORY LANE THRU/RIGHT FISHHOOK ARROW PER DETAIL ON SHEET S-05.

12 INSTALL PAVEMENT MARKING WORD PER CALTRANS 2018 STD PLAN A24E.

14 INSTALL "BIKE" "LANE" AND BIKE LANE ARROW PER CALTRANS STD PLAN A24A AND A24D.

GRAPHIC SCALE IN FEET
0 10 20 40

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DATE JUNE 2021
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PD-03

PAVEMENT DELINEATION PLANS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

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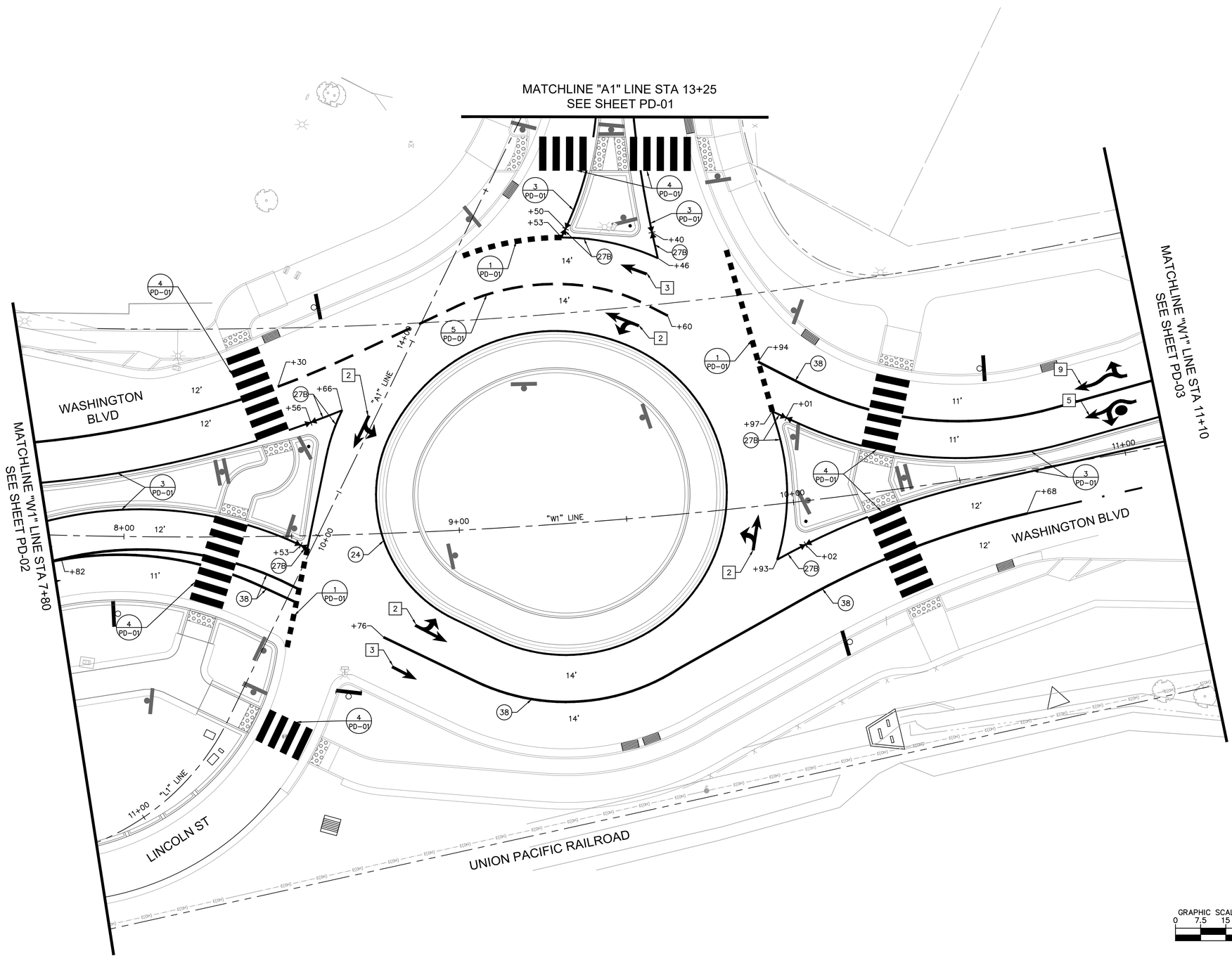

LEGEND

X / PD-XX	STRIPING DETAIL (SEE THIS SHEET)
XX	PROPOSED CALTRANS STRIPING DETAIL. SEE 2018 CALTRANS RSP
XX	EXISTING CALTRANS STRIPING DETAIL. SEE 2018 CALTRANS RSP
XX	PROPOSED CALTRANS STRIPING DETAIL. SEE 2010 CALTRANS RSP
XX	EXISTING CALTRANS STRIPING DETAIL. SEE 2010 CALTRANS RSP
+XX	BEGIN/END STRIPING STATION VALUE
	BREAK IN PAVEMENT DELINEATION
	ROADSIDE SIGN (SEE SIGNING PLAN)
	LIGHT POLE SIGN (SEE SIGNING PLAN)
	EXISTING ROADSIDE SIGN (SEE SIGNING PLAN)
	TYPE Q (CA) OBJECT MARKER PER CALTRANS 2018 STD PLAN A73A. (SEE SIGNING PLAN)

NOTES

1. REFER TO SHEET PD-01 FOR GENERAL NOTES FOR STRIPING SHEETS.

STRIPING NOTES

2 INSTALL TYPE VII ARROW PER CALTRANS STD PLAN A24A.

3 INSTALL TYPE I 10'-0" ARROW PER CALTRANS STD PLAN A24A.

5 INSTALL INNER CIRCULATORY LANE THRU/LEFT FISHHOOK ARROW.

9 INSTALL OUTER CIRCULATORY LANE THRU/RIGHT FISHHOOK ARROW.

GRAPHIC SCALE IN FEET
0 7.5 15 30

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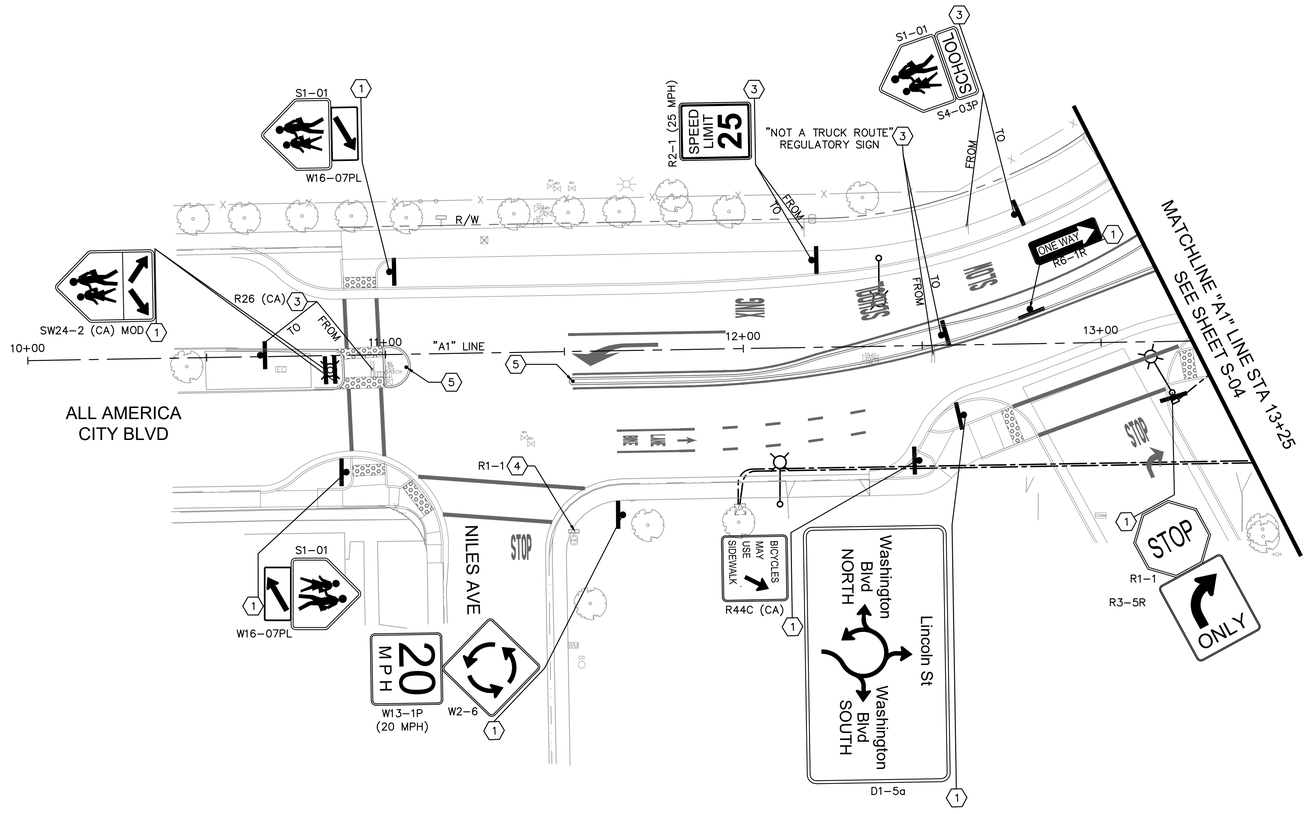
PD-04

PAVEMENT DELINEATION PLANS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA



LEGEND

	ROADSIDE SIGN
	TWO-POST ROADSIDE SIGN
	LIGHT POLE SIGN
	EXISTING ROADSIDE SIGN
•	TYPE Q (CA) OBJECT MARKER PER CALTRANS 2018 STD PLAN A73A.
R/W	RIGHT OF WAY

GENERAL NOTES

1. ALL EXISTING SIGNS SHALL BE PROTECTED IN PLACE UNLESS SPECIFIED FOR REMOVAL OR RELOCATION.
2. EXISTING SIGNS SPECIFIED FOR REMOVAL SHALL NOT BE REMOVED UNTIL NO LONGER PERTINENT TO TRAFFIC CONTROL.
3. SEE SHEET S-04 FOR ROUNDABOUT SIGNING DETAILS.

SIGNING NOTES

(1) INSTALL NEW SIGN PER CITY DESIGN STANDARDS.

(3) RELOCATE EXISTING SIGN.

(4) EXISTING SIGN TO REMAIN.

(5) INSTALL TYPE Q (CA) OBJECT MARKER PER CALTRANS 2018 STD PLAN A73A.

GRAPHIC SCALE IN FEET
0 10 20 40

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DATE	JUNE 2021
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	
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WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

S-01

SIGNING PLANS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 38 OF 60

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NOTES

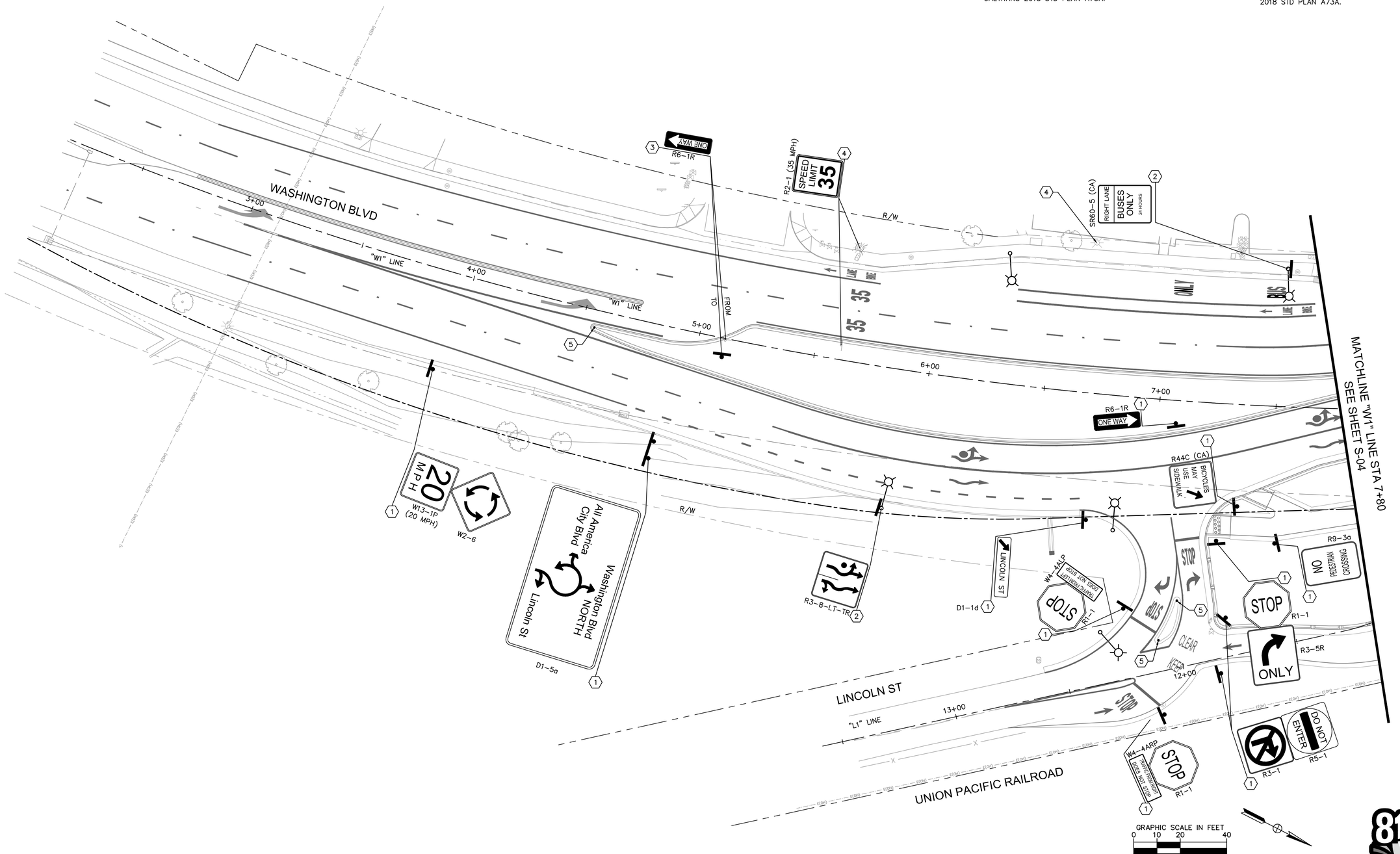
1. REFER TO SHEET S-01 FOR GENERAL NOTES FOR SIGNING SHEETS.
2. SEE SHEETS S-04 FOR ROUNDABOUT SIGNING DETAILS.

SIGNING NOTES

1. INSTALL NEW SIGN PER CITY DESIGN STANDARDS.
2. INSTALL NEW SIGN ON STREETLIGHT POLE.
3. RELOCATE EXISTING SIGN.
4. EXISTING SIGN TO REMAIN.
5. INSTALL TYPE Q (CA) OBJECT MARKER PER CALTRANS 2018 STD PLAN A73A.

LEGEND

- ROADSIDE SIGN
- TWO-POST ROADSIDE SIGN
- LIGHT POLE SIGN
- EXISTING ROADSIDE SIGN
- TYPE Q (CA) OBJECT MARKER PER CALTRANS 2018 STD PLAN A73A.



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No.	REVISIONS	DATE	BY

REGISTERED PROFESSIONAL ENGINEER DANIEL C. CARLEY No. C76394 CIVIL STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

S-02

SIGNING PLANS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 39 OF 60

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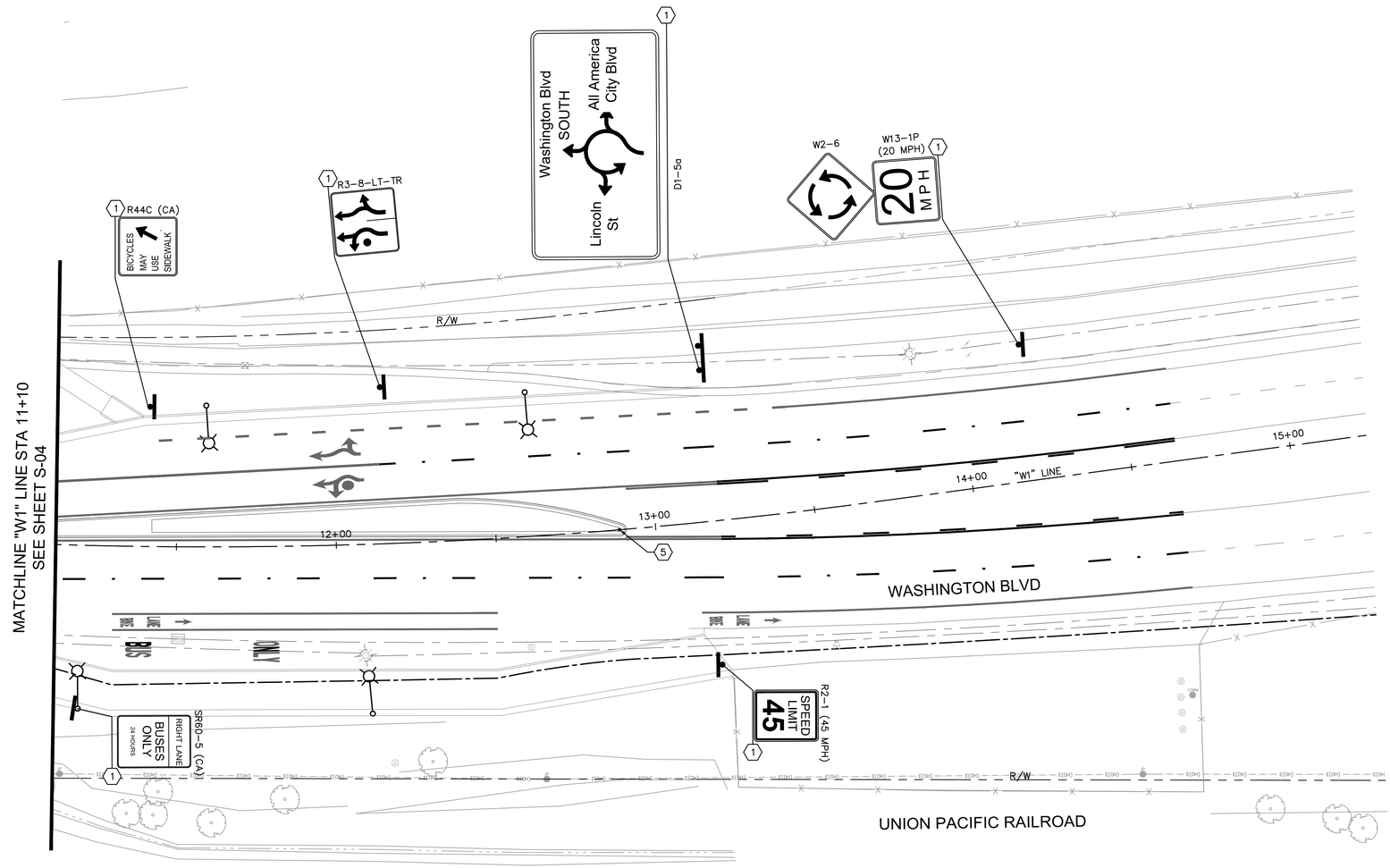

LEGEND

- ROADSIDE SIGN
- TWO-POST ROADSIDE SIGN
- LIGHT POLE SIGN
- EXISTING ROADSIDE SIGN
- TYPE Q (CA) OBJECT MARKER PER CALTRANS 2018 STD PLAN A73A.

NOTES

1. REFER TO SHEET S-01 FOR GENERAL NOTES FOR SIGNING SHEETS.
2. SEE SHEETS S-04 FOR ROUNDABOUT SIGNING DETAILS.

SIGNING NOTES

(1) INSTALL NEW SIGN PER CITY DESIGN STANDARDS.

(5) INSTALL TYPE Q (CA) OBJECT MARKER PER CALTRANS 2018 STD PLAN A73A.

GRAPHIC SCALE IN FEET
0 10 20 40

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KHA PROJECT 097918026
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SCALE AS SHOWN
DESIGNED BY
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WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

S-03

SIGNING PLANS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 40 OF 60

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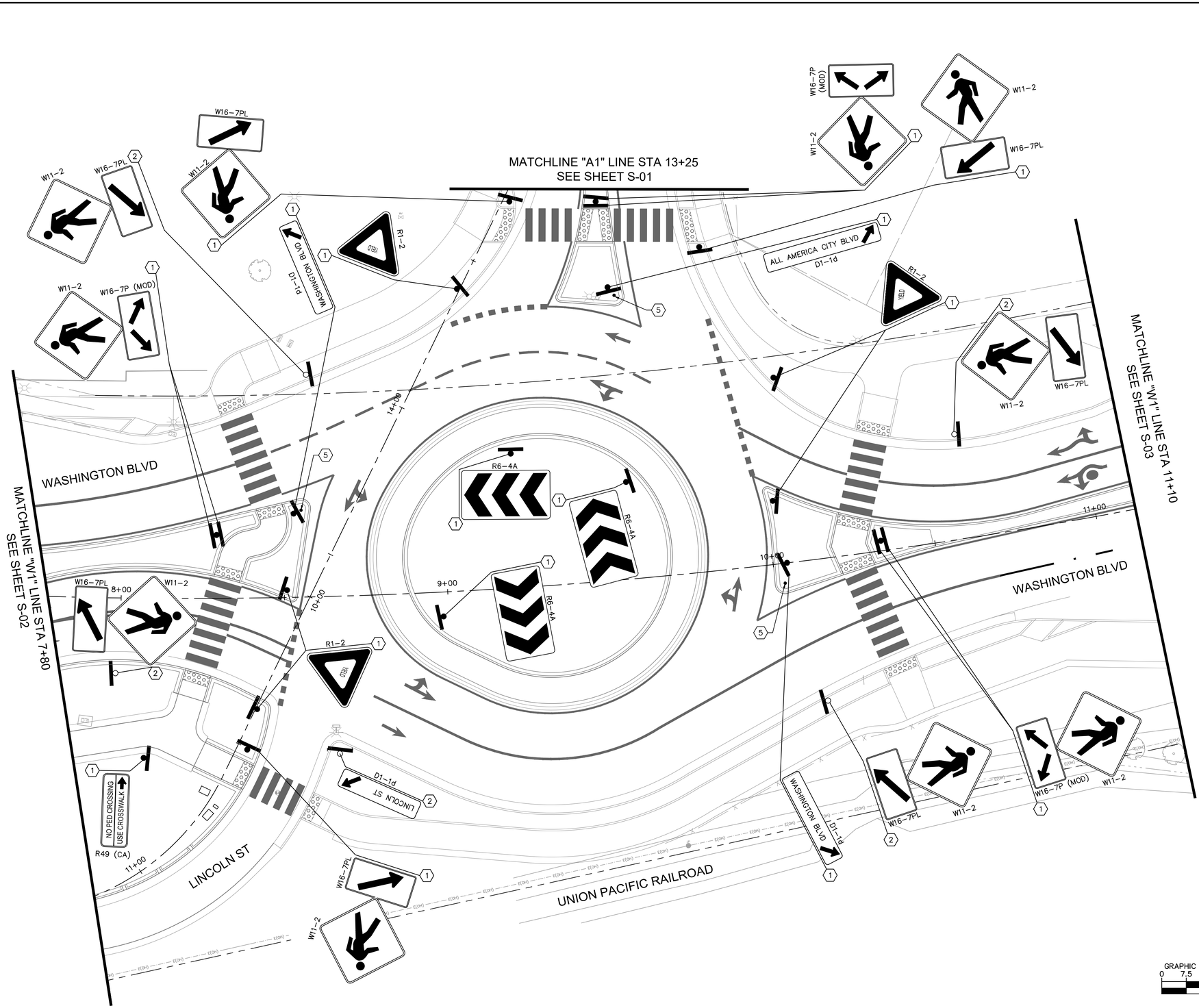

LEGEND

- ROADSIDE SIGN
- TWO-POST ROADSIDE SIGN
- LIGHT POLE SIGN
- EXISTING ROADSIDE SIGN
- TYPE Q (CA) OBJECT MARKER PER CALTRANS 2018 STD PLAN A73A.

NOTES

1. REFER TO SHEET SS-01 FOR GENERAL NOTES FOR SIGNING SHEETS.

SIGNING NOTES

(1) INSTALL NEW SIGN PER CITY DESIGN STANDARDS.

(2) INSTALL NEW SIGN ON STREETLIGHT POLE.

(5) INSTALL TYPE Q (CA) OBJECT MARKER PER CALTRANS 2018 STD PLAN A73A.

GRAPHIC SCALE IN FEET
0 7.5 15 30

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KHA PROJECT	097918026
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WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

S-04

SIGNING PLANS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

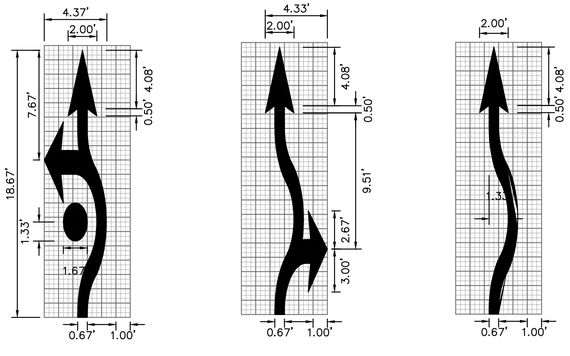
STRIPING SCHEDULE

DETAIL	PATTERN OR LEGEND	Type	TOTAL LENGTH (LF)	INSTALL THERMO (LF)	INSTALL MMA (LF)
6 PD-01	LANE LINE	MARKERS ONLY	1129	0	0
7 PD-01	LANE LINE	MARKERS ONLY	647	0	0
24	LEFT EDGE LINE – CENTER ISLAND	PAINT ONLY	316	0	316
3 PD-01	LEFT EDGE LINE	MARKERS ONLY	1648	0	0
27B	RIGHT EDGELINE	PAINT ONLY	496	341	155
8 PD-03	MEDIAN ISLAND	MARKERS ONLY	328	0	0
9 PD-03	TWO-WAY LEFT-TURN LANE	MARKERS ONLY	577	0	0
38	CHANNELIZING LINE	PAINT AND MARKERS	1940	1698	242
39	BIKE LANE LINE	PAINT ONLY	743	743	0
39A	INTERSECTION LINE (BIKE LANE LINE)	PAINT ONLY	500	500	0
5 PD-01	STRONG DASHED LANE EXTENSION THROUGH ROUNDABOUT	PAINT ONLY	125	0	125
1 PD-01	YIELD LINE	PAINT ONLY	113	0	113
2 PD-01	YELLOW CROSSWALK STRIPING	PAINT ONLY	250	250	0
	TOTAL		8812	3,532	951

*ALL STRIPING OUTSIDE OF THE CONCRETE PAVEMENT LIMIT IS TO BE THERMOPLASTIC(THERMO). ALL STRIPING WITHIN THE CONCRETE PAVEMENT LIMIT IS TO BE METHYL METHACRYLATE (MMA) INCLUDING HIGH CONTRAST 1-INCH BLACK BORDERS PER CITY STANDARD. SEE SPECIFICATIONS FOR MORE INFORMATION.

PAVEMENT MARKERS SCHEDULE

MARKERS	QUANTITY (EA)
NON-REFLECTIVE	648
RETROREFLECTORS	328



FISH HOOK DETAILS

SIGN SCHEDULE

MUTCD CODE	DESCRIPTION	INSTALL	REMAIN	RELOCATE	SIZE
D1-1d	DESTINATION SIGN	5	–	–	VARIES X 18"
D1-5a	EXIT DESTINATIONS	3	–	–	
R1-1	STOP	1	1	–	30"x30"
R1-1	STOP (ON LINCOLN ST.)	3	–	–	36"x36"
R1-2	YIELD	5	–	–	30"x30"x 30"
R2-1(25)	SPEED ZONE 25 (MPH)	–	–	1	30"x36"
R2-1(35)	SPEED ZONE (35 MPH)	–	2	–	30"x36"
R2-1(45)	SPEED ZONE (45 MPH)	1	–	–	30"x36"
R3-1	NO RIGHT TURN	2	–	–	24"X24"
R3-5R	RIGHT TURN ONLY	2	–	–	30"X36"
R3-8-LT-TR	RAB LANE DESIGNATIONS	2	–	–	VARIES x 30"
R5-1	DO NOT ENTER	2	–	–	30"X30"
R6-1R	ONE WAY	2	–	1	54"X18"
R6-4	RAB DIRECTIONAL ARROWS	3	–	–	30"X24"
R9-3a	NO PEDESTRIAN CROSSING	1	–	–	12"X18"
R-26	NO PARKING	–	–	1	24"x36"
R44C (CA)	BICYCLE MAY USE SIDEWALK	3	–	–	30"x30"
R49 (CA)	NO PED CROSSING USE CROSSWALK	1	–	–	42"X18"
S1-01	SCHOOL ZONE	2	–	1	36"X36"
S4-3P	SCHOOL	–	–	1	24"X8"
SR60-5 (CA)	RIGHT LANE – BUSES ONLY	2	–	–	30"x42"
SW24-2 (CA) MOD	SCHOOL CROSSING	2	–	–	36"X36"
W2-6	RAB SIGN	3	–	–	30"X30"
W4-4AP(L)	TRAFFIC FROM LEFT DOES NOT STOP	1	–	–	24"X12"
W4-4AP(R)	TRAFFIC FROM RIGHT DOES NOT STOP	1	–	–	24"X12"
W11-2	PEDESTRIAN CROSSING	10	–	–	36"X36"
W13-1P	ADVISORY SPEED	3	–	–	18"X18"
W16-7P(L)	DIAGONAL DOWNWARD POINTING ARROW (LEFT)	9	–	–	24"X12"
W16-7P(MOD)	DIAGONAL DOWNWARD POINTING ARROW (BOTH DIRECTION)	3	–	–	24"X12"
	NOT A TRUCK ROUTE	–	–	1	
	TOTAL	72	3	6	

MARKING SCHEDULE

PATTERN OR LEGEND	INSTALL THERMO		INSTALL MMA	
	No.	TOTAL SQ. FT.	No.	TOTAL SQ. FT.
TYPE I (10')	2	28	2	28
TYPE VII (L)	0	0	4	108
TYPE IV (L)	1	15	0	0
TYPE IV (R)	3	45	0	0
BIKE WORD	5	25	0	0
LANE WORD	5	30	0	0
WORD STOP	5	110	0	0
FISH HOOK –THRU/RT	2	40	0	0
FISH HOOK –THRU/LT	4	96	0	0
FISH HOOK –THRU	2	30	0	0
BIKE LANE ARROW	5	17.5	0	0
4 PD-01 CROSSWALK STRIPING	0	0	7	800
WORD SLOW	2	46	0	0
WORD SCHOOL	2	70	0	0
WORD XING	2	42	0	0
WORD BUS	2	40	0	0
WORD ONLY	2	44	0	0
NUMBER 35	2	33	0	0
TOTAL		712		936

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REGISTERED PROFESSIONAL ENGINEER DANIEL C. CARLEY No. C76394 CIVIL STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

S-05

SIGNING PLANS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 42 OF 60

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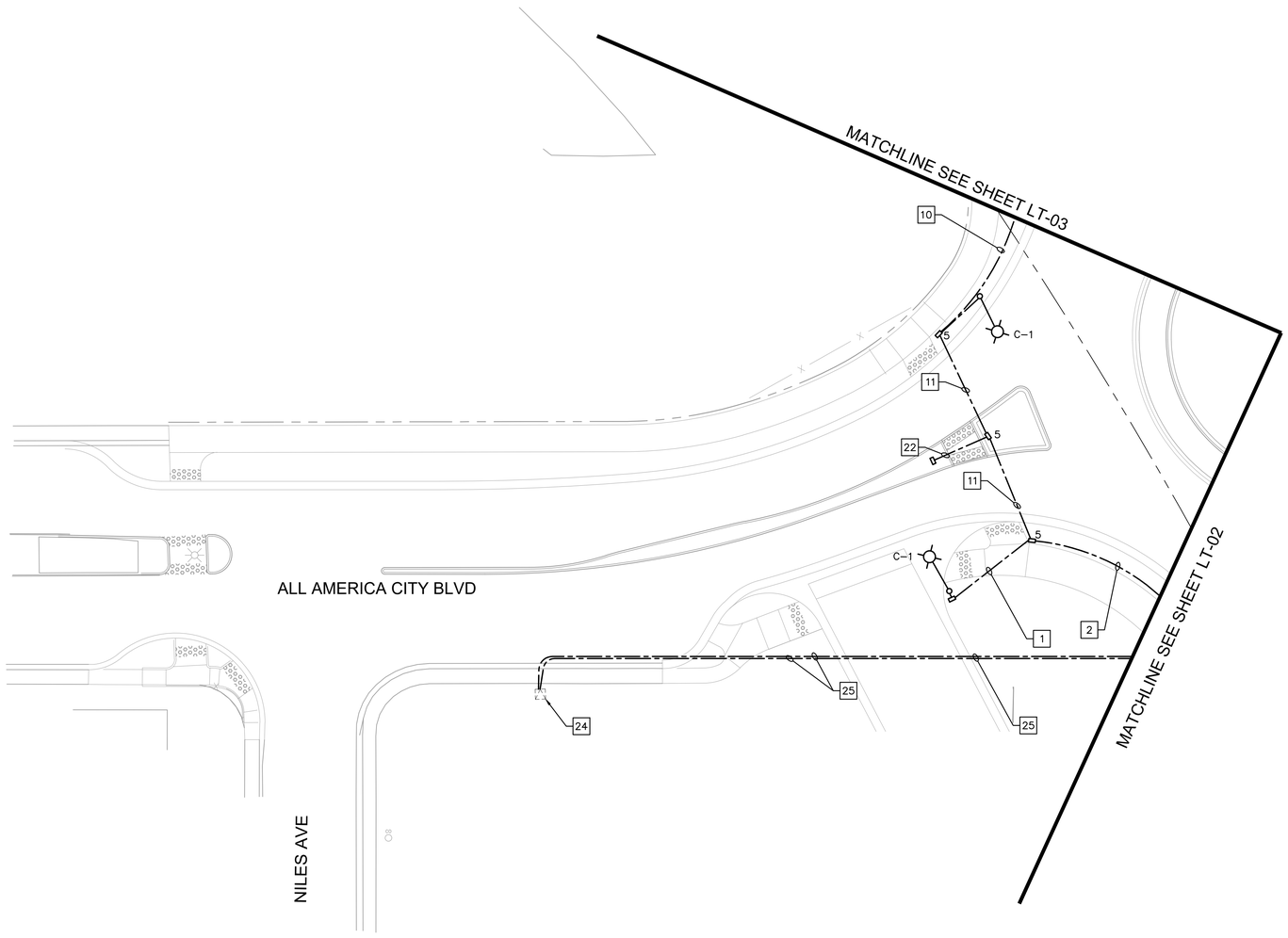

GENERAL NOTES (SHEETS LT-01 TO LT-03):

1. ALL STREET LIGHT PULL BOXES SHALL BE No. 9 PER CITY OF ROSEVILLE DESIGN AND CONSTRUCTION STANDARDS, UNLESS OTHERWISE NOTED ON PLAN.
2. ALL MATERIAL SHALL BE SUPPLIED BY THE CONTRACTOR, UNLESS OTHERWISE NOTED ON PLANS.

LEGEND

- NEW CONDUIT
- NEW PULL BOX
- FURNISH AND INSTALL NEW 180W STREET LIGHT, LEOTEK GC1-80F-MV-NW-3-GY-700 ON TYPE 15 POLE PER CALTRANS 2018 STANDARD PLAN ES-6A
- FURNISH AND INSTALL NEW DUAL 180W STREET LIGHT, LEOTEK GC1-80F-MV-NW-3-GY-700 ON TYPE 15 POLE PER CALTRANS 2018 STANDARD PLAN ES-6A
- EXISTING STREET LIGHT
- EXISTING SERVICE PEDESTAL

CONSTRUCTION NOTES

1. FURNISH AND INSTALL 2"C, 2#8 (ST LTG CIRCUIT 1), 1#6 (GROUND).
2. FURNISH AND INSTALL 2"C, 2#8 (ST LTG CIRCUIT 1), 2#8 (ST LTG CIRCUIT 2), 1#6 (GROUND).
10. FURNISH AND INSTALL 2"C, 2#8 (ST LTG CIRCUIT 2), 1#6 (GROUND).
11. FURNISH AND INSTALL 2-3"C, 2#8 (ST LTG CIRCUIT 1), 2#8 (ST LTG CIRCUIT 2), 1#6 (GROUND).
22. FURNISH AND INSTALL 2"C, MT.
24. EXISTING ROSEVILLE ELECTRIC SERVICE POINT (120/240V). CONTRACTOR TO COORDINATE WITH ROSEVILLE ELECTRIC FOR CONNECTIONS.
25. FURNISH AND INSTALL 2-2"C, 3#8 (SERVICE).

GRAPHIC SCALE IN FEET
0 10 20 40

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REGISTERED PROFESSIONAL ENGINEER ROBERT V. PADERNA No. 27262 CIVIL STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY RP/CY
DRAWN BY CY
CHECKED BY RP

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

LT-01

LIGHTING AND INTERCONNECT PLAN

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
43 OF 60

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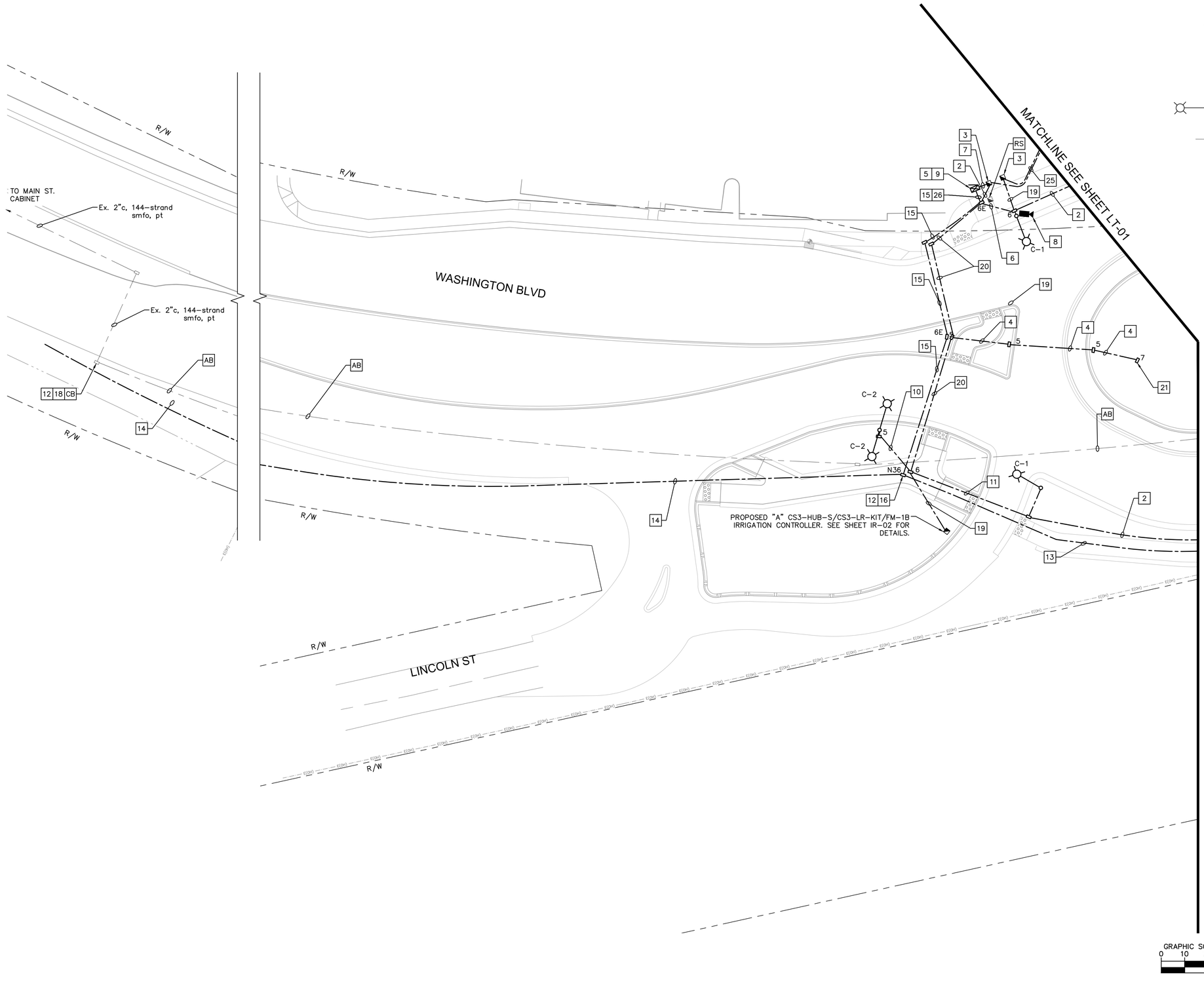

LEGEND

- NEW CONDUIT
- NEW PULL BOX
- FURNISH AND INSTALL NEW 180W STREET LIGHT, LEOTEK GC1-80F-MV-NW-3-GY-700 ON TYPE 15 POLE PER CALTRANS 2018 STANDARD PLAN ES-6A
- FURNISH AND INSTALL NEW DUAL 180W STREET LIGHT, LEOTEK GC1-80F-MV-NW-3-GY-700 ON TYPE 15 POLE PER CALTRANS 2018 STANDARD PLAN ES-6A
- EXISTING CONDUIT
- EXISTING STREET LIGHT
- EXISTING SERVICE PEDESTAL

CONSTRUCTION NOTES

2 FURNISH AND INSTALL 2"C, 2#8 (ST LTG CIRCUIT 1), 2#8 (ST LTG CIRCUIT 2), 1#6 (GROUND).

3 INSTALL CITY-FURNISHED TESCO 120/240V TYPE 27-22 SERVICE PEDESTAL.

4 FURNISH AND INSTALL 2-3"C, MT.

5 INSTALL CITY-FURNISHED NEMA TYPE P CABINET.

6 FURNISH AND INSTALL 2-3"C, 3 CAT6 CABLE (PTZ CCTV CAMERA), 2#8 (ST LTG CIRCUIT 1), 2#8 (ST LTG CIRCUIT 2), 2#8 (IRRIGATION CONTROLLER),1#6 (GROUND).

7 FURNISH AND INSTALL 2"C, 3#8 (CONTROLLER SERVICE).

8 INSTALL CITY-FURNISHED PTZ CCTV CAMERA ON STREET LIGHT POLE. INSTALL ASSOCIATED COMMUNICATIONS AND POWER CABLES TO TOP OF THE POLE WITH 30 FT OF SLACK.

9 FURNISH AND INSTALL 12-PORT HIGH DENSITY FIBER TERMINATION PANEL AND 12-STRAND SMFO TACTICAL CABLE IN NEW CABINET. TERMINATE BRANCH CABLE PER CITY OF ROSEVILLE STANDARD PLAN TS-26.

10 FURNISH AND INSTALL 2"C, 2#8 (ST LTG CIRCUIT 2), 1#6 (GROUND).

11 FURNISH AND INSTALL 2-3"C, 2#8 (ST LTG CIRCUIT 1), 2#8 (ST LTG CIRCUIT 2), 1#6 (GROUND).

12 CONTRACTOR TO PULL EXISTING 144-STRAND SMFO CABLE FROM JUNCTION BLVD. AND REROUTE IN NEW CONDUIT TO NEW N36 SPLICE VAULT.

13 FURNISH AND INSTALL 3"C, 144-STRAND SMFO CABLE.

14 FURNISH AND INSTALL 3"C. CONTRACTOR TO PULL EXISTING 144-STRAND SMFO CABLE.

15 FURNISH AND INSTALL 3"C, 12-STRAND SMFO TACTICAL CABLE.

16 FURNISH AND INSTALL N36 FIBER VAULT AND SPLICE ENCLOSURE. SPLICE 12-STRAND SMFO TACTICAL CABLE TO 144-STRAND SMFO CABLE IN SPLICE ENCLOSURE PER CITY OF ROSEVILLE STANDARD PLAN TS-26. COIL 50 FT OF SLACK OF 144-STRAND SMFO CABLE IN PULL BOX.

18 PROVIDE 15 FT OF SLACK OF 144-STRAND SMFO CABLE IN PULL BOX.

19 FURNISH AND INSTALL 2"C, 2#8 (IRRIGATION CONTROLLER), 1#6 (GROUND).

20 FURNISH AND INSTALL 2"C, 2#8 (ST LTG CIRCUIT 1), 2#8 (ST LTG CIRCUIT 2), 2#8 (IRRIGATION CONTROLLER), 1#6 (GROUND).

21 FURNISH AND INSTALL NO.7 PULL BOX WITH 3"C STUBOUT FOR WATER TOWER ELECTRICAL CONNECTION SEE UD-01 AND UD-02.

25 FURNISH AND INSTALL 2-2"C, 3#8 (SERVICE).

26 FURNISH AND INSTALL 2-3"C, 3 CAT6 CABLE (PTZ CCTV CAMERA).

AB ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.

CB INSTALL CONDUIT INTO EXISTING PULL BOX.

RS REMOVE AND SALVAGE EQUIPMENT.

MATCHLINE SEE SHEET LT-03

GRAPHIC SCALE IN FEET
0 10 20 40

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KHA PROJECT	097918026
DATE	JUNE 2021
SCALE	AS SHOWN
DESIGNED BY	RP/CY
DRAWN BY	CY
CHECKED BY	RP

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

LT-02

LIGHTING AND INTERCONNECT PLAN

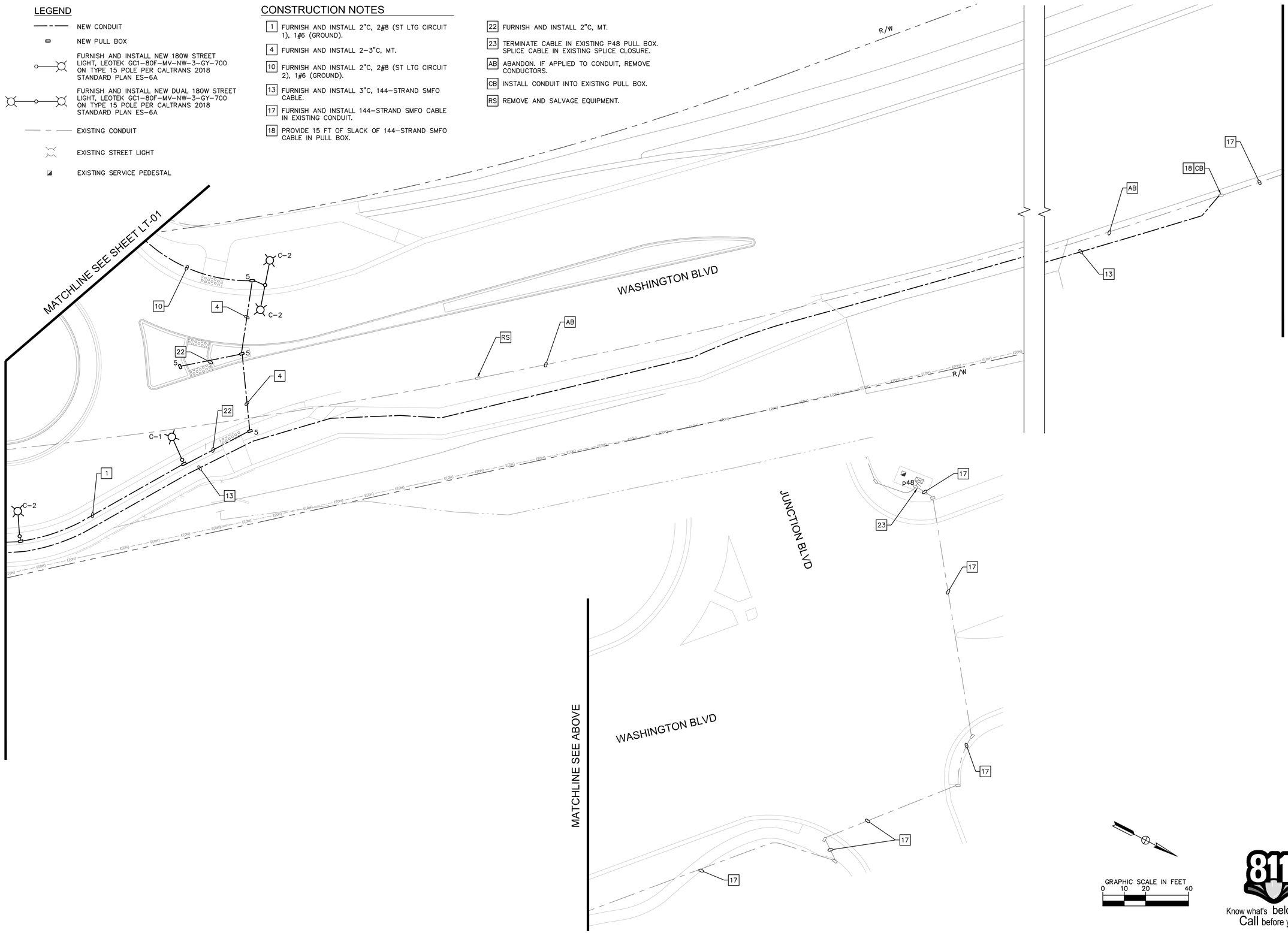
CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

LEGEND

- NEW CONDUIT
- NEW PULL BOX
- FURNISH AND INSTALL NEW 180W STREET LIGHT, LEOTEK GC1-80F-MV-NW-3-GY-700 ON TYPE 15 POLE PER CALTRANS 2018 STANDARD PLAN ES-6A
- FURNISH AND INSTALL NEW DUAL 180W STREET LIGHT, LEOTEK GC1-80F-MV-NW-3-GY-700 ON TYPE 15 POLE PER CALTRANS 2018 STANDARD PLAN ES-6A
- EXISTING CONDUIT
- EXISTING STREET LIGHT
- EXISTING SERVICE PEDESTAL

CONSTRUCTION NOTES

1. FURNISH AND INSTALL 2"C, 2#8 (ST LTG CIRCUIT 1), 1#6 (GROUND).
4. FURNISH AND INSTALL 2-3"C, MT.
10. FURNISH AND INSTALL 2"C, 2#8 (ST LTG CIRCUIT 2), 1#6 (GROUND).
13. FURNISH AND INSTALL 3"C, 144-STRAND SMFO CABLE.
17. FURNISH AND INSTALL 144-STRAND SMFO CABLE IN EXISTING CONDUIT.
18. PROVIDE 15 FT OF SLACK OF 144-STRAND SMFO CABLE IN PULL BOX.
22. FURNISH AND INSTALL 2"C, MT.
23. TERMINATE CABLE IN EXISTING P48 PULL BOX. SPLICE CABLE IN EXISTING SPLICE CLOSURE.
AB. ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.
CB. INSTALL CONDUIT INTO EXISTING PULL BOX.
RS. REMOVE AND SALVAGE EQUIPMENT.



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CHECKED BY	RP

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

LT-03

LIGHTING AND INTERCONNECT PLAN

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME	CONT	HEIGHT/SPREAD	CAL.	WUCOLS
	8	ARBUTUS X 'MARINA' / MARINA STRAWBERRY TREE STANDARD TRUNK	24" BOX	6'-7' HT. X 3-4' SPR.	1" CAL.	LOW
	30	EXISTING TREE / TO REMAIN PROTECT IN PLACE - SEE DETAIL '6' SHEET LD-01	EXISTING	-	-	-
	17	EXISTING TREE / TO BE REMOVED SEE DEMOLITION PLANS	EXISTING	-	-	-
	8	KOELREUTERIA PANICULATA / GOLDEN RAIN TREE	24" BOX	9'-11' HT. X 4'-5' SPR.	1" CAL.	MODERATE
	15	RHUS LANCEA / AFRICAN SUMAC STANDARD TRUNK	24" BOX	7'-9' HT. X 3'-5' SPR.	1" CAL.	LOW
	19	ULMUS X 'MORTON ACCOLADE' TM / ELM	24" BOX	8'-10' HT. X 4'-5' SPR.	2" CAL.	MODERATE

SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS
	125	CALLISTEMON CITRINUS 'LITTLE JOHN' / LITTLE JOHN DWARF BOTTLEBRUSH	5 GAL.	3' O.C.	LOW
	49	CISTUS X PULVERULENTUS 'SUNSET' / SUNSET ROCKROSE	5 GAL.	4' O.C.	LOW
	10	DODONAEA VISCOSA 'PURPUREA' / PURPLE LEAFED HOPSEED BUSH	5 GAL.	8' O.C.	LOW
	30	HESPERALOE PARVIFLORA / RED YUCCA	5 GAL.	3' O.C.	LOW
	165	PEROVSKIA ATRIPLICIFOLIA 'BLUE SPIRES' / BLUE SPIRES RUSSIAN SAGE	5 GAL.	4' O.C.	LOW
	18	PEROVSKIA ATRIPLICIFOLIA 'LITTLE LACE' / LITTLE LACE RUSSIAN SAGE	5 GAL.	2' O.C.	LOW
	94	RHAMNUS CALIFORNICA 'LITTLE SUR' / LITTLE SUR COFFEEBERRY	5 GAL.	5' O.C.	LOW
	61	RHAPHIOLEPIS UMBELLATA 'MINOR' / YEDDA HAWTHORN	5 GAL.	5' O.C.	LOW
	87	ROSA X 'FLOWER CARPET RED' / ROSE	5 GAL.	1.5' O.C.	MODERATE

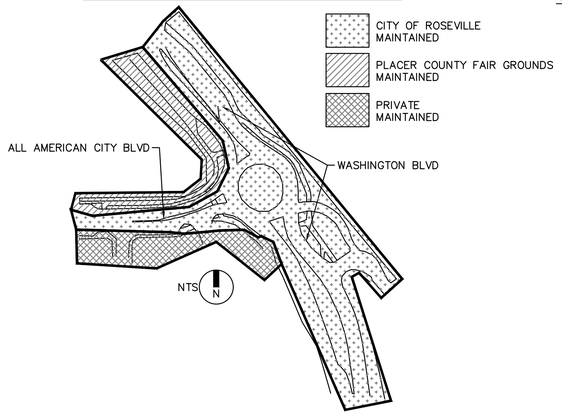
GRASSES	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS
	282	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' / FEATHER REED GRASS	5 GAL.	2' O.C.	LOW
	111	CHONDROPETALUM ELEPHANTINUM / LARGE CAPE RUSH	15 GAL.	5' O.C.	LOW
	386	FESTUCA MAIREI / ATLAS FESCUE	5 GAL.	3' O.C.	LOW
	193	LOMANDRA LONGIFOLIA 'LM300' / BREEZE MAT RUSH	5 GAL.	3' O.C.	LOW
	36	MUHLENBERGIA CAPILLARIS / PINK MUHLY GRASS	5 GAL.	4' O.C.	LOW
	189	MUHLENBERGIA RIGENS / DEER GRASS	5 GAL.	4' O.C.	LOW

GROUND COVERS	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS
	395	ARCTOSTAPHYLOS X 'EMERALD CARPET' / EMERALD CARPET MANZANITA	1 GAL.	3' O.C.	LOW
	145	BACCHARIS PILULARIS 'PIGEON POINT' / PIGEON POINT COYOTE BRUSH	1 GAL.	3' O.C.	LOW
	181	FESTUCA GLAUCA 'ELIJAH BLUE' / ELIJAH BLUE FESCUE	1 GAL.	2' O.C.	LOW
	60	GAZANIA X 'MITSUWA YELLOW' / YELLOW GAZANIA	1 GAL.	3' O.C.	MODERATE

EXISTING	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS
	5,657 SF	EXISTING LANDSCAPE / EXISTING TO REMAIN PROTECT IN PLACE.	EXISTING	-	-

INERT MATERIAL	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS
	26,374 SF	MULCH / FIR BARK MULCH WALK ON FIR BARK MULCH- INSTALL 3" DEPTH PER SPECIFICATIONS.	MULCH	-	-
	2,548 SF	ROCK COBBLE / 3"-5" WASHED GRAVEL 5" MINIMUM DEPTH W/ 1/2"-1" WASHED GRAVEL AT A MIN 1" DEPTH - SEE ROCK COBBLE DETAIL ON SHEET LD-01. (OR APPROVED EQUAL)	ROCK	-	-
	+/-1,100 LF	ROOT BARRIER - SEE DETAILS ON SHEET LD-01			
	+/-100 LF	12" MOWBAND - SEE DETAILS ON SHEET LS-03			

MAINTENANCE RESPONSIBILITY MAP



SPECIAL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL VEGETATION, SHRUBS AND TREES IDENTIFIED WITH 'PROTECT IN PLACE' ON THE DEMOLITION AND IMPROVEMENT PLANS. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING PLANT MATERIAL WHICH IS IMPACTED BY THE PROPOSED PROJECT CONSTRUCTION. EXISTING PLANT MATERIAL SHALL BE ADJUSTED, RELOCATED, SALVAGED/REINSTALLED AND/OR NEWLY FURNISHED AND INSTALLED IN LIKE SIZE AND KIND AS NEAR ITS ORIGINAL LOCATION AS POSSIBLE. NEW LOCATION(S) OF IMPACTED PLANT MATERIAL MUST BE APPROVED BY THE CITY'S REPRESENTATIVE PRIOR TO INSTALLATION. CONTRACTOR SHALL ENSURE THAT ANY ADJACENT LANDSCAPING OR PLANT MATERIAL IMPACTED BY THESE IMPROVEMENTS IS HEALTHY, DISEASE-FREE AND SHALL PROVIDE A WARRANTY THAT GUARANTEES ALL PLANT MATERIAL REPLACED AND/OR IMPACTED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF THE CONTRACT.
2. THE CONTRACTOR SHALL ADJUST, RELOCATE, SALVAGE, REINSTALL AND/OR FURNISH AND INSTALL NEW IRRIGATION COMPONENTS IN LIKE KIND FOR ANY ADJACENT EXISTING IRRIGATION SYSTEM(S) IMPACTED BY THESE IMPROVEMENTS AND ENSURE THAT THEY ARE IN FULL WORKING ORDER PRIOR TO PROJECT COMPLETION. ANY IRRIGATION THAT IS REMOVED DURING THE CONSTRUCTION PROCESS SHALL BE CAPPED IN A MANNER THAT THE REMAINING PORTIONS OF THE SYSTEM ARE NOT COMPROMISED. EXISTING IRRIGATION LATERAL LINES, HEADS, WIRING AND ALL OTHER ASSOCIATED EQUIPMENT IMPACTED BY THE PROJECT CONSTRUCTION SHALL BE CAREFULLY CUT, CAPPED AND RELOCATED TO EXISTING LANDSCAPE AREAS. PRIOR TO COMPLETION, CONTRACTOR SHALL ENSURE THAT ALL EXISTING IRRIGATION SYSTEMS IMPACTED ARE IN FULL WORKING ORDER WITH COMPLETE HEAD TO HEAD COVERAGE INCLUDING NO OVERSPRAY ONTO HARDSCAPE SURFACES OR WALLS. ANY IRRIGATION EQUIPMENT DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN LIKE KIND BY THE CONTRACTOR.
3. A SOILS CONSULTANT AND SOIL ANALYSIS SHALL BE COORDINATED/PREPARED BY THE CONTRACTOR UPON THE COMPLETION OF MASS GRADING. THE EXISTING SOIL NUTRIENT INFORMATION WILL BE COMPARED AGAINST THE PROPOSED PLANT PALETTE TO DETERMINE THE APPROPRIATE AMENDMENT RECOMMENDATIONS AND SUBMITTED FOR REVIEW AND APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO PLANT AND SOIL AMENDMENT WORK STARTING.

LANDSCAPE NOTES:

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COPIES OF ALL LOCAL STANDARDS, SPECIFICATIONS AND DRAWINGS, AS WELL AS ALL OTHER STANDARDS AND SPECIFICATIONS WHICH MAY BE NECESSARY TO COMPLETELY AND ACCURATELY INTERPRET THESE PLANS.
2. ALL QUANTITIES LISTED IN THE LANDSCAPE SCHEDULE ARE FOR THE CONVENIENCE OF THE CONTRACTOR. IN THE CASE OF ANY DISCREPANCIES, PLANS SHALL OVER RIDE THE LANDSCAPE AND BID SCHEDULE QUANTITIES. CONTRACTOR SHALL VERIFY QUANTITIES SHOWN ON THE PLANS AND BASE THEIR BID ACCORDINGLY.
3. RESPONSIBILITY FOR ESTABLISHING SUBGRADES IS NOT INCLUDED IN THIS WORK. INSPECT SUBGRADES PRIOR TO COMMENCING WORK TO CONFIRM SUBGRADE DEPTHS AND GRADES. ADVISE LANDSCAPE ARCHITECT OF DISCREPANCIES WITH DRAWINGS OR SPECIFICATIONS. ALL PLANTING AREAS SHALL BE LEFT FREE OF CONSTRUCTION DEBRIS AND/OR TOXIC MATERIAL AND SUBGRADED TO A LEVEL TO PERMIT LANDSCAPE CONSTRUCTION. TRENCHES OR OTHER FILLED EXCAVATIONS SHALL BE COMPACTED PRIOR TO LANDSCAPE INSTALLATION.
4. SITE GRADING NECESSITATED BY THE WORK AS IT PROGRESSES AND NOT SPECIFICALLY CALLED OUT ON THE PLANS WILL BE CONSIDERED INCIDENTAL WORK.
5. ALL LANDSCAPE AREAS SHALL BE UNIFORMLY GRADED SO THAT FINISHED SURFACES CONFORM TO THE TYPICAL SECTIONS AND PROPOSED GRADES SHOWN. FINISHED SURFACES SHALL BE REASONABLY SMOOTH, COMPACTED, AND FREE FROM IRREGULAR SURFACE DRAINAGE. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING THE FINISH GRADE AND SHALL BEAR FINAL RESPONSIBILITY FOR PROPER SURFACE DRAINAGE OF PLANTED AREAS.
6. PRIOR TO COMMENCEMENT OF ANY WORK, DETERMINE LOCATION OF ALL UNDERGROUND UTILITIES THROUGH '811' OR OTHER METHOD AND PERFORM WORK IN A MANNER WHICH WILL AVOID POSSIBLE DAMAGE. HAND EXCAVATE, AS REQUIRED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES CAUSED AS A RESULT OF HIS/HER WORK.
7. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY THE PRESENT LOCATION OF ANY AND ALL EXISTING OVERHEAD AND/OR UNDERGROUND UTILITIES THAT MAY INTERFERE WITH THIS CONSTRUCTION, WHETHER OR NOT SAID UTILITIES ARE SHOWN ON THE CONSTRUCTION PLANS FOR THIS PROJECT AND TO ADEQUATELY PROTECT AND MAINTAIN ANY SUCH UTILITIES.
8. EXCAVATE PITS, AS SHOWN ON DRAWINGS AND DETAILS. LOOSEN HARD SUBSOIL IN BOTTOM OF EXCAVATION. TEST DRAINAGE OF SHRUB AND PLANT PITS BY FILLING WITH WATER TWICE IN SUCCESSION. CONDITIONS PERMITTING THE RETENTION OF WATER IN PLANTING PITS FOR MORE THAN TWENTY-FOUR (24) HOURS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. SUBMIT IN WRITING A PROPOSAL FOR THE CORRECTION TO THE OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE PROCEEDING WITH WORK.
9. IF ROCK, UNDERGROUND CONSTRUCTION, ADVERSE DRAINAGE CONDITIONS, OR OTHER OBSTRUCTIONS ARE ENCOUNTERED IN EXCAVATION FOR PLANTING OF ANY PLANT MATERIAL, NOTIFY THE OWNER'S REPRESENTATIVE. NEW LOCATIONS MAY BE SELECTED BY THE OWNER'S REPRESENTATIVE, OR INSTRUCTIONS MAY BE ISSUED TO DIRECT REMOVAL OF OBSTRUCTION. PROCEED WITH WORK ONLY AFTER APPROVAL OF THE OWNER'S REPRESENTATIVE.
10. DO NOT MAKE SUBSTITUTIONS. IF SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON-AVAILABILITY FROM AT LEAST FIVE SOURCES TO THE OWNER'S REPRESENTATIVE, TOGETHER WITH PROPOSAL FOR USE OF EQUIVALENT MATERIAL FOR FINAL APPROVAL.
11. ALL PLANT MATERIAL AND SPECIFICATIONS TO CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK STANDARDS UNLESS OTHERWISE NOTED.
12. LAY OUT INDIVIDUAL PLANT LOCATIONS AND AREAS FOR MULTIPLE PLANTINGS, STAKE LOCATIONS AND OUTLINE AREAS AND SECURE THE OWNER'S REPRESENTATIVE'S ACCEPTANCE BEFORE START OF PLANTING WORK. MAKE MINOR ADJUSTMENTS AS MAY BE DIRECTED.
13. FOR LANDSCAPE INSTALLATIONS, COMPOST AT A RATE OF A MINIMUM OF FOUR CUBIC YARDS PER 1,000 SQUARE FEET OF PERMEABLE AREA SHALL BE INCORPORATED TO A DEPTH OF SIX INCHES INTO THE SOIL. SOILS WITH GREATER THAN 6% ORGANIC MATTER IN THE TOP 6 INCHES OF SOIL ARE EXEMPT FROM ADDING COMPOST AND TILLING. PER WELO 14.18.050 B 4. F. (III.) (ENVIRONMENTAL UTILITIES-WELO)
14. ALL PLANTS SHALL BE PLANTED A MINIMUM OF 5 FEET, ALL SHRUBS AND ACCENTS A MINIMUM OF 36", AND ALL GROUNDCOVERS 18" FROM EDGE OF CURBS, WALKS, WALLS, PADS, ETC., UNLESS DIRECTED OTHERWISE BY THE LANDSCAPE ARCHITECT.
15. ALL SHRUBS SHALL HAVE A FULL HEAD THAT COVERS THE CAN DIAMETER (CAN FULL) AND A MINIMUM OF THREE STEMS/BRANCHES.
16. FINISH GRADE OF MULCH SHALL BE 1" BELOW ALL CURBS, WALKS AND PAVING WITH SMOOTH EVEN LINES AT EDGES OF STRUCTURES.
17. FINISH LANDSCAPE GRADES SHALL SLOPE AT A 2% GRADE AWAY FROM CURBS, WALKS, AND WALLS.
18. ALL LANDSCAPE AREAS SHALL RECEIVE MULCH, AT A DEPTH AND TYPE, AS SHOWN ON THESE PLANS. APPLY PRE-EMERGENT HERBICIDE PRIOR TO AND AFTER MULCH INSTALLATION.
19. PROVIDE SAMPLES OF PROPOSED MULCH SHOWING COLOR, GRADATION SIZE RANGE AND TEXTURE INCLUDING PROPOSED SOURCE. PROVIDE 1/2 CUBIC FOOT SAMPLE OF EACH.
20. ANY ROCK MULCH SHALL NOT CONTAIN LUMPS OR BALLS OF CLAY, CALICHE, ORGANIC MATTER OR CALCAREOUS COATING. THE CONTRACTOR SHALL ENSURE THAT SUFFICIENT QUANTITY IS AVAILABLE FROM A SINGLE SOURCE TO COMPLETE THE PROJECT. THE OWNER'S REPRESENTATIVE SHALL APPROVE SAMPLES PRIOR TO ORDERING.
21. NO JOB WILL BE CONSIDERED COMPLETE UNTIL ALL CURBS, PAVEMENT AND SIDEWALKS HAVE BEEN SWEPT CLEAN OF ALL DIRT AND DEBRIS ACCORDING TO PLANS.
22. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY PERMITS REQUIRED.
23. ALL CONSTRUCTION ROADS AND COMPACTED AREAS DEVELOPED THROUGH CONSTRUCTION THAT ARE WITHIN THE LANDSCAPE AREAS SHALL BE SCARIFIED AND LOOSENED TO A DEPTH OF 12" PRIOR TO LANDSCAPE AND IRRIGATION WORK BEGINNING.
24. ALL CITY-MAINTAINED LANDSCAPES SHALL BE CONSTRUCTED ACCORDING TO CITY OF ROSEVILLE PARKS CONSTRUCTION STANDARDS, LATEST EDITION.

I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AB-1881 AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN.

RANDALL A. KOPFF JR, LLA 6633

ALL CITY-MAINTAINED LANDSCAPES SHALL BE CONSTRUCTED ACCORDING TO CITY OF ROSEVILLE PARKS CONSTRUCTION STANDARDS, LATEST EDITION.

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NO.	REVISIONS	DATE	BY

Kimley»Horn
555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

LICENSED LANDSCAPE ARCHITECT RANDALL A. KOPFF JR. No. 6633 9/30/2022 Renewal Date 6/26/2021 STATE OF CALIFORNIA

KHA PROJECT	097918026
DATE	JUNE 2021
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	
CHECKED BY	

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

LS-00

LANDSCAPE COVER SHEET

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 46 OF 60

K:\SAC_TPTO\ROSEVILLE WASHINGTON @ ALL AMERICA RAB - 097918026\08 CADD\PLANSHEETS\LS-01 LANDSCAPE PLANS.DWG
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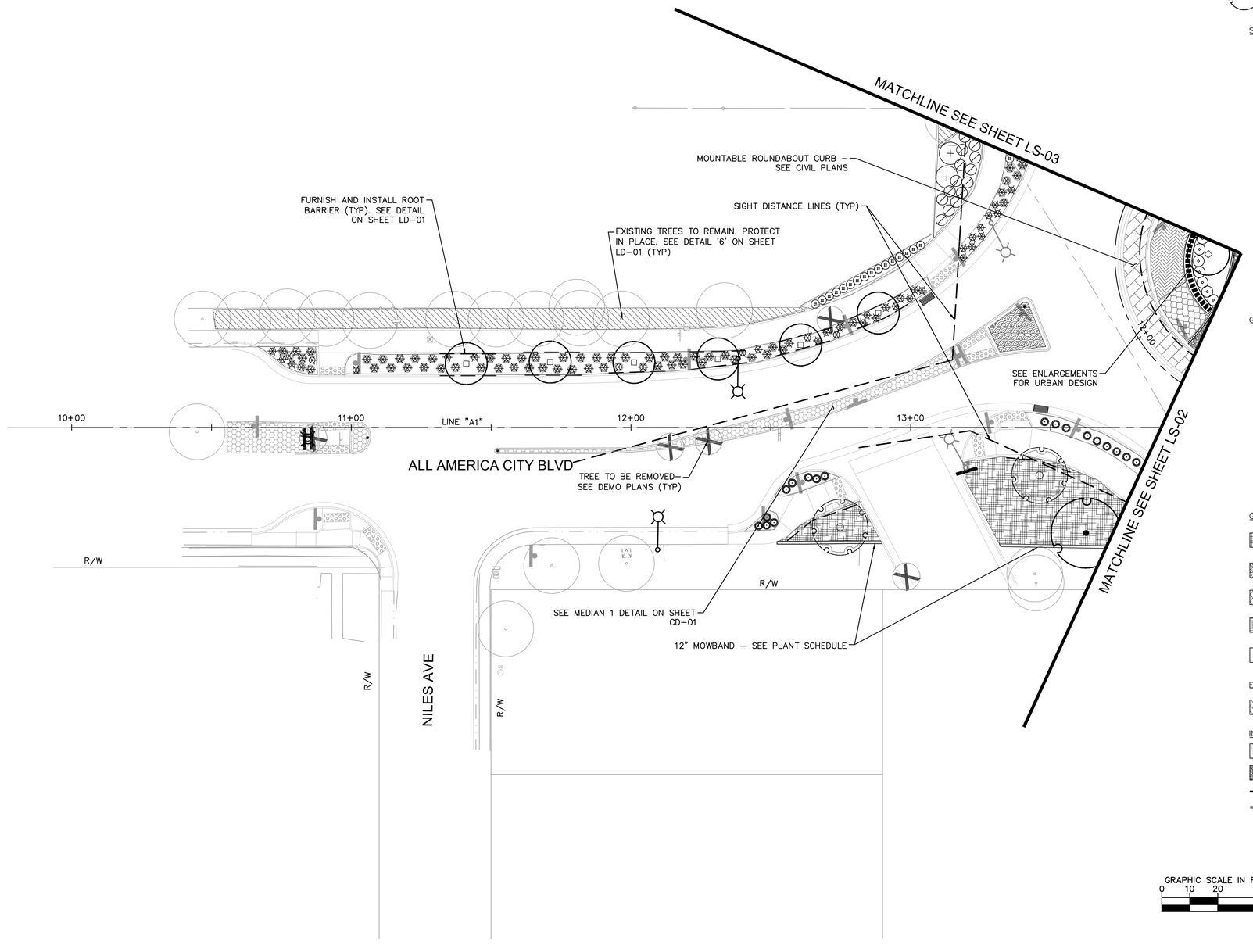

PLANT LEGEND

SEE SHEET L1-00 FOR COMPLETE PLANT LEGEND

TREES	BOTANICAL / COMMON NAME
	ARBUTUS X 'MARINA' / MARINA STRAWBERRY TREE STANDARD TRUNK
	EXISTING TREE / TO REMAIN PROTECT IN PLACE – SEE DETAIL '6' SHEET LD-01
	EXISTING TREE / TO BE REMOVED SEE DEMOLITION PLANS
	KOELREUTERIA PANICULATA / GOLDEN RAIN TREE STANDARD TRUNK
	RHUS LANCEA / AFRICAN SUMAC STANDARD TRUNK
	ULMUS X 'MORTON ACCOLADE' TM / ELM STANDARD TRUNK

SHRUBS	BOTANICAL / COMMON NAME
	CALLISTEMON CITRINUS 'LITTLE JOHN' / LITTLE JOHN DWARF BOTTLEBRUSH
	CISTUS X PULVERULENTUS 'SUNSET' / SUNSET ROCKROSE
	DODONAEA VISCOSA 'PURPUREA' / PURPLE LEAFED HOPSEED BUSH
	HESPERALOE PARVIFLORA / RED YUCCA
	PEROVSKIA ATRIPLICIFOLIA 'BLUE SPIRES' / BLUE SPIRES RUSSIAN SAGE
	PEROVSKIA ATRIPLICIFOLIA 'LITTLE LACE' / LITTLE LACE RUSSIAN SAGE
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EXISTING	BOTANICAL / COMMON NAME
	EXISTING LANDSCAPE / EXISTING TO REMAIN PROTECT IN PLACE.

INERT MATERIAL	BOTANICAL / COMMON NAME
	MULCH / FIR BARK MULCH
	ROCK COBBLE / 4"–6" ROCK COBBLE
	ROOT BARRIER – SEE SHEET LD-01
	12" MOWBAND – SEE DETAILS ON SHEET LS-03

GRAPHIC SCALE IN FEET
0 10 20 40

ALL CITY-MAINTAINED LANDSCAPES SHALL BE CONSTRUCTED ACCORDING TO CITY OF ROSEVILLE PARKS CONSTRUCTION STANDARDS, LATEST EDITION.

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Kimley»Horn
555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

LICENSED LANDSCAPE ARCHITECT — 6/30/2022 — 6/24/2021 — STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

LS-01

LANDSCAPE PLANS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 47 OF 60

K:\SAC_TPTO\ROSEVILLE WASHINGTON @ ALL AMERICA RAB – 097918026\08 CADD\PLANSHEETS\LS-01 LANDSCAPE PLANS.DWG
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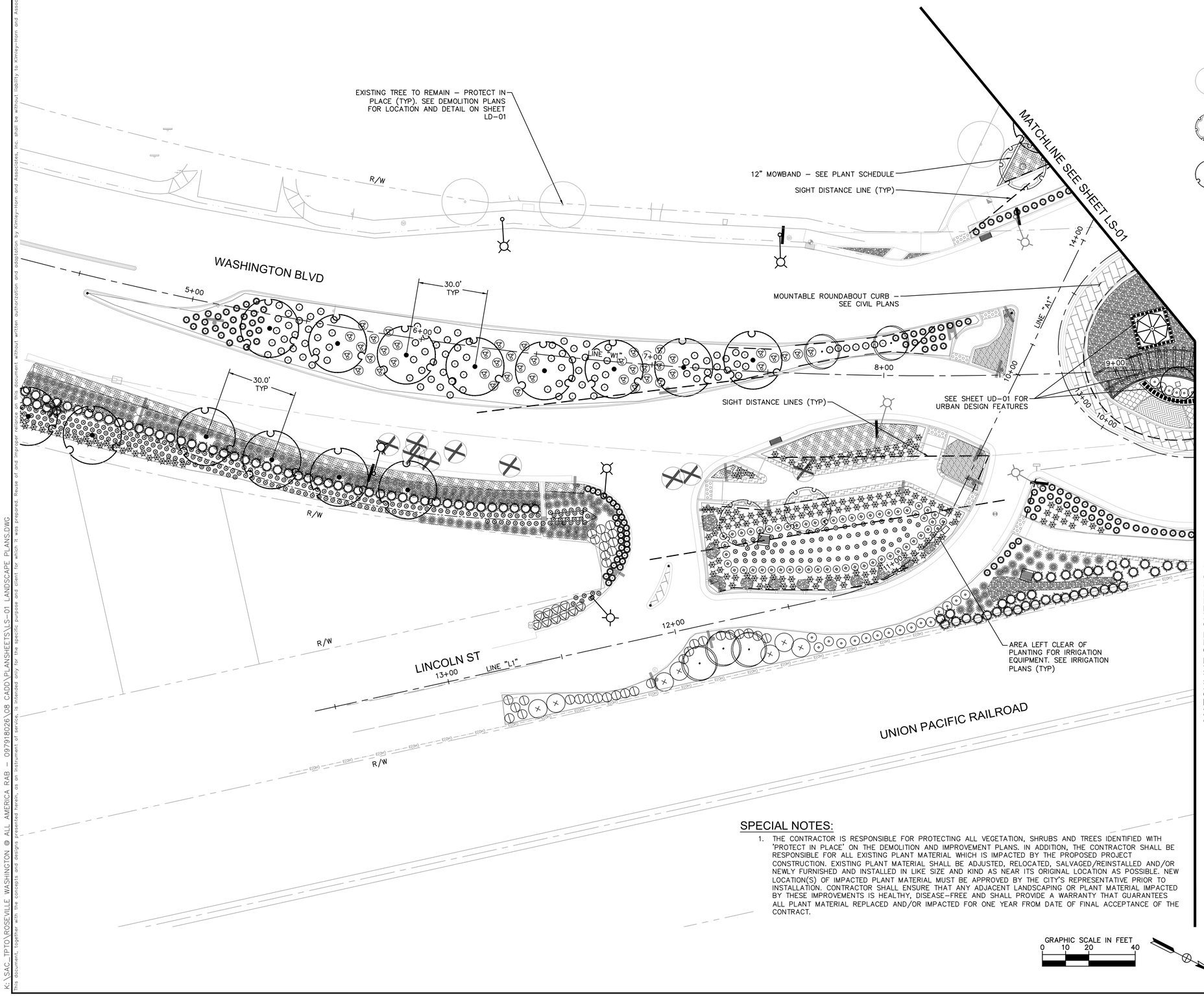

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SEE SHEET L1-00 FOR COMPLETE PLANT LEGEND

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	12" MOWBAND – SEE DETAILS ON SHEET LS-03

MATCHLINE SEE SHEET LS-03

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LICENSED LANDSCAPE ARCHITECT — No. 6432 — Renewal Date 8/31/2022 — 6/24/2021 — STATE OF CALIFORNIA

KHA PROJECT	097918026
DATE	JUNE 2021
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	
CHECKED BY	

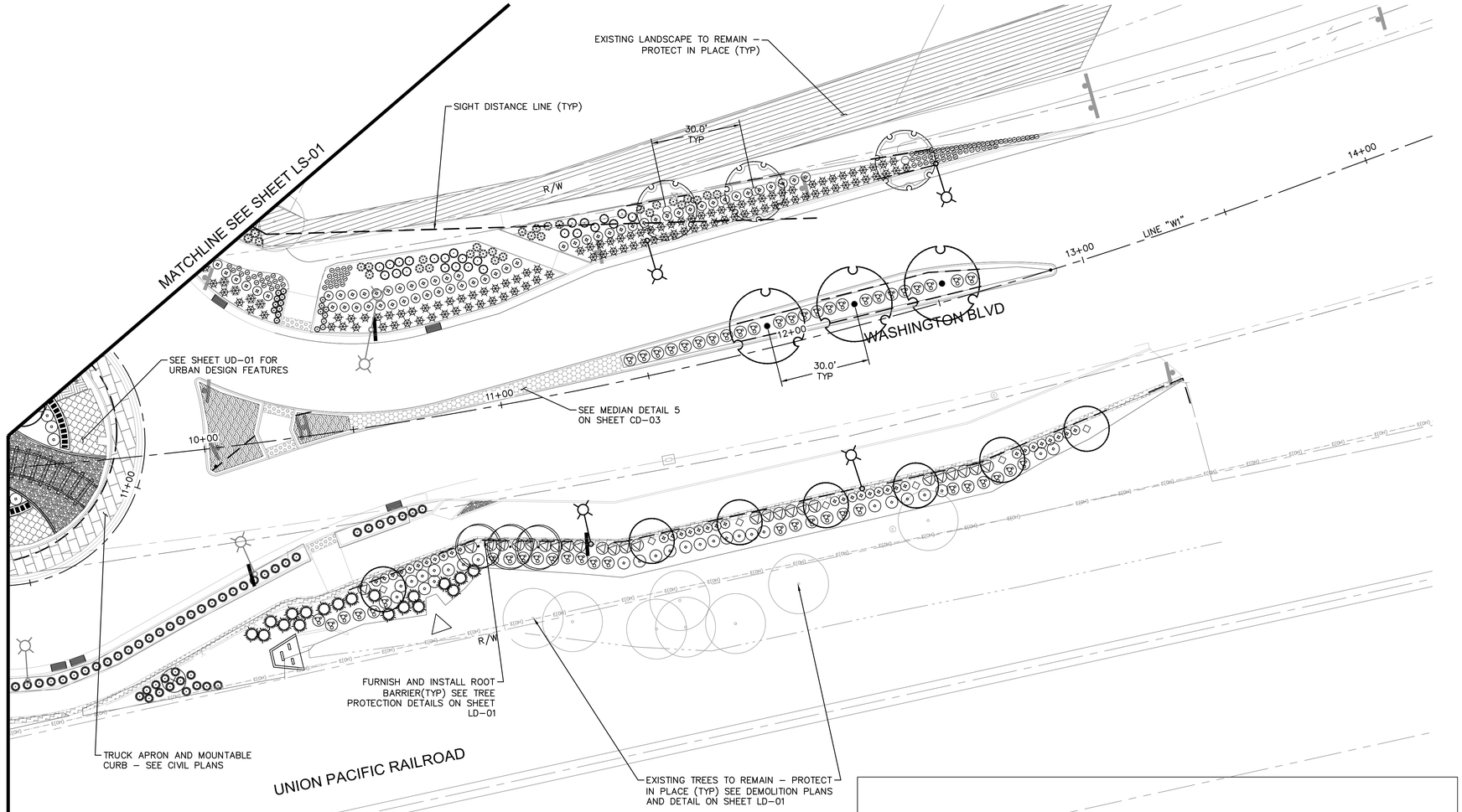
WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

LS-02

LANDSCAPE PLANS

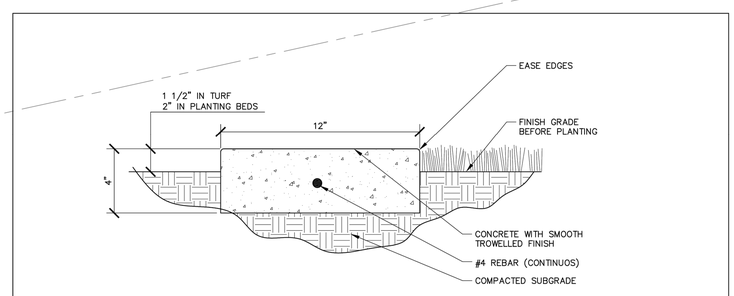
CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
48 OF 60



SPECIAL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL VEGETATION, SHRUBS AND TREES IDENTIFIED WITH 'PROTECT IN PLACE' ON THE DEMOLITION AND IMPROVEMENT PLANS. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING PLANT MATERIAL WHICH IS IMPACTED BY THE PROPOSED PROJECT CONSTRUCTION. EXISTING PLANT MATERIAL SHALL BE ADJUSTED, RELOCATED, SALVAGED/REINSTALLED AND/OR NEWLY FURNISHED AND INSTALLED IN LIKE SIZE AND KIND AS NEAR ITS ORIGINAL LOCATION AS POSSIBLE. NEW LOCATION(S) OF IMPACTED PLANT MATERIAL MUST BE APPROVED BY THE CITY'S REPRESENTATIVE PRIOR TO INSTALLATION. CONTRACTOR SHALL ENSURE THAT ANY ADJACENT LANDSCAPING OR PLANT MATERIAL IMPACTED BY THESE IMPROVEMENTS IS HEALTHY, DISEASE-FREE AND SHALL PROVIDE A WARRANTY THAT GUARANTEES ALL PLANT MATERIAL REPLACED AND/OR IMPACTED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF THE CONTRACT.



DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

MOWBAND

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-27

NOTES
1. WHERE VEHICULAR SERVICE/MAINTENANCE TRAFFIC WILL CROSS MOWBANDS, CONCRETE SECTIONS SHALL BE THICKENED TO 6" (SELECT AREAS ONLY).
2. PROVIDE 1/2" SCORE JOINTS AT 20' O.C.

1 CITY STANDARD DETAIL
NTS

PLANT LEGEND

SEE SHEET L1-00 FOR COMPLETE PLANT LEGEND

TREES	BOTANICAL / COMMON NAME
	ARBUTUS X 'MARINA' / MARINA STRAWBERRY TREE STANDARD TRUNK
	EXISTING TREE / TO REMAIN PROTECT IN PLACE – SEE DETAIL '6' SHEET LD-01
	EXISTING TREE / TO BE REMOVED SEE DEMOLITION PLANS
	KOELREUTERIA PANICULATA / GOLDEN RAIN TREE STANDARD TRUNK
	RHUS LANCEA / AFRICAN SUMAC STANDARD TRUNK
	ULMUS X 'MORTON ACCOLADE' TM / ELM STANDARD TRUNK

SHRUBS	BOTANICAL / COMMON NAME
	CALLISTEMON CITRINUS 'LITTLE JOHN' / LITTLE JOHN DWARF BOTTLEBRUSH
	CISTUS X PULVERULENTUS 'SUNSET' / SUNSET ROCKROSE
	DODONAEA VISCOSA 'PURPUREA' / PURPLE LEAFED HOPSEED BUSH
	HESPERALOE PARVIFLORA / RED YUCCA
	PEROVSKIA ATRIPLICIFOLIA 'BLUE SPIRES' / BLUE SPIRES RUSSIAN SAGE
	PEROVSKIA ATRIPLICIFOLIA 'LITTLE LACE' / LITTLE LACE RUSSIAN SAGE
	RHAMNUS CALIFORNICA 'LITTLE SUR' / LITTLE SUR COFFEEBERRY
	RHAPHIOLEPIS UMBELLATA 'MINOR' / YEDDA HAWTHORN
	ROSA X 'FLOWER CARPET RED' / ROSE

GRASSES	BOTANICAL / COMMON NAME
	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' / FEATHER REED GRASS
	CHONDROPETALUM ELEPHANTINUM / LARGE CAPE RUSH
	FESTUCA MAIREI / ATLAS FESCUE
	LOMANDRA LONGIFOLIA 'LM300' / BREEZE MAT RUSH
	MUHLENBERGIA CAPILLARIS / PINK MUHLY GRASS
	MUHLENBERGIA RIGENS / DEER GRASS

GROUND COVERS	BOTANICAL / COMMON NAME
	ARCTOSTAPHYLOS X 'EMERALD CARPET' / EMERALD CARPET MANZANITA
	BACCHARIS PILULARIS 'PIGEON POINT' / PIGEON POINT COYOTE BRUSH
	FESTUCA GLAUCA 'ELIJAH BLUE' / ELIJAH BLUE FESCUE
	GAZANIA X 'MITSUWA YELLOW' / YELLOW GAZANIA
	SOD / TURF, MATCH EXISTING TIGHTLY ROLLED, FREE OF OBNOXIOUS WEEDS

EXISTING	BOTANICAL / COMMON NAME
	EXISTING LANDSCAPE / EXISTING TO REMAIN PROTECT IN PLACE.

INERT MATERIAL	BOTANICAL / COMMON NAME
	MULCH / FIR BARK MULCH
	ROCK COBBLE / 4"–6" ROCK COBBLE
	ROOT BARRIER – SEE SHEET LD-01

GRAPHIC SCALE IN FEET
0 10 20 40

ALL CITY-MAINTAINED LANDSCAPES SHALL BE CONSTRUCTED ACCORDING TO CITY OF ROSEVILLE PARKS CONSTRUCTION STANDARDS, LATEST EDITION.

811 Know what's below. Call before you dig.

No.	REVISIONS	DATE	BY

Kimley»Horn
555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

LICENSED LANDSCAPE ARCHITECT — TIMOTHY A. GEE — No. 5887 — 9/30/2022 — 6/24/2021 — STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

LS-03

LANDSCAPE PLANS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 49 OF 60

K:\SAC_TPTO\ROSEVILLE WASHINGTON @ ALL AMERICA RAB - 097918026\08 CADD\PLANSHEETS\LS-01 LANDSCAPE PLANS.DWG
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

K:\SAC_TPTO\ROSEVILLE WASHINGTON @ ALL AMERICA RAB - 097918026\08 CADD\PLANSHEETS\LS-01 LANDSCAPE PLANS.DWG
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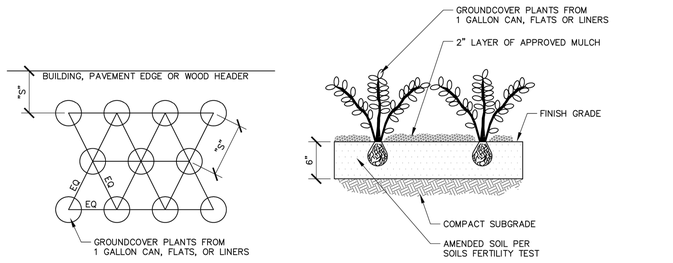


NOTES
1. "S" REFERS TO PLANT SPACING, SEE PLANT TABLE ON CONSTRUCTION DOCUMENTS.

DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

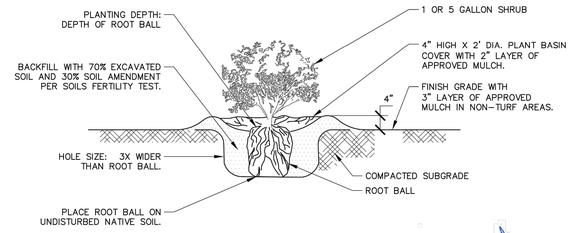
CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

GROUNDCOVER PLANTING

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-17

1 CITY STANDARD DETAIL
NTS



NOTES
1. AMENDMENT SHALL BE CONSISTENT WITH SOILS FERTILITY TEST.
2. PLANTING AREAS SHALL BE TREATED WITH PRE-EMERGENT PRIOR TO PLANTING TO PREVENT GERMINATION OF WEED SEEDS.
3. SCORE ROOT BALL IN VARIOUS LOCATIONS.

DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

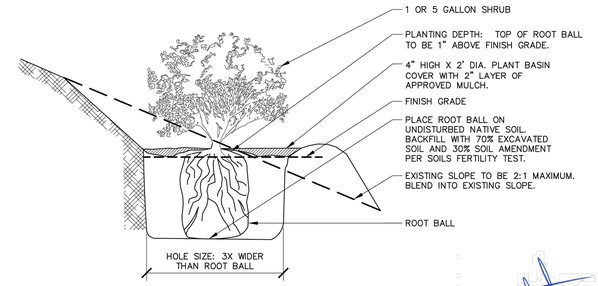
CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

SHRUB PLANTING

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-18

2 CITY STANDARD DETAIL
NTS



NOTES
1. PLANTER AREAS SHALL HAVE PRE-EMERGENT HERBICIDE APPLIED BEFORE PLANTING TO PREVENT GERMINATION OF WEED SEEDS.
2. BUBBLERS TO BE PLACED ON UPHILL SIDE OF SHRUB.
3. SCORE ROOT BALL IN VARIOUS LOCATIONS.

DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

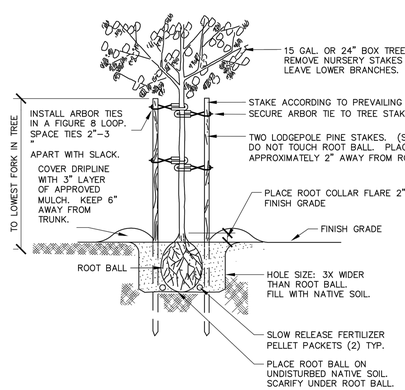
CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

SHRUBS ON SLOPES

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-19

3 CITY STANDARD DETAIL
NTS



NOTES
1. SCORE ROOT BALL AND CUT GIRDLING ROOTS ON ALL FOUR SIDES OF ROOT BALL.
2. FOR LAWN AREAS: PROVIDE A 3' DIA. AREA FREE OF TURF.
3. TREES LESS THAN 8' IN HEIGHT REQUIRE AN 8' STAKE. TREES 8' OR GREATER IN HEIGHT REQUIRE A 10' STAKE.
4. INSTALL 2 ARBOR TIES, AT 2/3 OF TREE HEIGHT AND 2 ARBOR TIES AT 1/2 OF TREE HEIGHT.
5. TREE STAKES SHOULD BE INSERTED INTO THE GROUND TO A MINIMUM DEPTH OF 18".

DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

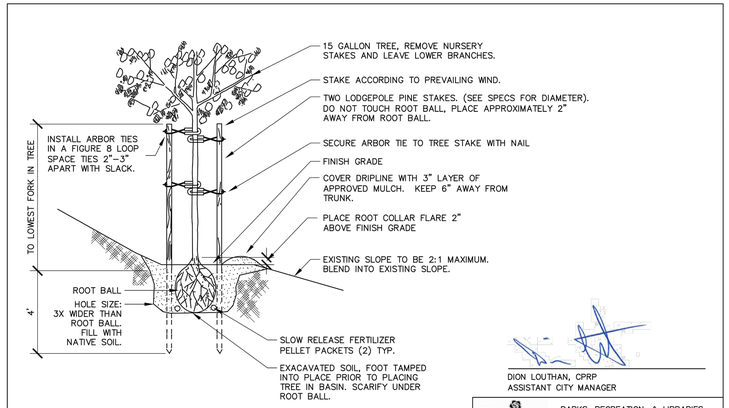
CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

TREE PLANTING

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-20

4 CITY STANDARD DETAIL
NTS



NOTES
1. SCORE ROOT BALL AND CUT GIRDLING ROOTS ON ALL FOUR SIDES OF ROOT BALL.
2. TREES LESS THAN 8' IN HEIGHT REQUIRE AN 8' STAKE. TREES 8' OR GREATER IN HEIGHT REQUIRE A 10' STAKE.
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DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

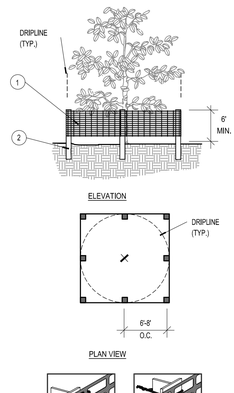
CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

TREES ON SLOPES

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-21

5 CITY STANDARD DETAIL
NTS



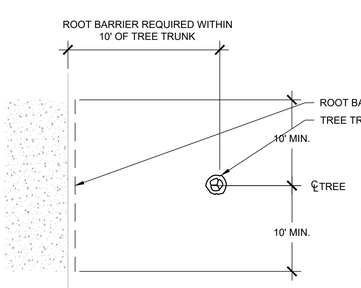
1. 6'H "PERIMETER PLUS" CONSTRUCTION FENCE BY CONWED PLASTICS OR OWNER'S REPRESENTATIVE APPROVED EQUAL. SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.
2. 8' TALL METAL "T" POSTS OR 2" x 2" X 8' PRESSURE TREATED WOOD POSTS WITH 24" BURIAL BELOW GRADE.

INSTALLATION NOTES:
A. POST SELECTION SHOULD BE BASED ON EXPECTED STRENGTH NEEDS AND THE LENGTH OF TIME FENCE WILL BE IN PLACE. FLEXIBLE FIBERGLASS ROD POSTS ARE RECOMMENDED FOR PARKS, ATHLETIC EVENTS AND CROWD CONTROL INSTALLATIONS. METAL "T" POSTS OR TREATED WOOD POSTS ARE TYPICALLY USED FOR CONSTRUCTION AND OTHER APPLICATIONS.
B. POSTS SHOULD BE DRIVEN INTO THE GROUND TO A DEPTH OF 1/4 OF THE HEIGHT OF THE POST. FOR EXAMPLE, A 8' POST SHOULD BE SET AT LEAST 2' INTO THE GROUND.
C. SPACE POSTS EVERY 6' (MIN.) TO 8' (MAX.).
D. SECURE FENCING TO POST WITH NYLON CABLE TIES (AVAILABLE FROM CONWED PLASTICS). WOOD STRIPS MAY BE ALSO BE USED TO PROVIDE ADDITIONAL SUPPORT AND PROTECTION BETWEEN TIES AND POSTS.

NOTE:
CONTRACTOR SHALL REFERENCE DEMOLITION PLANS AND THESE LANDSCAPE PLANS FOR TREE REMOVAL AND TREE PROTECTION.

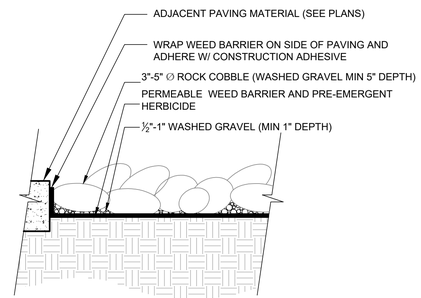
NOTE:
IF WIRE TIES ARE USED, AVOID DIRECT CONTACT WITH FENCE. WIRE MAY DAMAGE FENCE OVER TIME.

6 TREE PROTECTOR
NTS

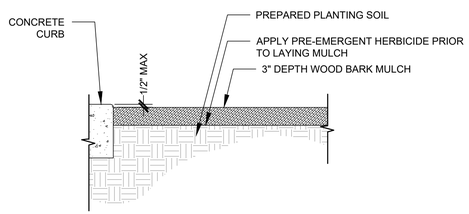


NOTES:
1. ROOT BARRIER SHALL BE INSTALLED ADJACENT TO THE IMPROVEMENT AND NOT AROUND THE ROOTBALL.
2. ROOT BARRIER REQUIRED WHEN TREE TRUNK IS WITHIN 10' OF HARDSCAPE, WALLS, BUILDINGS, BROW DITCHES, OR OTHER IMPROVEMENTS

7 ROOT CONTROL BARRIER
NTS



8 ROCK COBBLE
NTS



9 WOOD BARK MULCH
NTS

ALL CITY-MAINTAINED LANDSCAPES SHALL BE CONSTRUCTED ACCORDING TO CITY OF ROSEVILLE PARKS CONSTRUCTION STANDARDS, LATEST EDITION.

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NO.	REVISIONS	DATE	BY

Kimley»Horn
555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

LICENSED LANDSCAPE ARCHITECT — TIMOTHY A. GEE — No. 5432 — 6/30/2022 — Date Signed 6/24/2021 — STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

LD-01

LANDSCAPE DETAILS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
50 OF 60

IRRIGATION SCHEDULE

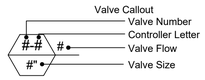
SYMBOL	MANUFACTURER/MODEL	QTY	ARC	PSI	GPM	RADIUS	DETAIL
	RAIN BIRD R-VAN18 1806-SAM-P45	10	ADJ	30		16'	5/ID-01
	RAIN BIRD R-VAN18 1806-SAM-P45	2	360	30	1.65	16'	5/ID-01
	RAIN BIRD R-VAN14 1812-SAM-P45	77	ADJ	30		13'	5/ID-01
	RAIN BIRD R-VAN18 1812-SAM-P45	2	ADJ	30		16'	5/ID-01
	RAIN BIRD R-VAN18 1812-SAM-P45	13	360	30	1.65	16'	5/ID-01
	RAIN BIRD R-VAN24 1812-SAM-P45	79	ADJ	30		19'	5/ID-01
	RAIN BIRD R-VAN24 1812-SAM-P45	5	360	30	2.35	19'	5/ID-01
	RAIN BIRD RWS-B-C 1402	98	360	30	0.50	3'	1/ID-03

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	DETAIL
	RAIN BIRD XCZ-100-PRB-COM WIDE FLOW DRIP CONTROL KIT FOR COMMERCIAL APPLICATIONS. 1" BALL VALVE WITH 1" PEB VALVE AND 1" PRESSURE REGULATING 40PSI QUICK-CHECK BASKET FILTER. 0.3GPM TO 20GPM.	4	3/ID-02
	RAIN BIRD XCZ-150-PRB-COM HIGH FLOW CONTROL ZONE KIT, FOR LARGE COMMERCIAL DRIP ZONES. 1-1/2" PEB VALVE WITH TWO 1" PRESSURE REGULATING (40PSI) QUICK-CHECK BASKET FILTERS. FLOW RANGE: 15-40GPM.	3	3/ID-02
F	NETAFIM TLSOV NETAFIM TLSOV- 1/2" MANUAL FLUSH VALVE, BARBED INSERT. INSTALL IN 10" BOX, WITH ADEQUATE BLANK OR "COBRA" TUBING TO EXTEND VALVE OUT OF VALVE BOX. 17MM FITS TECHLINE HCVXR, HCVXR-RW/RWP, CV, DL, RW AND RWP DRIPLINES, AND PE IRRIGATION HOSE	7	6/ID-02
A	NETAFIM 65ARIA100 1" MALE PIPE THREAD GUARDIAN AIR/VACUUM RELIEF VENT. INSTALL IN SUBSURFACE SYSTEMS. ON SLOPING TERRAIN TO PREVENT COLLAPSING OF PIPES. UV RESISTANT. MAXIMUM PRESSURE: 150 PSI.	7	5/ID-03
I	DRIP OPERATION INDICATOR DRIP SYSTEM OPERATION INDICATOR, RAINBIRD 1812 12" POP UP WITH A 4-VAN NOZZLE SET TO 0 DEGREE PATTERN	7	6/ID-02
	AREA TO RECEIVE DRIPLINE NETAFIM TLHCVXR-CS-053-18 TECHLINE HCVXR-CS PRESSURE COMPENSATING LANDSCAPE DRIPLINE WITH COPPER STRIPE, CHECK VALVE AND ANTI-SIPHON FEATURE. 0.53 GPH EMITTERS AT 18" O.C. DRIPLINE LATERALS SPACED AT 18" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. 17MM.	12,614 S.F.	2/ID-03

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	DETAIL
	RAIN BIRD PEB 1", 1-1/2", 2" PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION.	19	5/ID-02
	RAIN BIRD 44-LRC 1" BRASS QUICK-COUPLING VALVE, WITH CORROSION-RESISTANT STAINLESS STEEL SPRING, LOCKING THERMOPLASTIC RUBBER COVER, AND 2-PIECE BODY.	9	4/ID-02
	MATCO-NORCA 759 BRASS SHUT OFF BALL VALVE, 1/2" TO 4". TWO PIECE BODY, BLOW-OUT PROOF STEM, CHROME PLATED SOLID BRASS BALL, THREADED, WITH PTFE SEATS. SAME SIZE AS MAINLINE PIPE.	13	2/ID-02
MV2	BUCKNER-SUPERIOR 3300 1-1/2" NORMALLY OPEN BRASS MASTER VALVE THAT PROVIDES DIRTY WATER PROTECTION AND NO MINIMUM FLOW FEATURE, WHICH ENSURES RELIABLE OPENING AND CLOSING OF THE VALVE IN EXTREME HIGH OR LOW FLOW SCENARIOS.	1	2/ID-01
MV	EXISTING 2" MASTER VALVE 2" FIELD VERIFY LOCATION	1	
BF1	EXISTING 2" BACKFLOW 2" FIELD VERIFY LOCATION	1	
BF2	FEBCO 825Y 1-1/2" REDUCED PRESSURE BACKFLOW PREVENTER	1	3/ID-03
C—B	EXISTING CONTROLLER FIELD VERIFY LOCATION	1	
C—A	"A" CS3-HUB-S/CS3-LR-KIT/FM-1B CALSENSE IRRIGATION CONTROLLER AND ANTENNA. UTILIZE ONLY 14 AWG IN CONDUIT BETWEEN THE FLOW METER AND THE CONTROLLER. INSTALL PER MANUFACTURER RECOMMENDATIONS.	1	1/ID-01
FS2	CALSENSE FM-1.5B 1.5" BRONZE FLOW SENSOR	1	
FS1	EXISTING FLOW SENSOR FIELD VERIFY LOCATION	1	
M1	WATER METER 1" EXISTING IRRIGATION METER - FIELD VERIFY LOCATION	1	2/ID-01
M2	WATER METER 1-1/2" NEW 1.5" METER - SEE CIVIL PLANS	1	

PIPE SCHEDULE

———	IRRIGATION LATERAL LINE: PVC SCHEDULE 40 1"	+/- 5,463 L.F.
———	IRRIGATION LATERAL LINE: PVC SCHEDULE 40 1 1/4"	+/- 133.8 L.F.
———	IRRIGATION LATERAL LINE: PVC SCHEDULE 40 1 1/2"	+/- 16.5 L.F.
— — —	IRRIGATION MAINLINE: PVC SCHEDULE 40 2"	+/- 1,888 L.F.
= = =	PIPE SLEEVE: PVC SCHEDULE 40	+/- 706.6 L.F.



IRRIGATION NOTES

1. THE SYSTEM HAS BEEN DESIGNED TO PROVIDE 100% COVERAGE. ANY CHANGES MADE IN THE LAYOUT DUE TO FIELD CONDITIONS SHALL BE IN ACCORDANCE WITH THESE STANDARDS. QUANTITIES IN SCHEDULE ARE ESTIMATED. PLAN SHALL TAKE PRECEDENCE.
2. ALL IRRIGATION LINES AND VALVES ARE SHOWN DIAGRAMMATICALLY. ALL LINES AND VALVES TO BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE.
3. CONTRACTOR TO FIELD LOCATE ALL PROPOSED IRRIGATION WATER MAIN LINE LOCATIONS. CONTACT LANDSCAPE ARCHITECT PRIOR TO START OF WORK IF DISCREPANCIES BETWEEN THIS PLAN AND EXISTING CONDITIONS ARE FOUND.
4. LOCATE ALL VALVES INSIDE LANDSCAPE AREAS, ALLOWING ACCESS FOR MAINTENANCE PURPOSES, BUT HIDING THEM FROM PUBLIC VIEW WHENEVER POSSIBLE.
5. ALL PRESSURE MAINLINES UNDER ASPHALT PAVEMENT SHALL BE PLACED WITHIN SLEEVES AS NOTED. WHERE ELECTRIC VALVE CONTROL LINES PASS THROUGH A SLEEVE WITH OTHER MAIN OR LATERAL LINES THEY SHALL BE CONTAINED WITHIN A SEPARATE, SMALLER CONDUIT.
6. CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS OF THE FINAL INSTALLATION TO OWNER AT SUBSTANTIAL COMPLETION BEFORE RECEIVING FINAL PAYMENT.
7. ALL SLEEVES UTILIZED BY THE IRRIGATION CONTRACTOR, WHETHER INSTALLED BY HIM OR NOT, SHALL BE LOCATED ON THE "AS-BUILT" DRAWINGS. THE DEPTH BELOW FINISH GRADE, TO THE NEAREST FOOT OF EACH END OF EACH SLEEVE SHALL BE NOTED AT EACH SLEEVE LOCATION ON THE "AS-BUILT" DRAWINGS. ALL SLEEVES SHALL BE SIZED TWO PIPE SIZES GREATER THAN PIPE IT CARRIES.
8. ALL DRIP ZONES SHALL BE INSTALLED WITH A SELF-FLUSHING DISC FILTER, OR APPROVED EQUAL
9. IRRIGATION CONTRACTOR SHALL SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF HIS OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE OWNER/GENERAL CONTRACTOR. WORK IN THE R.O.W. SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LOCAL AND/OR STATE HIGHWAY JURISDICTION.
10. VERIFY CONTROLLER AND RAIN SENSOR LOCATION AND MAINLINE POINT OF CONNECTION AT PROJECT SITE WITH OWNER.
11. ELECTRIC SERVICE TO CONTROLLER SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
12. ALL 24 VAC WIRING SHALL BE OF DIRECT BURIAL COPPER WIRE AS FOLLOWS:
    - CONTROL WIRES - #14
    - COMMON WIRES - #12
13. INSTALLATION OF WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS IN SUCH A MANNER AS TO ALLOW FOR A SPEEDY AND ORDERLY COMPLETION OF ALL WORK ON THE SITE.
14. COORDINATE WITH PLANTING PLAN FOR PLANTER BED LOCATIONS AND TREE LOCATIONS.
15. CONTRACTOR SHALL COORDINATE WITH DEVELOPER FOR OPERATING PARAMETERS OF MASTER SYSTEM. THIS DESIGN REQUIRES 70 PSI TO OPERATE. IF THE MASTER SYSTEM CANNOT PROVIDE THESE PARAMETERS, CONTRACTOR SHALL MAKE ADJUSTMENTS TO THE DESIGN BY ADDING CONTROL VALVES, A BOOSTER PUMP, PRESSURE REDUCING VALVE, OR OTHER EQUIPMENT, AS NECESSARY. CONTRACTOR SHALL SUBMIT DESIGN REVISIONS TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO SUBMITTING BID.
16. A FINAL REPORT FOR THE TESTING AND ADJUSTING OF ALL NEW SYSTEMS SHALL BE COMPLETED PRIOR TO FINAL APPROVAL BY THE FIELD INSPECTOR. THIS REPORT SHALL BE SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESES SERVICES.
17. A LAMINATED DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES SHALL BE KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES.
18. A CERTIFICATE OF COMPLETION SHALL BE FILLED OUT AND CERTIFIED BY EITHER THE SIGNER OF THE LANDSCAPE PLANS, THE SIGNER OF THE IRRIGATION PLANS, OR THE LICENSED LANDSCAPE CONTRACTOR FOR THE PROJECT.
19. PROVIDE 12" MINIMUM CLEARANCE BETWEEN ALL OVERHEAD IRRIGATION SPRINKLERS AND THE PERIMETER HARDSCAPE.
20. IRRIGATION AUDIT, IRRIGATION SURVEY, AND IRRIGATION WATER USE ANALYSIS, WELO 14.18.080
    - 20.1. ALL LANDSCAPE IRRIGATION AUDITS SHALL BE CONDUCTED BY A THIRD PARTY CERTIFIED LANDSCAPE IRRIGATION AUDITOR. LANDSCAPE AUDITS SHALL NOT BE CONDUCTED BY THE PERSON WHO DESIGNED THE LANDSCAPE OR INSTALLED THE LANDSCAPE.
    - 20.2. IN LARGE PROJECTS OR PROJECTS WITH MULTIPLE LANDSCAPE INSTALLATIONS (I.E. PRODUCTION HOME DEVELOPMENTS) AN AUDITING RATE OF 1 IN 7 LOTS OR APPROXIMATELY 15% OF THE PROJECTS IRRIGATION VALVES SHALL SATISFY THIS REQUIREMENT.
    - 20.3. FOR NEW CONSTRUCTION AND REHABILITATED LANDSCAPE PROJECTS INSTALLED AFTER DECEMBER 1, 2015, AS DESCRIBED IN SECTION 14.18.030.
    - 20.3.1. THE PROJECT APPLICANT SHALL SUBMIT AN IRRIGATION AUDIT REPORT WITH THE CERTIFICATE OF COMPLETION TO THE LOCAL AGENCY THAT MAY INCLUDE, BUT IS NOT LIMITED TO: INSPECTION, SYSTEM TUNE UP, SYSTEM TEST DISTRIBUTION UNIFORMITY, REPORTING OVERSPRAY OR RUN OFF THAT CAUSES OVERLAND FLOW, AND PREPARATION OF AN IRRIGATION SCHEDULE. INCLUDING CONFIGURING IRRIGATION CONTROLLERS WITH APPLICATION RATE, SOIL TYPES, PLANT FACTORS, SLOPE, EXPOSURE AND ANY OTHER FACTORS NECESSARY FOR ACCURATE PROGRAMING; (ENVIRONMENTAL UTILITIES-WELO)
21. CONTRACTOR TO INCLUDE WELO CERTIFICATE OF COMPLETION PACKAGE SECTION 14.18.060. CONTRACTOR IS REQUIRED TO PROVIDE IRRIGATION SCHEDULES (ESTABLISHMENT AND ESTABLISHED), MAINTENANCE SCHEDULE, WATER AUDIT, AS WELL AS ALL OTHER REQUIREMENTS NEEDED PRIOR TO FINAL ACCEPTANCE. (ENVIRONMENTAL UTILITIES WELO)

MAINTENANCE:

1. LOW-FLOW BUBBLER ZONES WILL BE DRAINED IN COLD WEATHER SITUATIONS USING THE MANUAL FLUSH VALVES.
2. FILTER CLEANING AND REPLACEMENT ON A REGULAR BASIS.
3. CHECKING FOR LEAKS AT EACH VALVE AND INSPECTION OF EACH ZONE ON A MONTHLY BASIS.
4. HAVE THE CONTRACTOR WALK EACH SECTION OF LOW-FLOW BUBBLERS TO CHECK FOR CLOGGING OR PROBLEMS.
5. IF AN ON-SITE WEATHER STATION IS SPECIFIED, IT NEEDS TO BE CALIBRATED REGULARLY TO PROVIDE ACCURATE DATA. BECAUSE OF THE COST OF MAINTAINING AN ON-SITE WEATHER STATION, IT IS RECOMMENDED TO USE A CONTROL SYSTEM WHICH UTILIZES A NETWORK OF ET DATA THAT CAN ASSURE ACCURACY TO WITHIN ON KILOMETER OF THE SITE.

STATE OF CALIFORNIA ESTIMATED WATER USE

TOTAL WATER USE IS CALCULATED BY SUMMING THE AMOUNT OF WATER ESTIMATED FOR EACH HYDROZONE. WATER USE FOR EACH HYDROZONE IS ESTIMATED WITH THE FOLLOWING FORMULA:

ESTIMATED TOTAL WATER USE (ETWU) = GAL / YEAR PER HYDROZONE

ET ADJUSTMENT FACTOR (ETAF) =
0.55 ETAF FOR RESIDENTIAL LANDSCAPE
0.45 ETAF FOR NON-RESIDENTIAL LANDSCAPE
0.8 ETAF FOR EXISTING NON-REHABILITATED LANDSCAPE
SPECIAL LANDSCAPE SHALL NOT EXCEED 1.0 ETAF

PLANT FACTOR (PF) = WATER USE CLASSIFICATION OF LANDSCAPE SPECIES

HYDROZONE AREA (HA) = (SF OF LANDSCAPE) OR (32 SF / TREE)

CONVERSION FACTOR (CONVERTS ACRE-INCHES PER ACRE PER YEAR TO GALLONS PER SQUARE FOOT PER YEAR = 0.62

IRRIGATION EFFICIENCY (IE) = 0.75 (OVERHEAD SPRAY) 0.81 (DRIP)

SPECIAL LANDSCAPE AREA (SLA) = SF OF EDIBLE PLANTS, RECREATIONAL AREAS, AREAS IRRIGATED WITH RECYCLED WATER, OR WATER FEATURS USING RECYCLED WATER

EVAPOTRANSPIRATION RATE (ETo) = QUANTITY OF WATER EVAPORATED FROM ADJ. SOIL AND TRANSPIRED BY PLANTS OVER A SPECIFIED TIME

ETWU = [(ETo) * (PF) * (HA) * (0.62)] / (IE)

MAWA = (ETo) * (0.62) [ETAF) * (SUM OF SLA & HA)] + [(1-ETAF) * (SLA)]

HYDROZONE "A" (DRIP)

ETO	PF	HA	CONVERSION FACTOR	IE	SLA	ETWU (GAL/YEAR)
52.20	0.20	12,759	0.62	0.81	-	101,958.59

HYDROZONE "B" (BUBBLERS)

ETO	PF	HA	CONVERSION FACTOR	IE	SLA	ETWU (GAL/YEAR)
52.20	0.30	2,048	0.62	0.81	-	24,548.69

HYDROZONE "C" (ROTARY)

ETO	PF	HA	CONVERSION FACTOR	IE	SLA	ETWU (GAL/YEAR)
52.20	0.40	28,456	0.62	0.75	-	491,173.32
			ESTIMATED TOTAL WATER USE (GAL/YEAR)			**617,680.60**

MAXIMUM APPLIED WATER ALLOWANCE (MAWA)

ETO	SUM OF HA	CONVERSION FACTOR	ETAF	SUM OF SLA	MAWA(GAL/YEAR)
52.20	43,263.00	0.62	0.45	-	630,073.68
		MAXIMUM APPLIED WATER ALLOWANCE (GAL/YEAR)			**630,073.68**
MAXIMUM APPLIED WATER ALLOWANCE PERCENT OF ESTIMATED TOTAL WATER USE					**98.03%**

I HAVE COMPLIED WITH THE CRITERIA OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE AND IRRIGATION DESIGN PLAN.

RANDALL A. HOFF JR, LLA 6633

VALVE SCHEDULE - CITY

NUMBER	MODEL	SIZE	TYPE	GPM	PSI	PSI @ POC	PRECIP
1-A	RAIN BIRD XCZ-100-PRB-COM	1"	AREA FOR DRIPLINE	3.90	17.92	30.87	0.43 in/h
2-A	RAIN BIRD PEB	1"	BUBBLER	3.00	21.55	34.46	1.7 in/h
3-A	RAIN BIRD PEB	1"	BUBBLER	10.00	22.52	35.79	1.84 in/h
4-A	RAIN BIRD PEB	1-1/2"	SHRUB ROTARY	24.42	35.3	51.58	0.57 in/h
5-A	RAIN BIRD XCZ-150-PRB-COM	1-1/2"	AREA FOR DRIPLINE	8.89	15.39	28.49	0.43 in/h
6-A	RAIN BIRD XCZ-100-PRB-COM	1"	AREA FOR DRIPLINE	6.94	20.77	33.76	0.43 in/h
7-A	RAIN BIRD PEB	1"	BUBBLER	2.00	21.49	34.35	1.71 in/h
8-A	RAIN BIRD PEB	1"	SHRUB ROTARY	20.87	35.35	49.62	0.44 in/h
9-A	RAIN BIRD PEB	1-1/2"	SHRUB ROTARY	26.57	35.05	49.78	0.63 in/h
10-A	RAIN BIRD PEB	1"	SHRUB ROTARY	8.55	32.04	44.93	0.98 in/h
11-A	RAIN BIRD XCZ-100-PRB-COM	1"	AREA FOR DRIPLINE	6.32	20.94	33.81	0.43 in/h
12-A	RAIN BIRD PEB	1"	BUBBLER	5.00	32.14	45.01	1.84 in/h
13-A	RAIN BIRD PEB	1"	BUBBLER	10.00	22.59	35.76	1.72 in/h
14-A	RAIN BIRD PEB	1"	SHRUB ROTARY	13.74	33.35	47.04	0.32 in/h
15-A	RAIN BIRD PEB	1"	SHRUB ROTARY	19.80	35.33	49.97	0.47 in/h
16-A	RAIN BIRD PEB	1"	SHRUB ROTARY	13.22	33.24	46.87	0.3 in/h
17-A	RAIN BIRD PEB	1"	SHRUB ROTARY	19.60	36.44	51.49	0.35 in/h
18-A	RAIN BIRD PEB	1"	SHRUB ROTARY	18.23	35.06	49.85	0.36 in/h
19-A	RAIN BIRD PEB	1"	BUBBLER	6.00	22.01	35.04	1.73 in/h
20-A	RAIN BIRD PEB	1"	BUBBLER	4.00	31.81	44.69	1.71 in/h
21-A	RAIN BIRD PEB	1"	TURF ROTARY	10.25	33.45	46.52	0.47 in/h
22-A	RAIN BIRD XCZ-100-PRB-COM	1"	AREA FOR DRIPLINE	3.29	42.35	55.23	0.38 in/h

VALVE SCHEDULE - PLACER COUNTY FAIRGROUND

NUMBER	MODEL	SIZE	TYPE	GPM	PSI	PSI @ POC	PRECIP
1-B	RAIN BIRD XCZ-150-PRB-COM	1-1/2"	AREA FOR DRIPLINE	12.29	15.34	29.67	0.43 in/h
2-B	RAIN BIRD PEB	1"	BUBBLER	6.00	22.01	35.49	1.71 in/h
3-B	RAIN BIRD XCZ-150-PRB-COM	1-1/2"	AREA FOR DRIPLINE	14.63	15.59	30.46	0.43 in/h
4-B	RAIN BIRD PEB	1"	BUBBLER	4.00	21.65	35.03	1.72 in/h

ALL CITY-MAINTAINED LANDSCAPES SHALL BE CONSTRUCTED ACCORDING TO CITY OF ROSEVILLE PARKS CONSTRUCTION STANDARDS, LATEST EDITION.

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PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

LICENSED LANDSCAPE ARCHITECT RANDALL A. HOFF JR. No. 6633 9/30/2022 Renewal Date 6/24/2021 STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

IR-00

IRRIGATION COVER SHEET

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 51 OF 60

K:\SAC_TPTO\ROSEVILLE WASHINGTON @ ALL AMERICA RAB - 097918026\08 CADD\PLANSHEETS\IR-01 IRRIGATION PLANS.DWG
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IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL
R-VAN18 R-VAN18-360	RAIN BIRD R-VAN18 1806-SAM-P45
R-VAN14 R-VAN14-360	RAIN BIRD R-VAN14 1812-SAM-P45
R-VAN18 R-VAN18-360	RAIN BIRD R-VAN18 1812-SAM-P45
R-VAN24 R-VAN24-360	RAIN BIRD R-VAN24 1812-SAM-P45
1401 1402 1404 1408	RAIN BIRD RWS-B-C 1401

SYMBOL	MANUFACTURER/MODEL
	RAIN BIRD XCZ-100-PRB-COM
	RAIN BIRD XCZ-150-PRB-COM
F	NETAFIM TLSOV
A	NETAFIM 65ARIA100
I	DRIP OPERATION INDICATOR
	AREA TO RECEIVE DRIPLINE NETAFIM TLHCVXR-CS-053-18

SYMBOL	MANUFACTURER/MODEL
	RAIN BIRD PEB
	RAIN BIRD 44-LRC
	MATCO-NORCA 759
MV2	BUCKNER-SUPERIOR 3300 1-1/2"
MV	EXISTING 2" MASTER VALVE 2"
BF1	EXISTING 2" BACKFLOW 2"
BF2	FEBCO 825Y 1-1/2"
C	EXISTING CONTROLLER
A	"A" CS3-HUB-S/CS3-LR-KIT/FM-1B
S2	CALSENSE FM-1.5B
FS1	EXISTING FLOW SENSOR

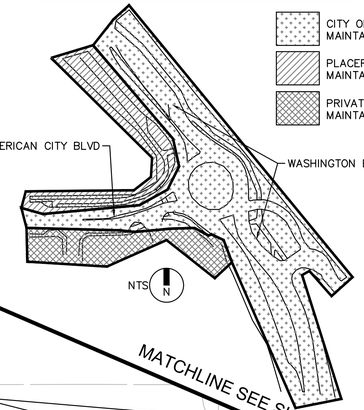
IRRIGATION LATERAL LINE: PVC SCHEDULE 40

IRRIGATION MAINLINE: PVC SCHEDULE 40

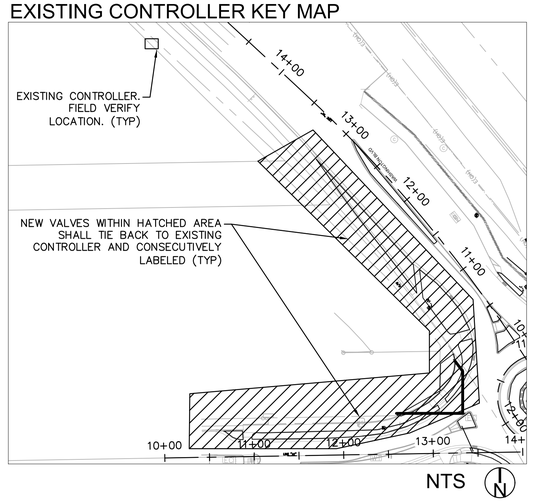
PIPE SLEEVE: PVC SCHEDULE 40

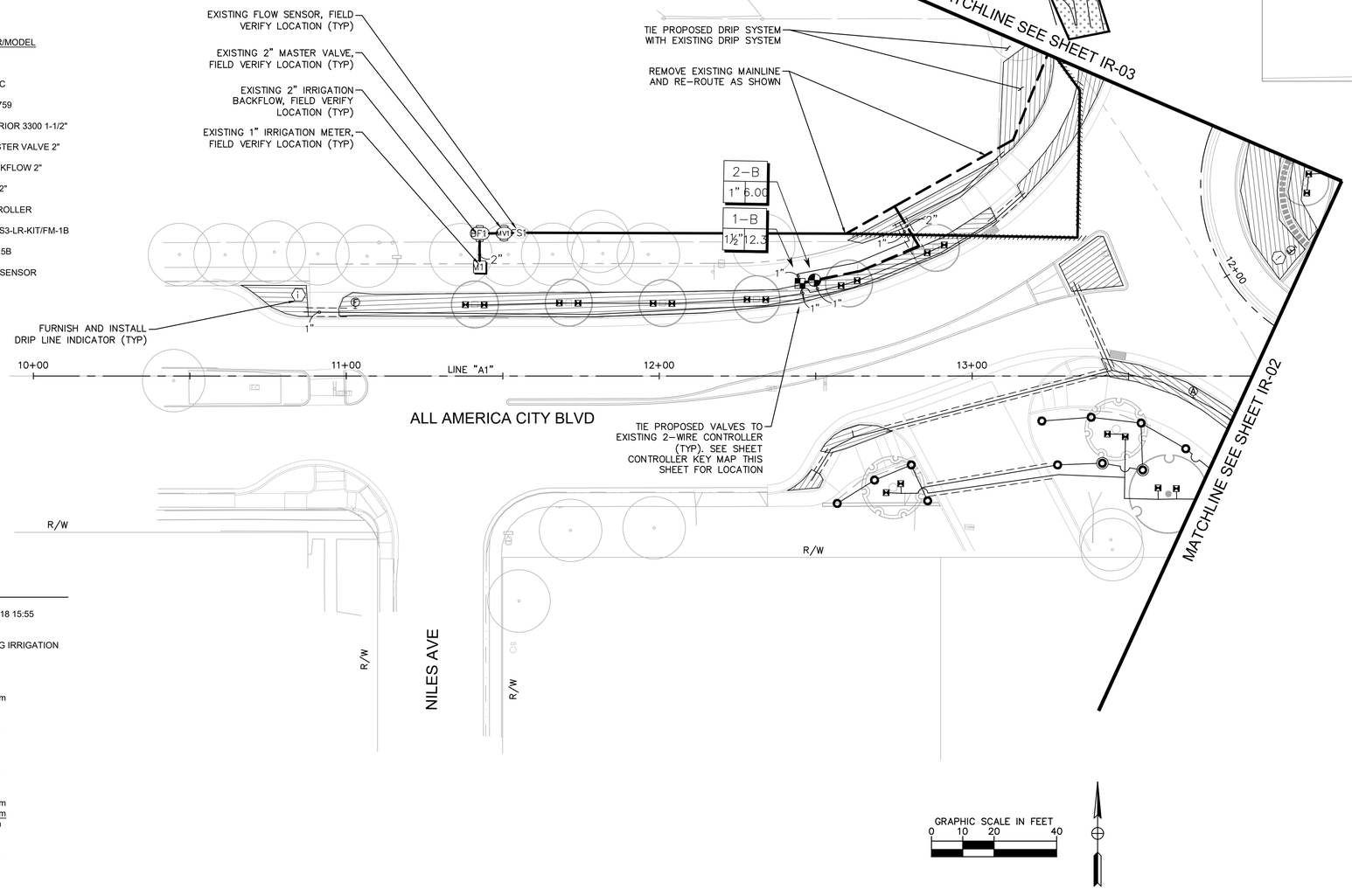
Valve Callout

MAINTENANCE RESPONSIBILITY MAP



EXISTING CONTROLLER KEY MAP





CRITICAL ANALYSIS

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P.O.C. NUMBER: 01	
Water Source Information:	EXISTING IRRIGATION METER - FIELD VERIFY LOCATION
FLOW AVAILABLE	
Water Meter Size:	1"
Flow Available:	37.50 gpm
PRESSURE AVAILABLE	
Static Pressure at POC:	70.00 psi
Elevation Change:	0.00 ft
Service Line Size:	N/A
Length of Service Line:	0.00 ft
Pressure Available:	70.00 psi
DESIGN ANALYSIS	
Maximum Multi-valve Flow:	37.50 gpm
Flow Available at POC:	37.50 gpm
Residual Flow Available:	0.00 gpm
Critical Station:	4-1
Design Pressure:	30.00 psi
Friction Loss:	0.05 psi
Fittings Loss:	0.00 psi
Elevation Loss:	0.00 psi
Loss through Valve:	1.60 psi
Pressure Req. at Critical Station:	31.64 psi
Loss for Fittings:	0.23 psi
Loss for Main Line:	2.27 psi
Loss for POC to Valve Elevation:	0.00 psi
Loss for Backflow:	11.96 psi
Loss for Master Valve:	0.80 psi
Loss for Water Meter:	8.48 psi
Critical Station Pressure at POC:	55.38 psi
Pressure Available:	70.00 psi
Residual Pressure Available:	14.62 psi

GRAPHIC SCALE IN FEET
0 10 20 40

IRRIGATION NOTES - TYPICAL FOR ALL LOCATIONS

1. ALL MAINLINES, WIRES, AND/OR LATERAL LINE SLEEVES TO BE 30" DEEP. UNDER NO CIRCUMSTANCES SHALL NEW IRRIGATION LINES AND WIRE BE INSTALLED UNDER HARDSCAPE WITHOUT A SLEEVE. ALL SLEEVES SHALL BE TWO (2) TIMES THE SIZE OF THE PIPE(S) IT CARRIES. BACKFILL WITH CLEAN NATIVE SOIL COMPACTED TO 90%. SEE LEGEND FOR SLEEVES.
2. MAINLINES SHOWN IN HARDSCAPE FOR GRAPHIC CLARITY ONLY. INSTALL ALL MAINLINES AND CONTROL WIRES IN PLANTING AREAS. IF SHOWN IN HARDSCAPE, INSTALL IN PLANTING AREA DIRECTLY ADJACENT.
3. LATERAL LINE SHOWN IN HARDSCAPE FOR CLARITY ONLY. INSTALL LATERAL LINES IN PLANTING AREAS. IF SHOWN IN HARDSCAPE, INSTALL IN PLANTING AREA DIRECTLY ADJACENT.
4. INSTALL NEW ELECTRIC CONTROL VALVES IN ADJACENT PLANTER. REFER TO IRRIGATION LEGEND FOR MAKE AND MODEL. WIRE TO NEW CONTROLLER, STATION NUMBER AS IDENTIFIED IN THE VALVE CALL-OUT, WITH NEW CONTROL WIRES INSTALLED AND WATERPROOF CONNECTORS AS PART OF THIS WORK.
5. INSTALL NEW QUICK COUPLERS IN ADJACENT PLANTER. REFER TO IRRIGATION LEGEND FOR MAKE AND MODEL. LOCATE QUICK COUPLERS SO THEY ARE EASILY ACCESSIBLE FROM ADJACENT HARDSCAPE.
6. INSTALL NEW BALL VALVES IN ADJACENT PLANTING AREA.
7. LIGHT POLES AND OTHER FIXED VERTICAL OBJECTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS FOR REFERENCE ONLY. CONTRACTORS SHALL ADJUST IRRIGATION TO ACCOMMODATE IN THE FIELD, PROVIDING 100% COVERAGE WITH NO OVER-SPRAY.
8. INSTALL SUPPLEMENTAL TREE BUBBLERS (TWO PER TREE). INSTALL PER LEGEND AND DETAILS. LOCATE ON SEPARATE VALVES FROM ALL OTHER IRRIGATION DEVICES.
9. LOCATE MANUAL FLUSH VALVES IN PLANTER AREAS AND IN THE LOWEST ELEVATION POINT OF THE DRIP ZONE.
10. HATCHED AREAS REPRESENT SUB-SURFACE DRIP LINE IRRIGATION. INSTALL PER DETAILS AND MANUFACTURERS RECOMMENDATION.
11. PROVIDE 12" MINIMUM CLEARANCE BETWEEN ALL OVERHEAD IRRIGATION SPRINKLERS AND THE PERIMETER HARDSCAPE.
12. THE CONTRACTOR SHALL ADJUST, RELOCATE, SALVAGE, REINSTALL AND/OR FURNISH AND INSTALL NEW IRRIGATION COMPONENTS IN LIKE KIND FOR ANY ADJACENT EXISTING IRRIGATION SYSTEM(S) IMPACTED BY THESE IMPROVEMENTS AND ENSURE THAT THEY ARE IN FULL WORKING ORDER PRIOR TO PROJECT COMPLETION. ANY IRRIGATION THAT IS REMOVED DURING THE CONSTRUCTION PROCESS SHALL BE CAPPED IN A MANNER THAT THE REMAINING PORTIONS OF THE SYSTEM ARE NOT COMPROMISED. EXISTING IRRIGATION LATERAL LINES, HEADS, WIRING AND ALL OTHER ASSOCIATED EQUIPMENT IMPACTED BY THE PROJECT CONSTRUCTION SHALL BE CAREFULLY CUT, CAPPED AND RELOCATED TO EXISTING LANDSCAPE AREAS. PRIOR TO COMPLETION, CONTRACTOR SHALL ENSURE THAT ALL EXISTING IRRIGATION SYSTEMS IMPACTED ARE IN FULL WORKING ORDER WITH COMPLETE HEAD TO HEAD COVERAGE INCLUDING NO OVERSPRAY ONTO HARDSCAPE SURFACES OR WALLS. ANY IRRIGATION EQUIPMENT DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN LIKE KIND BY THE CONTRACTOR

ALL CITY-MAINTAINED LANDSCAPES SHALL BE CONSTRUCTED ACCORDING TO CITY OF ROSEVILLE PARKS CONSTRUCTION STANDARDS, LATEST EDITION.

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LICENSED LANDSCAPE ARCHITECT — KEVIN A. HARRIS — No. 5922 — 9/30/2022 — Renewal Date — 6/24/2021 — STATE OF CALIFORNIA

KHA PROJECT	097918026
DATE	JUNE 2021
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	
CHECKED BY	

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

IR-01

IRRIGATION PLANS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 52 OF 60

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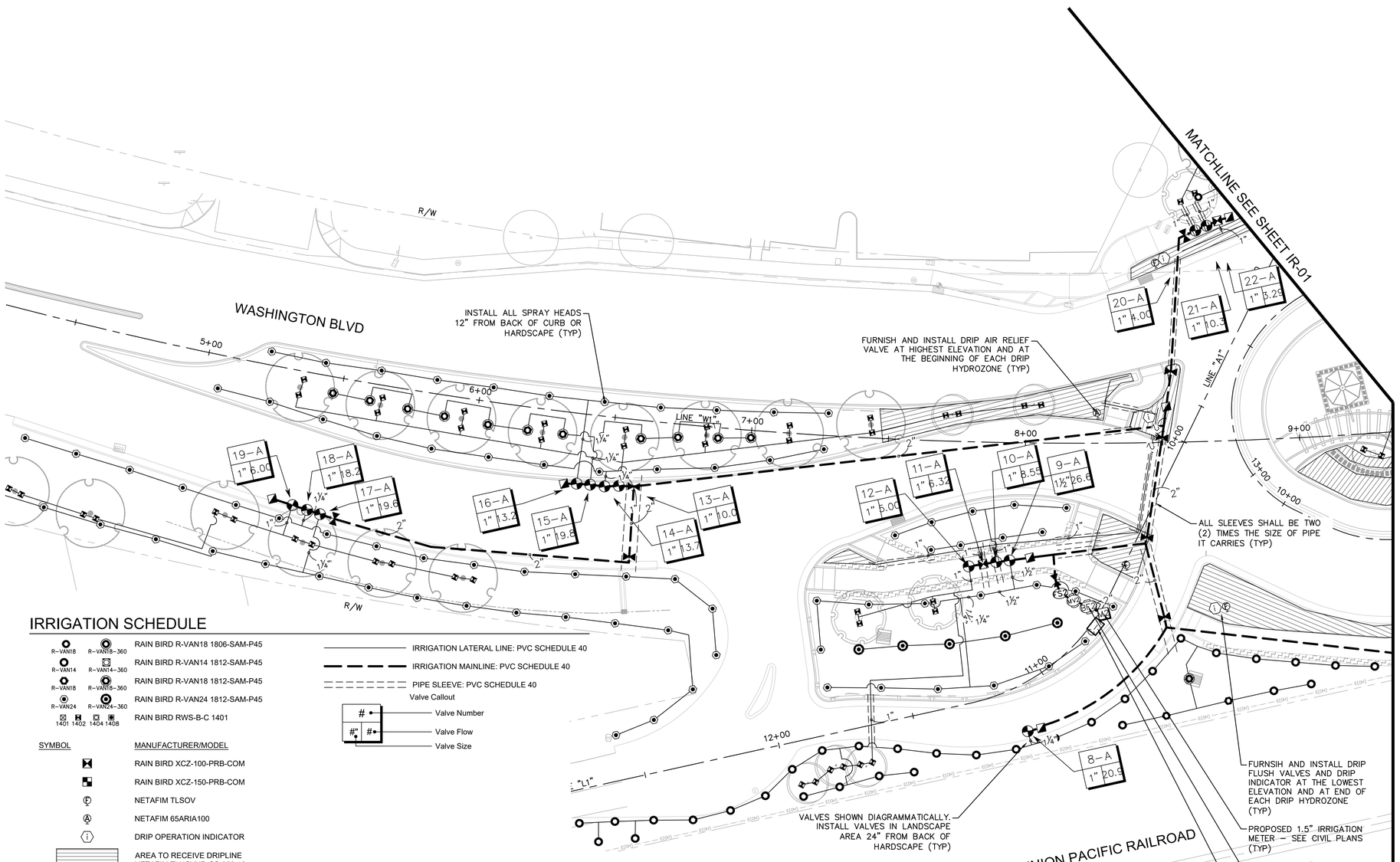

IRRIGATION SCHEDULE

R-VAN18	R-VAN18-360	RAIN BIRD R-VAN18 1806-SAM-P45
R-VAN14	R-VAN14-360	RAIN BIRD R-VAN14 1812-SAM-P45
R-VAN18	R-VAN18-360	RAIN BIRD R-VAN18 1812-SAM-P45
R-VAN24	R-VAN24-360	RAIN BIRD R-VAN24 1812-SAM-P45
1401 1402	1404 1408	RAIN BIRD RWS-B-C 1401

IRRIGATION LATERAL LINE: PVC SCHEDULE 40

IRRIGATION MAINLINE: PVC SCHEDULE 40

PIPE SLEEVE: PVC SCHEDULE 40

Valve Callout

Valve Number

Valve Flow

Valve Size

SYMBOL	MANUFACTURER/MODEL
	RAIN BIRD XCZ-100-PRB-COM
	RAIN BIRD XCZ-150-PRB-COM
F	NETAFIM TLSOV
A	NETAFIM 65ARIA100
I	DRIP OPERATION INDICATOR
	AREA TO RECEIVE DRIPLINE NETAFIM TLHCVXR-CS-053-18

SYMBOL	MANUFACTURER/MODEL
	RAIN BIRD PEB
	RAIN BIRD 44-LRC
	MATCO-NORCA 759
MV2	BUCKNER-SUPERIOR 3300 1-1/2"
MV	EXISTING 2" MASTER VALVE 2"
BF1	EXISTING 2" BACKFLOW 2"
BF2	FEBCO 825Y 1-1/2"
C	EXISTING CONTROLLER
A	"A" CS3-HUB-S/CS3-LR-KIT/FM-1B
FS2	CALSENSE FM-1.5B
FS1	EXISTING FLOW SENSOR

IRRIGATION MAINTENANCE SCHEDULE:

THE IRRIGATION MAINTENANCE SCHEDULE TASKS LISTED BELOW ARE INTENDED A S MINIMUM STANDARDS AND MORE FREQUENT ATTENTION MAY BE REQUIRED DEPENDING ON THE PARTICULAR SITE CONDITIONS. MAINTENANCE SHALL BE DONE TO ENSURE WATER EFFICIENCY. REPAIR OF IRRIGATION EQUIPMENT SHALL BE DONE WITH THE ORIGINALLY SPECIFIED MATERIALS OR APPROVED EQUIVALENTS.

FREQUENCY - QUARTERLY
TASK - CONTROLLER CABINET : OPEN CABINET AND CLEAN OUT DEBRIS AND REPLACE BATTERY AS NECESSARY.CHECK WIRING AND REPAIR AS NEEDED AND CHECK CLOCK AND RESET IF NECESSARY.

FREQUENCY - MONTHLY
TASK - IRRIGATION SCHEDULE: ADJUST SCHEDULE FOR SEASONAL VARIATIONS AND OTHER CONDITIONS WHICH MAY AFFECT THE AMOUNT OF WATER NEEDED TO MAINTAIN PLANT HEALTH. ADJUST AS NECESSARY.

FREQUENCY - QUARTERLY
TASK - POC: VISUALLY INSPECT COMPONENTS FOR LEAKS, PRESSURE SETTINGS, SETTLEMENT OR OTHER DAMAGE AFFECTING THE OPERATION OF A COMPONENT. REPAIR AS NEEDED.

FREQUENCY - QUARTERLY
TASK - REMOTE CONTROL VALVES : ISOLATION VALVES AND QUICK COUPLER VALVES: VISUALLY INSPECT FOR LEAKS, SETTLEMENTS, WIRE CONNECTIONS AND PRESSURE SETTINGS. REPAIR AS NEEDED.

FREQUENCY - QUARTERLY
TASK - MAINLINE AND LATERALS: VISUALLY INSPECT FOR LEAKS OR SETTLEMENTS OF TRENCH.

FREQUENCY - WEEKLY
TASK - FILTERS AND STRAINERS - VISUALLY CHECK FOR ANY BROKEN MALIGNED OR CLOGGED HEADS, HEADS WITH INCORRECT ARC, INADEQUATE COVERAGE OR OVERSPRAY AND LOW HEAD DRAINAGE. REPAIR AS NEEDED.

FREQUENCY - MONTHLY
TASK - FILTERS AND STRAINERS: VISUALLY CHECK FOR LEAKS, BROKEN FITTINGS. CLEAN AND FLUSH SCREENS.

GRAPHIC SCALE IN FEET
0 10 20 40

ALL CITY-MAINTAINED LANDSCAPES SHALL BE CONSTRUCTED ACCORDING TO CITY OF ROSEVILLE PARKS CONSTRUCTION STANDARDS, LATEST EDITION.

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2. MAINLINES SHOWN IN HARDSCAPE FOR GRAPHIC CLARITY ONLY. INSTALL ALL MAINLINES AND CONTROL WIRES IN PLANTING AREAS. IF SHOWN IN HARDSCAPE, INSTALL IN PLANTING AREA DIRECTLY ADJACENT.
3. LATERAL LINE SHOWN IN HARDSCAPE FOR CLARITY ONLY. INSTALL LATERAL LINES IN PLANTING AREAS. IF SHOWN IN HARDSCAPE, INSTALL IN PLANTING AREA DIRECTLY ADJACENT.
4. INSTALL NEW ELECTRIC CONTROL VALVES IN ADJACENT PLANTER. REFER TO IRRIGATION LEGEND FOR MAKE AND MODEL. WIRE TO NEW CONTROLLER, STATION NUMBER AS IDENTIFIED IN THE VALVE CALL-OUT, WITH NEW CONTROL WIRES INSTALLED AND WATERPROOF CONNECTORS AS PART OF THIS WORK.
5. INSTALL NEW QUICK COUPLERS IN ADJACENT PLANTER. REFER TO IRRIGATION LEGEND FOR MAKE AND MODEL. LOCATE QUICK COUPLERS SO THEY ARE EASILY ACCESSIBLE FROM ADJACENT HARDSCAPE.
6. INSTALL NEW BALL VALVES IN ADJACENT PLANTING AREA.
7. LIGHT POLES AND OTHER FIXED VERTICAL OBJECTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS FOR REFERENCE ONLY. CONTRACTORS SHALL ADJUST IRRIGATION TO ACCOMMODATE IN THE FIELD, PROVIDING 100% COVERAGE WITH NO OVER-SPRAY.
8. INSTALL SUPPLEMENTAL TREE BUBBLERS (TWO PER TREE). INSTALL PER LEGEND AND DETAILS. LOCATE ON SEPARATE VALVES FROM ALL OTHER IRRIGATION DEVICES.
9. LOCATE MANUAL FLUSH VALVES IN PLANTER AREAS AND IN THE LOWEST ELEVATION POINT OF THE DRIP ZONE.
10. HATCHED AREAS REPRESENT SUB-SURFACE DRIP LINE IRRIGATION. INSTALL PER DETAILS AND MANUFACTURERS RECOMMENDATION.
11. PROVIDE 12" MINIMUM CLEARANCE BETWEEN ALL OVERHEAD IRRIGATION SPRINKLERS AND THE PERIMETER HARDSCAPE.
12. THE CONTRACTOR SHALL ADJUST, RELOCATE, SALVAGE, REINSTALL AND/OR FURNISH AND INSTALL NEW IRRIGATION COMPONENTS IN LIKE KIND FOR ANY ADJACENT EXISTING IRRIGATION SYSTEM(S) IMPACTED BY THESE IMPROVEMENTS AND ENSURE THAT THEY ARE IN FULL WORKING ORDER PRIOR TO PROJECT COMPLETION. ANY IRRIGATION THAT IS REMOVED DURING THE CONSTRUCTION PROCESS SHALL BE CAPPED IN A MANNER THAT THE REMAINING PORTIONS OF THE SYSTEM ARE NOT COMPROMISED. EXISTING IRRIGATION LATERAL LINES, HEADS, WIRING AND ALL OTHER ASSOCIATED EQUIPMENT IMPACTED BY THE PROJECT CONSTRUCTION SHALL BE CAREFULLY CUT, CAPPED AND RELOCATED TO EXISTING LANDSCAPE AREAS. PRIOR TO COMPLETION, CONTRACTOR SHALL ENSURE THAT ALL EXISTING IRRIGATION SYSTEMS IMPACTED ARE IN FULL WORKING ORDER WITH COMPLETE HEAD TO HEAD COVERAGE INCLUDING NO OVERSPRAY ONTO HARDSCAPE SURFACES OR WALLS. ANY IRRIGATION EQUIPMENT DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN LIKE KIND BY THE CONTRACTOR

No.	REVISIONS	DATE	BY

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555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

LICENSED LANDSCAPE ARCHITECT — KEVIN J. MASUDA — No. 5494 — 9/30/2022 — 6/22/2021 — STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

IR-02

IRRIGATION PLANS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER 53 OF 60

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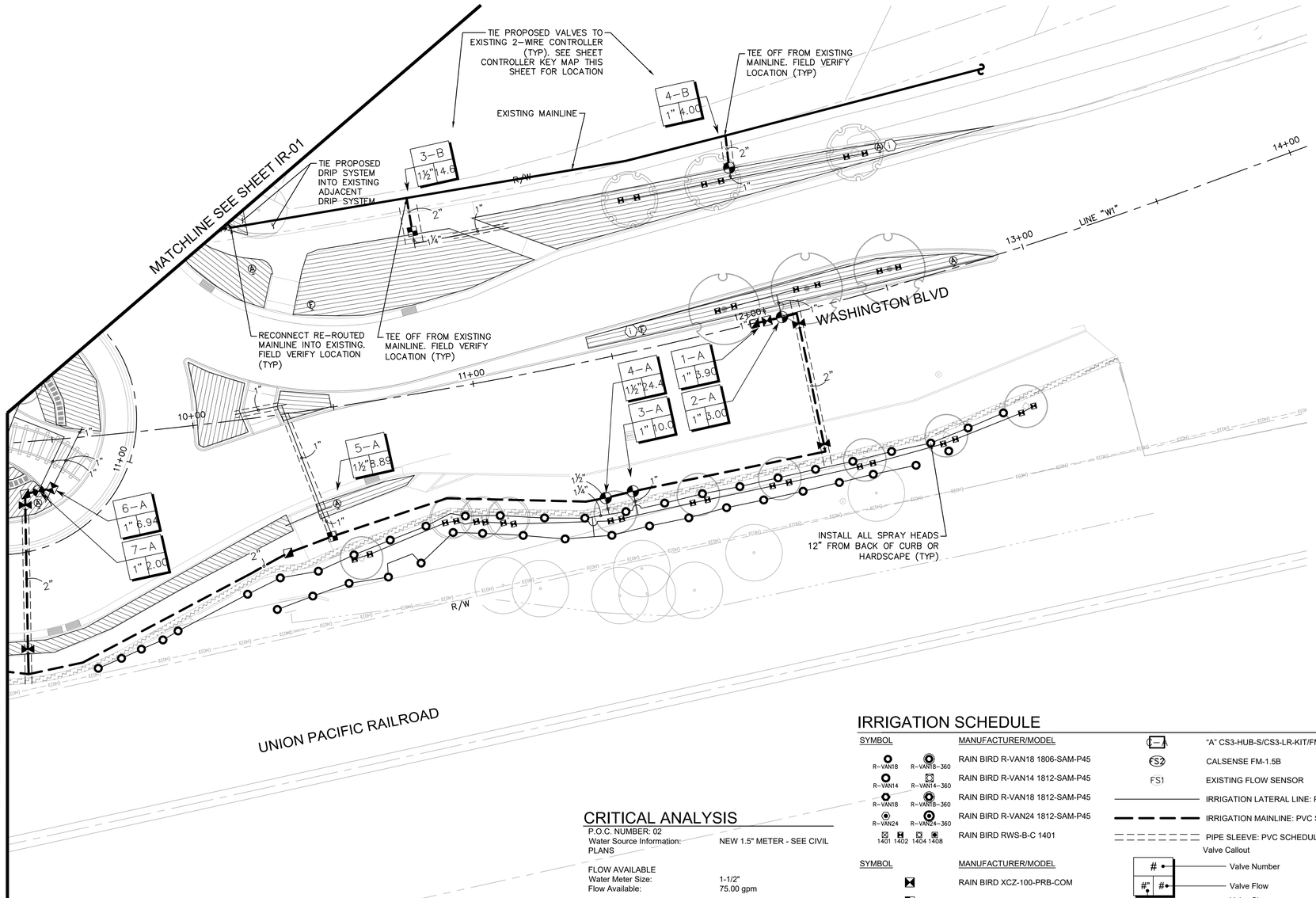
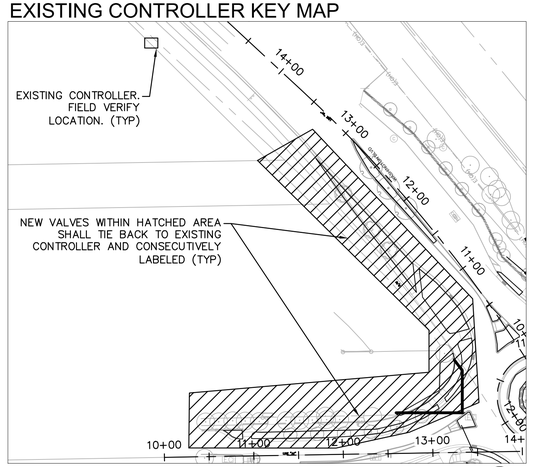


EXISTING CONTROLLER KEY MAP



IRRIGATION NOTES - TYPICAL FOR ALL LOCATIONS

1. ALL MAINLINES, WIRES, AND/OR LATERAL LINE SLEEVES TO BE 30" DEEP. UNDER NO CIRCUMSTANCES SHALL NEW IRRIGATION LINES AND WIRE BE INSTALLED UNDER HARDSCAPE WITHOUT A SLEEVE. ALL SLEEVES SHALL BE TWO (2) TIMES THE SIZE OF THE PIPE(S) IT CARRIES. BACKFILL WITH CLEAN NATIVE SOIL COMPACTED TO 90%. SEE LEGEND FOR SLEEVES.
2. MAINLINES SHOWN IN HARDSCAPE FOR GRAPHIC CLARITY ONLY. INSTALL ALL MAINLINES AND CONTROL WIRES IN PLANTING AREAS. IF SHOWN IN HARDSCAPE, INSTALL IN PLANTING AREA DIRECTLY ADJACENT.
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CRITICAL ANALYSIS

P.O.C. NUMBER: 02	
Water Source Information: PLANS	NEW 1.5" METER - SEE CIVIL
FLOW AVAILABLE	
Water Meter Size:	1-1/2"
Flow Available:	75.00 gpm
PRESSURE AVAILABLE	
Static Pressure at POC:	70.00 psi
Elevation Change:	5.00 ft
Service Line Size:	1-½"
Length of Service Line:	20.00 ft
Pressure Available:	68.00 psi
DESIGN ANALYSIS	
Maximum Multi-valve Flow:	37.50 gpm
Flow Available at POC:	75.00 gpm
Residual Flow Available:	37.50 gpm
Critical Station:	17-2
Design Pressure:	30.00 psi
Friction Loss:	3.26 psi
Fittings Loss:	0.33 psi
Elevation Loss:	0.00 psi
Loss through Valve:	2.86 psi
Pressure Req. at Critical Station:	36.43 psi
Loss for Fittings:	0.80 psi
Loss for Main Line:	7.97 psi
Loss for POC to Valve Elevation:	0.00 psi
Loss for Backflow:	12.10 psi
Loss for Master Valve:	1.53 psi
Loss for Water Meter:	2.95 psi
Critical Station Pressure at POC:	61.78 psi
Pressure Available:	68.00 psi
Residual Pressure Available:	6.22 psi

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL
R-VAN18 R-VAN18-360	RAIN BIRD R-VAN18 1806-SAM-P45
R-VAN14 R-VAN14-360	RAIN BIRD R-VAN14 1812-SAM-P45
R-VAN18 R-VAN18-360	RAIN BIRD R-VAN18 1812-SAM-P45
R-VAN24 R-VAN24-360	RAIN BIRD R-VAN24 1812-SAM-P45
1401 1402 1404 1408	RAIN BIRD RWS-B-C 1401

SYMBOL	MANUFACTURER/MODEL
	RAIN BIRD XCZ-100-PRB-COM
	RAIN BIRD XCZ-150-PRB-COM
P	NETAFIM TLSOV
A2	NETAFIM 65ARIA100
i	DRIP OPERATION INDICATOR
	AREA TO RECEIVE DRIPLINE NETAFIM TLHCVXR-CS-053-18

SYMBOL	MANUFACTURER/MODEL
	RAIN BIRD PEB
	RAIN BIRD 44-LRC
	MATCO-NORCA 759
MV2	BUCKNER-SUPERIOR 3300 1-1/2"
MV	EXISTING 2" MASTER VALVE 2"
BF1	EXISTING 2" BACKFLOW 2"
BF2	FEBCO 825Y 1-1/2"
C—B	EXISTING CONTROLLER

C—A	"A" CS3-HUB-S/CS3-LR-KIT/FM-1B
CS2	CALSENSE FM-1.5B
FS1	EXISTING FLOW SENSOR
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40
	IRRIGATION MAINLINE: PVC SCHEDULE 40
	PIPE SLEEVE: PVC SCHEDULE 40

Valve Callout

#	Valve Number
#" #	Valve Flow / Valve Size

GRAPHIC SCALE IN FEET
0 10 20 40

ALL CITY-MAINTAINED LANDSCAPES SHALL BE CONSTRUCTED ACCORDING TO CITY OF ROSEVILLE PARKS CONSTRUCTION STANDARDS, LATEST EDITION.

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PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

LANDSCAPE ARCHITECT — KEVIN M. HARRIS — 6/30/2022 — 6/22/2021 — STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

IR-03

IRRIGATION PLANS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
54 OF 60

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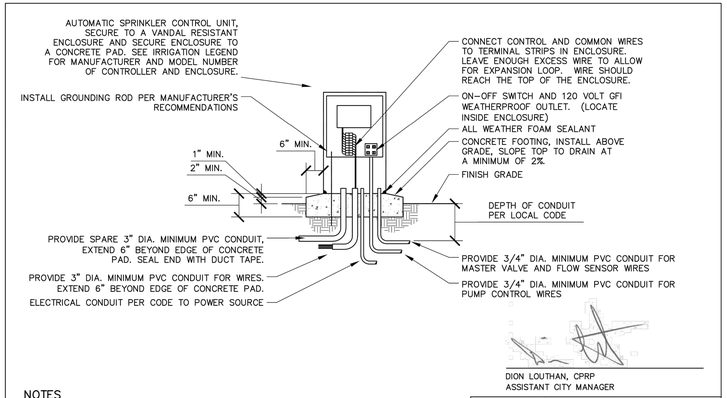


DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

NOTES
1. COMMON WIRE TO BE WHITE & CONTROL WIRE TO BE RED IN COLOR. BUNDLE AND TAPE AT INTERVALS OF 10 FT. O. C.
2. NO SPLICES SHALL BE MADE BETWEEN CONTROLLER AND REMOTE CONTROL VALVES UNDER 500 LINEAL FEET.
3. ORDER WITH MANUFACTURER'S FACTORY FINISH STAINLESS STEEL.
4. INSULATE AROUND INSIDE BASE OF BOX WITH ALL WEATHER FOAM SEALANT.
5. GROUNDING ROD SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS..
6. GROUND TEST TO BE CONDUCTED AFTER INSTALLATION, NOT TO EXCEED 25 OHMS.
7. MASTER VALVE WIRE SHALL BE BLUE.
8. PROVIDE COLOR CODED MAP OF VALVE LOCATIONS.

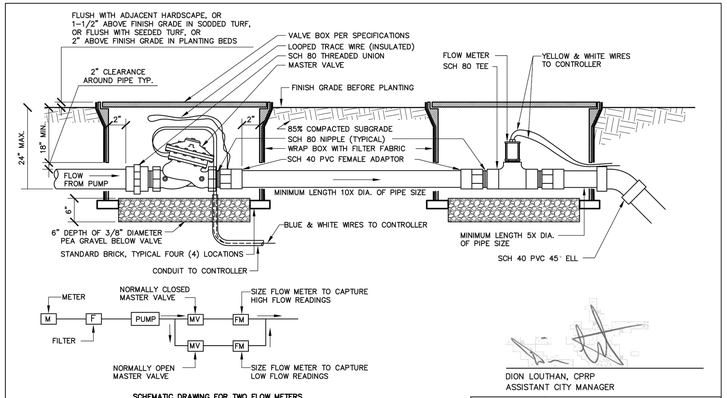
CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

CONTROLLER

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-1

1 CITY STANDARD DETAIL
NTS



SCHEMATIC DRAWING FOR TWO FLOW METERS

DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

NOTES
1. INSTALL VALVES A MINIMUM OF 12" FROM STRUCTURES OR HARDSCAPING.
2. INSTALL VALVES IN PLANTER BEDS WHEREVER POSSIBLE.
3. PLACE VALVE BOX AT RIGHT ANGLES TO STRUCTURES OR HARDSCAPING.
4. INSTALL VALVE BOX SO THAT TOP OF BOX IS FLUSH WITH ADJACENT HARDSCAPING.
5. USE TEFLON TAPE ON ALL MALE THREADS.
6. INSULATE AROUND PIPE AT BOX OPENINGS WITH PLASTIC SHEETING TO PREVENT SOIL FROM ENTERING BOX.
7. REFER TO SPECIFICATIONS FOR REQUIREMENTS FOR TAPING, EXPANSION COILS, WIRE CONNECTIONS, ETC.
8. FOR USE WITH CALSENSE CONTROLLERS ONLY.

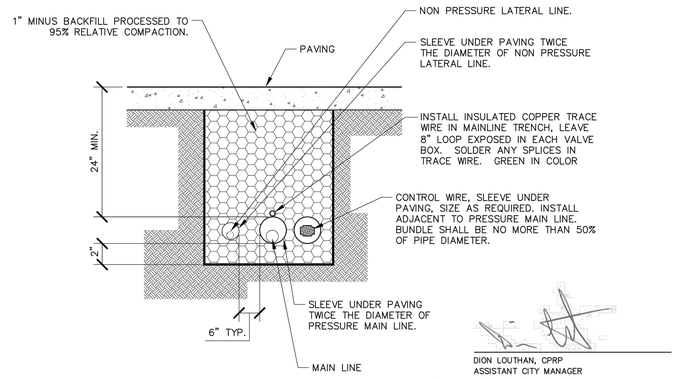
CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

MASTER VALVE CALSENSE

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-2

2 CITY STANDARD DETAIL
NTS



DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

NOTES
1. ALL SLEEVES TO BE SCHEDULE 40 PVC.
2. EXTEND ALL SLEEVES 12" BEYOND EDGE OF HARDSCAPING.
3. CAP BOTH ENDS OF ALL SPARE SLEEVES AND MARK BOTH ENDS WITH 3M LOCATOR BALLS.
4. INSTALL SPARE SLEEVE UNDER ROADWAYS

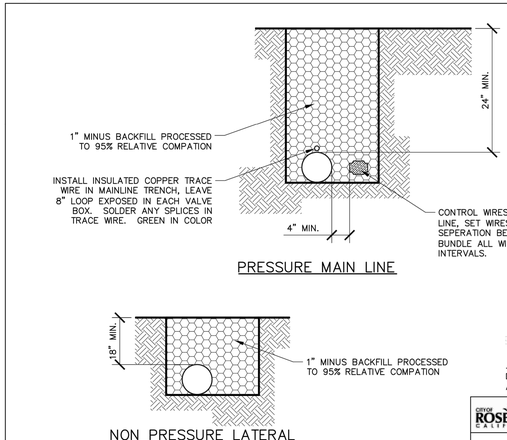
CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

PIPE AT PAVEMENT

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-5

3 CITY STANDARD DETAIL
NTS



PRESSURE MAIN LINE

NON PRESSURE LATERAL

DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

NOTES
1. RECLAIMED WATER REQUIRES BURIED TAPE LINE PER PUBLIC WORKS CONSTRUCTION STANDARDS.

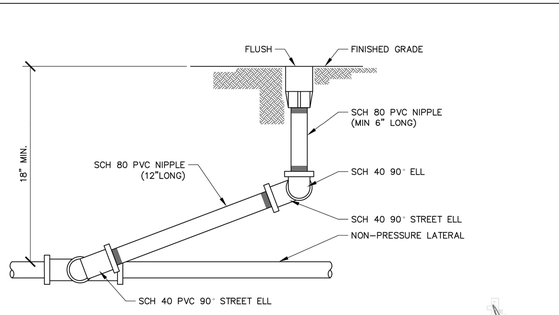
CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

PIPE TRENCH

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-6

4 CITY STANDARD DETAIL
NTS



DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

NOTES
1. LOCATE HEAD 2" FROM WALKS, CURBS, HARDSCAPING, MOW STRIPS, AND HEADER BOARDS, OR AS REQUIRED BY CURRENT WELO REGULATIONS.
2. LOCATE HEAD 12" FROM ALL STRUCTURES.
3. USE TEFLON TAPE ON ALL THREADED FITTINGS. DO NOT USE MARLEX FITTINGS.
4. SWING JOINT ASSEMBLY PIPE SIZE MUST MATCH INLET SIZE OF SPRINKLER.
5. PREFABRICATED SWING JOINTS ARE ALLOWED, UPON APPROVAL.

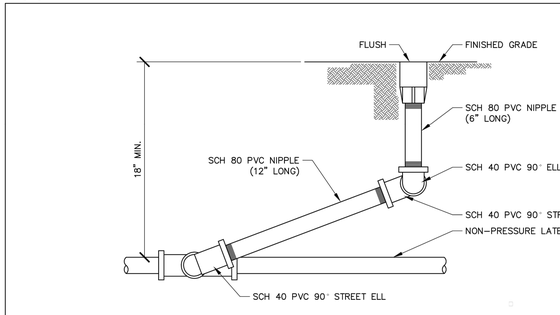
CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

POP-UP ROTOR

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-7

5 CITY STANDARD DETAIL
NTS



DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

NOTES
1. LOCATE HEAD 2" FROM WALKS, CURBS, HARDSCAPING, MOW STRIPS, AND HEADER BOARDS, OR AS REQUIRED BY CURRENT WELO REGULATIONS.
2. LOCATE SPRAY HEADS 12" FROM ALL STRUCTURES IN TURF AREAS AND 6" FROM ALL STRUCTURES IN GROUND-COVER AREAS.
3. USE TEFLON TAPE ON ALL THREADED FITTINGS. DO NOT USE MARLEX FITTINGS.
4. PREFABRICATED SWING JOINT ARE ALLOWED, UPON APPROVAL.
5. 6" LONG SCH 80 PVC RISER NIPPLE NOT REQUIRED FOR 12" POPUP HEADS.

CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

POP-UP SPRAY

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-8

6 CITY STANDARD DETAIL
NTS

ALL CITY-MAINTAINED LANDSCAPES SHALL BE CONSTRUCTED ACCORDING TO CITY OF ROSEVILLE PARKS CONSTRUCTION STANDARDS, LATEST EDITION.

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555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

LICENSED LANDSCAPE ARCHITECT — TIMOTHY A. GEE — No. 5887 — 9/30/2022 — STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT
ID-01
IRRIGATION DETAILS
CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
55 OF 60

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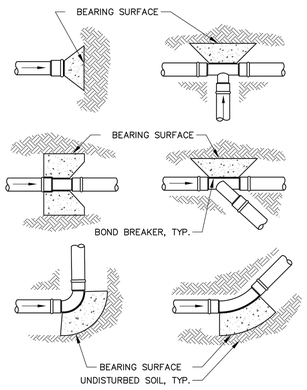


MINIMUM BEARING SURFACE AREA

PIPE SIZE	TEE AND PLUG	90 DEGREE BEND	45 DEGREE BEND
1-1/2"	0.45 SQ. FT.	0.63 SQ. FT.	0.34 SQ. FT.
2"	0.69 SQ. FT.	0.97 SQ. FT.	0.53 SQ. FT.
2-1/2"	1.0 SQ. FT.	1.41 SQ. FT.	0.77 SQ. FT.
3"	1.48 SQ. FT.	2.10 SQ. FT.	1.14 SQ. FT.
4"	2.43 SQ. FT.	3.45 SQ. FT.	1.87 SQ. FT.
6"	5.25 SQ. FT.	7.41 SQ. FT.	4.02 SQ. FT.
8"	9.08 SQ. FT.	12.83 SQ. FT.	6.96 SQ. FT.
10"	14.93 SQ. FT.	21.07 SQ. FT.	11.44 SQ. FT.

NOTES
1. SIZE THRUST BLOCKS AS SPECIFIED ABOVE.
2. DO NOT ENCASE CONTROL WIRES IN THE CONCRETE.
3. ALL FITTINGS MUST BE WRAPPED WITH POLYETHYLENE TO PREVENT CONCRETE FROM ADHERING TO BOLTS OR PIPES.
4. JOINTS AND BOLTS SHALL BE ACCESSIBLE FOR REPAIRS.

DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

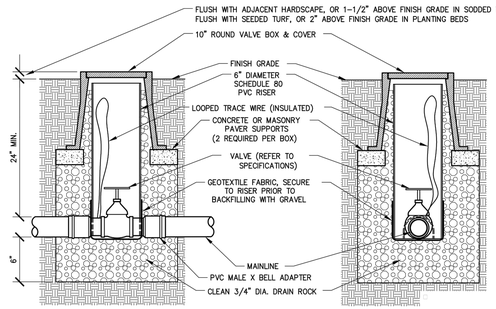
CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

THRUST BLOCKS

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-10

1 CITY STANDARD DETAIL
NTS



NOTES
1. COMPACT SOIL AROUND BOX TO 90% MINIMUM COMPACTION.
2. PLACE DRAIN ROCK PRIOR TO INSTALLING VALVE BOX.
3. GATE VALVE AND FITTINGS SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
4. USE TEFLON TAPE ON ALL THREADED FITTINGS.
5. LOCATE VALVES IN SHRUB/GROUNDCOVER AREAS WHENEVER POSSIBLE.
6. LOOP EXTRA TRACER WIRE UP TO TOP OF BOX.

DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

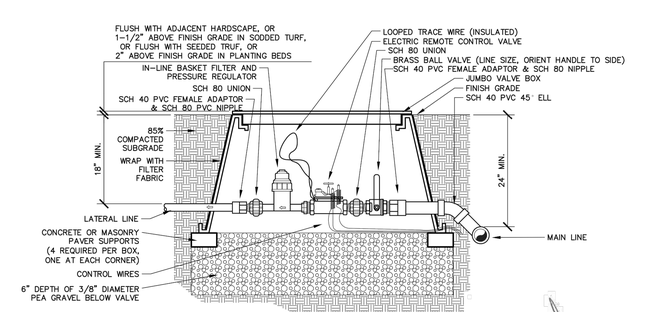
CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

VALVE
3" AND SMALLER

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-11

2 CITY STANDARD DETAIL
NTS



NOTES
1. INSTALL VALVES A MINIMUM OF 12" FROM STRUCTURES OR HARDSCAPING.
2. INSTALL VALVES IN PLANTER BEDS WHEREVER POSSIBLE.
3. PLACE VALVE BOX AT RIGHT ANGLES TO STRUCTURES OR HARDSCAPING.
4. INSTALL VALVE BOX SO THAT TOP OF BOX IS FLUSH WITH ADJACENT HARDSCAPING.
5. USE TEFLON TAPE ON ALL MALE THREADS.
6. PROVIDE SCHEDULE 80 THREADED UNION ON DOWNSTREAM SIDE.
7. INSULATE AROUND PIPE AT BOX OPENINGS WITH PLASTIC SHEETING TO PREVENT SOIL FROM ENTERING BOX.
8. REFER TO SPECIFICATIONS FOR REQUIREMENTS FOR TAPING, EXPANSION COILS, WIRE CONNECTIONS, ETC.
9. ALL RCV'S SHALL BE TAGGED INDICATING STATION #'S.
10. ALL VALVE BOXES SHALL HAVE STATION #'S PERMANENTLY BURNED ON VALVE BOX LIDS. MARKINGS SHALL BE AS FOLLOWS:
TURF VALVES: T#
LANDSCAPE AREA VALVES: L#
BUBBLER VALVES: B#

DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

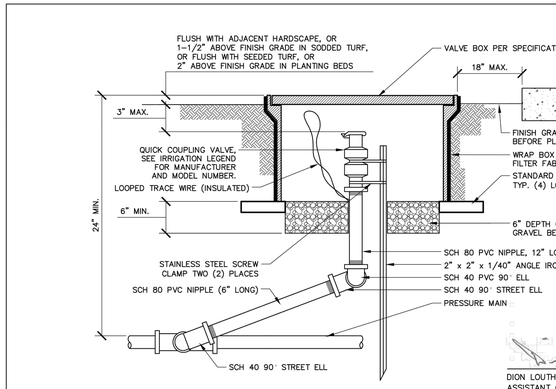
CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

VALVE
DRIP CONTROL

SCALE: NONE.
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-13

3 CITY STANDARD DETAIL
NTS



NOTES
1. INSTALL VALVE BOXES SO THAT THE TOP OF THE BOX IS FLUSH WITH THE TOP OF THE ADJACENT HARDSCAPE.
2. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

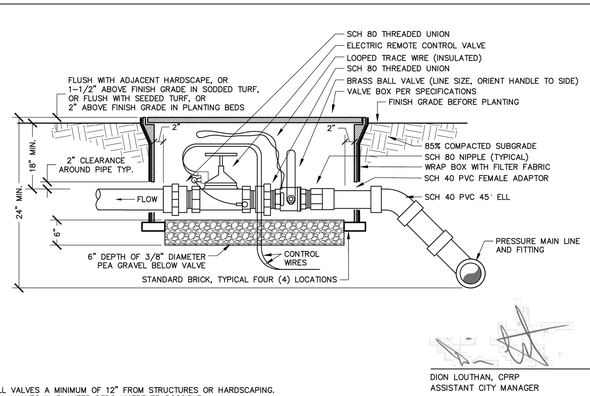
CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

VALVE
QUICK COUPLING

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-14

4 CITY STANDARD DETAIL
NTS



NOTES
1. INSTALL VALVES A MINIMUM OF 12" FROM STRUCTURES OR HARDSCAPING.
2. INSTALL VALVES IN PLANTER BEDS WHEREVER POSSIBLE.
3. PLACE VALVE BOX AT RIGHT ANGLES TO STRUCTURES OR HARDSCAPING.
4. INSTALL VALVE BOX SO THAT TOP OF BOX IS FLUSH WITH ADJACENT HARDSCAPING.
5. USE TEFLON TAPE ON ALL MALE THREADS.
6. PROVIDE SCHEDULE 80 THREADED UNION ON DOWNSTREAM SIDE.
7. INSULATE AROUND PIPE AT BOX OPENINGS WITH PLASTIC SHEETING TO PREVENT SOIL FROM ENTERING BOX.
8. REFER TO SPECIFICATIONS FOR REQUIREMENTS FOR TAPING, EXPANSION COILS, WIRE CONNECTIONS, ETC.
9. ALL RCV'S SHALL BE TAGGED INDICATING STATION #'S.
10. ALL VALVE BOXES SHALL HAVE STATION #'S PERMANENTLY BURNED ON VALVE BOX LIDS. MARKINGS SHALL BE AS FOLLOWS:
TURF VALVES: T#
LANDSCAPE AREA VALVES: L#
BUBBLER VALVES: B#

DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

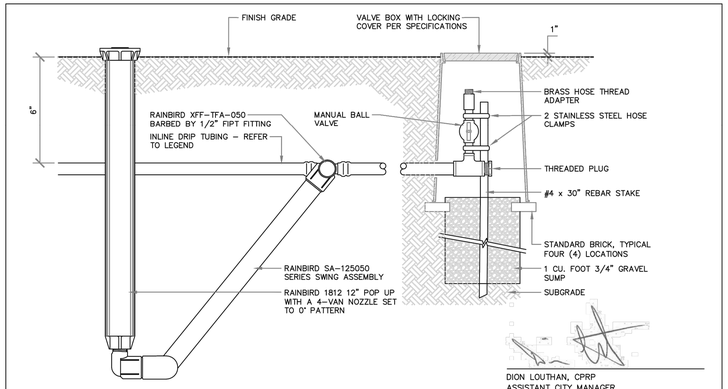
CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

VALVE
REMOTE CONTROL AT GRADE

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-15

5 CITY STANDARD DETAIL
NTS



NOTES
1. CENTER BALL VALVE IN VALVE BOX OPENING TO ALLOW EASY ACCESS.
2. INSTALL OPERATION INDICATOR WITHIN 18" OF FLUSH VALVE.
3. PLACE VALVE BOX AT RIGHT ANGLES TO STRUCTURES OR HARDSCAPING.
4. USE TEFLON TAPE ON ALL MALE THREADS.
5. INSTALL 3M LOCATOR BALLS AT ALL BOXES.
6. REFER TO SPECIFICATIONS FOR REQUIREMENTS FOR TAPING, EXPANSION COILS, WIRE CONNECTIONS, ETC.

DION LOUTHAN, CPRP
ASSISTANT CITY MANAGER

CITY OF ROSEVILLE CALIFORNIA — PARKS, RECREATION, & LIBRARIES DEPARTMENT

DRIP FLUSH VALVE
AND OPERATION INDICATOR

SCALE: NONE
REVISED: JULY 2019
REVIEWED BY: T. GEE
APPROVED BY: D. LOUTHAN

PK-16

6 CITY STANDARD DETAIL
NTS

ALL CITY-MAINTAINED LANDSCAPES SHALL BE CONSTRUCTED ACCORDING TO CITY OF ROSEVILLE PARKS CONSTRUCTION STANDARDS, LATEST EDITION.

811 Know what's below. Call before you dig.

No.	REVISIONS	DATE	BY

Kimley»Horn
555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

LICENSED LANDSCAPE ARCHITECT — 5616 — 9/30/2022 — Renewal Date — 9/30/2021 — STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

ID-02

IRRIGATION DETAILS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
56 OF 60

K:\SAC_TPTO\ROSEVILLE WASHINGTON @ ALL AMERICA RAB - 097918026\08 CADD\PLANSHEETS\VR-01 IRRIGATION PLANS.DWG
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WATERING TIME ADJUSTMENT (HYDROZONE 'A' DRIP)												
MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
MAXIMUM MINUTES PER START TIME	16	16	16	16	16	16	16	16	16	16	16	16
START TIMES PER WEEK	2	3	4	6	6	8	8	8	6	4	3	2
TOTAL MINUTES PER WEEK	32	48	64	96	96	128	128	128	96	64	48	32

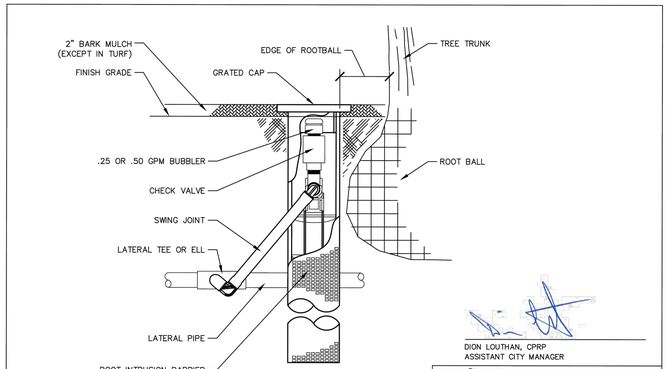
WATERING TIME ADJUSTMENT (HYDROZONE 'B' BUBBLER)												
MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
MAXIMUM MINUTES PER START TIME	5	5	5	5	5	5	5	5	5	5	5	5
START TIMES PER WEEK	2	2	3	4	5	6	6	6	4	3	2	2
TOTAL MINUTES PER WEEK	10	10	15	20	25	30	30	30	20	15	10	10

WATERING TIME ADJUSTMENT (HYDROZONE 'C' ROTARY)												
MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
MAXIMUM MINUTES PER START TIME	22	22	22	22	22	22	22	22	22	22	22	22
START TIMES PER WEEK	1	2	2	3	3	4	4	4	3	2	1	1
TOTAL MINUTES PER WEEK	22	44	44	66	66	88	88	88	66	44	22	22

NOTES:
1. WATERING REQUIREMENTS ARE APPROXIMATE PER SEASON AND SHOULD BE ADJUSTED TO REFLECT SEASONAL FLUCTUATIONS IN AVERAGE PRECIPITATION.
2. "IRRIGATION SCHEDULING INFORMATION" IS TO BE USED FOR WATERING TIME/DURATION/FREQUENCY FOR THE FIRST THREE YEARS, HOWEVER THE SYSTEM SHOULD BE MONITORED FREQUENTLY AND ADJUSTED TO MEET THE NEEDS OF THE PLANT MATERIAL AS MATURE ROOT SYSTEMS DEVELOP.
3. ALL PLANTS TO RECEIVE APPROPRIATE ADDITIONAL 15% HIGHER WATERING DURING INSTALLATION PERIOD IN ORDER TO ESTABLISH HEALTHY AND DEEP ROOT GROWTH.

*PRE AND POST ESTABLISHMENT IRRIGATION RUN TIME SCHEDULE

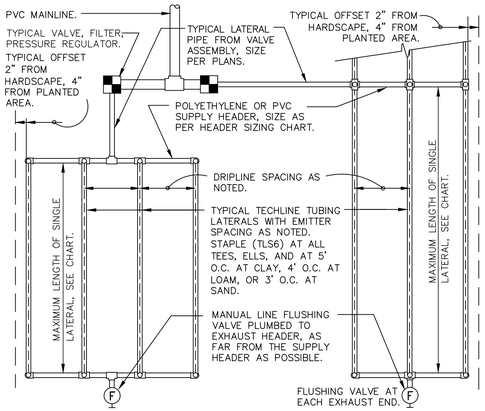
NTS



NOTE
1. INSTALL FILTER FABRIC SLEEVE
2. SEE PLANS AND SPECS FOR APPROVED MANUFACTURERS AND MODEL NUMBERS

1 CITY STANDARD DETAIL

NTS

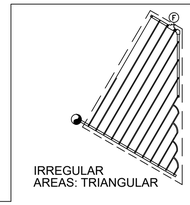


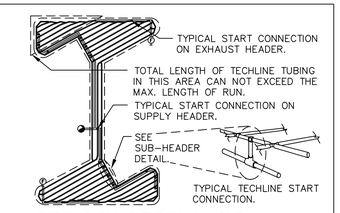
TECHLINE CV MAXIMUM LENGTH OF SINGLE LATERAL (FEET)											
DRIPPER SPACING		12"				18"				24"	
DRIPPER FLOW RATE (GPH)		0.26	0.4	0.6	0.9	0.26	0.4	0.6	0.9	0.6	0.9
INLET PRESSURE (PSI)	15	127	109	86	65	177	151	120	91	152	116
	25	427	325	256	194	604	459	361	274	458	348
	35	539	409	322	244	763	579	456	346	580	440
	45	618	469	369	280	877	664	523	397	666	506

TECHLINE FLOW PER 100 FEET								
DRIPPER SPACING	0.26 GPH DRIPPER		0.4 GPH DRIPPER		0.6 GPH DRIPPER		0.9 GPH DRIPPER	
	GPH	GPM	GPH	GPM	GPH	GPM	GPH	GPM
12"	26.40	0.44	40.00	0.67	61.00	1.02	92.00	1.53
18"	17.58	0.29	26.67	0.44	41.00	0.68	61.00	1.02
24"	N/A	N/A	N/A	N/A	31.00	0.51	46.00	0.77

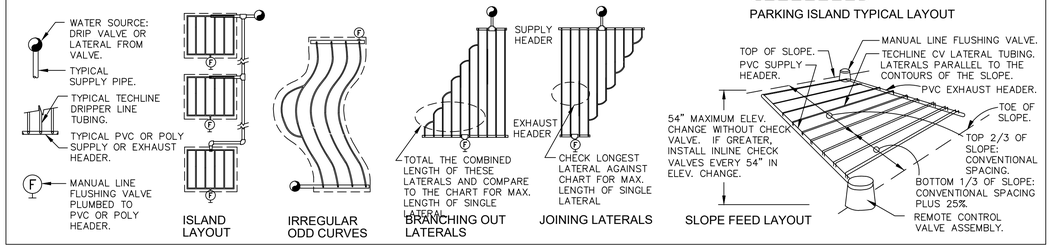
SUPPLY AND EXHAUST HEADER SIZING CHART (UNLESS NOTED ON PLANS)
STEP 1: ADD LENGTH OF ALL TECHLINE LATERAL TUBING CONNECTED TO THE HEADER.
STEP 2: DIVIDE THIS TOTAL LENGTH BY 100 TO INDICATE THE LENGHT IN UNITS OF 100.
STEP 3: LOCATE THE GPM THAT APPLIES FOR EACH UNIT OF 100 FEET LENGTH ON THE CHART "TECHLINE FLOW PER 100 FEET". MULTIPLY THIS GPM NUMBER TIMES THE UNITS OF 100 FEET FOR THE TOTAL GPM AT THIS HEADER.
STEP 4: SIZE THE HEADER WITH THE FOLLOWING:
1 TO 6 GPM: 3/4" HEADER. 6 TO 10 GPM: 1" HEADER.
10 TO 20 GPM: 1 1/4" HEADER. 20 TO 30 GPM: 1 1/2" HEADER.

TECHLINE CV GENERAL GUIDELINES FOR WATERING TIME						
	TURF			SHRUB & GROUND COVER		
	CLAY	LOAM	SANDY	CLAY	LOAM	SANDY
DIPPER FLOW (GPH)	0.26	0.4	0.6	0.26	0.4	0.6
DRIPPER INTERVAL	18"	12"	12"	18"	18"	12"
LATERAL (ROW) SPACING	18"-22"	18"-22"	12"-16"	18"-24"	18"-24"	16"-20"
APPLICATION RATE (IN/HR)	.19-0.15	.43-.35	.96-.72	.19-.21	.29-.21	.72-.58
TIME TO APPLY 1/4"	79-100	35-43	16-21	79-107	52-71	21-26



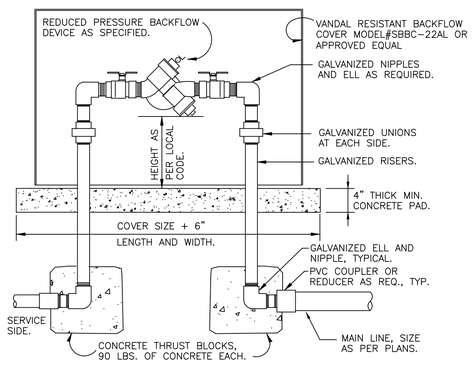


PARKING ISLAND TYPICAL LAYOUT



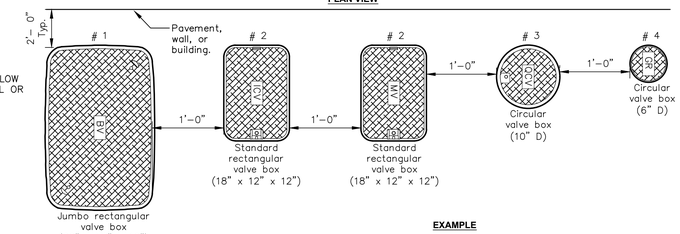
2 TYPICAL NETAFIM TECHLINE CV REQUIREMENTS

N.T.S.



3 RP BACKFLOW W/ENCLOSURE

NOT TO SCALE



Water type	Controller	Designation	Box size	Lid Color	Identification Guide
RW	A	MV	# 2	Green	Master valve
RW	A	FS	# 2	Green	Flow sensor
RW	A	HM	# 2	Green	Hydrometer
RW	A	BV	# 2	Green	Ball valve 3" or less
RW	A	BV	# 1	Green	Ball valve 4" or more
RW	A	GV	# 2	Green	Gate valve
RW	A	ARV	# 2	Green	Air release valve
RW	A	QCV	# 3	Green	Quick coupler valve
RW	A	RCV	# 2	Green	Remote control valve
RW	A	MS	# 2	Green	Moisture sensor
RW	A	GR	# 4	Green	Grounding rod
RW	A	SB	# 3	Green	Splice box
RW	A	FC	# 3	Green	Future connection

EXAMPLE

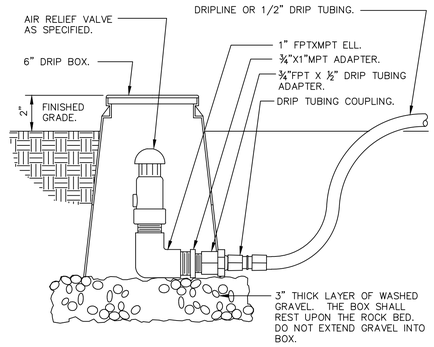
Potable water system on Controller 'A', Remote control valve station # 3.

Notes:

1- Valve box # 1 thru # 3 shall have stainless steel locking hardware.
2- Valve boxes shall be labeled by hot iron branding or aluminum asphaltic base water proof paint.
3- Locate valve assemblies in planting area.
4- Valve locations shall be approved by the Owner's Representative prior to installation.
5- Valve boxes shall be centered above valve assemblies to facilitate access and maintenance.
6- Valve boxes shall be flush with finished grade.
7- Valve boxes shall be set parallel to each other and perpendicular to the edge of pavement.
8- See other irrigation details for further information.

4 VALVE BOX LAYOUT

NTS



5 DRIP AIR RELIEF VALVE IN BOX

NOT TO SCALE

ALL CITY-MAINTAINED LANDSCAPES SHALL BE CONSTRUCTED ACCORDING TO CITY OF ROSEVILLE PARKS CONSTRUCTION STANDARDS, LATEST EDITION.

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No.	REVISIONS	DATE	BY

Kimley»Horn
555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

PROFESSIONAL LANDSCAPE ARCHITECT — TIMOTHY J. GEE — No. 5600 — 9/30/2022 — STATE OF CALIFORNIA — 6/22/2021

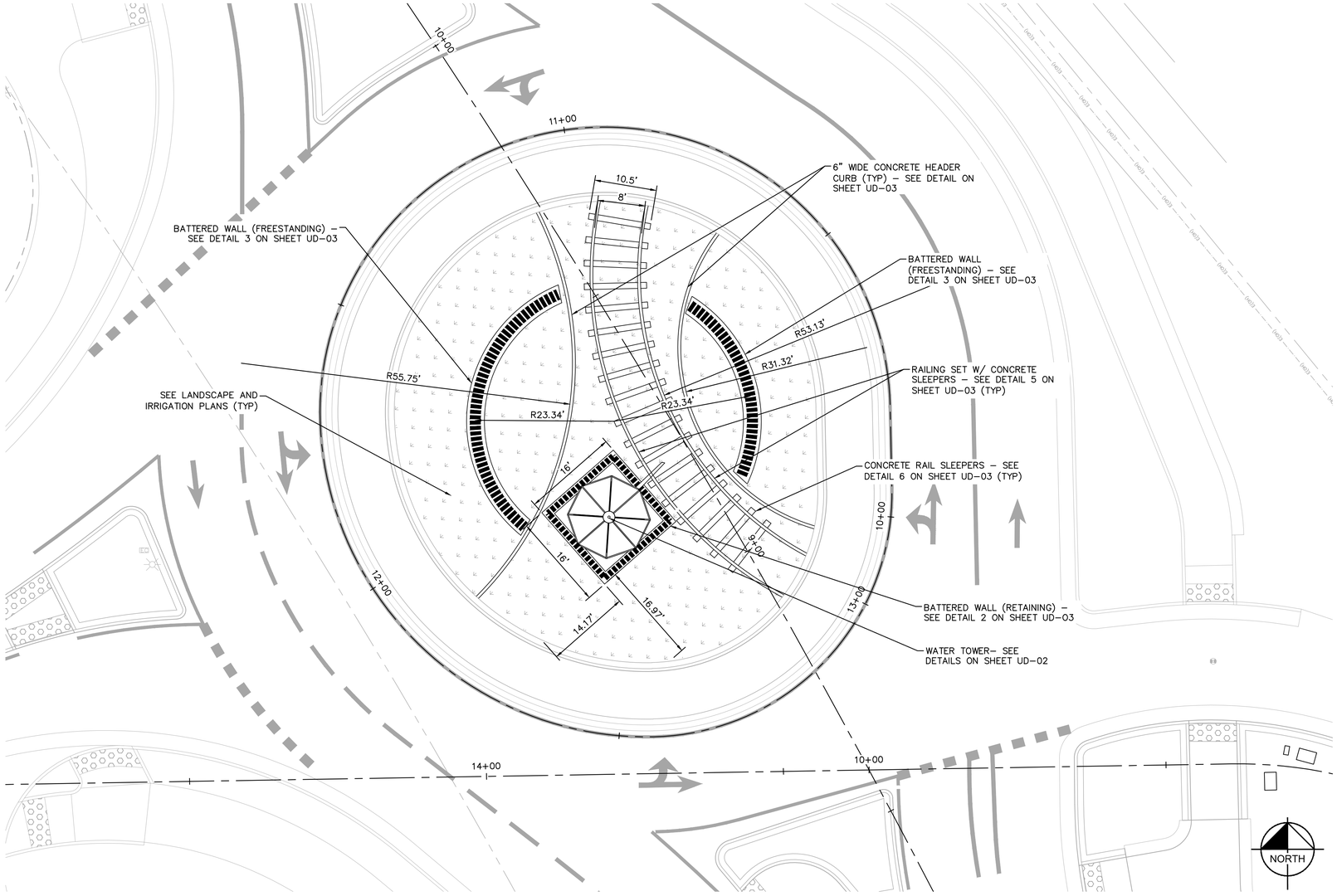
KHA PROJECT 097918026	
DATE	JUNE 2021
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	
CHECKED BY	

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

ID-03

IRRIGATION DETAILS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA



1 ROUNDABOUT URBAN DESIGN (PLAN)
SCALE: 1"=10'

NOTE: FOR INFORMATION ONLY. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SIGNED BY A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF CALIFORNIA FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND/OR CONSTRUCTION. DIGITAL FILES AVAILABLE UPON REQUEST.

GRAPHIC SCALE IN FEET
0 5 10 20

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555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

REGISTERED LANDSCAPE ARCHITECT
KEVIN A. MASSEY
No. 5494
9/30/2022
6/24/2021
STATE OF CALIFORNIA

KHA PROJECT	097918026
DATE	JUNE 2021
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	
CHECKED BY	

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

UD-01

URBAN DESIGN DETAILS

CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
58 OF 60

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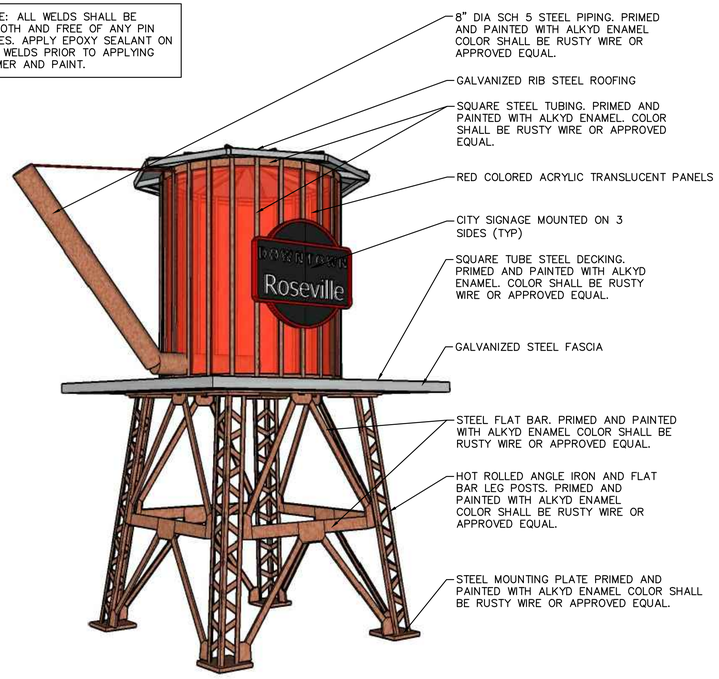
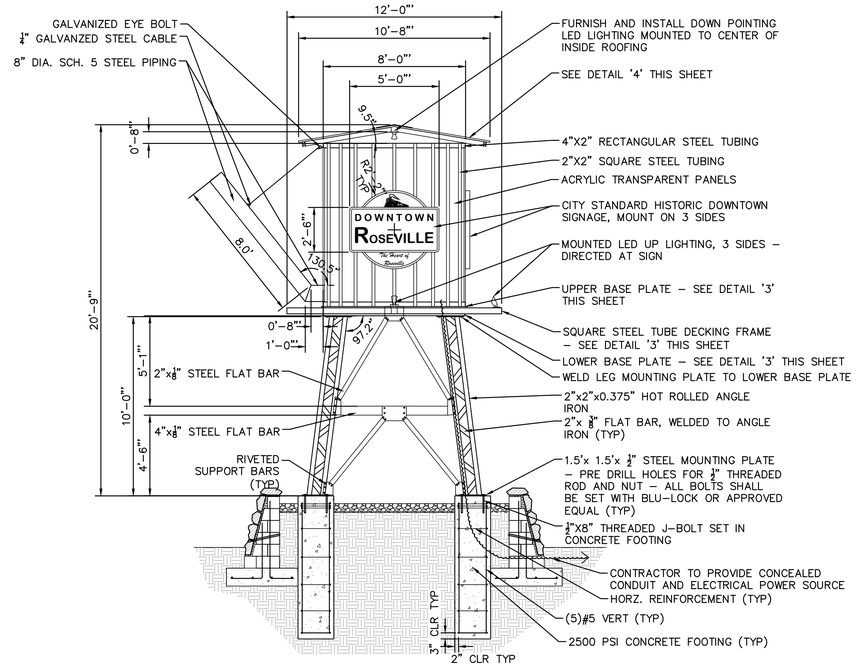
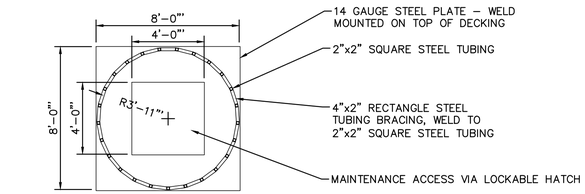
NOTE: ALL WELDS SHALL BE SMOOTH AND FREE OF ANY PIN HOLES. APPLY EPOXY SEALANT ON ALL WELDS PRIOR TO APPLYING PRIMER AND PAINT.

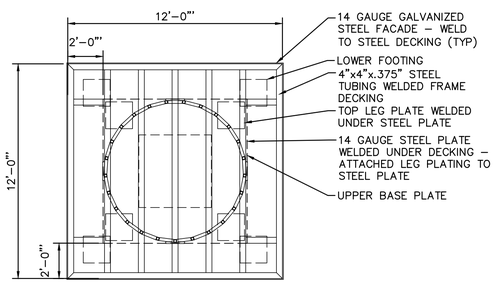


1 WATER TOWER - ISOMETRIC
NTS

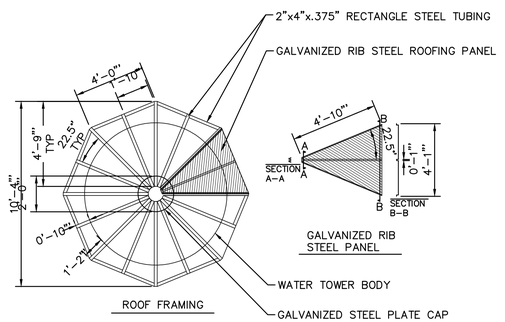


2 WATER TOWER
SCALE: 1"=3'





3 WATER TOWER - STEEL DECKING AND BASE PLATE
SCALE: 1"=3'



4 WATER TOWER - STEEL ROOFING
SCALE: 1"=3'

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555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

LICENSED LANDSCAPE ARCHITECT — KEVIN A. HARRIS — No. 5922 — 9/30/2022 — STATE OF CALIFORNIA — 6/22/2021

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT
UD-02
URBAN DESIGN DETAILS
CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

SHEET NUMBER
59 OF 60

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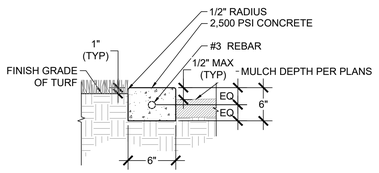
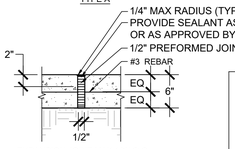
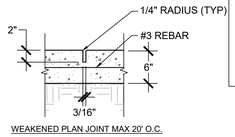


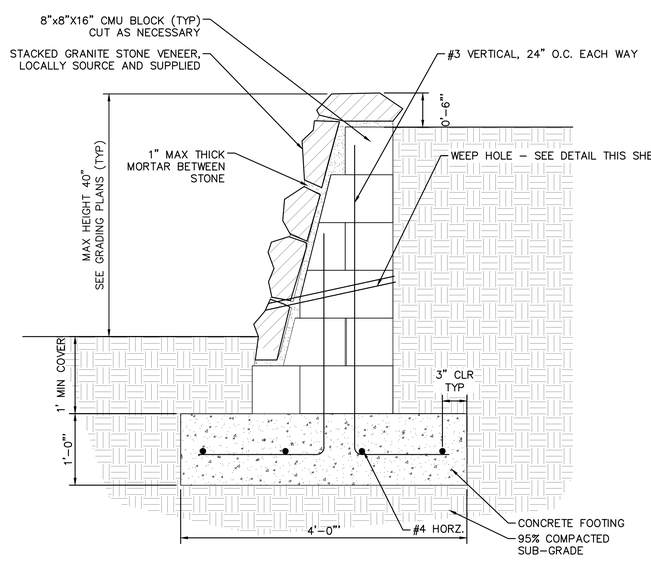




NOTES:
1. REBAR SHALL BE CONTINUOUS WITH 18" OVERLAP WHERE SPLICED.
2. INSTALL EXPANSION JOINTS WHERE THE MOWING STRIP ABUTS CONCRETE IMPROVEMENT AND AT LOCATION APPROVED BY THE ENGINEER
3. STRAIGHT SECTIONS TO MEET CURVED SECTIONS AT TRUE TANGENT POINTS WITH NO BROKEN CURVE SECTIONS.
4. CURVED SECTIONS TO BE FORMED IN SMOOTH, EVEN CURVES AS SHOWN ON PLANS.
5. FORM STAKING SHALL NOT ALLOW DEFORMING OR LEAKING. ALL SPILL OF EXCESS CONCRETE SHALL BE CLEANED UP AND REMOVED FROM SITE BY CONTRACTOR.

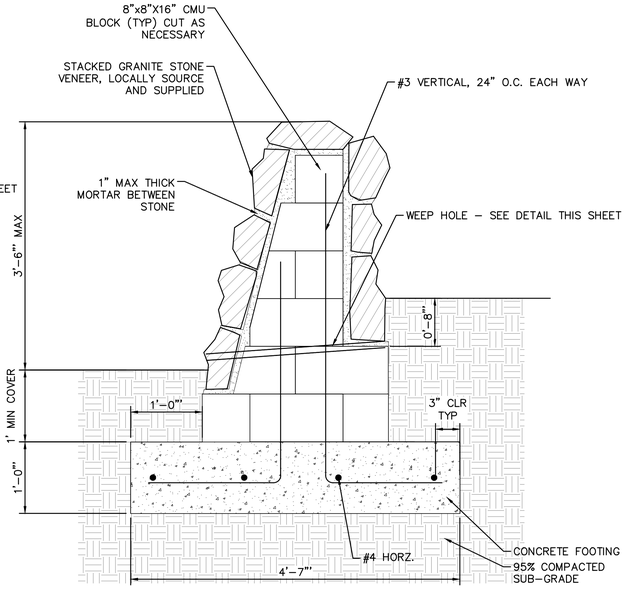
1 CONCRETE HEADER

NTS



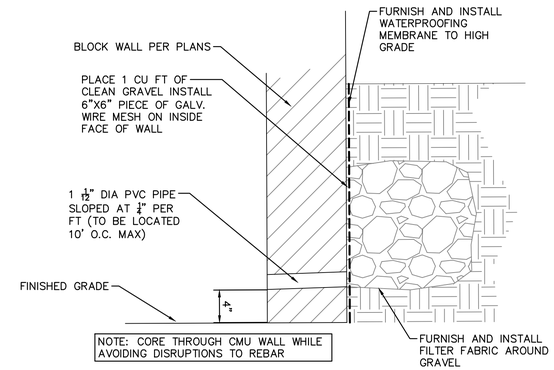
2 BATTERED WALL (RETAINING)

NTS



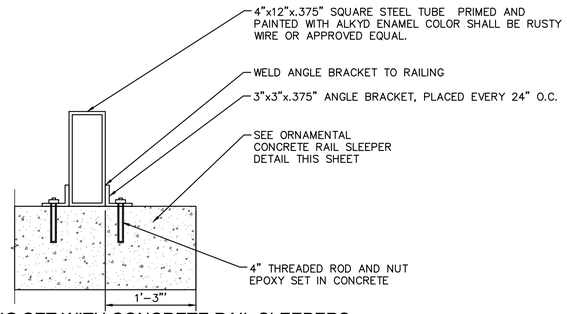
3 BATTERED WALL (FREESTANDING)

NTS



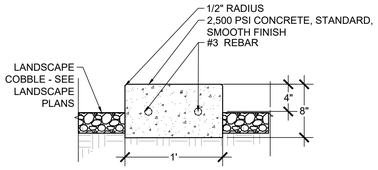
4 TYPICAL WEEP HOLE

NTS



5 RAILING SET WITH CONCRETE RAIL SLEEPERS

NTS



6 ORNAMENTAL CONCRETE RAIL SLEEPERS

NTS

NOTE: FOR INFORMATION ONLY. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SIGNED BY A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF CALIFORNIA FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND/OR CONSTRUCTION. DIGITAL FILES AVAILABLE UPON REQUEST.

811 Know what's below. Call before you dig.

No.	REVISIONS	DATE	BY

Kimley»Horn
555 CAPITOL MALL, SUITE 300, SACRAMENTO, CA 95814
PHONE: 916-858-5800
WWW.KIMLEY-HORN.COM

LICENSED LANDSCAPE ARCHITECT — KEVIN A. HARRIS — No. 5584 — 9/30/2022 — 6/22/2021 — STATE OF CALIFORNIA

KHA PROJECT 097918026
DATE JUNE 2021
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

WASHINGTON BLVD AT ALL AMERICA CITY BLVD ROUNDABOUT PROJECT

UD-03

URBAN DESIGN DETAILS

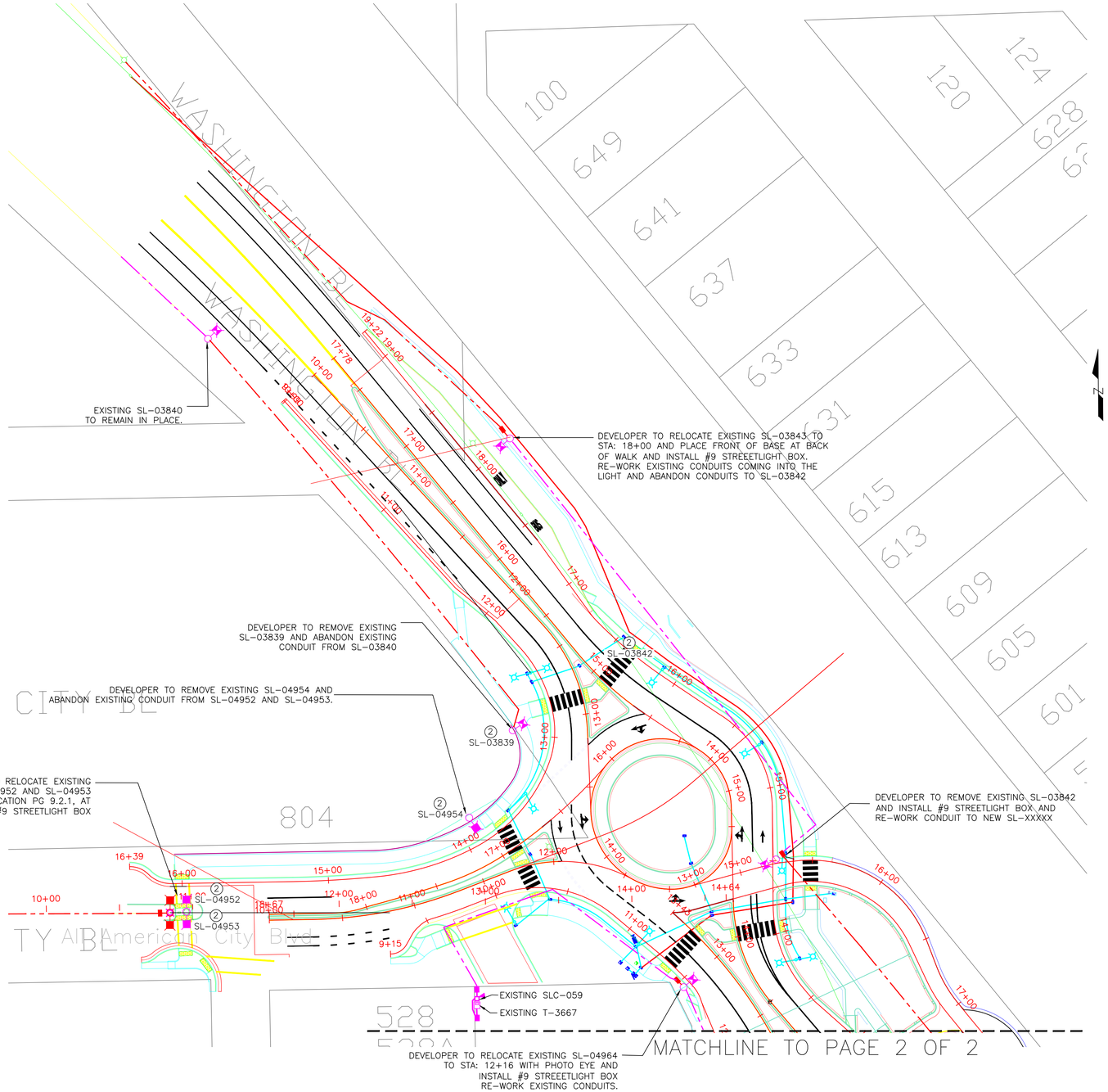
CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA

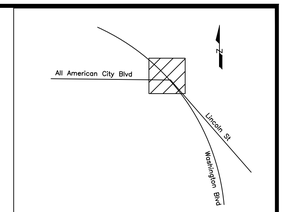
SHEET NUMBER 60 OF 60

K:\SAC_TPTO\ROSEVILLE WASHINGTON @ ALL AMERICA RAB - 097918026\08 CADD\PLANSHEETS\UD-01 URBAN DESIGN FEATURES.DWG
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Washington Blvd. Roundabout Lighting

PLAN FOR ELECTRIC UTILITY IMPROVEMENTS





VICINITY MAP
N.T.S

LEGEND:

- PADMOUNT 3ø TRANSFORMER 1500kVA AND ABOVE (115"X115")
- PADMOUNT 3ø TRANSFORMER 700kVA TO 1000kVA (96"X96")
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- PHOTO EYE
- CONDUIT STUB, CAP AND PLACE "E.M.S." MARKER
- SEE CORRESPONDING TRENCH DETAIL

- 4-4"C'S W/3-#750MCM AL. (OR AS NOTED)
- 1-4"C W/3-#1/0 PRI. URD CABLE
- 1-3"C W/2-#1/0 PRI. URD CABLE
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NOTES:

1. "ROSEVILLE ELECTRIC'S SPECIFICATIONS FOR COMMERCIAL CONSTRUCTION" ARE A PART OF THESE CONSTRUCTION PLANS FOR THIS DESIGN AND SHALL BE ADHERED TO UNLESS OTHERWISE DIRECTED BY SPECIFIC COMMENTS OR DETAILS IN THESE PLANS.
2. A MINIMUM SEPARATION OF 5' WHEN PARALLELING AND BY AT LEAST 6" WHEN CROSSING IS REQUIRED BETWEEN ELECTRIC AND OTHER SUBSTRUCTURES (WATER,SEWER, STORM DRAIN, ETC). THE CROSSING SEPARATION MAY BE REDUCED TO 3" WHEN ELECTRIC CONDUITS ARE CONCRETE ENCASED AND APPROVED BY THE ELECTRIC DEPARTMENT INSPECTOR.
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8. THE CITY OF ROSEVILLE IS A MEMBER OF THE UNDERGROUND SERVICE ALERT SYSTEM, CALL BEFORE YOU DIG!! U.S.A PHONE #800-642-2444. ROSEVILLE ELECTRIC DISPATCH PHONE #916-774-5620.

REV	BY	DATE	DESCRIPTION	APPR.

CITY OF ROSEVILLE CALIFORNIA
ROSEVILLE ELECTRIC

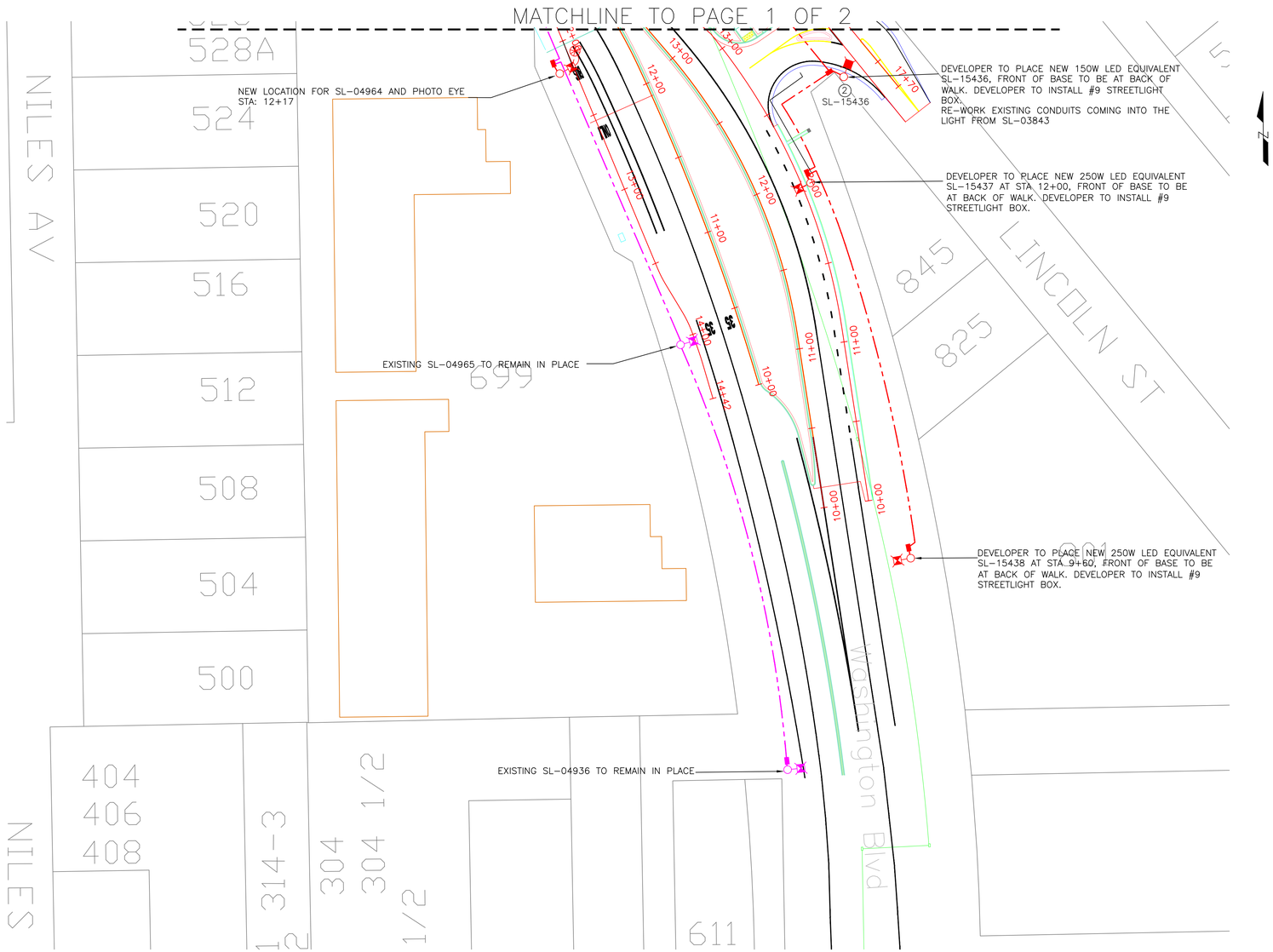
TITLE: Washington Blvd Roundabout Lighting Design
Washington Blvd and Lincoln

ENG. TMcAvoy | APPR. | SCALE: 1"= 40 '
DR. TMcAvoy | DATE:03/30/21

MAXIMO NO. 000000
ACCOUNT NO. 6001-6587-84701-290001-01070
DRAWING NO. 120-1548
SHEET 1 OF 2

Washington Blvd Roundabout
Lighting Design

PLAN FOR ELECTRIC UTILITY IMPROVEMENTS



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DR. TMcAvoy | DATE:03/30/21

MAXIMO NO. 000000
ACCOUNT NO. 6001-6587-84701-290001-01070
DRAWING NO. 000-0000
SHEET 2 OF 2

COUNCIL COMMUNICATION

CC #: 1693
File #: 0704-01

Title:	Hewlett Packard 2 Campus Oaks 64 (HP2/CO64) City-Wide Park - Master Plan and Park Development Agreement
Contact:	Tara Gee 916-774-5253 tgee@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 7.4.

RECOMMENDATION TO COUNCIL

Staff recommends that Council approve the master plan for the design and construction of the HP2/CO64 city-wide park.

Staff additionally recommends that City Council adopt a resolution to authorize the City Manager to execute a Park Development Agreement with BBC Roseville Oaks, LLC.

BACKGROUND

Location, Size and Type of Park

This 8.7 acre park site is located off of Crimson Ridge Drive in the Campus Oaks area of Roseville south of Blue Oaks, west of Foothills Boulevards and adjacent to the former Hewlett Packard campus.

Master Plan Proposal

The master plan proposes a design that includes multi-use grass areas, pickle ball courts, a fenced off-leash dog park, shaded picnic areas, a restroom, a parkour or challenge fitness course for juniors and adults, a skate track and a BMX track. A walkway/bike path loops along the park edges and through the park.

Turn-Key or Developer Built Project

According to the Development Agreement approved by the City Council in 2015, this park is to be built by the Developer. In lieu of paying city-wide park fees per home, the Developer will incur the cost for the park and build it on behalf of the City, per city standards. Once complete, the park will be deeded to the City for operations and maintenance.

Parks & Recreation Commission

The Parks & Recreation Commission reviewed and recommended approval of the proposed master plan. However, there were concerns regarding sufficient parking for the park. The master plan has been amended to include an on-site 49 space parking area. On-street parking along the park's edge within Campus Oaks can accommodate 55 spaces. Lastly, there is a potential for 80 on-street parking spaces along the former Hewlett Packard road and adjacent to the future park, pending agreement from the current property owners. As an alternative to parking along the

Hewlett Packard road, additional on-site parking could be expanded.

FISCAL IMPACT

The budget for the design and construction of the park is approximately $3.7 million. This includes permitting, inspections and engineering costs, in addition to landscape architectural design. Many items within this park design are shown as add-alternates, which is a “menu-style” approach to construction. By so doing, the City is able to seek competitive prices and select those park amenities that fit the budget. The City will also contribute 20.5 percent of the cost of construction of the park from the Campus Oaks Neighborhood Park Fund, consistent with the Development Agreement. The City’s share of the construction costs is currently estimated at $768,541. Maintenance costs are estimated at approximately $140,000 per year. Consistent with all city-wide parks, the funding source for maintenance will be provided through the General Fund.

ENVIRONMENTAL REVIEW

Development of the HP2/CO64 park site was previously evaluated in the 4th Addendum to the Hewlett Packard Master Plan EIR (SCH No.95112022 and amended by City Council on May 20, 2020, Resolution No. 20-168), and identified in the associated Third Amended Hewlett-Packard Campus Oaks Master Plan. Construction of the HP2/CO64 park is found to be within the scope of the project covered by the 4th Addendum to the Hewlett Packard Master Plan EIR. As discussed in the Master Plan EIR, the EIR provides environmental analyses of community infrastructure and facilities, including parks, pedestrian bridges, and bike trails, to the extent applicable. Because the project is consistent with the Third Amended Hewlett-Packard Campus Oaks Master Plan, no new effects would be expected to occur and all applicable mitigation measures from the Hewlett Packard Master Plan EIR will be implemented during the design and construction of the HP2/CO64 park site. Because the proposed project meets the requirements identified in Section 15183 of the State CEQA Guidelines, no additional CEQA review is required.

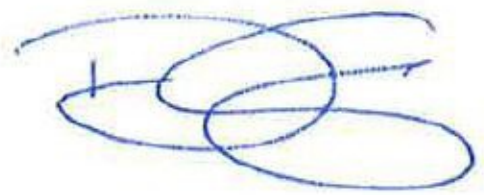
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal A - Remain fiscally responsible in a changing world
Goal C - Maintain a safe and healthy community
Goal D - Enhance economic vitality
Goal E - Deliver exceptional city services
Goal F - Invest in well-planned infrastructure and growth

Respectfully Submitted,

Tara Gee, Park Planning & Development Superintendent

Jill Geller, Parks, Recreation & Libraries Director



Dominick Casey, City Manager

ATTACHMENTS:

Description

CO-64/HP Master Plan

Resolution 21-389

Park Development Agreement-CO-64

Vicinity Map

Optional Parking Plan

NOTE: SHOWN WITH ADDITIVE ALTERNATES: REFER TO COST OPINION FOR DESCRIPTIONS OF ALTERNATES AND BASE BID.

KEYNOTES

1. PARK SIGN WITH ENTRY PLANTING (ROSES)
2. OPEN TURF
3. CLASS 1 MULTI-USE PATH, 12' (ASPHALT INC. A/C SHOULDERS)
4. INTERNAL WALKWAY (CONCRETE, MIN. 5' WIDE)
5. PLANTING (SHRUBS/GROUNDCOVER)
6. 2 PICKLEBALL COURTS, LIGHTED, WITH BENCHES AND SHADE CANOPY
7. CITY STANDARD CURB/GUTTER W/ ATTACHED 5' WALK AT EAST SIDE
8. MAIN PLAZA (WITH SHADE STRUCTURE, TABLES, DRINKING FOUNTAIN OR BOTTLE FILLER, AND BICYCLE RACKS)
9. RESTROOM (2-STALL)
10. POST & CABLE FENCING WITHIN 7.5' PARKWAY PLANTER AND ALONG WEST PARK BOUNDARY ADJACENT STREETS
11. PROPOSED STREET CROSSING (CURB RAMPS)
12. DOG PARK, LARGE AND SMALL DOG AREAS, 1.8 ACRES TOTAL. INCLUDES ENTRY AREA, HOSE BIBS, BENCHES, BIKE RACKS
13. GREEN BUFFER/DRAINAGE SWALE WITH COBBLE AND BOULDERS
14. UNDERGROUND GAS LINE W/ 20' EASEMENT WITHIN CO-64 AND 10' EASEMENT WITHIN HP-2
15. MIN. 4' WIDE ATTACHED SIDEWALK
16. LOW RETAINING WALL AT "L" STREET PARK ENTRY (AS REQUIRED BY SITE AND ROADWAY CONDITIONS)
17. STRIPING FOR PARALLEL PARKING ALONG BLUE DOG STREET ADJACENT PARK FRONTAGE, TOTAL OF 37 SPACES

BID ALTERNATES

- A1 TURF I.L.O. WOOD CHIPS ADJACENT SKATE PARK AND PARKOUR/CHALLENGE AREA
- A2 PARKOUR/CHALLENGE: ADULT AND JUNIOR AREAS WITH SYNTHETIC TURF/RESILIENT SURFACE (BASE: WOOD CHIPS)
- A3 ADD (2) PICKLEBALL COURTS, LIGHTED, 20' X 44' EACH (BASE BID: SHRUBS/GROUNDCOVER)
- A4 TURF I.L.O. NATIVE NON-IRRIGATED GRASS AT BMX/PUMP TRACK AREA.
- A5 SKATE PARK: CONCRETE WITH METAL EMBEDS AND DEPRESSED BOWLS, MEDIUM SHADE STRUCTURE, DRINKING FOUNTAIN, ELECTRICAL. ±10,000SF TOTAL
- A6 BMX/PUMP TRACK (1 ACRE): FENCING, ROUGH GRADING, WOOD CHIPS AT PERIMITER (BASE BID: NATIVE NON-IRRIGATED GRASS)
- A7 CONCRETE SPLIT RAIL FENCE (BASE BID: POST AND CABLE FENCE)
- A8 ADD SHADE STRUCTURE, BENCHES, AND BIKE RACK AT PICKLEBALL COURTS.
- A9 GRAVEL PARKING AREA, INCLUDING ACCESSIBLE STALLS, TOTAL OF 49 SPACES (INCLUDES VEHICULAR TURN-AROUND AND FIRE ACCESS/EGRESS ONLY TO EXISTING FIRE LANE AT PRIVATE DRIVEWAY)

CITY OF ROSEVILLE CALIFORNIA

Roach & Campbell

July 2021
Roseville, California
Parks, Recreation, and Libraries Commission and City Council Review

0' 40' 80'
1" = 40'
N

CO-64 Citywide Park
Master Plan

L1

RESOLUTION NO. 21-389

APPROVING A PARK DEVELOPMENT AGREEMENT FOR HP2/CO64 CITY-WIDE PARK SITE IMPROVEMENTS, BY AND BETWEEN THE CITY OF ROSEVILLE AND BBC ROSEVILLE OAKS, LLC, AND AUTHORIZING THE CITY MANAGER TO EXECUTE IT ON BEHALF OF THE CITY OF ROSEVILLE

WHEREAS, a Park Development Agreement for HP2/CO64 City-wide Park Site Improvements, by and between the City of Roseville and BBC Roseville Oaks, LLC, has been reviewed by the City Council; and

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Roseville that said agreement is hereby approved and that the City Manager is authorized to execute it on behalf of the City of Roseville; and

PASSED AND ADOPTED by the Council of the City of Roseville this____day of _____, 2021, by the following vote on roll call:

AYES COUNCILMEMBERS:

NOES COUNCILMEMBERS:

ABSENT COUNCILMEMBERS:

_____
MAYOR

ATTEST:

_____
City Clerk

PARK DEVELOPMENT AGREEMENT FOR
HP2/CO64 CITY-WIDE PARK SITE IMPROVEMENTS

THIS AGREEMENT is made and entered into this _____ day of _____, 2021 **("Effective Date")**, by and between the City of Roseville, a municipal corporation ("CITY") and BBC Roseville Oaks, LLC, an Illinois limited liability company **("DEVELOPER"), and**

W I T N E S S E T H:

WHEREAS, DEVELOPER is the owner and developer of subdivisions within the Campus Oaks Property development located in the HP/Campus Oaks Master Plan Area; and

WHEREAS, DEVELOPER, through the approved Campus Oaks Development Agreement and subsequent Campus Oaks Development Agreement amendments thereto **(collectively, the "Development Agreement")**, has agreed to construct park improvements **("Park Improvements")** on Lots HP-2 of the HP Property and CO-64 of the Campus Oaks Property **(the "Park Site") on a "turn-key" basis; and**

WHEREAS, DEVELOPER and CITY desire to develop the Park Improvements on a turn-key basis, provided that the Park Improvements accommodate the cost estimates for the Park Improvements under the Park Financing Plan, as adjusted under the Development Agreement from the Effective Date thereof to the date of commencement of construction thereof **(the "Cost Estimate")**. As of July 1, 2021, and subject to adjustment at the time of commencement of construction, the Cost Estimate for the Park Improvements to be constructed by DEVELOPER consistent with the Park Financing Plan is Three Million Seven Hundred Forty-Eight Thousand Nine Hundred Eighty-Two Dollars ($3,748,982); DEVELOPER is solely responsible for funding the 79.5% City-wide Park Fee portion thereof (i.e., $2,980,441), in lieu of the Campus Oaks Property having to pay a City-wide Park Fee under the Development Agreement, and shall be reimbursed as provided herein for funding the remaining 20.5% Neighborhood Park Fee portion thereof (i.e., $768,541) from the Neighborhood Park Fees collected from the Campus Oaks development.

NOW, THEREFORE, CITY and DEVELOPER agree as follows:

1. Master Plan. DEVELOPER shall cause the preparation of a master plan for the Park Site, **which is shown in Exhibit "A," attached hereto and incorporated by this reference**. The master plan shall be subject to approval by the Parks & Recreation Commission and the City Council. This process shall include, to the extent required, environmental clearance in compliance with the California Environmental Quality Act (CEQA). DEVELOPER and CITY shall use good faith efforts to provide copies of the draft master plan to the owner of the HP Property for review and input by such owner, provided final approval thereof shall be made by the CITY.

2. Construction Documents. DEVELOPER shall cause the preparation of a HP2/CO64 Master Plan, **construction plans and specifications for the Park Improvements ("Construction Documents"). The Construction Documents shall be consistent with** the approved HP2/CO64 Master Plan and with CITY's **Park and Public Works Construction Standards. The Construction Documents shall be subject to review and approval by the Department of Parks, Recreation & Libraries ("Department") and** other applicable City departments prior to the issuance of the 207th building permit for a single family dwelling to be constructed in Phases B and C of the Campus Oaks Property, as such Phases are defined in the Development Agreement. So long as this Agreement and the HP2/CO64 Master Plan are approved prior to the issuance of the building permit for the 207th residential unit within Phases B and C of the Campus Oaks Property, as such Phases are defined in the Development Agreement, and so long as a complete set of Construction Documents are submitted to the CITY for review within sixty (60) days of the Effective Date of this Agreement and DEVELOPER diligently processes such Construction Plans with the CITY for approval (including promptly resubmitting revised Construction Documents on a timely basis in response to CITY comments thereto), DEVELOPER shall be deemed to be in substantial compliance with the requirements of this Section and DEVELOPER may continue obtaining building permits for residential units within Phases B and C, even if the aggregate number thereof exceeds 207 units, during the additional period required to obtain City approval of the Construction Documents.

3. Bid Documents. DEVELOPER shall prepare the bid documents for the Park Improvements, with the intent to advertise for bids in January/February 2022 and be ready to award the contract and commence construction of the Park Improvements in April 2022. The Department shall review and approve the bid documents prior to the issuance of a notice of, and invitation to, bid by DEVELOPER. Invitations to bid shall only be issued to contractors on the City list of prequalified park contractors provided by the CITY. Bids shall be lump sum with an itemized unit summary to be used for additions and deletions only. The Department shall also review the bids received by DEVELOPER and shall approve **DEVELOPER's selection of the most appropriate bid prior to the award of contract**, which approval shall not be unreasonably withheld. All bids shall require the contractors to comply with prevailing wage laws, including the payment of prevailing wage rates. The Department shall have ten (10) working days to review the bids and, in the event the Department concludes the bids are unacceptably high and not to budget, to notify DEVELOPER of required modifications to the Park Improvements or the need to solicit additional bids. If the bid amount for the work, together with all design and other Park Improvement costs then incurred by DEVELOPER, exceeds the then adjusted Cost Estimate by more than eight percent (8%), then the CITY shall either (i) agree to defer the installation of certain Park Improvements within the Park Site to reduce the cost of the work to be installed by DEVELOPER to 108% of such adjusted Cost Estimate or (ii) agree to pay its share of the cost of the Park Improvements in excess of 108% of such adjusted Cost Estimate, as such costs are incurred by DEVELOPER.

4. Commencement of Improvements. DEVELOPER shall commence construction of the Park Improvements in accordance with the approved Construction Documents within the later of (i) sixty **(60) calendar days after CITY's approval** of the Construction Documents, including the selection of the bidder and the construction contract for the work, or (ii) April 16, 2022, subject to any additional applicable enforced delays described in Section 14 below. So long as the Construction Documents are approved and the notice and invitation to bidders with bid documents approved by the City, are issued prior to the issuance of the building permit for the 282nd residential unit within Phases B and C of the Campus Oaks Property, as such Phases are defined in the Development Agreement, then the foregoing

extension of the time to commence work (and any other such extension due to enforced delays described in Section 15) shall not affect or impair **DEVELOPER's right to continue obtaining building permits for** residential units within Phases B and C, even if the aggregate number thereof exceeds 282 units during the additional period that the commencement of such construction is delayed as provided herein. After commencement of construction, DEVELOPER shall diligently proceed with such construction and use its best, commercially reasonable efforts, subject to the enforced delay provisions above and in Section 15 below, to complete the construction of the Park Improvements within one hundred fifty (150) business days of the date of commencement of such Park Improvements, not including the establishment period as **defined in the City's Park Construction Standards**.

If CITY is in a Stage 2 or higher drought mandate, all improvements except turf may be constructed. In lieu of installing the turf, DEVELOPER shall provide to CITY the funds to install the turf as a condition of acceptance of the Park Improvements; CITY shall thereafter be responsible for turf installation once the mandated drought stage drops below Stage 2.

Notice of satisfaction of DEVELOPER's construction obligations shall be evidenced by a written acceptance of the Park Improvements by CITY. Upon acceptance of the Park Improvements by CITY, CITY shall accept the irrevocable offers of dedication for Lots HP-2 and CO-64 previously dedicated to the CITY by the owners thereof and the CITY shall assume all rights, title, interests, responsibilities and obligations in and to the improved Park Site as the owner thereof.

5. Timeframes. DEVELOPER acknowledges that, as provided in the Development Agreement, development of Phases B and C of the Campus Oaks Property is dependent upon compliance with the design and construction timeframes set forth in this Agreement. Accordingly, if the design and construction schedule for the Park Improvements provided herein is not timely satisfied, unless otherwise expressly excused or delayed by the terms of this Agreement, CITY may deny issuance of building permits within Phases B and C of the Campus Oaks Property. CITY acknowledges and agrees that any failure to comply with such timeframes shall not affect the rights of DEVELOPER or its successors to proceed with the construction of units for which building permits have been issued by CITY within

Phases B and C of Campus Oaks and shall not limit the rights of DEVELOPER to develop within any other Phase of the Campus Oaks Property.

6. Change Orders. DEVELOPER shall submit a written request for approval of any change orders to the CITY at least ten (10) working days prior to proceeding with any change order. DEVELOPER shall not issue any change orders on such construction contract without first obtaining **CITY's written consent,** which consent shall also address and/or confirm the portion, if any, of the increased costs associated with such change order to be reimbursed by CITY where such change order will cause the total cost to exceed 108% of the adjusted Cost Estimate. DEVELOPER acknowledges **failure to obtain such written consent from CITY will result in DEVELOPER's sole** responsibility to pay for such change orders without reimbursement or credit from CITY. Any change in design in the Park **Improvements must have CITY's pre**-approval.

7. Payments. DEVELOPER shall be responsible for all payments associated with the Park Improvements. **This includes but is not limited to, contractor's work, electric and water bills, storm water** pollution prevention measures, consultant construction assistance, CITY inspections, permits, and fees. DEVELOPER shall provide to CITY a monthly accounting summary outlining project costs to date. DEVELOPER will include copies of invoices paid. DEVELOPER will provide copies of cancelled checks if requested by CITY.

8. Warranty. DEVELOPER shall provide CITY a warranty for the Park Improvements for a period of one year from the date of acceptance of the Park Improvements by CITY. Any warranty repairs performed shall be the responsibility of DEVELOPER and shall not be subject to the reimbursement provisions of this Agreement.

9. Cost of Park Improvements. The total cost of the Park Improvements in accordance with an approved master plan shall be no greater than Three Million Seven Hundred Forty-Eight Thousand Nine Hundred Eighty-Two Dollars ($3,748,982), **as shown in Exhibit "B," attached hereto and** incorporated by this reference, subject to adjustment as provided below **(the** "Cost Estimate"). The total cost shall be inclusive of consultant construction assistance (landscape architectural, architectural,

environmental, inspection, engineering), storm water pollution prevention measures, utility bills (electric, water), CITY inspections, CITY project management and plan review time, permits and fees, design/drafting fees, fencing, maintenance and miscellaneous costs such as photocopying and printing. The total cost and Cost Estimate, and allocations thereof between the City-wide and Neighborhood Park Fees, shall be subject to adjustment at the time of commencement of construction of the Park Improvements, based on the change in the ENR Construction Cost Index after July 1, 2021. CITY and DEVELOPER acknowledge that the actual construction costs of the Park Improvements may vary from the estimated costs used to establish the list of Park Improvements to be constructed by DEVELOPER hereunder. However, the parties will make every effort to enumerate the Park Improvement costs up front, including reasonable contingencies therefor, as part of the Cost Estimate. The Park Improvement costs that will be subject to reimbursement in accordance with Section 11 below shall consist of (i) the amount equal to twenty and one-half percent (20.5%) of the total approved Park Improvement costs, up to, but not in excess of, $768,541 of Neighborhood Park Fees collected from development of the Campus Oaks Property (subject to adjustment based on commencement of construction), (ii) the amount, if any, agreed to be reimbursed by CITY under Section 3 for its share of the total cost of the Park Improvements in excess of 108% of the adjusted Cost Estimate at the time of commencement thereof (including available contingencies included in such Cost Estimate), and (iii) any change orders, approved by CITY pursuant to Section 6 above (including CITY approval/confirmation of the share of increased costs due to such change order to be reimbursed by CITY in connection with its approval thereof), which cause the total cost of the Park Improvements to exceed 108% of the adjusted Cost Estimate, including contingencies.

10. Fee Credit for Park Improvements. In consideration for the Park Improvements to be constructed by DEVELOPER in accordance with the Development Agreement and this Agreement, CITY has granted and shall continue to grant for all dwelling units, with the exception of very low affordable housing units, to be developed within the Campus Oaks Property a full credit toward the City-wide Park Fee, including any and all adjustments thereto. DEVELOPER shall remain responsible for the payment of all Neighborhood **Park Fees on residential units to be developed on DEVELOPER's portion of the**

Campus Oaks Property as provided under the Development Agreement. In the event that actual construction, design, and related costs for the Park Improvements, as approved by CITY, total less than the adjusted Cost Estimate, DEVELOPER shall pay the amount equal to 79.5% of such difference to CITY prior to acceptance of the Park Improvements by CITY and/or instruct the CITY to deduct such amount from the Neighborhood Park Fee reimbursement payable to DEVELOPER hereunder.

11. Reimbursement for Park Improvement Costs. As DEVELOPER incurs Park Improvement costs, including any such costs in excess of 108% of the adjusted Cost Estimate at the time of commencement of construction, if such excess costs are agreed to be paid by the CITY pursuant to Section 3 above and/or pursuant to Section 6 above in connection with change orders approved by CITY, DEVELOPER shall provide invoices, not more frequently than monthly, documenting the actual costs thereof, lien releases and such other documents and information as desired by the CITY to confirm the actual Park Improvement Costs **and DEVELOPER'S compliance with the terms of this Agreement related** to such construction. Upon receipt thereof, the excess amounts and/or change order amounts agreed to be paid by CITY shall be paid by the CITY to DEVELOPER within sixty (60) days after the CITY**'s receipt** of such invoice(s), subject to the availability of funds. Similarly, as such invoices are received and approved by the CITY, the CITY may elect, in its sole discretion, to pay DEVELOPER from available Campus Oaks Neighborhood Park Fees the 20.5% Neighborhood Park Fee portion of the approved Park Improvement costs within said 60-day invoice approval period; in any event, upon completion of the Park Improvements, the 20.5% Neighborhood Park Fee portion of the approved Park Improvement costs, up to, but not in excess of, $768,541 of Neighborhood Park Fees (subject to adjustment based on commencement of construction) collected from development of the Campus Oaks Property, and less any portion thereof previously reimbursed to DEVELOPER, shall be paid to DEVELOPER within sixty (60) days after CITY acceptance of the Park Improvements, subject to the availability of funds.

12. Reimbursement Rights Personal to DEVELOPER. The rights to reimbursement pursuant to Section 11, for which provision is made in the Agreement, shall be personal to DEVELOPER and shall

not run to any successor in interest without prior written consent of CITY, which consent shall not be unreasonably withheld.

13. Prevailing Wages and Contractor Registration. For purposes of this Agreement, contractors and subcontractors retained to construct the Park Improvements shall comply with all applicable prevailing wage laws, including but not limited to California Labor Code Section 1770 et seq. In addition, no contractor or subcontractor may work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. DEVELOPER is hereby notified that this Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

14. Payment Bond. Prior to the commencement of the Park Improvements, DEVELOPER shall procure, or cause its general contractor to procure, a Payment Bond securing the payment of the claims of laborers, mechanics or materialmen employed to construct the Park Improvements. The Payment Bond shall be in the amount of the general contractor**'s bid amount for cost of the Park** Improvements. If, at the time of approval of any change orders, the then remaining cost to be paid or incurred to complete the Park Improvements increases by the issuance of such change orders to be greater than the amount of the Payment Bond, upon request of the CITY at the time of its approval of the change order, the penal amounts of the Payment Bond required shall increase accordingly. The surety on the Payment Bond shall be satisfactory to the CITY.

15. Enforced Delay; Extension of Times of Performance. In addition to specific provisions of this Agreement, performance by either party hereunder shall not be deemed to be in default where delays or default are due to war, insurrection, strikes, walkouts, riots, floods, drought, earthquakes, fires, casualties, acts of God, governmental restrictions imposed or mandated by other governmental entities, enactment of conflicting state or federal laws or regulations which render performance by DEVELOPER impossible or impracticable, new or supplementary environmental regulation, litigation, or similar bases for excused performance. Performance by DEVELOPER shall also be excused for any delay caused by the owner of Lot HP-2 if such owner fails or refuses to timely offer to dedicate or dedicate Lot HP-2 in

fee to the CITY and/or refuses to give DEVELOPER timely construction access onto Lot HP-2 to investigate, design and construct the Park Improvements **in breach of such owner's obligations under its** Development Agreement with the CITY; in particular, DEVELOPER shall not be obligated to commence construction of the Park Improvements unless and until the CITY confirms that Lot HP-2 has been offered for dedication to the CITY such that, upon completion of the Park Improvements, CITY will have the authority to accept the dedication of Lot HP-2 and assume ownership of Lot HP-2 and the Park Improvements completed by DEVELOPER thereon. If written notice of such delay is given to CITY within thirty (30) days of the commencement of such delay, an extension of time for such cause shall be granted for the period of the enforced delay, or longer as may be mutually agreed upon. During any such enforced delay, so long as DEVELOPER is in compliance with all other provisions of this Agreement, DEVELOPER shall be deemed in compliance with the timing requirements of the Development Agreement and this Agreement and the CITY will not refuse to issue building permits for development within Phases B and of Campus Oaks due to any failure to commence construction of the Park Improvements caused by such delay, even if the total number thereof exceeds the 282 number of residential units allowed to be constructed before such commencement under the Development Agreement and this Agreement.

16. Attorney's Fees; Venue; Governing Law. If either party commences any legal action against the other party arising out of this Agreement or the performance hereof, the prevailing party in such action shall be entitled to recover its reasonable litigation expenses, including but not limited to, **court costs, expert witness fees, discovery expenses, and attorney's fees. Any action arising out of this** Agreement shall be brought in Placer County, California, regardless of where else venue may lie. This Agreement shall be governed by and construed in accordance with the laws of the State of California.

17. Modification. This Agreement and each provision contained herein may be waived, amended, supplemented or eliminated only by mutual written agreement of the parties.

18. Severability. In case any one or more of the provisions contained in this Agreement is for any reason held invalid or unenforceable, such holding shall not affect the remaining provisions or the validity and enforceability of the Agreement as a whole.

19. Integrated Agreement; Consistency with Development Agreement. This is an integrated agreement and, together with the provisions of the Development Agreement related to the design and construction of the Park Improvements for the Park Site, contains all of the terms, considerations, understanding and promises of the parties. It shall be read as a whole, provided in the event of any inconsistency between the terms of this Agreement and the terms of the Development Agreement applicable to such design and construction of the Park Improvements, the terms of the Development Agreement shall control.

[Signatures on Following Page]

IN WITNESS WHEREOF, the CITY OF ROSEVILLE, a municipal corporation, has caused this Agreement to be executed in duplicate by its City Manager and attested to by its City Clerk under the authority of Resolution No. _____, adopted by the Council of the City of Roseville on the _____ day of _____, 2021, and DEVELOPER has caused this Agreement to be executed.

CITY OF ROSEVILLE,
a municipal corporation

By: _____
DOMINICK CASEY
City Manager

BBC ROSEVILLE OAKS, LLC,
an Illinois limited liability company

By: _____
Name: Brett R. Baumgarten
Title: Authorized Representative

ATTEST:

By: _____
SONIA OROZCO
City Clerk

APPROVED AS TO FORM:

BY: _____
MICHELLE SHEIDENBERGER
City Attorney

APPROVED AS TO SUBSTANCE:

BY: _____
JILL GELLER
Director of Parks, Recreation & Libraries

EXHIBIT A

Map of Park Site

[See Attached Map]

KEYNOTES

1. PARK SIGN WITH ENTRY PLANTING (PER CS-1)
2. OPEN TURF
3. CLASS 1 MULTI-USE PATH, 12' (ASPHALT W/C W/ BOULDERS)
4. INTERNAL WALKWAY (CONCRETE, MIN. 5' WIDE)
5. PLANTING (SHRUBS/GROUNDCOVER)
6. 2 PICKLEBALL COURTS, LIGHTED, WITH BENCHES AND SHADE CANOPY
7. CITY STANDARD CURB/GUTTER W/ ATTACHED 5' WALK AT EAST SIDE
8. MAIN PLAZA (WITH SHADE STRUCTURE, TABLES, DRINKING FOUNTAIN OR BOTTLE FILLER, AND BICYCLE RACKS)
9. RESTROOM (2-5 STALL)
10. POST & CABLE FENCING WITHIN 7.5' PARKWAY PLANTER AND ALONG WEST PARK BOUNDARY ADJACENT STREETS
11. PROPOSED STREET CROSSING (CURB RAMPS)
12. DOG PARK, LARGE AND SMALL DOG AREAS, 1.8 ACRES TOTAL INCLUDES ENTRY AREA, HOSE BIBB, BENCHES, BIKE RACKS
13. GREEN BUFFER/DRAINAGE SWALE WITH COBBLE AND BOULDERS
14. UNDERGROUND GAS LINE W/ 20' EASEMENT WITHIN CO-64 AND 10' EASEMENT WITHIN HP-2
15. MIN. 4' WIDE ATTACHED SIDEWALK
16. LOW RETAINING WALL AT "L" STREET PARK ENTRY (AS REQUIRED BY SITE AND ROADWAY CONDITIONS)
17. STRIPING FOR PARALLEL PARKING ALONG BLUE OAK'S STREET ADJACENT PARK FRONTAGE, TOTAL OF 37 SPACES

BID ALTERNATES

- A1 TURF (L.O. WOOD CHIPS ADJACENT SKATE PARK AND PARKOUR/CHALLENGE AREA
- A2 PARKOUR/CHALLENGE: ADULT AND JUNIOR AREAS WITH SYNTHETIC TURF RESILIENT SURFACE (BASE: WOOD CHIPS)
- A3 ADD (2) PICKLEBALL COURTS, LIGHTED, 20' X 44' EACH (BASE BID: SHRUBS/GROUNDCOVER)
- A4 TURF (L.O. NATIVE NON-IRRIGATED GRASS AT BMX/PUMP TRACK AREA
- A5 SKATE PARK: CONCRETE WITH METAL EMBEDS AND DEPRESSED BOWLS, MEDIUM SHADE STRUCTURE, DRINKING FOUNTAIN, ELECTRICAL, & HUMINF TOTAL
- A6 BMX/PUMP TRACK (1 ACRE): FENCING, ROUGH GRADING, WOOD CHIPS AT PERIMETER (BASE BID: NATIVE NON-IRRIGATED GRASS)
- A7 CONCRETE SPLIT RAIL FENCE (BASE BID: POST AND CABLE FENCE)
- A8 ADD SHADE STRUCTURE, BENCHES, AND BIKE RACK AT PICKLEBALL COURTS
- A9 GRAVEL PARKING AREA, INCLUDING ACCESSIBLE STALLS TOTAL OF 48 SPACES (INCLUDES VEHICULAR TURN-AROUND AND FIRE ACCESS/EGRESS ONLY TO EXISTING FIRE LANE AT PRIVATE DRIVEWAY)

NOTE: SHOWN WITH ADDITIVE ALTERNATES REFER TO COST OPINION FOR DESCRIPTIONS OF ALTERNATES AND UNIT $$.

ROSEVILLE

July 2021
Roseville, California
Parks, Recreation, and Libraries Commission and City Council Review

N

CO-64 Citywide Park

Master Plan

L1

EXHIBIT B

Total Estimated Cost of Park Improvements

[See Attached Cost Estimate]

Preliminary Opinion of Probable Cost | **Project** | 20018
CO-64/HP-2 Citywide Park | **Date** | 8/2/2021
Roach + Campbell Landscape Architecture

Description	Unit	Quantity	Est. Unit Price ($)	Est. Subtotal
Site Preparation and Grading				
Temporary fence	lf	5,870	$ 4.00	$ 23,480
Erosion control (DI protection, filter rolls, washout, entrance)	ls	1	$ 14,000.00	$ 14,000
Clearing and grubbing	ls	1	$ 4,000.00	$ 4,000
Demo misc. site elements (ex. curb, etc.)	ls	1	$ 2,000.00	$ 2,000
Demo ex. concrete curb at private driveway (east side)	lf	2,242	$ 5.00	$ 11,210
Construction area sign	ea	1	$ 500.00	$ 500
Pothole existing utilities	allow	1	$ 15,000.00	$ 15,000
Construction staking	ls	1	$ 8,000.00	$ 8,000
Earthwork (assume 6" across site, excludes import/export)	cy	8,410	$ 6.00	$ 50,460
Subtotal				**$ 128,650**
Site Utilities (Wet)				
Site Drainage (lines and structures)	ac	10.7	$ 24,000.00	$ 256,800
Sanitary Sewer maintenance hole (service point N. of 'D' St.)	ea	1	$ 4,000.00	$ 4,000
Sanitary Sewer line, PVC (to Restroom, drink.ftn, & dog park)	lf	180	$ 40.00	$ 7,200
Sanitary Sewer cleanouts	ea	4	$ 1,400.00	$ 5,600
Tap 6" RW line at Blue Dog, street, curb, gutter repair	ea	1	$ 4,000.00	$ 4,000
Install RW meter, 3"	ea	1	$ 1,900.00	$ 1,900
Install potable meter, backflow, and enclosure, 1"	ea	1	$ 3,200.00	$ 3,200
Potable water line, 1.5" PVC	lf	420	$ 30.00	$ 12,600
RW usage/meter charges (per month; grow-in)	ea	6	$ 4,000.00	$ 24,000
Subtotal				**$ 319,300**
Electrical				
Metered pedestal	ea	1	$ 18,000.00	$ 18,000
Adjust ex. electrical vaults to grade	ea	2	$ 800.00	$ 1,600
Conduit/conductor for secondary service (est; location unknown	lf	60	$ 340.00	$ 20,400
Conduit/conductor (inc. extension to pickleball courts)	lf	1,200	$ 50.00	$ 60,000
Pullbox (#3.5: qty. est.)	ea	6	$ 600.00	$ 3,600
Pullbox (#5: qty. est.)	ea	4	$ 800.00	$ 3,200
Security light - City standard (at main plaza)	ea	1	$ 3,300.00	$ 3,300
Security light - within shelter	ea	1	$ 2,200.00	$ 2,200
Convienence outlet (at main plaza)	ea	2	$ 800.00	$ 1,600
Electrical Subtotal				**$ 113,900**
SITE WORK SUBTOTAL				**$ 561,850**
Site Paving and Hardscape				
Site concrete (City std, 5" w/ fibermesh)	sf	24,769	$ 8.00	$ 198,152
City std. curb/gutter at east boundary	lf	2,242	$ 30.00	$ 67,260
Class I bicycle path (10' wide AC, w/ 2' AB shoulder)	sf	25,006	$ 7.00	$ 175,042
Class I bicycle path decomposed granite shoulder	sf	5,064	$ 12.00	$ 60,768
Class I bicycle path rwd header at DG shoulder	lf	2,532	$ 15.00	$ 37,980
Curbing, mowband (12" wide)	lf	732	$ 40.00	$ 29,280
Accessible ramp (Caltrans type A/C)	ea	2	$ 3,000.00	$ 6,000
Accessible ramp (Caltrans type F)	ea	1	$ 2,500.00	$ 2,500
Striping at 135 on-street parallel stalls	lf	405	$ 10.00	$ 4,050
Subtotal				**$ 581,032**

Preliminary Opinion of Probable Cost | **Project** | 20018
CO-64/HP-2 Citywide Park | **Date** | 8/2/2021
Roach + Campbell Landscape Architecture

Description	Unit	Quantity	Est. Unit Price ($)	Est. Subtotal
Site Amenities (inc. main plaza, etc.)				
Park sign (City std.)	allow	1	$ 8,000.00	$ 8,000
Shade structure at main plaza (432sf, standing mtl seam roof)	ea	1	$ 40,000.00	$ 40,000
City std. restroom (2-room)	ls	1	$ 130,000.00	$ 130,000
Bicycle path signage	allow	1	$ 4,000.00	$ 4,000
Retaining Seatwall (+/-16" high)	lf	81	$ 180.00	$ 14,580
Boulders (at swale)	ton	40	$ 300.00	$ 12,000
Cobble (8-12" deep x 3' wide at swale CL)	ton	80	$ 200.00	$ 16,000
Bollards (at class 1 path adj. street)	ea	9	$ 500.00	$ 4,500
Post and Cable Fencing (at Ashbrook and Street 'E' frontage)	lf	1,636	$ 40.00	$ 65,440
Bicycle rack (2 spaces each)	ea	-	$ 900.00	$ -
Picnic table, 4-seat or 3-seat accessible	ea	2	$ 1,600.00	$ 3,200
6' bench w/ back, armrest	ea	2	$ 1,000.00	$ 2,000
Drinking Fountain (at entry plaza)	ea	1	$ 11,900.00	$ 11,900
Subtotal				**$ 311,620**
Pickleball courts (two courts, inc. lighting and shade structure)				
Convienence outlet	ea	2	$ 800.00	$ 1,600
Sports court lighting (Musco)	allow	1	$ 75,000.00	$ 75,000
Sports court paving (assumed 6" reinforced w/ 4" cl 2 agg. base	sf	3,721	$ 14.00	$ 52,094
Sports court surfacing	sf	3,721	$ 0.60	$ 2,233
Fencing, 10' high, 3-rail, black vinyl chain link (inc. gates)	lf	240	$ 185.00	$ 44,400
Fencing, 4' high, black vinyl chain link (between courts)	lf	40	$ 65.00	$ 2,600
Pickleball posts, footings, net, tensioners	ea	2	$ 4,200.00	$ 8,400
Subtotal				**$ 186,327**
Dog Park				
Storm Drain (add'l)	lf	240	$ 30.00	$ 7,200
Area drain in concrete, ADA grate	ea	1	$ 1,600.00	$ 1,600
Potable water line (1" or 1.5")	lf	140	$ 35.00	$ 4,900
Conduit/conductor (extend conduit to dog park entry)	lf	120	$ 50.00	$ 6,000
Convienence outlet	ea	1	$ 800.00	$ 800
Site concrete (City std, 5" w/ fibermesh)	sf	674	$ 8.00	$ 5,392
Fencing, 6' high, black vinyl chain link (inc. gates)	lf	1,827	$ 60.00	$ 109,620
Fencing, 4' wide person/dog gate	ea	4	$ 500.00	$ 2,000
Fencing, 6' wide maintenance gate	ea	4	$ 900.00	$ 3,600
Bicycle rack (2 spaces each)	ea	2	$ 1,300.00	$ 2,600
6' bench w/ back, armrest	ea	2	$ 2,200.00	$ 4,400
Hose bib (at entry of both small and large dog areas)	ea	2	$ 500.00	$ 1,000
Tree bubblers, system (2/tree; trees in mulch only base areas)	ea	46	$ 80.00	$ 3,680
Finish grading (bark area)	sf	80,242	$ 0.12	$ 9,630
Wood chips, 2"	cy	545	$ 70.00	$ 38,140
Trees (15 gallon)	ea	23	$ 150.00	$ 3,450
Subtotal				**$ 204,012**

Preliminary Opinion of Probable Cost | **Project** | 20018
CO-64/HP-2 Citywide Park | **Date** | 8/2/2021
Roach + Campbell Landscape Architecture

Description	Unit	Quantity	Est. Unit Price ($)	Est. Subtotal
Irrigation				
Small-scale turf irrigaton system (rotary)	sf	17,572	$ 3.05	$ 53,600
Small-scale shrub system (rotary)	sf	50,408	$ 3.15	$ 158,790
Large area turf system (rotors,over 20' wide)	sf	94,125	$ 2.65	$ 249,440
Large area shrub system (rotors, at swale/natural planting)	sf	24,693	$ 2.75	$ 67,910
Tree bubblers, system (2/tree; trees in mulch only base areas)	ea	120	$ 80.00	$ 9,600
Booster pump	allow	1	$ 40,000.00	$ 40,000
Filter (3" steel, w/ cover & pad)	ls	1	$ 14,000.00	$ 14,000
Controller assembly (inc. dual flow sensor & master valve)	allow	1	$ 24,000.00	$ 24,000
Irrigation Subtotal				**$ 617,340**
Planting				
Soil fertility test	ea	1	$ 250.00	$ 250
Soil amendments	sf	193,347	$ 0.42	$ 81,206
Finish grading	sf	193,347	$ 0.22	$ 42,537
Hydroseeded native grass (non-irrigated)	sf	72,101	$ 0.20	$ 14,421
Hydroseeded turf	sf	118,039	$ 0.16	$ 18,887
Planting, regular intensity (entry/sign areas)	sf	8,913	$ 4.00	$ 35,652
Planting, moderate intensity (shrubs/groundcover)	sf	35,343	$ 3.00	$ 106,029
Planting, low intensity (swale/buffer areas)	sf	31,052	$ 1.80	$ 55,894
Trees (15 gallon)	ea	277	$ 150.00	$ 41,550
Linear root barrier (18")	lf	-	$ 14.00	$ -
Bark mulch, 3"	cy	767	$ 80.00	$ 61,363
Wood chips, 2" (base bid at at skate park and parkour area)	cy	308	$ 70.00	$ 21,594
90-day maintenance (inc. 30-day establishment)	ls	1	$ 17,500.00	$ 17,500
Planting Subtotal				**$ 496,883**
Construction Subtotal				**$ 2,959,064**
General Conditions (assumed at:)		3.0%		$ 88,800
Mobilization (assumed at:)		2.0%		$ 59,200
CONSTRUCTION TOTAL				**$ 3,107,064**

Preliminary Opinion of Probable Cost | **Project** | 20018
CO-64/HP-2 Citywide Park | **Date** | 8/2/2021
Roach + Campbell Landscape Architecture

Description	Unit	Quantity	Est. Unit Price ($)	Est. Subtotal
Soft/Other Costs				
City Soft Costs (assumed at:)		4.0%		$ 124,300
Design Costs (% of costruction cost w/ add alts assumed at:)		5.0%		$ 240,400
Design Contingency		3.9%		$ 121,200
Construction Contingency (held at:)		5.0%		$ 155,400
PROJECT GRAND TOTAL				**$ 3,748,364**
Project Maximum:				**$ 3,748,982**
Variance				**$ (618)**
Proposed Alternates				
Alternate #1 (Turf at Skate Park and Parkour areas i.l.o wood chips; exclusive w/ Add Alts 2 & 5)				
Large area turf (rotor)	sf	45,431	$ 2.65	$ 120,400
Tree bubblers, system (2/tree; trees in mulch only base areas)	ea	(60)	$ 80.00	$ (4,800)
Soil amendments	sf	45,431	$ 0.42	$ 19,082
Finish grading	sf	45,431	$ 0.22	$ 9,995
Hydroseeded turf	sf	45,431	$ 0.16	$ 7,269
Wood chips, 2" (at skate park and parkour)	cy	(308)	$ 70.00	$ (21,594)
Subtotal Alternate #4 (excludes other costs)				$ 130,352
TOTAL ALT #1 (w/ general conditions, mobilization)				**$ 136,870**
Alternate #2 (Add Parkour/Ninja Challenge Area: includes adjacent walks, trees at SW, turf at NE; base bid: wood chips)				
Parkour/Ninja Course equipment	allow	1	$ 110,000.00	$ 110,000
Parkour/Ninja Course signage	ea	2	$ 1,400.00	$ 2,800
Resilient surfacing (Parkour/Ninja Course)	sf	8,684	$ 24.00	$ 208,416
Convienence outlet	ea	2	$ 800.00	$ 1,600
Site concrete (City std, 5" w/ fibermesh)	sf	2,251	$ 8.00	$ 18,008
Fencing, 4' high, black vinyl chain link (at east)	lf	180	$ 65.00	$ 11,700
Bicycle rack (2 spaces each)	ea	1	$ 1,300.00	$ 1,300
Small-scale turf (rotary)	sf	6,186	$ 3.00	$ 18,560
Soil amendments	sf	6,186	$ 0.42	$ 2,599
Finish grading	sf	6,186	$ 0.22	$ 1,361
Hydroseeded turf	sf	6,186	$ 0.16	$ 990
Trees (15 gallon; at SW)	ea	7	$ 150.00	$ 1,050
Subtotal (excludes other costs)				$ 378,384
TOTAL ALT #2 (w/ general conditions, mobilization)				**$ 397,303**

Preliminary Opinion of Probable Cost | **Project** | 20018
CO-64/HP-2 Citywide Park | **Date** | 8/2/2021
Roach + Campbell Landscape Architecture

Description	Unit	Quantity	Est. Unit Price ($)	Est. Subtotal
Alternate #3 (Add (2) pickleball courts; base bid is planting)				
Convienence outlet	ea	2	$ 800.00	$ 1,600
Sports court lighting (Musco)	allow	1	$ 75,000.00	$ 75,000
Sports court paving (assumed 6" w/ 4" cl 2 agg. base)	sf	3,751	$ 14.00	$ 52,514
Sports court surfacing	sf	3,751	$ 0.60	$ 2,251
Site concrete (City std, 5" w/ fibermesh)	sf	435	$ 8.00	$ 3,480
Fencing, 10' high, 3-rail, black vinyl chain link (inc. gates)	lf	293	$ 185.00	$ 54,205
Fencing, 4' high, black vinyl chain link (between courts)	lf	24	$ 80.00	$ 1,920
Pickleball net, posts, tensioners	ea	2	$ 4,200.00	$ 8,400
Small-scale shrub (rotary)	sf	(4,186)	$ 3.15	$ (13,190)
Soil amendments	sf	(4,186)	$ 0.42	$ (1,759)
Finish grading	sf	(4,186)	$ 0.22	$ (921)
Planting, moderate intensity (shrubs/groundcover)	sf	(4,186)	$ 3.00	$ (12,558)
Subtotal (excludes other costs)				$ 170,942
TOTAL ALT #3 (w/o general conditions, mobilization)				**$ 179,489**
Alternate #4 (Turf i.l.o. native grass at future BMX area)				
Large area turf (rotor)	sf	62,360	$ 2.75	$ 171,490
Tree bubblers, laterals (for trees w/in base bid but w/o irr, 2/tree	ea	(60)	$ 120.00	$ (7,200)
Soil amendments	sf	62,360	$ 0.42	$ 26,192
Finish grading	sf	62,360	$ 0.22	$ 13,720
Hydroseeded turf	sf	62,360	$ 0.16	$ 9,978
Temporary rdwd. header (adj. future Class I path extension)	lf	347	$ 15.00	$ 5,205
Subtotal (excludes other costs)				$ 219,385
TOTAL ALT #4 (w/ general conditions, mobilization)				**$ 230,354**
Alternate #5 (Skate Park, inc. drinking fountain, shade structure, and electrical)				
Site concrete (surrounding bowls, city std., 5" w/ fibermesh)	sf	7,651	$ 8.00	$ 61,208
Skate park: PIP bowls/skate features w/ metal imbeds	sf	5,300	$ 32.00	$ 169,600
Med. Shade Structure (432sf, standing mtl seam roof)	ea	1	$ 40,000.00	$ 40,000
Bicycle rack (2 spaces each)	ea	1	$ 1,300.00	$ 1,300
6' bench w/ back, armrest	ea	4	$ 2,200.00	$ 8,800
Sanitary Sewer line (4" PVC, for drinking fountain)	lf	880	$ 40.00	$ 35,200
Sanitary Sewer cleanouts	ea	1	$ 1,400.00	$ 1,400
Area Drain in concrete, ADA grate (for drinking fountain)	ea	1	$ 1,600.00	$ 1,600
Potable water line (1.5")	lf	420	$ 30.00	$ 12,600
Drinking Fountain	ea	1	$ 11,900.00	$ 11,900
Conduit/conductor (extend conduit to skate park and stub S.)	lf	1,020	$ 50.00	$ 51,000
Pullbox (#3.5)	ea	3	$ 600.00	$ 1,800
Convienence outlet	ea	2	$ 800.00	$ 1,600
Security light - within shelter	ea	1	$ 2,200.00	$ 2,200
Small-scale turf (rotary)	sf	15,656	$ 3.05	$ 47,760
Tree bubblers, laterals (for trees now in turf w/ add. alt)	ea	(18)	$ 80.00	$ (1,440)
Soil amendments	sf	15,656	$ 0.42	$ 6,576
Finish grading	sf	15,656	$ 0.22	$ 3,445
Hydroseeded turf	sf	15,656	$ 0.16	$ 2,505
Trees (15 gallon; at N. and S.)	ea	9	$ 150.00	$ 1,350
Subtotal (excludes other costs)				$ 460,404
TOTAL ALT #5 (w/ general conditions, mobilization)				**$ 483,424**

Preliminary Opinion of Probable Cost | **Project** | 20018
CO-64/HP-2 Citywide Park | **Date** | 8/2/2021
Roach + Campbell Landscape Architecture

Description	Unit	Quantity	Est. Unit Price ($)	Est. Subtotal
Alternate #6 (Add pump track fence, grade track, and wood chips at perimeter; base bid: rough grade w/native grass)				
6' fencing at pump track (inc. gates)	lf	947	$ 60.00	$ 56,820
Signage: use/management	allow	1	$ 1,200.00	$ 1,200
Grading allowance (specialized berms, rollers, etc.)	allow	1	$ 30,000.00	$ 30,000
Hydroseeded native grass (non-irrigated)	sf	(37,489)	$ 0.20	$ (7,498)
Wood chips, 3"	cy	200	$ 70.00	$ 13,975
Subtotal (excludes other costs)				$ 94,497
TOTAL ALT #6 (w/o general conditions, mobilization)				**$ 99,222**
Alternate #7 (Concrete Split Rail i.l.o. Post-and Cable fencing at W. side of park)				
Post and Cable Fencing	lf	1,636	$ (40.00)	$ (65,440)
Concrete Split Rail Fence (two-rail)	lf	1,574	$ 125.00	$ 196,750
Subtotal (excludes other costs)				$ 131,310
TOTAL ALT #7 (w/ general conditions, mobilization)				**$ 137,876**
Alternate #8 (Add shade structure, benches at pickleball courts)				
Site concrete (City std, 5" w/ fibermesh)	sf	270	$ 8.00	$ 2,160
6' bench w/ back, armrest	ea	2	$ 1,000.00	$ 2,000
Sml. Shade Structure (120sf, standing mtl seam roof)	ea	1	$ 28,000.00	$ 28,000
Bicycle rack (2 spaces each)	ea	1	$ 1,300.00	$ 1,300
Subtotal (excludes other costs)				$ 33,460
TOTAL ALT #8 (w/ general conditions, mobilization)				**$ 35,133**
Alternate #9 (On-Site Gravel Parking)				
Hydroseeded native grass (non-irrigated)	sf	(16,000)	$ 0.20	$ (3,200)
6" Class II aggregate base, over compacted subgrade	sf	16,000	$ 3.00	$ 48,000
Road Oil	sf	16,000	$ 0.15	$ 2,400
Collapsible bollard at fire access (or chain/sign)	ls	1	$ 1,500.00	$ 1,500
Bollards at Class I multi-use path	ea	3	$ 500.00	$ 1,500
Knox Box	ea	1	$ 600.00	$ 600
Concrete Precast Curb Stops (accessible parking only)	ea	2	$ 120.00	$ 240
Accessible Concrete, vehicular (5"/6")	sf	732	$ 12.00	$ 8,784
Accessible Striping	ls	1	$ 800.00	$ 800
Accessible/Parking Signage	ea	3	$ 750.00	$ 2,250
Accessible ramp (sim. to Caltrans type C)	ea	1	$ 2,000.00	$ 2,000
Subtotal				$ 64,874
TOTAL ALT #9 (w/ general conditions, mobilization)				**$ 68,118**
Omitted Items				
Redwood header (at south property line)	lf	-	$ 15.00	$ -
Trash receptacles (OFOI)	ea	-	$ -	$ -
Painted curb (if req'd for fire lane at private drive)	lf	-	$ 6.00	$ -
Subtotal omitted Items				**$ -**

Notes:
1. Opinion of probable cost does not and cannot reflect contractor's bid pricing, subject to market fluctuations, labor and material availability, and other factors beyond the Landscape Architect's knowledge or control.
2. Excludes work within the roadway (including curb, gutter and sidewalk: constructed per separate improvement plans).
3. Excludes utility connection fees (i.e., potable water): assumed "no charge" for City project.
4. Earthwork excludes import/export (site assumed to balance).
5. Based on Draft Master Plan dated March 2021.
6. Cost opinion provided for planning only and subject to revisions to the master plan and during detailed design.

Preliminary Opinion of Probable Cost
CO-64/HP-2 Citywide Park
Roach + Campbell Landscape Architecture

Project 20018
Date 8/2/2021

Description	Unit	Quantity	Est. Unit Price ($)	Est. Subtotal

7. Alternates priced relative to base bid. Combinations of alternates may affect pricing.
8. We recommend a 10% design contingency (at the preliminary phase), and minimum 10% construction contingency. These have been reduced due to budget constraints.

Vicinity Map

HP2/CO64 Park Site

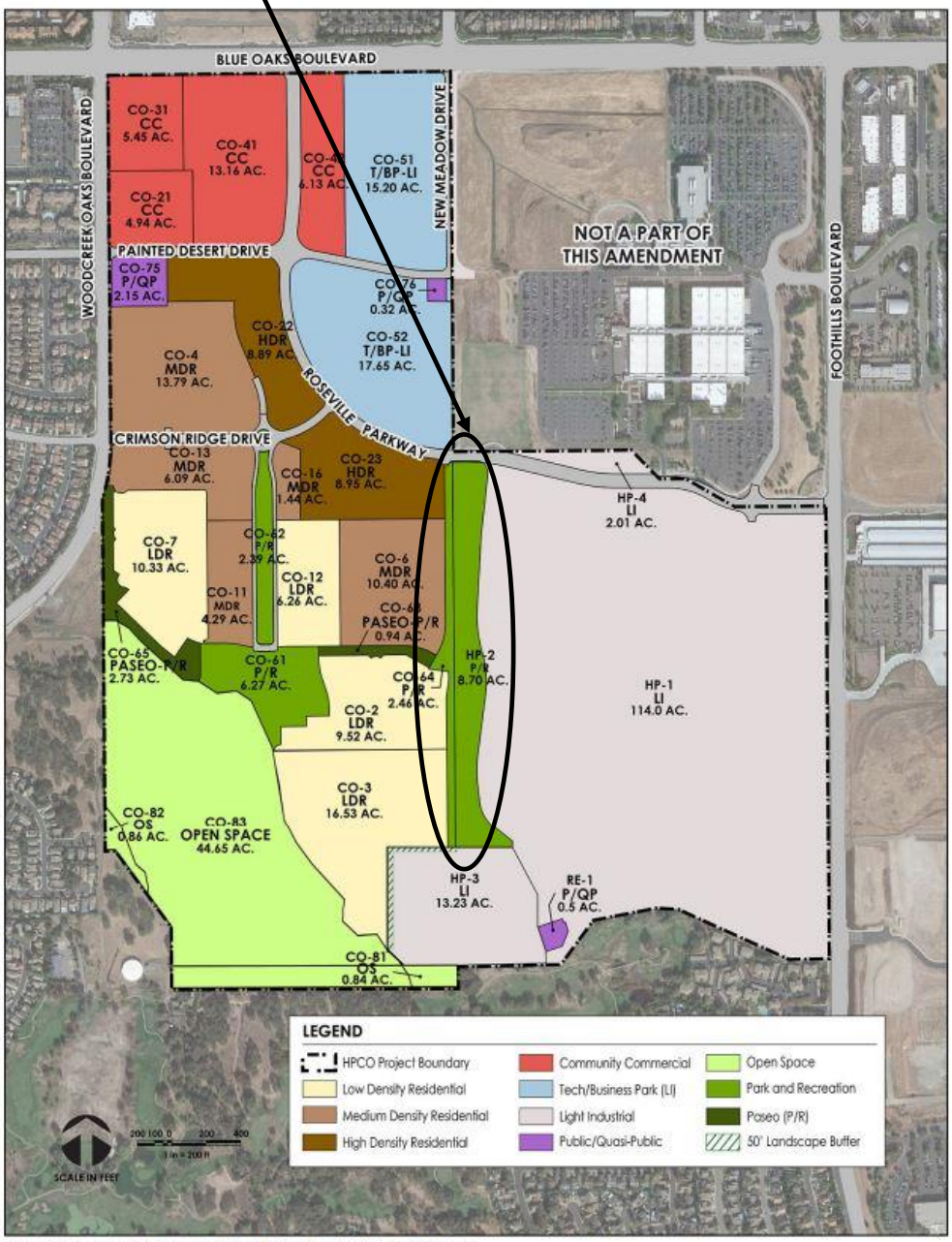
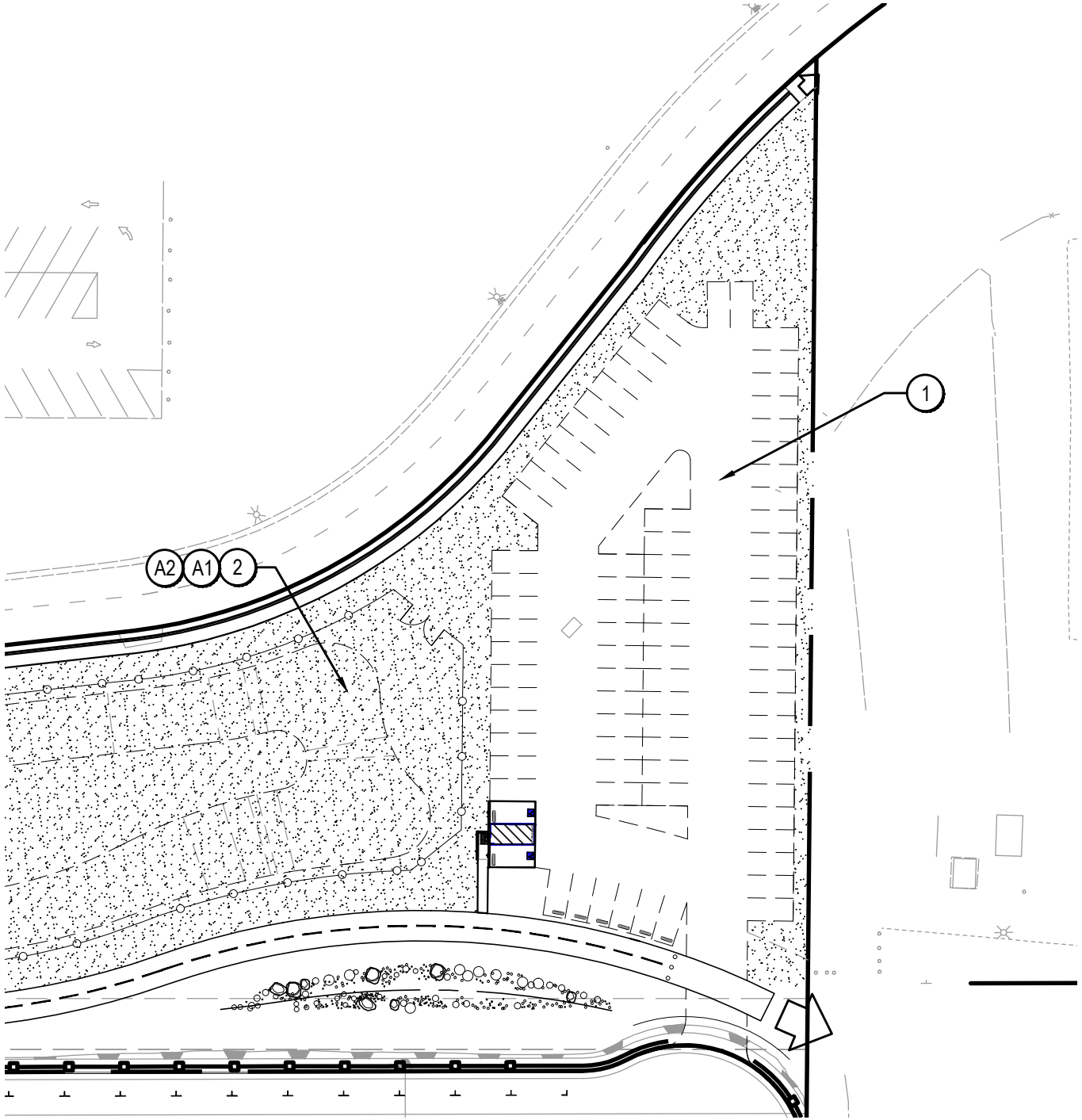


FIGURE 3-1: HPCO Project Area Land Use Diagram



1 GRAVEL PARKING AREA, INCLUDING ACCESSIBLE STALLS, TOTAL OF 82 SPACES

2 BASE BID: NATIVE NON-IRRIGATED GRASS

A1 TURF I.L.O. NATIVE NON-IRRIGATED GRASS

A2 BMX/PUMP TRACK (.6 ACRE): FENCING, ROUGH GRADING, WOOD CHIPS AT PERIMETER

CO-64 Citywide Park - Option B (Parking)

0' 60' 120'

1" = 60'

N

COUNCIL COMMUNICATION

CC #: 1683
File #: 0800-03

Title:	2020 Power Source Disclosure Annual Reports and 2020 Power Content Labels
Contact:	David Siao 916-746-1613 dsiao@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 7.5.

RECOMMENDATION TO COUNCIL

Staff recommends that the City Council adopt a resolution to approve the 2020 Power Source Disclosure Annual Reports and 2020 Power Content Labels. There is no fiscal impact with the approval of these reports.

BACKGROUND

Senate Bill (SB) 1305, approved in 1997, directs all California retail suppliers of electricity to disclose to consumers the sources of energy used to provide the electric service in an accurate, reliable and simple to understand manner. The SB 1305 Report is referred to as the Power Source Disclosure (PSD) Report. The data contained in the PSD Reports are subsequently used to prepare the annual Power Content Labels (PCLs), which are mailed to Roseville's customers and posted on Roseville Electric's website.

Beginning in 2019, Roseville has two electricity products: its general electricity product and its Roseville Community Solar product. The regulations require utilities to engage a third-party certified public accountant to perform an audit to verify the PSD Report and PCL for each of Roseville Electric's electricity products. Alternatively, publicly owned electric utilities, like Roseville, are exempt from this requirement if its City Council attests to the veracity of the annual reports per the regulations. This resolution approves the 2020 PSD Reports and PCL reports, serving as the attestation to the veracity of these submissions. This attestation is required by October 1st of each year.

Roseville's contracts provide flexibility to energy providers on the timing of renewable energy deliveries, which can result in year to year variability in Roseville's power sources. Roseville's existing contracts ensure it will be in full compliance with the State Renewable Portfolio Standard (RPS) through 2024.

FISCAL IMPACT

There is no fiscal impact associated with the approval of the 2020 Power Source Disclosure Annual Reports and 2020 Power Content Labels.

ENVIRONMENTAL REVIEW

The California Environmental Quality Act (CEQA) does not apply to activities that will not result in a direct or reasonably foreseeable indirect physical change in the environment, or is otherwise not considered a project as defined by CEQA Statute §21065 and CEQA State Guidelines §15060(c)(3) and §15378. Approval of the 2020 PSD Annual Reports and PCLs meets the above criteria and are not subject to CEQA. No additional environmental review is required.

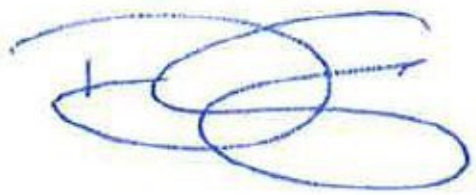
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal C - Maintain a safe and healthy community

Respectfully Submitted,

David Siao, Electric Resources Analyst

Michelle Bertolino, Electric Utility Director



_____

Dominick Casey, City Manager

ATTACHMENTS:

Description

Resolution 21-384

2020 Roseville Power Content Label Final

2020 PSD Annual Report Community Solar - Roseville Electric with attestation

2020 PSD Annual Report - Roseville Electric v2.1 (002)

RESOLUTION NO. 21-384

APPROVING SUBMISSION OF THE 2020 POWER SOURCE DISCLOSURE ANNUAL REPORTS AND 2020 POWER CONTENT LABELS, AND ATTESTATION OF THE VERACITY OF THE ANNUAL REPORTS

WHEREAS, Senate Bill 1305 (SB 1305), adopted in 1997 and now codified in California Public Utilities Code sections 398.1-398.5, established a Power Source Disclosure Program that requires retail sellers of electricity to annually submit power source disclosure reports to the California Energy Commission (CEC); and

WHEREAS, the SB 1305 Report is referred to as the Power Source Disclosure (PSD) Report and Roseville Electric Utility submits PSD Reports to the California Energy Commission (CEC) by June 1st of each year; and

WHEREAS, Roseville Electric Utility is a retail seller of electricity as defined by the Power Source Disclosure Program; and

WHEREAS, publicly owned utilities (POUs), such as Roseville Electric Utility, are exempt from the annual audit requirements if the governing body of the POU approves at a public meeting the submission to the CEC of an attestation of the veracity of the annual report by October 1st of each year; and

WHEREAS, Roseville Electric Utility staff has prepared the 2020 Power Source Disclosure Annual Reports and the 2020 Power Content Labels to the CEC in accordance with the Power Source Disclosure Program requirements and deadlines.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Roseville that it has approved the submission of the 2020 Power Source Disclosure Annual Reports and the 2020 Power Content Labels to the CEC and hereby provides attestation of the veracity of the annual reports submitted by staff.

PASSED AND ADOPTED by the Council of the City of Roseville this_____day of _____, 2021, by the following vote on roll call.

AYES COUNCILMEMBERS:
NOES COUNCILMEMBERS:
ABSENT COUNCILMEMBERS:

_____
MAYOR

ATTEST:

_____
City Clerk

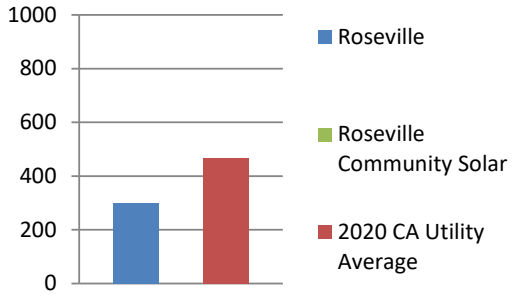
2020 POWER CONTENT LABEL

City of Roseville

roseville.ca.us/pcl

Greenhouse Gas Emissions Intensity (lbs CO_2e/MWh)

Roseville	Roseville Community Solar	2020 CA Utility Average
301	**0**	**466**



Energy Resources	Roseville	Roseville Community Solar	2020 CA Power Mix
Eligible Renewable[1]	**31.9%**	**100.0%**	**33.1%**
Biomass & Biowaste	0.0%	0.0%	2.5%
Geothermal	9.9%	0.0%	4.9%
Eligible Hydroelectric	0.4%	0.0%	1.4%
Solar	0.1%	100.0%	13.2%
Wind	21.5%	0.0%	11.1%
Coal	**0.0%**	**0.0%**	**2.7%**
Large Hydroelectric	**46.2%**	**0.0%**	**12.2%**
Natural Gas	**17.8%**	**0.0%**	**37.1%**
Nuclear	**2.9%**	**0.0%**	**9.3%**
Other	**0.2%**	**0.0%**	**0.2%**
Unspecified Power[2]	**1.0%**	**0.0%**	**5.4%**
TOTAL	**100.0%**	**100.0%**	**100.0%**
Percentage of Retail Sales Covered by Retired Unbundled RECs[3]**:**	**0%**	**0%**	

[1]The eligible renewable percentage above does not reflect RPS compliance, which is determined using a different methodology.

[2]Unspecified power is electricity that has been purchased through open market transactions and is not traceable to a specific generation source.

[3]Renewable energy credits (RECs) are tracking instruments issued for renewable generation. Unbundled renewable energy credits (RECs) represent renewable generation that was not delivered to serve retail sales. Unbundled RECs are not reflected in the power mix or GHG emissions intensities above.

For specific information about this electricity portfolio, contact:	**City of Roseville-Roseville Electric Utility (916) 79-POWER**
For general information about the Power Content Label, visit:	http://www.energy.ca.gov/pcl/
For additional questions, please contact the California Energy Commission at:	Toll-free in California: 844-454-2906 Outside California: 916-653-0237

2020 POWER SOURCE DISCLOSURE ANNUAL REPORT
For the Year Ending December 31, 2020

Retail suppliers are required to use the posted template and are not allowed to make edits to this format. Please complete all requested information.

GENERAL INSTRUCTIONS

RETAIL SUPPLIER NAME
City of Roseville

ELECTRICITY PORTFOLIO NAME
Roseville Community Solar

CONTACT INFORMATION	
NAME	**David Siao**
TITLE	**Electric Resources Planner**
MAILING ADDRESS	**2090 Hilltop Circle**
CITY, STATE, ZIP	**Roseville, CA 95747**
PHONE	**916-746-1613**
EMAIL	dsiao@roseville.ca.us
WEBSITE URL FOR PCL POSTING	https://www.roseville.ca.us/government/departments/electric_utility/about_us/reports___publications/power_content_label

Submit the Annual Report and signed Attestation in PDF format with the Excel version of the Annual Report to PSDprogram@energy.ca.gov. Remember to complete the Retail Supplier Name, Electricity Portfolio Name, and contact information above, and submit separate reports and attestations for each additional portfolio if multiple were offered in the previous year.

NOTE: Information submitted in this report is not automatically held confidential. If your company wishes the information submitted to be considered confidential an authorized representative must submit an application for confidential designation (CEC-13), which can be found on the California Energy Commissions's website at https://www.energy.ca.gov/about/divisions-and-offices/chief-counsels-office.

If you have questions, contact Power Source Disclosure (PSD) staff at PSDprogram@energy.ca.gov or (916) 639-0573.

2020 POWER SOURCE DISCLOSURE ANNUAL REPORT
SCHEDULE 1: PROCUREMENTS AND RETAIL SALES
For the Year Ending December 31, 2020
City of Roseville
Roseville Community Solar

Instructions: Enter information about power procurements underlying this electricity portfolio for which your company is filing the Annual Report. Insert additional rows as needed. All fields in white should be filled out. **Fields in grey auto-populate as needed and should not be filled out.** For EIA IDs for unspecified power or specified system mixes from asset-controlling suppliers, enter "unspecified", "BPA," "Powerex,", or "Tacoma" as applicable. For specified procurements of ACS power, use the ACS Procurement Calculator to calculate the resource breakdown comprising the ACS system mix. **Procurements of unspecified power must not be entered as line items below; unspecified power will be calculated automatically in cell N9**. Unbundled RECs must not be entered on Schedule 1; these products must be entered on Schedule 2. At the bottom portion of the schedule, provide the other electricity end-uses that are not retail sales including, but not limited to transmission and distribution losses or municipal street lighting. Amounts should be in megawatt-hours.

Retail Sales (MWh)	**1,765**
Net Specified Procurement (MWh)	1,765
Unspecified Power (MWh)	-
Procurement to be adjusted	-
Net Specified Natural Gas	-
Net Specified Coal & Other Fossil Fuels	-
Net Specified Nuclear, Large Hydro, Renewables, and ACS Power	1,765
GHG Emissions (excludes grandfathered emissions)	0
GHG Emissions Intensity (in MT CO_2e/MWh)	0.0000

DIRECTLY DELIVERED RENEWABLES

Facility Name	Fuel Type	State or Province	WREGIS ID	RPS ID	N/A	EIA ID	Gross MWh Procured	MWh Resold	Net MWh Procured	Adjusted Net MWh Procured	GHG Emissions Factor (in MT CO2e/MWh)	GHG Emissions (in MT CO_2e)	N/A
Roseville Community Solar	Solar	CA	W7161	64204A		62114	**1,765**	-	1,765	1,765	-	-	
									-	-	#N/A		
									-	-	#N/A		
									-	-	#N/A		
									-	-	#N/A		
									-	-	#N/A		
									-	-	#N/A		
									-	-	#N/A		
									-	-	#N/A		
									-	-	#N/A		
									-	-	#N/A		

FIRMED-AND-SHAPED IMPORTS

Facility Name	Fuel Type	State or Province	WREGIS ID	RPS ID	EIA ID of REC Source	EIA ID of Substitute Power	Gross MWh Procured	MWh Resold	Net MWh Procured	Adjusted Net MWh Procured	GHG Emissions Factor (in MT CO2e/MWh)	GHG Emissions (in MT CO_2e)	Eligible for Grandfathered Emissions?
									-	-	#N/A		

SPECIFIED NON-RENEWABLE PROCUREMENTS

Facility Name	Fuel Type	State or Province	N/A	N/A	N/A	EIA ID	Gross MWh Procured	MWh Resold	Net MWh Procured	Adjusted Net MWh Procured	GHG Emissions Factor (in MT CO2e/MWh)	GHG Emissions (in MT CO_2e)	N/A
									-	-	#N/A		
									-	-	#N/A		
									-	-	#N/A		
									-	-	#N/A		
									-	-	#N/A		
									-	-	#N/A		
									-	-	#N/A		
									-	-	#N/A		
									-	-	#N/A		

PROCUREMENTS FROM ASSET-CONTROLLING SUPPLIERS

Facility Name	Fuel Type	N/A	N/A	N/A	N/A	EIA ID	Gross MWh Procured	MWh Resold	Net MWh Procured	Adjusted Net MWh Procured	GHG Emissions Factor (in MT CO2e/MWh)	GHG Emissions (in MT CO_2e)	N/A
										-	#N/A		
										-	#N/A		
										-	#N/A		
										-	#N/A		

END USES OTHER THAN RETAIL SALES	MWh

2020 POWER SOURCE DISCLOSURE ANNUAL REPORT
SCHEDULE 2: RETIRED UNBUNDLED RECS
For the Year Ending December 31, 2020
City of Roseville
Roseville Community Solar

INSTRUCTIONS: Enter information about retired unbundled RECs associated with this electricity portfolio. Insert additional rows as needed. All fields in white should be filled out. Fields in grey auto-populate as needed and should not be filled out.

			Total Retired Unbundled RECs	-

RETIRED UNBUNDLED RECS				
Facility Name	**Fuel Type**	**State or Province**	**RPS ID**	**Total Retired (in MWh)**

2020 POWER SOURCE DISCLOSURE ANNUAL REPORT
SCHEDULE 3: POWER CONTENT LABEL DATA
For the Year Ending December 31, 2020
City of Roseville
Roseville Community Solar

Instructions: No data input is needed on this schedule. Retail suppliers should use these auto-populated calculations to fill out their Power Content Labels.

	Adjusted Net Procured (MWh)	Percent of Total Retail Sales
Renewable Procurements	1,765	100.0%
Biomass & Biowaste	-	0.0%
Geothermal	-	0.0%
Eligible Hydroelectric	-	0.0%
Solar	1,765	100.0%
Wind	-	0.0%
Coal	-	0.0%
Large Hydroelectric	-	0.0%
Natural gas	-	0.0%
Nuclear	-	0.0%
Other	-	0.0%
Unspecified Power	-	0.0%
Total	**1,765**	**100.0%**

Total Retail Sales (MWh)	**1,765**
GHG Emissions Intensity (converted to lbs CO_2e/MWh)	**-**
Percentage of Retail Sales Covered by Retired Unbundled RECs	**0.0%**

POWER SOURCE DISCLOSURE ANNUAL REPORT ATTESTATION FORM
for the year ending December 31, 2020
City of Roseville
Roseville Community Solar

I, (print name) **David Siao,**
(title) Electric Resources Planner**, declare under penalty of perjury, that the statements contained in this report including Schedules 1, 2, and 3 are true and correct and that I, as an authorized agent of** (print name of company) **City of Roseville, have authority to submit this report on the company's behalf. I further declare that the megawatt-hours claimed as specified purchases as shown in these Schedules were, to the best of my knowledge, sold once and only once to retail customers.**

Name: David Siao
Representing (Retail Supplier):City of Roseville
Signature: _____
Dated: _____
Executed at: _____

POWER SOURCE DISCLOSURE ANNUAL REPORT ATTESTATION FORM
for the year ending December 31, 2020
City of Roseville
Roseville Community Solar

I, (print name) **David Siao,**
(title) Electric Resources Planner, **declare under penalty of perjury, that the statements contained in this report including Schedules 1, 2, and 3 are true and correct and that I, as an authorized agent of** (print name of company) **City of Roseville, have authority to submit this report on the company's behalf. I further declare that the megawatt-hours claimed as specified purchases as shown in these Schedules were, to the best of my knowledge, sold once and only once to retail customers.**

Name: David Siao
Representing (Retail Supplier):City of Roseville
Signature: David Siao
Dated: 6-1-21
Executed at: 2090 Hilltop Circle, Roseville, CA 95747

2020 POWER SOURCE DISCLOSURE ANNUAL REPORT
For the Year Ending December 31, 2020

Retail suppliers are required to use the posted template and are not allowed to make edits to this format. Please complete all requested information.

GENERAL INSTRUCTIONS

RETAIL SUPPLIER NAME
City of Roseville

ELECTRICITY PORTFOLIO NAME
Roseville

CONTACT INFORMATION	
NAME	**David Siao**
TITLE	**Electric Resources Planner**
MAILING ADDRESS	**2090 Hilltop Circle**
CITY, STATE, ZIP	**Roseville, CA 95747**
PHONE	**916-746-1613**
EMAIL	dsiao@roseville.ca.us
WEBSITE URL FOR PCL POSTING	https://www.roseville.ca.us/government/departments/electric_utility/about_us/reports___publications/power_content_label

Submit the Annual Report and signed Attestation in PDF format with the Excel version of the Annual Report to PSDprogram@energy.ca.gov. Remember to complete the Retail Supplier Name, Electricity Portfolio Name, and contact information above, and submit separate reports and attestations for each additional portfolio if multiple were offered in the previous year.

NOTE: Information submitted in this report is not automatically held confidential. If your company wishes the information submitted to be considered confidential an authorized representative must submit an application for confidential designation (CEC-13), which can be found on the California Energy Commissions's website at https://www.energy.ca.gov/about/divisions-and-offices/chief-counsels-office.

If you have questions, contact Power Source Disclosure (PSD) staff at PSDprogram@energy.ca.gov or (916) 639-0573.

INTRODUCTION

Retail suppliers are required to submit separate Annual Reports for each electricity portfolio offered to California retail consumers in the previous calendar year. Enter the Retail Supplier Name and Electricity Portfolio Name at the top of Schedule 1, Schedule 2, Schedule 3, and the Attestation.

A complete Annual Report includes the following tabs:

PSD Intro
Instructions
Schedule 1 - Procurements and Retail Sales
Schedule 2 - Retired Unbundled Renewable Energy Credits (RECs)
Schedule 3 - Annual Power Content Label Data
GHG Emissions Factors
Asset-Controlling Supplier (ACS) Procurement Calculator
PSD Attestation

INSTRUCTIONS

Schedule 1: Procurements and Retail Sales

Retail suppliers of electricity must complete this schedule by entering information about all power procurements and generation that served the identified electricity portfolio covered in this filing in the prior year. The schedule is divided into sections: directly delivered renewables, firmed-and-shaped imports, specified non-renewables, and procurements from ACSs. Insert additional rows as needed to report all procurements or generation serving the subject product. Provide the annual retail sales for the subject product in the appropriate space. At the bottom of Schedule 1, provide the retail suppliers' other electricity end-uses that are not retail sales, such as transmission and distribution losses. Retail suppliers shall submit a purchase agreement or ownership arrangement documentation substantiating that any eligible firmed-and-shaped product for which it is claiming an exclusion was executed prior to January 1, 2019. **Any retail supplier that offered multiple electricity portfolios in the prior year must submit separate Annual Reports for each portfolio offered.**

Specified Purchases: A Specified Purchase refers to a transaction in which electricity is traceable to specific generating facilities by any auditable contract trail or equivalent, such as a tradable commodity system, that provides commercial verification that the electricity claimed has been sold once and only once to retail consumers. Do not enter data in the grey fields. For specified purchases, include enter following information for each line item:

Facility Name - Provide the name used to identify the facility.
Fuel Type - Provide the resource type (solar, natural gas, etc.) that this facility uses to generate electricity.
Location - Provide the state or province in which the facility is located.
Identification Numbers - Provide all applicable identification numbers from the Western Renewable Energy Generation Information System (WREGIS), the Energy Information Agency (EIA), and the California Renewables Portfolio Standard (RPS).
Gross Megawatt Hours Procured - Provide the quantity of electricity procured in MWh from the generating facility.
Megawatt Hours Resold - Provide the quantity of electricity resold at wholesale.

Unspecified Power: Unspecified Power refers to electricity that is not traceable to specific generation sources by any auditable contract trail or equivalent, or to power purchases from a transaction that expressly transferred energy only and not the RECs associated from a facility. **Do not enter procurements of unspecified power**. The schedule will calculate unspecified power procurements automatically.

Schedule 2: Retired Unbundled RECs

Complete this schedule by entering information about unbundled REC retirements in the previous calendar year.

Schedule 3: Annual Power Content Label Data

This schedule is provided as an automated worksheet that uses the information from Schedule 1 to calculate the power content and GHG emissions intensity for each electricity portfolio. The percentages calculated on this worksheet should be used for your Power Content Label.

ACS Resource Mix Calculator

Retail suppliers may report specified purchases from ACS system power if the ACS provided its fuel mix of its specified system mix to the Energy Commission. Use the calculator to determine the resource-specific procurement quantities, and transfer them to Schedule 1.

GHG Emissions Factors

This tab will be displayed for informational purposes only; it will not be used by reporting entities, since the emissions factors below auto-populate in the relevant fields on Schedules 1 & 3.

Attestation

This template provides the attestation that must be submitted with the Annual Report to the Energy Commission, stating that the information contained in the applicable schedules is correct and that the power has been sold once and only once to retail consumers. This attestation must be included in the package that is transmitted to the Energy Commission. Please provide the complete Annual Report in Excel format and the complete Annual Report with signed attestation in PDF format as well.

2020 POWER SOURCE DISCLOSURE ANNUAL REPORT
SCHEDULE 1: PROCUREMENTS AND RETAIL SALES
For the Year Ending December 31, 2020
City of Roseville
Roseville

Instructions: Enter information about power procurements underlying this electricity portfolio for which your company is filing the Annual Report. Insert additional rows as needed. All fields in white should be filled out. **Fields in grey auto-populate as needed and should not be filled out.** For EIA IDs for unspecified power or specified system mixes from asset-controlling suppliers, enter "unspecified", "BPA," "Powerex,", or "Tacoma" as applicable. For specified procurements of ACS power, use the ACS Procurement Calculator to calculate the resource breakdown comprising the ACS system mix. **Procurements of unspecified power must not be entered as line items below; unspecified power will be calculated automatically in cell N9**. Unbundled RECs must not be entered on Schedule 1; these products must be entered on Schedule 2. At the bottom portion of the schedule, provide the other electricity end-uses that are not retail sales including, but not limited to transmission and distribution losses or municipal street lighting. Amounts should be in megawatt-hours.

Retail Sales (MWh)	**1,106,693**
Net Specified Procurement (MWh)	1,232,894
Unspecified Power (MWh)	-
Procurement to be adjusted	126,201
Net Specified Natural Gas	323,449
Net Specified Coal & Other Fossil Fuels	-
Net Specified Nuclear, Large Hydro, Renewables, and ACS Power	909,445
GHG Emissions (excludes grandfathered emissions)	151,032
GHG Emissions Intensity (in MT CO_2e/MWh)	0.1365

DIRECTLY DELIVERED RENEWABLES

Facility Name	Fuel Type	State or Province	WREGIS ID	RPS ID	N/A	EIA ID	Gross MWh Procured	MWh Resold	Net MWh Procured	Adjusted Net MWh Procured	GHG Emissions Factor (in MT CO2e/MWh)	GHG Emissions (in MT CO_2e)	N/A
Blackwell Solar - Blackwell Solar, LLC	Solar	CA	W4587	61892		58711	313		313	313	-	-	
Cape Scott Wind - Cape Scott Wind	Wind	BC	W3959	60600		P149	17,967		17,967	17,967	-	-	
Dokie Wind - Dokie Wind	Wind	BC	W1992	61360		P150	24,860		24,860	24,860	-	-	
Geothermal 1_Unit 1 - Geothermal 1	Geothermal	CA	W1254	60908		7368	38,633		38,633	38,633	0.0457	1,765	
Geothermal 1_Unit 1 & 2 Onsite Load - Geotherma	Geothermal	CA	W4883	60908		7368	1,074		1,074	1,074	0.0457	49	
Geothermal 1_Unit 2 - Geothermal 1	Geothermal	CA	W1255	60908		7368	32,232		32,232	32,232	0.0457	1,472	
Geothermal 2_Unit 4 - Geothermal 2	Geothermal	CA	W1257	60911		7369	37,300		37,300	37,300	0.0730	2,722	
Geothermal Solar Unit_1 - Geo_Solar_1 Clearlake	Solar	CA	W1509	62040		7368	46		46	46	0.0457	2	
Geothermal Solar Unit_2 - Geo_Solar_2 Middletow	Solar	CA	W2792	62041		7369	73		73	73	0.0730	5	
Juniper Canyon - Juniper Canyon	Wind	WA	W1690	61202		57320	14,701		14,701	14,701	-	-	
Klondike IIIa - Klondike Wind Power IIIa	Wind	OR	W817	60694		56468	2,544		2,544	2,544	-	-	
Leaning Juniper II - Leaning Juniper II	Wind	OR	W1689	61200		57333	17,198		17,198	17,198	-	-	
Lewiston Powerplant - Lewiston	Eligible hydro	CA	W1108	61044		977	93		93	93	-	-	
Lost Hills - Lost Hills Solar, LLC	Solar	CA	W4586	61893		58711	524		524	524	-	-	
Nimbus Powerplant - Nimbus Plant (2)	Eligible hydro	CA	W1161	61045		444	2,832		2,832	2,832	-	-	
Quality Wind - Quality Wind	Wind	BC	W3160	62247		P154	32,173		32,173	32,173	-	-	
Spicer_1_Units - Spicer Meadow Project	Eligible hydro	CA	W1260	61580		54554	1,575		1,575	1,575	-	-	
Stampede Powerplant - Stampede (2)	Eligible hydro	CA	W1177	61046		7066	413		413	413	-	-	

FIRMED-AND-SHAPED IMPORTS

Facility Name	Fuel Type	State or Province	WREGIS ID	RPS ID	EIA ID of REC Source	EIA ID of Substitute Power	Gross MWh Procured	MWh Resold	Net MWh Procured	Adjusted Net MWh Procured	GHG Emissions Factor (in MT CO2e/MWh)	GHG Emissions (in MT CO_2e)	Eligible for Grandfathered Emissions?
Leaning Juniper II - Leaning Juniper II	Wind	WA	W1689	61200	57333	57320	1,847		1,847	1,847	-	-	No
Leaning Juniper II - Leaning Juniper II	Wind	WA	W1689	61200	57333	56359	51		51	51	-	-	No
Leaning Juniper II - Leaning Juniper II	Wind	WA	W1689	61200	57333	56468	758		758	758	-	-	No
Leaning Juniper II - Leaning Juniper II	Wind	WA	W1689	61200	57333	57333	1,951		1,951	1,951	-	-	No
Leaning Juniper II - Leaning Juniper II	Wind	WA	W1689	61200	57333	Unspecified Power	33,767		33,767	33,767	0.42800	14,452	No
Juniper Canyon - Juniper Canyon	Wind	WA	W1690	61202	57320	57320	122		122	122	-	-	No
Juniper Canyon - Juniper Canyon	Wind	WA	W1690	61202	57320	56359	85		85	85	-	-	No
Juniper Canyon - Juniper Canyon	Wind	WA	W1690	61202	57320	56468	1,566		1,566	1,566	-	-	No
Juniper Canyon - Juniper Canyon	Wind	WA	W1690	61202	57320	57333	382		382	382	-	-	No
Juniper Canyon - Juniper Canyon	Wind	WA	W1690	61202	57320	Unspecified Power	57,565		57,565	57,565	0.42800	24,638	No
Klondike III - Klondike Wind Power III LLC	Wind	OR	W237	60602	56468	Unspecified Power	7,865		7,865	7,865	0.42800	3,366	No
Klondike IIIa - Klondike Wind Power IIIa	Wind	OR	W817	60694	56468	Unspecified Power	22,346		22,346	22,346	0.4280	9,564	No

SPECIFIED NON-RENEWABLE PROCUREMENTS

Facility Name	Fuel Type	State or Province	N/A	N/A	N/A	EIA ID	Gross MWh Procured	MWh Resold	Net MWh Procured	Adjusted Net MWh Procured	GHG Emissions Factor (in MT CO2e/MWh)	GHG Emissions (in MT CO_2e)	N/A
Folsom Powerplant	Large hydro	CA				441	11,289		11,289	11,289	-	-	
Gianelli Powerplant	Large hydro	CA				448	3,628		3,628	3,628	-	-	
J.F. Carr	Large hydro	CA				442	14,852		14,852	14,852	-	-	

Keswick Powerplant	Large hydro	CA				443	10,585		10,585	10,585	-	-	
New Melones	Large hydro	CA				6158	14,617		14,617	14,617	-	-	
O'Neill Powerplant	Large hydro	CA				446	122		122	122	-	-	
Shasta	Large hydro	CA				445	54,132		54,132	54,132	-	-	
Spring Creek	Large hydro	CA				450	12,807		12,807	12,807	-	-	
Trinity Powerplant	Large hydro	CA				451	14,205		14,205	14,205	-	-	
Collierville	Large Hydro	CA				54555	37,035		37,035	37,035	-	-	
Roseville Energy Park	Natural Gas	CA				56298	307,853		307,853	187,737	0.4517	84,792	
Roseville Power Plant No. 2	Natural Gas	CA				7452	2,505		2,505	1,528	1.0345	1,580	
STIG	Natural Gas	CA				7449	13,091		13,091	7,983	0.3860	3,081	
Boundary Hydroelectric Units	Large Hydro	WA				6433	6,724		6,724	6,724	-	-	
Box Canyon Dam	Large Hydro	CA				3891	73,871		73,871	73,871	-	-	
Mid-C Hydro - Priest Rapids and Wanapum dams	Large hydro	WA				3887	140		140	140	-	-	

PROCUREMENTS FROM ASSET-CONTROLLING SUPPLIERS

Facility Name	Fuel Type	N/A	N/A	N/A	N/A	EIA ID	Gross MWh Procured	MWh Resold	Net MWh Procured	Adjusted Net MWh Procured	GHG Emissions Factor (in MT CO2e/MWh)	GHG Emissions (in MT CO_2e)	N/A
Bonneville Power Administration (Asset-Controlling	Large Hydro					BPA	256,897	0	256,897	256,897	0.0117	3,006	
Bonneville Power Administration (Asset-Controlling	Nuclear					BPA	32,009	0	32,009	32,009	0.012	375	
Bonneville Power Administration (Asset-Controlling	Other					BPA	2,218	0	2,218	2,218	0.012	26	
Tacoma Power (Asset-Controlling Supplier)	Large Hydro					Tacoma Power	538	0	538	538	0.017	9	
Tacoma Power (Asset-Controlling Supplier)	Nuclear					Tacoma Power	38	0	38	38	0.017	1	
Bonneville Power Administration (Asset-Controlling	Natural gas					BPA	20	0	20	20	0.012	0	
Bonneville Power Administration (Asset-Controlling	Solar					BPA	0		0	0	0.012	0	
Bonneville Power Administration (Asset-Controlling	Unspecified Power					BPA	10,838		10,838	10,838	0.012	127	
Tacoma Power (Asset-Controlling Supplier)	Unspecified Power					Tacoma Pow	24		24	24	0.017	0	

END USES OTHER THAN RETAIL SALES	MWh
Self load	41,641
T&D losses (including streetlights)	43,531

2020 POWER SOURCE DISCLOSURE ANNUAL REPORT
SCHEDULE 2: RETIRED UNBUNDLED RECS
For the Year Ending December 31, 2020
City of Roseville
Roseville

INSTRUCTIONS: Enter information about retired unbundled RECs associated with this electricity portfolio. Insert additional rows as needed. All fields in white should be filled out. Fields in grey auto-populate as needed and should not be filled out.

Total Retired Unbundled RECs	-

RETIRED UNBUNDLED RECS				
Facility Name	**Fuel Type**	**State or Province**	**RPS ID**	**Total Retired (in MWh)**

2020 POWER SOURCE DISCLOSURE ANNUAL REPORT
SCHEDULE 3: POWER CONTENT LABEL DATA
For the Year Ending December 31, 2020
City of Roseville
Roseville

Instructions: No data input is needed on this schedule. Retail suppliers should use these auto-populated calculations to fill out their Power Content Labels.

	Adjusted Net Procured (MWh)	Percent of Total Retail Sales
Renewable Procurements	352,856	31.9%
Biomass & Biowaste	-	0.0%
Geothermal	109,239	9.9%
Eligible Hydroelectric	4,913	0.4%
Solar	956	0.1%
Wind	237,748	21.5%
Coal	-	0.0%
Large Hydroelectric	511,442	46.2%
Natural gas	197,268	17.8%
Nuclear	32,048	2.9%
Other	2,218	0.2%
Unspecified Power	10,862	1.0%
Total	**1,106,693**	**100.0%**

Total Retail Sales (MWh)	**1,106,693**

GHG Emissions Intensity (converted to lbs CO_2e/MWh)	**301**

Percentage of Retail Sales Covered by Retired Unbundled RECs	**0.0%**

ASSET CONTROLLING SUPPLIER RESOURCE MIX CALCULATOR

Instructions: Enter total net specified procurement of ACS system resources into cell A8, A23, or A38. In Column E, the calculator will determine quantities of resource-specific net procurement for entry on Schedule 1.

Powerex

Net MWh Procured	N/A	Resource Type	Resource Mix Factors	Resource-Specific Procurements from ACS
		Biomass & biowaste		-
		Geothermal		-
		Eligible hydroelectric		-
		Solar		-
		Wind	0.00	-
		Coal		-
		Large hydroelectric	0.88	-
		Natural gas	0.01	-
		Nuclear	0.01	-
		Other	0.04	-
		Unspecified Power	0.06	-

Bonneville Power Administration

Net MWh Procured	N/A	Resource Type	Resource Mix Factors	Resource-Specific Procurements from ACS
301,982		Biomass & biowaste		-
		Geothermal		-
		Eligible hydroelectric		-
		Solar	0.00	0
		Wind		-
		Coal		-
		Large hydroelectric	0.85	256,897
		Natural gas	0.00	20
		Nuclear	0.11	32,009
		Other	0.01	2,218
		Unspecified Power	0.04	10,838

Tacoma Power

Net MWh Procured	N/A	Resource Type	Resource Mix Factors	Resource-Specific Procurements from ACS
600		Biomass & biowaste		-
		Geothermal		-
		Eligible hydroelectric		-
		Solar		-

Wind		-
Coal		-
Large hydroelectric	0.90	538
Natural gas		-
Nuclear	0.06	38
Other		-
Unspecified Power	0.04	24

POWER SOURCE DISCLOSURE ANNUAL REPORT ATTESTATION FORM

for the year ending December 31, 2020

City of Roseville

Roseville

I, David Siao, Electric Resources Planner, **declare under penalty of perjury, that the statements contained in this report including Schedules 1, 2, and 3 are true and correct and that I, as an authorized agent of** City of Roseville, **have authority to submit this report on the company's behalf. I further declare that the megawatt-hours claimed as specified purchases as shown in these Schedules were, to the best of my knowledge, sold once and only once to retail customers.**

Name: David Siao

Representing (Retail Supplier): City of Roseville

Signature: David Siao

Dated: 7-7-2021

Executed at: 2090 Hilltop Circle, Roseville, CA 95747

COUNCIL COMMUNICATION

CC #: 1692
File #: 0400-04-12-1

Title:	Westbrook - Phase 3 Villages WB-22 And WB-23 - Notice of Completion
Contact:	Andrew Druck 916-223-7577 adruck@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 7.6.

RECOMMENDATION TO COUNCIL

Staff recommends that the City Council adopt the attached resolution accepting Westbrook - Phase 3 - Villages WB-22 And WB-23, CWJ#190109 as complete and authorizing the City Engineer to execute the Notice of Completion.

BACKGROUND

The Engineering Division has made a final inspection of the above project and has found the roadway infrastructure work complete in accordance with the improvement plans and City specifications.

FISCAL IMPACT

The actions requested as part of this action have no impact to the City's General Fund. Construction costs were paid by the developer.

ENVIRONMENTAL REVIEW

The California Environmental Quality Act (CEQA) does not apply to activities that will not result in a direct or reasonably foreseeable indirect physical change in the environment, or is otherwise not considered a project as defined by CEQA Statute §21065 and CEQA State Guidelines §15060(c)(3) and §15378. Approval of a Notice of Completion meets the above criteria and is not subject to CEQA. No additional environmental review is required.

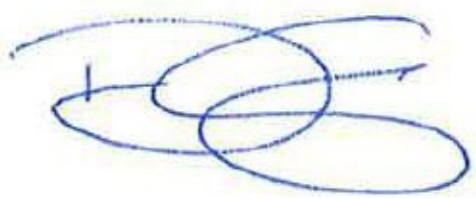
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal F - Invest in well-planned infrastructure and growth

Respectfully Submitted,

Andrew Druck, Construction Inspector

Mike Isom, Development Services Director



_____

Dominick Casey, City Manager

ATTACHMENTS:

Description

Resolution 21-388

NOC

Exhibit A

Final Map

RESOLUTION NO. 21-388

RESOLUTION OF THE COUNCIL OF THE CITY OF ROSEVILLE ACCEPTING THE PUBLIC WORK KNOWN AS WESTBROOK – PHASE 3 – VILLAGES WB-22 AND WB-23 PROJECT, APPROVING THE "NOTICE OF COMPLETION", AND AUTHORIZING AND DIRECTING THE CITY ENGINEER TO EXECUTE SAID NOTICE ON BEHALF OF THE CITY OF ROSEVILLE, THEREFORE, AND ACCEPTING ALL DEDICATIONS OFFERED ON THE RECORDED MAP OF THE SUBDIVISION.

BE IT RESOLVED by the Council of the City of Roseville as follows:

1. The "Notice of Completion" on file in the City Clerk's Department relative to that public work known as the Westbrook - Phase 3 - Villages WB-22 and WB-23 is hereby approved and the public work accepted.

2. All rights of way and easements as offered on the final map of recorded with Placer County Recorder's Office Book FF of Maps, Page 36 is hereby accepted.

3. The City Engineer is hereby authorized and directed to execute said Notice on behalf of the City of Roseville.

PASSED AND ADOPTED by the Council of the City of Roseville, this_____day of_____, 2021, by the following vote on roll call:

AYES COUNCILMEMBERS:

NOES COUNCILMEMBERS:

ABSENT COUNCILMEMBERS:

_____
MAYOR

ATTEST:

_____
CITY CLERK

RECORDING REQUESTED BY AND WHEN
RECORDED MAIL TO:

CITY CLERK
CITY OF ROSEVILLE
311 VERNON STREET
ROSEVILLE, CA 95678

Exempt from recording fees
Pursuant to Gov't Code §27383

NOTICE OF COMPLETION

NOTICE IS HEREBY GIVEN that the public work of improvement known as the _____ Project was completed and accepted by the City of Roseville on _____. The location is situated in the City of Roseville, County of Placer, State of California and is indicated on the attached map, marked as Exhibit "A" and incorporated herein by this reference. The real property herein described is owned by the City of Roseville, 311 Vernon Street, Roseville CA 95678.

The direct/general contractor on said project was _____.

The surety on said project was _____

_____.

_____

City of Roseville
Owner

ATTEST:

_____
Sonia Orozco, City Clerk

State of California)
County of Placer)

I,_____, being first duly sworn, depose and say: I am the _____ of the City of Roseville, a municipal corporation in the State of California, owner of the property described in the above Notice. I am duly authorized to make this verification for and on behalf of the City of Roseville. I have read the Notice of Completion and know its contents and the facts stated therein are true.

_____

City of Roseville

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Placer)

Subscribed and sworn to (or affirmed) before me on this _____ day of _____,

20___, _____

proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.

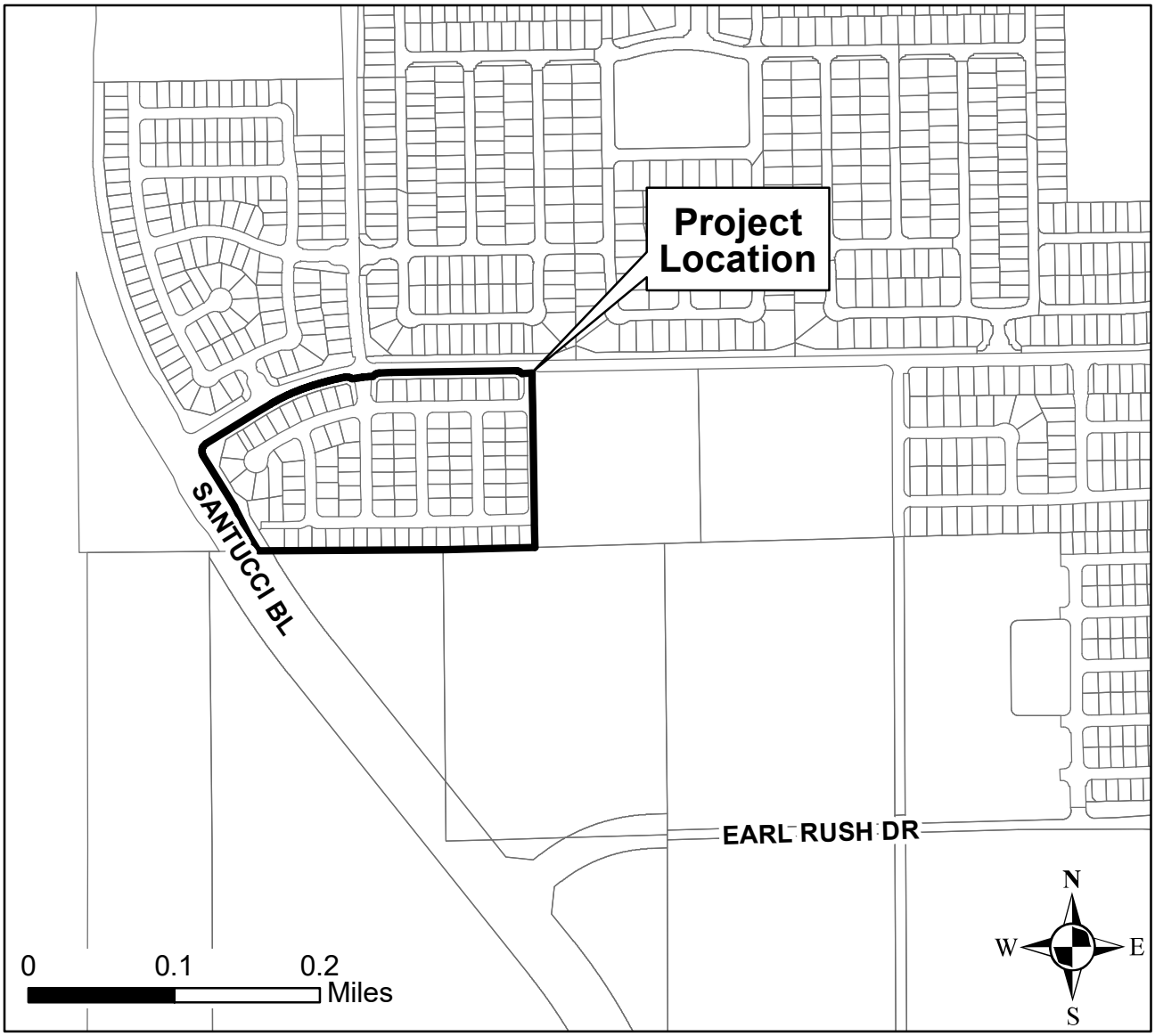
_____

Place Notary Seal and/or Stamp Above

Signature of Notary Public

EXHIBIT A

City of Roseville
Westbrook - Phase 3
Villages WB-22 and WB-23



OWNER'S STATEMENT

THE UNDERSIGNED HEREBY CERTIFY THAT THEY ARE THE ONLY PERSONS HAVING ANY RECORD TITLE INTEREST IN THE REAL PROPERTY INCLUDED WITHIN THE SUBDIVISION SHOWN UPON THIS FINAL MAP OF "WESTBROOK - PHASE 3 VILLAGES WB-22 AND WB-23" AND THEY HEREBY CONSENT TO THE PREPARATION AND RECORDATION OF THIS FINAL MAP AND HEREBY OFFER FOR DEDICATION AND DO HEREBY DEDICATE FOR PARTICULAR PURPOSES THE FOLLOWING:

THE REAL PROPERTY DESCRIBED BELOW IS DEDICATED AS EASEMENT FOR PUBLIC PURPOSES:

(A) PUBLIC EASEMENTS FOR THE INSTALLATION AND MAINTENANCE OF, BUT NOT LIMITED TO ELECTROLIERS, WATER AND GAS PIPES, SEWER PIPES, AND FOR UNDERGROUND WIRE AND CONDUITS, ABOVE GROUND APPURTENANCES FOR ELECTRIC, TELEPHONE AND TELEVISION SERVICES TOGETHER WITH ANY AND ALL APPURTENANCES PERTAINING THERETO ON, OVER, UNDER AND ACROSS LOTS A, B AND C, THE STREETS SHOWN HEREON AS SANTUCCI BOULEVARD, SOLAIRE DRIVE, SOLAR FLARE WAY, SOLAR FLARE COURT, SUN DROP WAY, FIRELIGHT DRIVE, GOLDEN GLOW WAY, SUN BEAM WAY, SOLAR POINT DRIVE, SUNBELT WAY, AND SUNBELT PLACE, THOSE STRIPS OF LAND LYING CONTIGUOUS TO THE RIGHT-OF-WAY AS SHOWN HEREON AND DESIGNATED "P.U.E." (PUBLIC UTILITY EASEMENT).

THE REAL PROPERTY DESCRIBED BELOW IS DEDICATED IN FEE FOR PUBLIC PURPOSES:

(A) AS PUBLIC RIGHT OF WAY (INCLUDING IMPROVEMENTS THEREON) THE STREETS SHOWN HEREON AS SANTUCCI BOULEVARD, SOLAIRE DRIVE, SOLAR FLARE WAY, SOLAR FLARE COURT, SUN DROP WAY, FIRELIGHT DRIVE, GOLDEN GLOW WAY, SUN BEAM WAY, SOLAR POINT DRIVE, SUNBELT WAY, AND SUNBELT PLACE

(B) LOTS A, B AND C SHOWN HEREON TO THE CITY OF ROSEVILLE FOR LANDSCAPING PURPOSES AND AS PUBLIC RIGHT-OF-WAY.

TRI POINTE HOMES, INC.,
A DELAWARE CORPORATION

BY: _____
PHILIP S. BODEM
DIVISION PRESIDENT - SACRAMENTO

NOTARY'S ACKNOWLEDGMENT

A NOTARY PUBLIC OR OTHER OFFICER COMPLETING THIS CERTIFICATE VERIFIES ONLY THE IDENTITY OF THE INDIVIDUAL WHO SIGNED THE DOCUMENT TO WHICH THIS CERTIFICATE IS ATTACHED, AND NOT THE TRUTHFULNESS, ACCURACY OR VALIDITY OF THAT DOCUMENT.

STATE OF CALIFORNIA

COUNTY OF Placer

ON September 16, 2020 BEFORE ME, K. Curcio, A NOTARY PUBLIC

PERSONALLY APPEARED Philip S. Bodem

WHO PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE/THEY EXECUTED THE SAME IN HIS/HER/THEIR AUTHORIZED CAPACITY(IES), AND THAT BY HIS/HER/THEIR SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S), OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

I CERTIFY UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING PARAGRAPH IS TRUE AND CORRECT.

WITNESS MY HAND AND OFFICIAL SEAL.

K. Curcio — Katie Curcio
SIGNATURE — PRINTED NAME

MY PRINCIPAL PLACE OF BUSINESS IS Placer COUNTY

MY COMMISSION EXPIRES: Nov. 26, 2023 MY COMMISSION NUMBER: 2313976

SURVEYOR'S STATEMENT

THIS FINAL MAP OF "WESTBROOK - PHASE 3 VILLAGE WB-22 AND WB-23" WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCES AT THE REQUEST OF WESTPARK S.V. 400, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY, IN DECEMBER 2018. I HEREBY STATE THAT THIS FINAL MAP SUBSTANTIALLY CONFORMS TO THE APPROVED OR CONDITIONALLY APPROVED TENTATIVE MAP. ALL MONUMENTS SHOWN HEREON ARE OF THE CHARACTER AND WILL OCCUPY THE POSITIONS INDICATED, AND WILL BE SET BY DECEMBER 31, 2022 AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED.

MACKAY & SOMPS CIVIL ENGINEERS, INC.

Paul Ferguson

PAUL FERGUSON JR., PLS 9265
EXPIRATION DATE: MARCH 31, 2022

DATE: 9/15/2020

LICENSED LAND SURVEYOR
PAUL FERGUSON, JR.
3-31-22
No. 9265
STATE OF CALIFORNIA

CITY ENGINEER'S STATEMENT

I HEREBY STATE THAT I HAVE EXAMINED THIS FINAL MAP OF "WESTBROOK - PHASE 3 VILLAGES WB-22 AND WB-23" AND FIND IT TO BE SUBSTANTIALLY THE SAME AS THE TENTATIVE MAP ON FILE AND ANY APPROVED ALTERATIONS THEREOF; THAT ALL PROVISIONS OF THE SUBDIVISION MAP ACT AND ALL APPLICABLE CITY ORDINANCES HAVE BEEN COMPLIED WITH.

_____ DATE: 10/13/20
MARC STOUT, R.C.E. 69879
CITY ENGINEER, CITY OF ROSEVILLE
LICENSE EXPIRES: SEPTEMBER 30, 2022

I HEREBY STATE THAT I AM SATISFIED THAT THIS FINAL MAP OF "WESTBROOK - PHASE 3 VILLAGES WB-22 AND WB-23" IS TECHNICALLY CORRECT.

FOR MARC STOUT, CITY ENGINEER, CITY OF ROSEVILLE

_____ DATE: 9/29/20
TIMOTHY G. BLAIR, PLS 8278
EXPIRES DECEMBER 31, 2021

LICENSED LAND SURVEYOR
TIMOTHY G. BLAIR
Exp. 12-31-21
No. 8278
STATE OF CALIFORNIA

CITY CLERK'S STATEMENT

I HEREBY CERTIFY THAT THE CITY COUNCIL, CITY OF ROSEVILLE, HAS APPROVED THIS FINAL MAP OF "WESTBROOK - PHASE 3 VILLAGES WB-22 AND WB-23", AND HAS ACCEPTED ON BEHALF OF THE PUBLIC, THE PUBLIC UTILITY EASEMENTS OFFERED HEREON FOR DEDICATION AND HAS ACCEPTED, SUBJECT TO IMPROVEMENTS, LOTS A, B, C AND THE RIGHTS-OF-WAY OFFERED HEREON FOR DEDICATION. THE CITY COUNCIL HEREBY APPROVES THE ABANDONMENT OF THE RIGHTS OF WAY LISTED HEREON WITHIN NOTE 7 ON SHEET 2.

Sonia Orozco
CITY CLERK, CITY OF ROSEVILLE

DATE: 11/5/2020 BY: _____
ASSISTANT CITY CLERK

RECORDER'S STATEMENT

FILED THIS 22ND DAY OF DECEMBER, 2020, AT 11:19 A.M. IN BOOK FF OF MAPS, AT PAGE 36, IN THE OFFICE OF THE PLACER COUNTY RECORDER, AT THE REQUEST OF MACKAY & SOMPS CIVIL ENGINEERS, INC.

RYAN RONCO
RECORDER OF PLACER COUNTY
STATE OF CALIFORNIA

DOCUMENT NO.: 2020-0150821

BY: _____ DEPUTY

FEE: $ 101

FINAL MAP OF
WESTBROOK - PHASE 3
VILLAGES WB-22 AND WB-23
SUBDIVISION No. PL18-0266

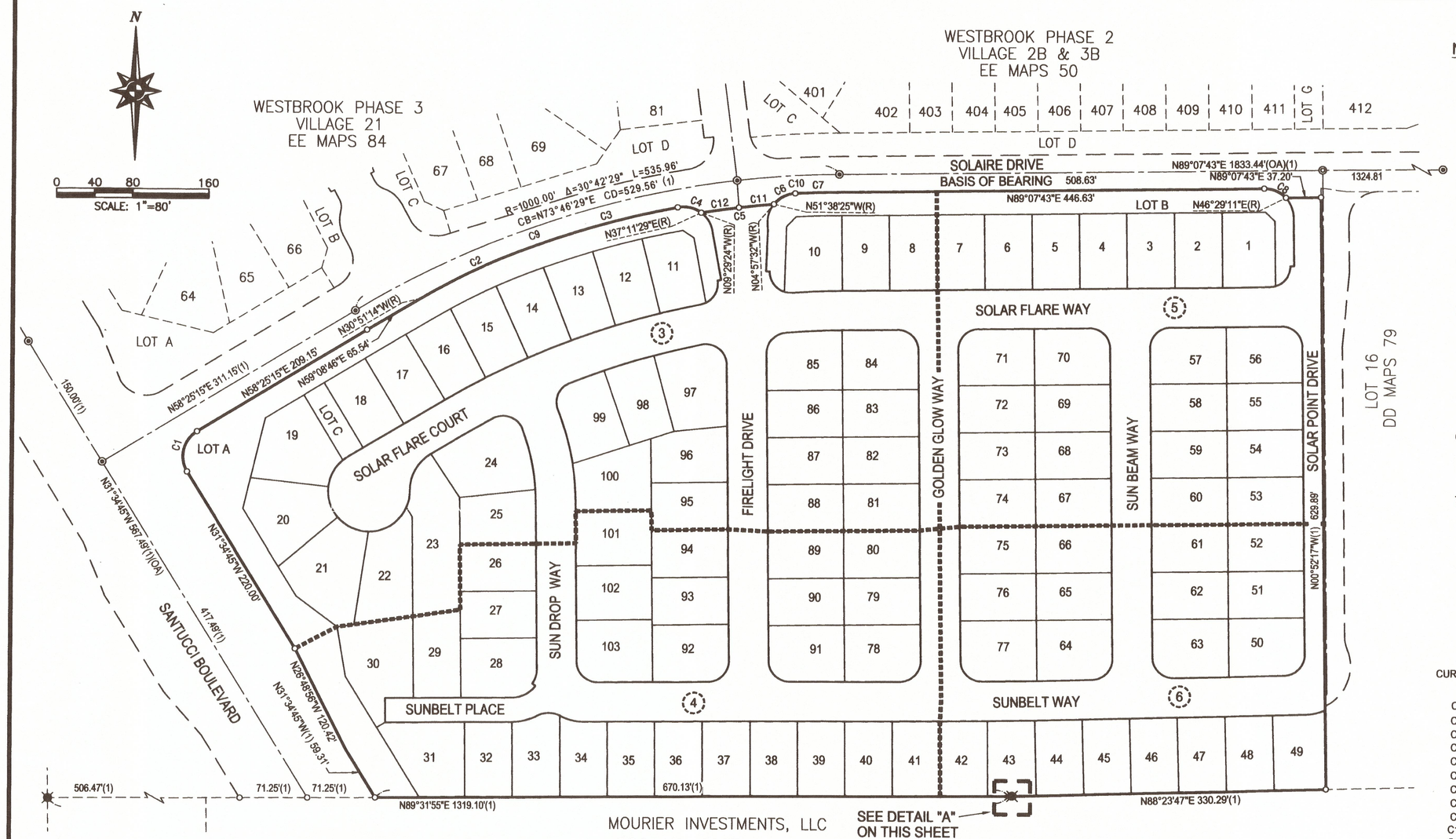
BEING A SUBDIVISION OF LOT 9, LOT 10, LOT C, A PORTION OF SOLAIRE DRIVE, AND A PORTION OF SANTUCCI BOULEVARD AS SHOWN ON THE CERTAIN FINAL MAP ENTITLED "WESTBROOK-PHASE 2 & 3 LARGE LOT SUBDIVISION" FILED FOR RECORD ON DECEMBER 8, 2016 IN BOOK DD OF MAPS, AT PAGE 79, OFFICIAL RECORDS OF PLACER COUNTY, WITHIN SECTIONS 26 & 27, TOWNSHIP 11 NORTH, RANGE 5 EAST, MOUNT DIABLO MERIDIAN

CITY OF ROSEVILLE • PLACER COUNTY • CALIFORNIA

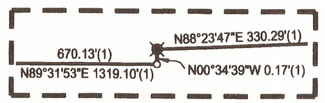
SEPTEMBER 2020

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
1025 Creekside Ridge Drive, Suite 150, Roseville, CA 95678 (916) 773-1189

18437.PH3



MOURIER INVESTMENTS, LLC
DOC. NO. 2007-0076354



DETAIL "A"
N.T.S.

NOTES:

1. TOTAL AREA OF THIS SUBDIVISION IS 15.40± ACRES, GROSS, CONSISTING OF 103 RESIDENTIAL LOTS AND 3 MISCELLANEOUS LOTS.
2. ALL CURVES ARE DIMENSIONED WITH RADIUS, DELTA, ARC LENGTH, CHORD BEARING AND CHORD LENGTH. DELTA, ARC LENGTH, CHORD LENGTHS AND OTHER DISTANCES MAY CONTAIN SOME ROUNDING ERROR. DISTANCES SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF AND ARE "GROUND" DISTANCES.
3. A PRELIMINARY SOILS REPORT WAS PREPARED BY ENGEO DATED MARCH 20, 2014; PROJECT NUMBER 10814.000.000 AND ON FILE WITH THE CITY OF ROSEVILLE DEVELOPMENT SERVICES - ENGINEERING DEPARTMENT, FILE No. 308-894.
4. ALL FRONT CORNERS ARE MARKED BY A 1" BRASS MARKER STAMPED "LS 9265" IN THE SIDEWALK ON THE EXTENSION OF SIDE LOT LINES 1.00' FROM THE PROPERTY LINE.
5. ALL REAR CORNERS AND ANGLE POINTS WILL BE SET WITH A 5/8" REBAR AND PLASTIC CAP STAMPED "LS 9265", WHERE REAR CORNER FALLS WITHIN A MASONRY RETAINING WALL, MASONRY SOUND WALL OR CONCRETE FOOTING, A 5/8" REBAR WITH PLASTIC CAP STAMPED "LS 9265" WILL BE SET ON THE SIDE LOT LINE AT A 4.00 FOOT OFFSET TO THE REAR CORNER OR A BRASS TAG STAMPED "LS 9265" WILL BE SET WITH EPOXY TO THE FACE OF WALL 2.00 FOOT ABOVE GROUND OR ON TOP OF WALL WHERE THE OFFSET MONUMENT CANNOT BE SET.
6. COVENANTS, CONDITIONS AND RESTRICTIONS AFFECTING THE LOTS SHOWN HEREON ARE RECORDED ~~CONCURRENTLY HEREWITH~~ AS DOCUMENT NO. 2020-0066259 OFFICIAL RECORDS OF PLACER COUNTY.
7. PURSUANT TO SECTION 66499.20.2 OF THE GOVERNMENT CODE, THE LANDS SHOWN HEREON, INCLUDING PORTIONS OF SOLAIRE DRIVE ARE HEREBY MERGED AND RE-SUBDIVIDED AND THE FOLLOWING RIGHTS-OF-WAY AND EASEMENTS ARE HEREBY ABANDONED:
   A. THOSE PORTIONS OF SOLAIRE DRIVE DEDICATED PER DD MAPS 79 NOT SHOWN HEREON.
   B. THE PUBLIC UTILITY EASEMENTS DEDICATED PER DD MAPS 79 NOT SHOWN HEREON.

CURVE TABLE

CURVE #	RADIUS	DELTA	LENGTH	CHORD BEARING	CHORD LENGTH
C1	31.00'	90°00'00"	48.69'	N13° 25' 15"E	43.84'
C2	700.00'	10°54'34"	133.28'	N64° 36' 03"E	133.08'
C3	981.00'	09°05'39"	155.71'	N74° 36' 09"E	155.54'
C4	31.00'	48°02'30"	25.99'	N76° 49' 46"W	25.24'
C5	971.00'	04°31'52"	76.79'	N82° 46' 32"E	76.77'
C6	31.00'	48°02'30"	25.99'	N62° 22' 50"E	25.24'
C7	981.00'	02°43'38"	46.70'	N87° 45' 54"E	46.69'
C8	31.00'	47°21'28"	25.62'	N67° 11' 33"W	24.90'
C9	1000.00'	24°30'29"	427.75'	N70° 40' 29"E	424.49'
C10	1000.00'	06°12'00"	108.21'	N86° 01' 44"E	108.16'
C11	971.00'	02°11'45"	37.21'	N83° 56' 35"E	37.21'
C12	971.00'	02°20'07"	39.57'	N81° 40' 39"E	39.57'

LEGEND

- FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "LS 4533" PER CC MAPS 85
- FOUND COPPERWELD SURVEY MONUMENT WITH CENTER PUNCH IN MONUMENT WELL STAMPED "LS 7944" PER (1)
- SET COPPERWELD SURVEY MONUMENT WITH CENTER PUNCH IN MONUMENT WELL STAMPED "LS 9265" PER CITY OF ROSEVILLE STANDARDS
- o DIMENSION POINT
- AC± ACRES
- BNDY BOUNDARY
- S.F. SQUARE FEET
- CB CHORD BEARING
- CD CHORD DISTANCE
- C/L CENTERLINE
- (OA) OVERALL
- P.U.E. PUBLIC UTILITY EASEMENT
- (R) RADIAL BEARING
- (1) DENOTES RECORD INFORMATION
- (X) SHEET NUMBER
- DIMENSION LEADERS

REFERENCES:

(1) DD MAPS 79

BASIS OF BEARINGS:

THE BASIS OF BEARING FOR THIS MAP IS N89°07'43"E , AS SHOWN BETWEEN FOUND MONUMENTS ALONG THE CENTERLINE OF SOLAIRE DRIVE AS SHOWN ON THAT CERTAIN FINAL MAP ENTITLED "WESTBROOK - PHASE 2 & 3 - LARGE LOT SUBDIVISION" FILED FOR RECORD ON DECEMBER 8, 2016 IN BOOK DD OF MAPS, AT PAGE 79, PLACER COUNTY RECORDS.

FINAL MAP OF
WESTBROOK - PHASE 3
VILLAGES WB-22 AND WB-23
SUBDIVISION No. PL18-0266

BEING A SUBDIVISION OF LOT 9, LOT 10, LOT C, A PORTION OF SOLAIRE DRIVE, AND A PORTION OF SANTUCCI BOULEVARD AS SHOWN ON THE CERTAIN FINAL MAP ENTITLED "WESTBROOK-PHASE 2 & 3 LARGE LOT SUBDIVISION" FILED FOR RECORD ON DECEMBER 8, 2016 IN BOOK DD OF MAPS, AT PAGE 79, OFFICIAL RECORDS OF PLACER COUNTY, WITHIN SECTIONS 26 & 27, TOWNSHIP 11 NORTH, RANGE 5 EAST, MOUNT DIABLO MERIDIAN

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SEPTEMBER 2020

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
1025 Creekside Ridge Drive, Suite 150, Roseville, CA 95678 (916) 773-1189

18437.PH3

CURVE TABLE

CURVE #	RADIUS	DELTA	LENGTH	CHORD BEARING	CHORD LENGTH
C1	675.00'	01°48'21"	21.28'	N60° 02' 57"E	21.27'
C2	675.00'	04°34'49"	53.96'	N63° 14' 32"E	53.94'
C3	675.00'	04°31'24"	53.29'	N67° 47' 38"E	53.27'
C4	956.00'	03°16'26"	54.63'	N71° 41' 33"E	54.62'
C5	956.00'	03°13'49"	53.90'	N74° 56' 41"E	53.89'
C6	956.00'	02°38'24"	44.05'	N77° 52' 48"E	44.05'
C7	31.00'	48°02'30"	25.99'	N76° 49' 46"W	25.24'
C8	31.00'	48°31'37"	26.26'	N28° 32' 43"W	25.48'
C9	22.00'	74°10'24"	28.48'	N26° 29' 29"E	26.53'
C10	22.00'	15°16'13"	5.86'	N71° 12' 48"E	5.85'
C11	846.00'	00°12'50"	3.16'	N59° 10' 25"E	3.16'
C12	43.00'	09°11'47"	6.90'	N54° 28' 07"E	6.89'
C13	43.00'	24°21'22"	18.28'	N11° 14' 41"E	18.14'
C14	804.00'	02°37'23"	36.81'	N60° 22' 42"E	36.81'
C15	22.00'	97°50'57"	37.57'	N69° 23' 08"W	33.17'
C16	229.00'	19°35'23"	78.30'	N10° 39' 58"W	77.92'
C17	271.00'	20°58'05"	99.18'	N11° 21' 18"W	98.62'
C18	22.00'	89°50'54"	34.50'	N23° 05' 06"E	31.07'
C19	804.00'	02°45'12"	38.64'	N69° 23' 09"E	38.63'
C20	804.00'	10°19'55"	144.98'	N73° 10' 31"E	144.79'
C21	22.00'	100°47'15"	38.70'	N51° 15' 54"W	33.90'
C22	22.00'	85°34'22"	32.86'	N41° 54' 55"E	29.89'

CURVE TABLE

CURVE #	RADIUS	DELTA	LENGTH	CHORD BEARING	CHORD LENGTH
C23	804.00'	04°25'38"	62.12'	N86° 54' 55"E	62.11'
C24	22.00'	90°00'00"	34.56'	N45° 52' 17"W	31.11'
C25	846.00'	03°42'34"	54.77'	N87° 16' 26"E	54.76'
C26	22.00'	95°59'45"	36.86'	N46° 34' 58"W	32.70'
C27	22.00'	21°49'20"	8.38'	N83° 40' 11"W	8.33'
C28	22.00'	74°10'24"	28.48'	N35° 40' 18"W	26.53'
C29	31.00'	42°38'30"	23.07'	N17° 02' 20"E	22.54'
C30	31.00'	48°02'30"	25.99'	N62° 22' 50"E	25.24'
C31	971.00'	02°20'07"	39.57'	N81° 40' 39"E	39.57'
C32	971.00'	02°11'46"	37.22'	N83° 56' 35"E	37.21'
C33	846.00'	19°46'54"	292.09'	N68° 57' 28"E	290.64'
C34	825.00'	05°49'31"	83.88'	N61° 58' 46"E	83.84'
C35	825.00'	17°00'35"	244.92'	N73° 23' 49"E	244.02'
C36	825.00'	07°13'37"	104.06'	N85° 30' 55"E	103.99'
C37	1000.00'	01°39'48"	29.03'	N01° 42' 11"W	29.03'
C38	1000.00'	01°44'50"	30.49'	N03° 24' 30"W	30.49'
C39	1000.00'	24°30'29"	427.75'	N70° 40' 29"E	424.49'
C40	1000.00'	06°12'00"	108.21'	N86° 01' 44"E	108.16'
C41	926.00'	02°50'21"	45.88'	N87° 42' 33"E	45.88'
C42	22.00'	89°26'38"	34.34'	N34° 07' 36"E	30.96'
C43	31.00'	96°34'06"	52.25'	N52° 33' 58"W	46.28'
C44	31.00'	90°41'00"	49.06'	N41° 03' 35"W	44.10'

LINE TABLE

Line #	Bearing	Length
L1	N79°24'17"E (R)	4.00'
L2	N88°35'06"W(R)	4.00'
L3	N04°16'55"W	6.18'
L4	N43°41'52"E	14.80'
L5	N89°07'43"E	2.22'

FINAL MAP OF

WESTBROOK - PHASE 3

VILLAGES WB-22 AND WB-23

SUBDIVISION No. PL18-0266

BEING A SUBDIVISION OF LOT 9, LOT 10, LOT C, A PORTION OF SOLAIRE DRIVE, AND A PORTION OF SANTUCCI BOULEVARD AS SHOWN ON THE CERTAIN FINAL MAP ENTITLED "WESTBROOK-PHASE 2 & 3 LARGE LOT SUBDIVISION" FILED FOR RECORD ON DECEMBER 8, 2016 IN BOOK DD OF MAPS, AT PAGE 79, OFFICIAL RECORDS OF PLACER COUNTY, WITHIN SECTIONS 26 & 27, TOWNSHIP 11 NORTH, RANGE 5 EAST, MOUNT DIABLO MERIDIAN

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SEPTEMBER 2020

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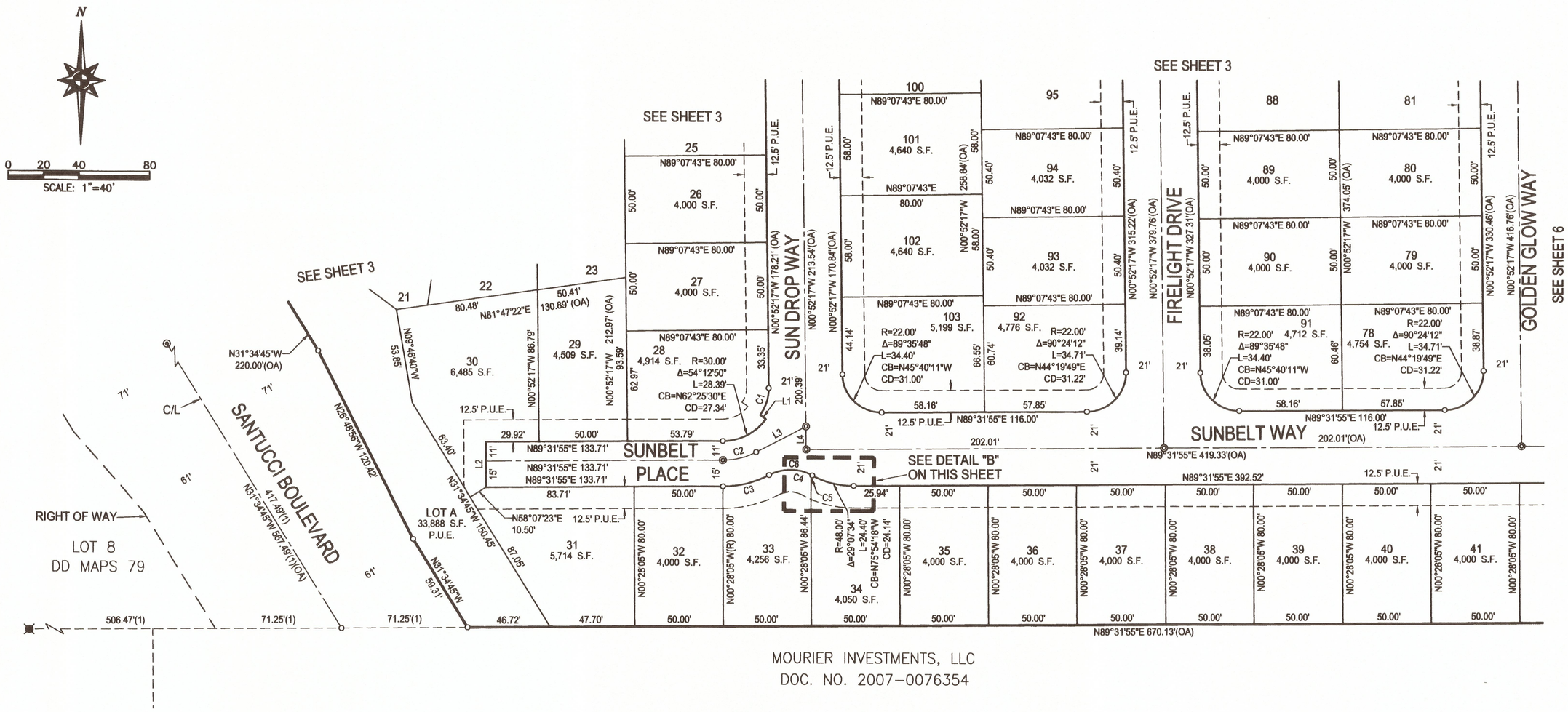
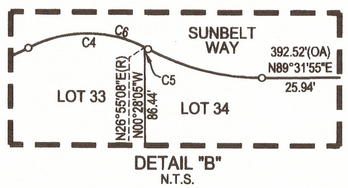


CURVE TABLE

CURVE #	RADIUS	DELTA	LENGTH	CHORD BEARING	CHORD LENGTH
C1	26.00'	36°11'22"	16.42'	N17° 13' 24"E	16.15'
C2	41.00'	27°13'49"	19.49'	N75° 55' 01"E	19.30'
C3	56.00'	27°38'21"	27.01'	N75° 42' 45"E	26.75'
C4	26.00'	55°01'33"	24.97'	N89° 24' 21"E	24.02'
C5	26.00'	01°44'22"	0.79'	N62° 12' 42"W	0.79'
C6	26.00'	56°45'55"	25.76'	N89° 43' 28"W	24.72'

LINE TABLE

Line #	Bearing	Length
L1	N54°40'55"W(R)	4.00'
L2	N0°28'05"W	26.00'
L3	N62°18'06"E	31.93'
L4	N00°52'17"W	13.16'



DETAIL "B"
N.T.S.

SEE SHEET 2 FOR BASIS OF BEARINGS, LEGEND, NOTES AND REFERENCES.

FINAL MAP OF
WESTBROOK - PHASE 3
VILLAGES WB-22 AND WB-23
SUBDIVISION No. PL18-0266

BEING A SUBDIVISION OF LOT 9, LOT 10, LOT C, A PORTION OF SOLAIRE DRIVE, AND A PORTION OF SANTUCCI BOULEVARD AS SHOWN ON THE CERTAIN FINAL MAP ENTITLED "WESTBROOK-PHASE 2 & 3 LARGE LOT SUBDIVISION" FILED FOR RECORD ON DECEMBER 8, 2016 IN BOOK DD OF MAPS, AT PAGE 79, OFFICIAL RECORDS OF PLACER COUNTY, WITHIN SECTIONS 26 & 27, TOWNSHIP 11 NORTH, RANGE 5 EAST, MOUNT DIABLO MERIDIAN

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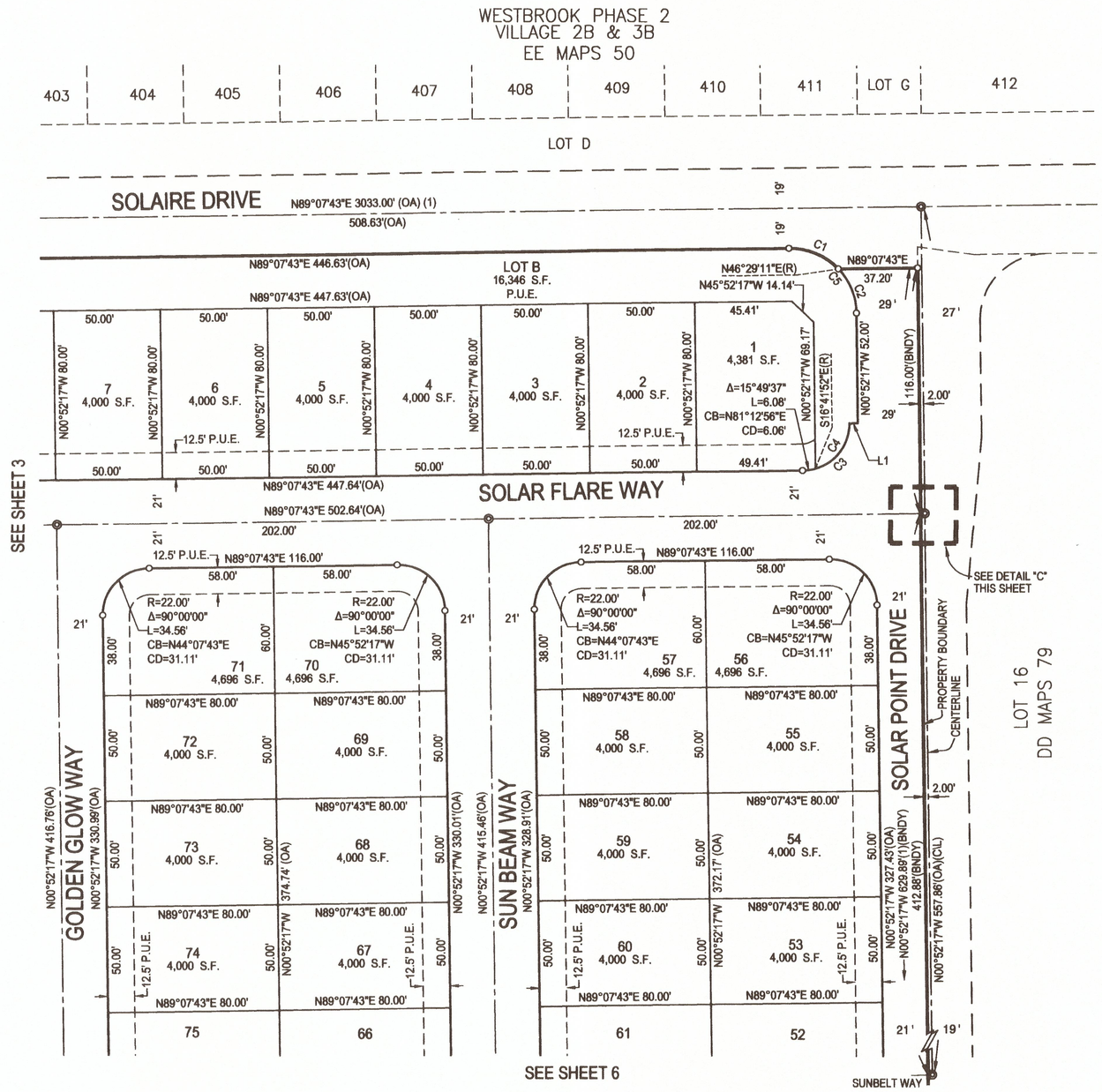
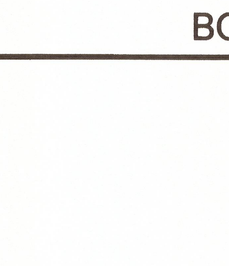


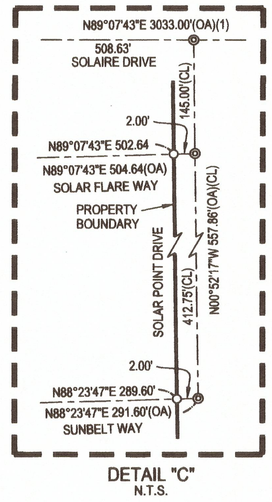
CURVE TABLE

CURVE #	RADIUS	DELTA	LENGTH	CHORD BEARING	CHORD LENGTH
C1	31.00'	47°21'28"	25.62'	N67° 11' 33"W	24.90'
C2	31.00'	42°38'32"	23.07'	N22° 11' 33"W	22.54'
C3	22.00'	90°00'01"	34.56'	N44° 07' 44"E	31.11'
C4	22.00'	74°10'24"	28.48'	N36° 12' 56"E	26.53'
C5	31.00'	90°00'00"	48.69'	N45° 52' 17"W	43.84'

LINE TABLE

Line #	Bearing	Length
L1	N89°07'43"E	4.00'





DETAIL "C"
N.T.S.

FINAL MAP OF
WESTBROOK - PHASE 3
VILLAGES WB-22 AND WB-23
SUBDIVISION No. PL18-0266

BEING A SUBDIVISION OF LOT 9, LOT 10, LOT C, A PORTION OF SOLAIRE DRIVE, AND A PORTION OF SANTUCCI BOULEVARD AS SHOWN ON THE CERTAIN FINAL MAP ENTITLED "WESTBROOK-PHASE 2 & 3 LARGE LOT SUBDIVISION" FILED FOR RECORD ON DECEMBER 8, 2016 IN BOOK DD OF MAPS, AT PAGE 79, OFFICIAL RECORDS OF PLACER COUNTY, WITHIN SECTIONS 26 & 27, TOWNSHIP 11 NORTH, RANGE 5 EAST, MOUNT DIABLO MERIDIAN

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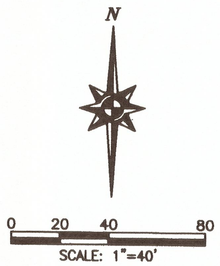
SEPTEMBER 2020

SEE SHEET 2 FOR BASIS OF BEARINGS, LEGEND, NOTES AND REFERENCES.

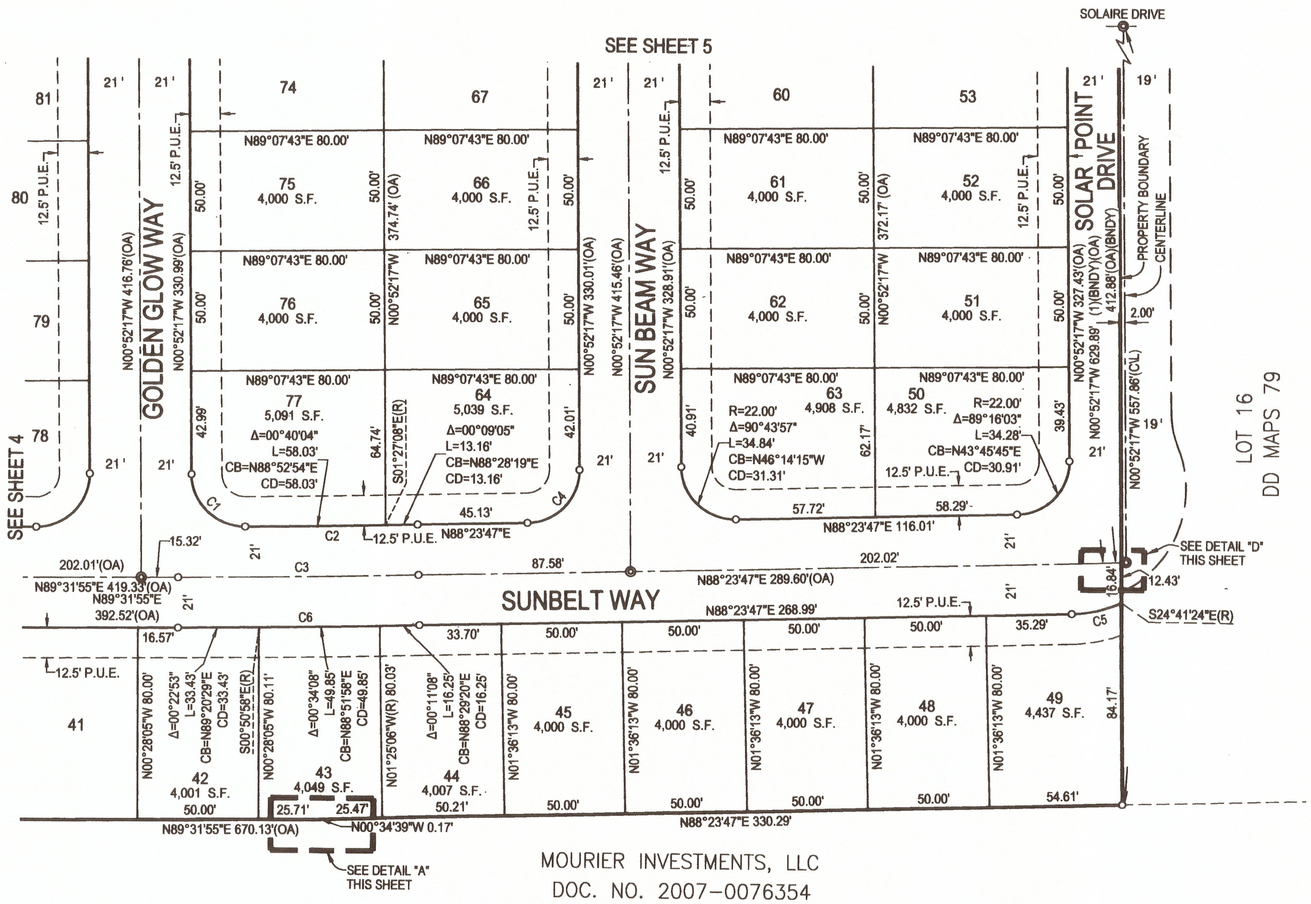
MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
1025 Creekside Ridge Drive, Suite 150, Roseville, CA 95678 (916) 773-1189

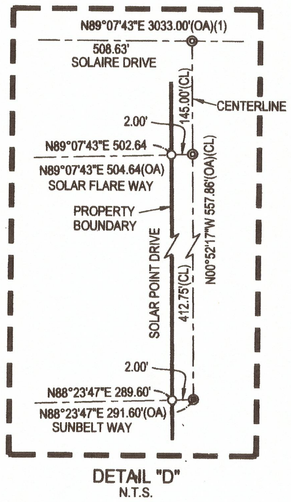
18437.PH3



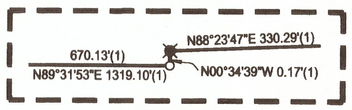
CURVE TABLE

CURVE #	RADIUS	DELTA	LENGTH	CHORD BEARING	CHORD LENGTH
C1	22.00'	89°54'48"	34.52'	N45° 49' 40"W	31.09'
C2	4979.00'	00°49'09"	71.19'	N88° 48' 21"E	71.19'
C3	5000.00'	01°08'09"	99.11'	N88° 57' 51"E	99.11'
C4	22.00'	89°16'03"	34.28'	N43° 45' 45"E	30.91'
C5	52.00'	23°05'11"	20.95'	N76° 51' 11"E	20.81'
C6	5021.00'	01°08'09"	99.53'	N88° 57' 51"E	99.53'





DETAIL "D"
N.T.S.



DETAIL "A"
N.T.S.

MOURIER INVESTMENTS, LLC
DOC. NO. 2007-0076354

SEE SHEET 2 FOR BASIS OF BEARINGS, LEGEND, NOTES AND REFERENCES.

FINAL MAP OF

WESTBROOK - PHASE 3

VILLAGES WB-22 AND WB-23

SUBDIVISION No. PL18-0266

BEING A SUBDIVISION OF LOT 9, LOT 10, LOT C, A PORTION OF SOLAIRE DRIVE, AND A PORTION OF SANTUCCI BOULEVARD AS SHOWN ON THE CERTAIN FINAL MAP ENTITLED "WESTBROOK-PHASE 2 & 3 LARGE LOT SUBDIVISION" FILED FOR RECORD ON DECEMBER 8, 2016 IN BOOK DD OF MAPS, AT PAGE 79, OFFICIAL RECORDS OF PLACER COUNTY, WITHIN SECTIONS 26 & 27, TOWNSHIP 11 NORTH, RANGE 5 EAST, MOUNT DIABLO MERIDIAN

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SEPTEMBER 2020

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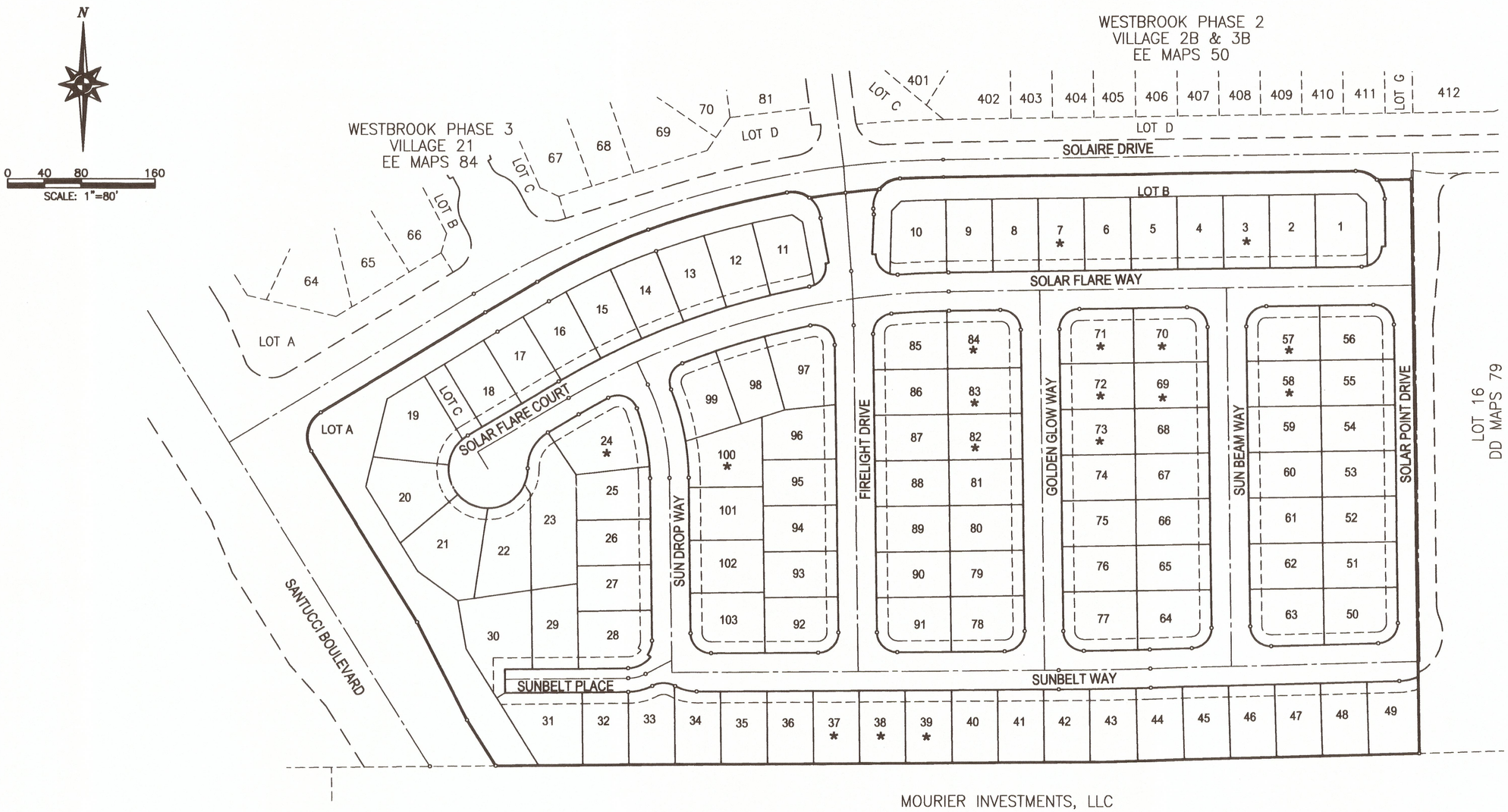

MOURIER INVESTMENTS, LLC
DOC. NO. 2007–0076354

ADDITIONAL INFORMATION FOR INFORMATIONAL PURPOSES ONLY PURSUANT TO SECTION 66434.2 OF THE GOVERNMENT CODE

EACH RESIDENTIAL DWELLING CONSTRUCTED ON ANY OF THE LOTS INDICATED SHALL BE FITTED WITH A SEWER BACKFLOW PREVENTER VALVE AS APPROVED BY THE CITY OF ROSEVILLLE. IT SHALL BE THE RESPONSIBILITY OF THE OWNER OF SAID DWELLING TO MAINTAIN THE VALVE AND PREVENT DAMAGE FROM OCCURRING THERETO. THE CITY OF ROSEVILLE SHALL NOT BE RESPONSIBLE FOR THE MAINTENANCE OR PERFORMANCE OF THE VALVE, AND THE CITY OF ROSEVILLE SHALL NOT BE LIABLE FOR ANY DAMAGE OCCURRING TO ANY SUCH DWELLING OR ITS CONTENTS DUE TO FAILURE OF THE VALVE FOR ANY REASON WHATSOEVER.

LEGEND

* DENOTES SEWER BACKFLOW PREVENTER VALVE REQUIRED ON SANITARY SEWER CONNECTION BY THE CITY OF ROSEVILLE WITH THE BUILDING PERMIT AND MAINTAINED THEREAFTER BY THE OWNER.

NOTE: SEE SHEET 2 FOR BASIS OF BEARING, LEGEND, NOTES & REFERNCES.

FINAL MAP OF

WESTBROOK - PHASE 3

VILLAGES WB-22 AND WB-23

SUBDIVISION No. PL18-0266

BEING A SUBDIVISION OF LOT 9, LOT 10, LOT C, A PORTION OF SOLAIRE DRIVE, AND A PORTION OF SANTUCCI BOULEVARD AS SHOWN ON THE CERTAIN FINAL MAP ENTITLED "WESTBROOK-PHASE 2 & 3 LARGE LOT SUBDIVISION" FILED FOR RECORD ON DECEMBER 8, 2016 IN BOOK DD OF MAPS, AT PAGE 79, OFFICIAL RECORDS OF PLACER COUNTY, WITHIN SECTIONS 26 & 27, TOWNSHIP 11 NORTH, RANGE 5 EAST, MOUNT DIABLO MERIDIAN

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18437.PH3

COUNCIL COMMUNICATION

CC #: 1687
File #: 0400-04-09-01

Title:	Federico - Phase 1 - Village 20A - Notice of Completion
Contact:	Andrew Druck 916-223-7577 adruck@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 7.7.

RECOMMENDATION TO COUNCIL

Staff recommends that the City Council adopt the attached resolution accepting Federico - Phase 1 - Village 20A, CWJ#180083 as complete and authorizing the City Engineer to execute the Notice of Completion.

BACKGROUND

The Engineering Division has made a final inspection of the above project and has found the roadway infrastructure work complete in accordance with the improvement plans and City specifications.

FISCAL IMPACT

The actions requested as part of this action have no impact to the City's General Fund. Construction costs were paid by the developer.

ENVIRONMENTAL REVIEW

The California Environmental Quality Act (CEQA) does not apply to activities that will not result in a direct or reasonably foreseeable indirect physical change in the environment, or is otherwise not considered a project as defined by CEQA Statute §21065 and CEQA State Guidelines §15060(c)(3) and §15378. Approval of a Notice of Completion meets the above criteria and is not subject to CEQA. No additional environmental review is required.

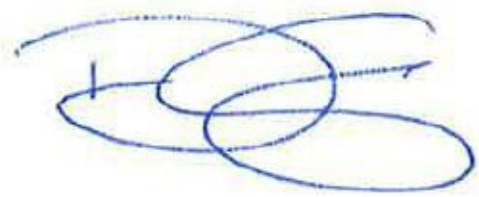
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal F - Invest in well-planned infrastructure and growth

Respectfully Submitted,

Andrew Druck, Construction Inspector

Mike Isom, Development Services Director



_____

Dominick Casey, City Manager

ATTACHMENTS:

Description

Resolution 21-386

NOC

Exhibit A

Final Map

RESOLUTION NO. 21-386

RESOLUTION OF THE COUNCIL OF THE CITY OF ROSEVILLE ACCEPTING THE PUBLIC WORK KNOWN AS FEDERICO – PHASE 1 – VILLAGE 20A PROJECT, APPROVING THE "NOTICE OF COMPLETION", AND AUTHORIZING AND DIRECTING THE CITY ENGINEER TO EXECUTE SAID NOTICE ON BEHALF OF THE CITY OF ROSEVILLE, THEREFORE, AND ACCEPTING ALL DEDICATIONS OFFERED ON THE RECORDED MAP OF THE SUBDIVISION.

BE IT RESOLVED by the Council of the City of Roseville as follows:

1. The "Notice of Completion" on file in the City Clerk's Department relative to that public work known as the Federico - Phase 1 - Village 20A is hereby approved and the public work accepted.

2. All rights of way and easements as offered on the final map of recorded with Placer County Recorder's Office Book FF of Maps, Page 35 is hereby accepted.

3. The City Engineer is hereby authorized and directed to execute said Notice on behalf of the City of Roseville.

PASSED AND ADOPTED by the Council of the City of Roseville, this_____day of_____, 2021, by the following vote on roll call:

AYES COUNCILMEMBERS:

NOES COUNCILMEMBERS:

ABSENT COUNCILMEMBERS:

_____
MAYOR

ATTEST:

_____
CITY CLERK

RECORDING REQUESTED BY AND WHEN
RECORDED MAIL TO:

CITY CLERK
CITY OF ROSEVILLE
311 VERNON STREET
ROSEVILLE, CA 95678

Exempt from recording fees
Pursuant to Gov't Code §27383

NOTICE OF COMPLETION

NOTICE IS HEREBY GIVEN that the public work of improvement known as the _____ Project was completed and accepted by the City of Roseville on _____. The location is situated in the City of Roseville, County of Placer, State of California and is indicated on the attached map, marked as Exhibit "A" and incorporated herein by this reference. The real property herein described is owned by the City of Roseville, 311 Vernon Street, Roseville CA 95678.

The direct/general contractor on said project was _____.

The surety on said project was _____

_____.

_____

City of Roseville
Owner

ATTEST:

_____
Sonia Orozco, City Clerk

State of California)
County of Placer)

I,_____, being first duly sworn, depose and say: I am the _____ of the City of Roseville, a municipal corporation in the State of California, owner of the property described in the above Notice. I am duly authorized to make this verification for and on behalf of the City of Roseville. I have read the Notice of Completion and know its contents and the facts stated therein are true.

_____

City of Roseville

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Placer)

Subscribed and sworn to (or affirmed) before me on this _____ day of _____,

20___, _____

proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.

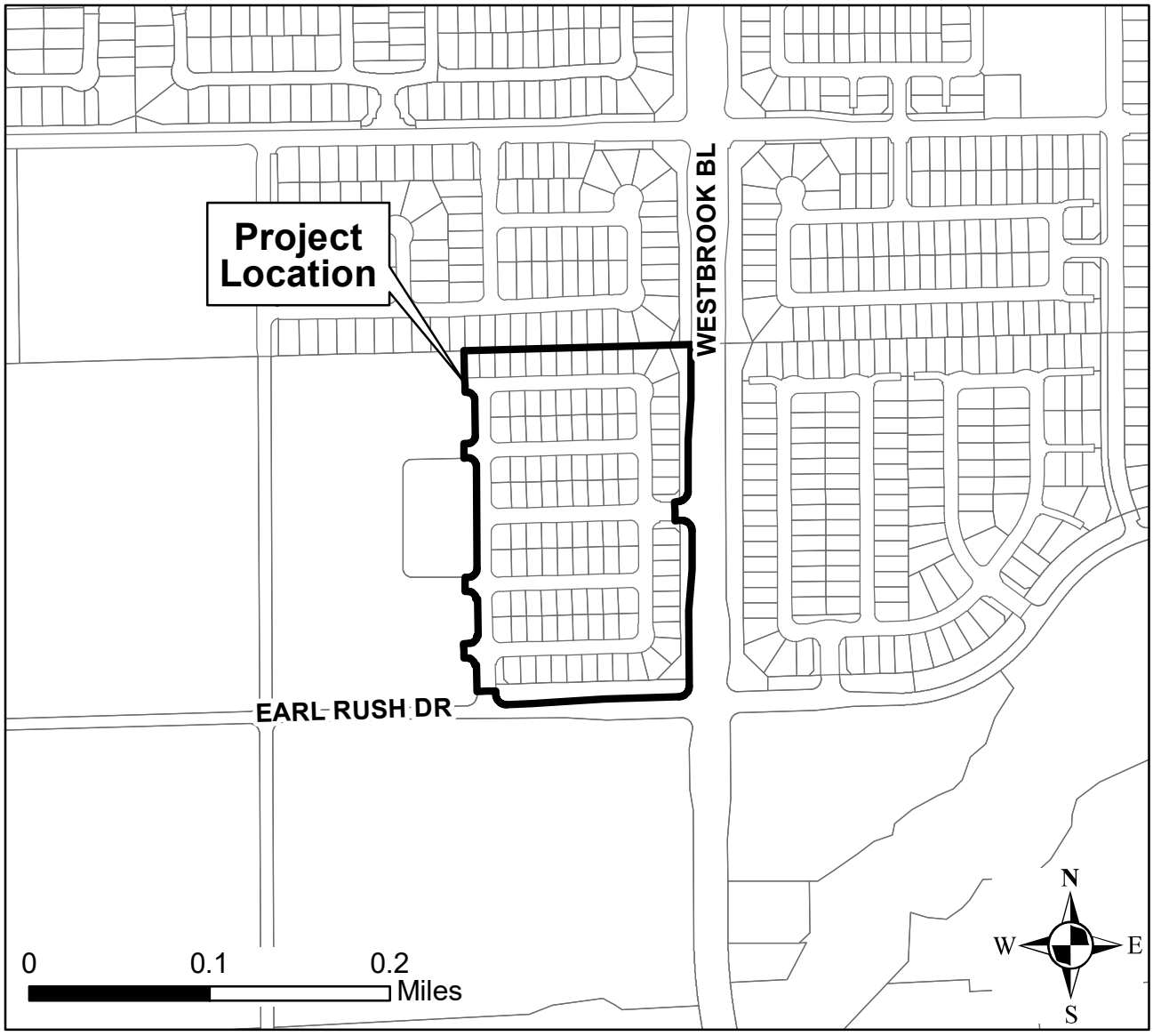
_____

Place Notary Seal and/or Stamp Above

Signature of Notary Public

EXHIBIT A

City of Roseville
Federico - Phase 1
Village 20A



OWNER'S STATEMENT

THE UNDERSIGNED HEREBY CERTIFY THAT THEY ARE THE ONLY PERSONS HAVING ANY RECORD TITLE INTEREST IN THE REAL PROPERTY INCLUDED WITHIN THE SUBDIVISION SHOWN UPON THIS FINAL MAP OF "FEDERICO PHASE 1 VILLAGE 20A" AND THEY HEREBY CONSENT TO THE PREPARATION AND RECORDATION OF THIS FINAL MAP AND HEREBY OFFER FOR DEDICATION AND DO HEREBY DEDICATE FOR SPECIFIC PURPOSES THE FOLLOWING:

THE REAL PROPERTY DESCRIBED BELOW IS DEDICATED AS EASEMENT FOR PUBLIC PURPOSES:

(A) PUBLIC EASEMENTS FOR THE INSTALLATION AND MAINTENANCE OF, BUT NOT LIMITED TO ELECTROLIERS, WATER AND GAS PIPES, SEWER AND DRAINAGE PIPES, AND FOR UNDERGROUND WIRE AND CONDUITS FOR ELECTRIC, TELEPHONE AND TELEVISION SERVICES AND TRAFFIC CONTROL APPURTENANCES TOGETHER WITH ANY AND ALL APPURTENANCES PERTAINING THERETO ON, OVER, UNDER AND ACROSS LOTS A, B, C, D, E AND F, THE STREETS SHOWN HEREON AS MERCURY LANE, MILKY WAY CIRCLE, STARFIELD DRIVE, TITAN LANE, AND WANDERING STAR DRIVE, THOSE STRIPS OF LAND LYING CONTIGUOUS TO THE RIGHTS-OF-WAY AS SHOWN HEREON AND DESIGNATED "P.U.E." (PUBLIC UTILITY EASEMENT).

THE REAL PROPERTY DESCRIBED BELOW IS DEDICATED IN FEE FOR PUBLIC PURPOSES:

(A) AS PUBLIC RIGHTS-OF-WAY (INCLUDING ALL IMPROVEMENTS THEREON) THE STREETS SHOWN HEREON AS MERCURY LANE, MILKY WAY CIRCLE, STARFIELD DRIVE, TITAN LANE, AND WANDERING STAR DRIVE.

(B) LOTS A, B, C, D, E AND F SHOWN HEREON TO THE CITY OF ROSEVILLE FOR LANDSCAPING AND AS PUBLIC RIGHTS-OF-WAY.

TRI POINTE HOMES, INC.,
A DELAWARE CORPORATION

BY: _____
PHILIP S. BODEM
DIVISION PRESIDENT - SACRAMENTO

NOTARY'S ACKNOWLEDGMENT

A NOTARY PUBLIC OR OTHER OFFICER COMPLETING THIS CERTIFICATE VERIFIES ONLY THE IDENTITY OF THE INDIVIDUAL WHO SIGNED THE DOCUMENT TO WHICH THIS CERTIFICATE IS ATTACHED, AND NOT THE TRUTHFULNESS, ACCURACY OR VALIDITY OF THAT DOCUMENT.

STATE OF CALIFORNIA

COUNTY OF Placer

ON September 16,2020 BEFORE ME, K. Curcio A NOTARY PUBLIC

PERSONALLY APPEARED Philip S. Bodem
WHO PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE/THEY EXECUTED THE SAME IN HIS/HER/THEIR AUTHORIZED CAPACITY(IES), AND THAT BY HIS/HER/THEIR SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S), OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

I CERTIFY UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING PARAGRAPH IS TRUE AND CORRECT.

WITNESS MY HAND AND OFFICAL SEAL.

K. Curcio — Katie Curcio
SIGNATURE — PRINTED NAME

MY PRINCIPAL PLACE OF BUSINESS IS Placer COUNTY

MY COMMISSION EXPIRES: Nov. 26, 2023 MY COMMISSION NUMBER: 2313976

SURVEYOR'S STATEMENT

THIS FINAL MAP OF "FEDERICO PHASE 1 VILLAGE 20A" WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCES AT THE REQUEST OF MOURIER INVESTMENTS, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY AND WESTPARK SIERRA VISTA LLC, IN NOVEMBER 2017. I HEREBY STATE THAT THIS FINAL MAP SUBSTANTIALLY CONFORMS TO THE APPROVED OR CONDITIONALLY APPROVED TENTATIVE MAP. ALL MONUMENTS SHOWN HEREON ARE OF THE CHARACTER AND WILL OCCUPY THE POSITIONS INDICATED, AND WILL BE SET BY DECEMBER 31, 2022 AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED.

MACKAY & SOMPS CIVIL ENGINEERS, INC.

_____
PAUL FERGUSON JR., PLS 9265
EXPIRATION DATE: MARCH 31, 2022

DATE: 9/15/2020

LICENSED LAND SURVEYOR — PAUL FERGUSON, JR. — 3-31-22 — No. 9265 — STATE OF CALIFORNIA

CITY ENGINEER'S STATEMENT

I HEREBY STATE THAT I HAVE EXAMINED THIS FINAL MAP OF "FEDERICO PHASE 1 VILLAGE 20A" AND FIND IT TO BE SUBSTANTIALLY THE SAME AS THE TENTATIVE MAP ON FILE AND ANY APPROVED ALTERATIONS THEREOF; THAT ALL PROVISIONS OF THE SUBDIVISION MAP ACT AND ALL APPLICABLE CITY ORDINANCES HAVE BEEN COMPLIED WITH.

_____ DATE: 10/13/20
MARC STOUT, R.C.E. 69879
CITY ENGINEER, CITY OF ROSEVILLE
LICENSE EXPIRES: SEPTEMBER 30, 2022

I HEREBY STATE THAT I AM SATISFIED THIS FINAL MAP OF "FEDERICO PHASE 1 VILLAGE 20A" IS TECHNICALLY CORRECT.

FOR MARC STOUT, CITY ENGINEER, CITY OF ROSEVILLE

_____ DATE: 9/29/20
TIMOTHY G. BLAIR, PLS 8278
EXPIRES DECEMBER 31, 2021

LICENSED LAND SURVEYOR — TIMOTHY G. BLAIR — Exp. 12-31-21 — No. 8278 — STATE OF CALIFORNIA

CITY CLERK'S STATEMENT

I HEREBY CERTIFY THAT THE CITY COUNCIL, CITY OF ROSEVILLE, HAS APPROVED THIS FINAL MAP OF "FEDERICO PHASE 1 VILLAGE 20A" AND HAS ACCEPTED ON BEHALF OF THE PUBLIC THE PUBLIC UTILITY EASEMENTS OFFERED HEREON FOR DEDICATION AND HAVE ACCEPTED, SUBJECT TO IMPROVEMENT, LOTS A, B, C, D, E, F, AND THE RIGHTS OF WAY OFFERED HEREON FOR DEDICATION.

_____
CITY CLERK, CITY OF ROSEVILLE

DATE: 11/5/2020 BY: _____
ASSISTANT CITY CLERK

RECORDER'S STATEMENT

FILED THIS 22ND DAY OF DECEMBER, 2020, AT 9:17 A M. IN BOOK FF OF MAPS, AT PAGE 35, IN THE OFFICE OF THE PLACER COUNTY RECORDER, AT THE REQUEST OF MACKAY & SOMPS CIVIL ENGINEERS, INC.

RYAN RONCO
RECORDER OF PLACER COUNTY
STATE OF CALIFORNIA

DOCUMENT NO.: 2020-0150590

BY: D. Butters
DEPUTY

FEE: $ 95.00

FINAL MAP OF
FEDERICO PHASE 1
VILLAGE 20A
SUBDIVISION NO. PL17-0024

ALL OF LOT 4 AS SHOWN ON THAT CERTAIN FINAL MAP ENTITLED "SIERRA VISTA - FEDERICO LARGE LOT SUBDIVISION, SUBDIVISION NO. PL15-0192", FILED FOR RECORD ON FEBRUARY 16, 2018 IN BOOK EE OF MAPS AT PAGE 6 PLACER COUNTY RECORDS, BEING A PORTION OF THE SOUTHEAST ONE-QUARTER OF SECTION 26, TOWNSHIP 11 NORTH, RANGE 5 EAST, MOUNT DIABLO MERIDIAN.

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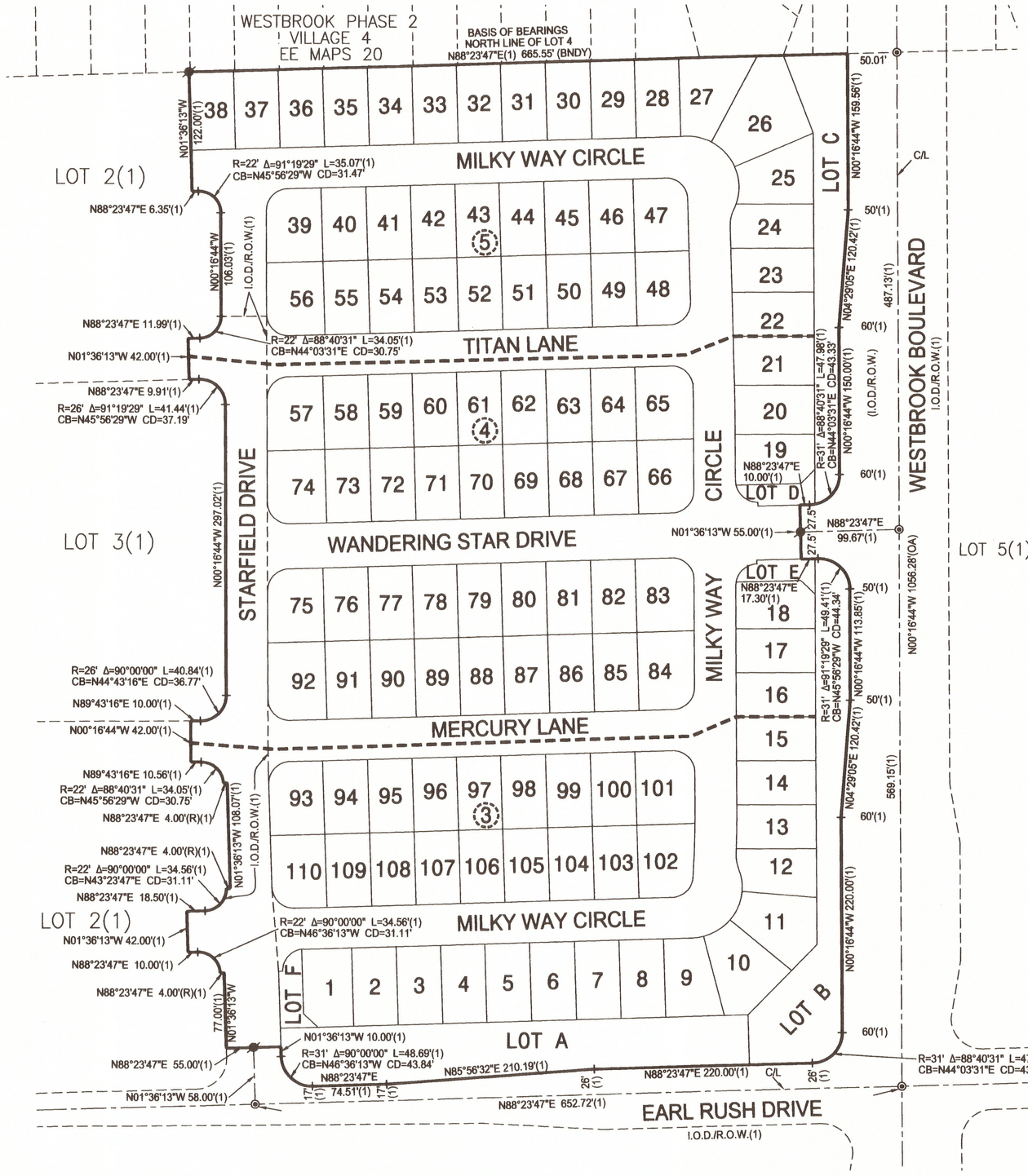
MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
1025 Creekside Ridge Drive, Suite 150, Roseville, CA 95678 (916) 773-1189

SEPTEMBER 2020



NOTES:

1. TOTAL AREA OF THIS SUBDIVISION IS 14.93± ACRES GROSS, CONSISTING OF 110 RESIDENTIAL LOTS AND 6 MISCELLANEOUS LOTS.
2. ALL CURVES ARE DIMENSIONED WITH RADIUS, DELTA, ARC LENGTH, CHORD BEARING AND CHORD LENGTH. DISTANCES SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF AND ARE "GROUND" DISTANCES. DUE TO ROUNDING, THE SUM OF INDIVIDUAL DIMENSIONS MAY NOT EQUAL THE OVERALL DIMENSION.
3. A PRELIMINARY SOILS REPORT WAS PREPARED BY YOUNGDAHL CONSULTING GROUP, INC. DATED FEBRUARY, 2017; PROJECT NUMBER E 16372.00 AND ON FILE WITH THE CITY OF ROSEVILLE DEVELOPMENT SERVICES - ENGINEERING DEPARTMENT, FILE No. 308-870.
4. ALL FRONT CORNERS ARE MARKED BY A 1" BRASS MARKER STAMPED "LS 9265" IN THE SIDEWALK ON THE EXTENSION OF SIDE LOT LINES 1.00' FROM THE PROPERTY LINE, WHERE SIDEWALK DOES NOT EXIST, FRONT CORNERS SHALL BE SET ON 2.00' EXTENSION IN THE GUTTER PAN, UNLESS OTHERWISE NOTED.
5. ALL REAR CORNERS AND ANGLE POINTS WILL BE SET WITH A 5/8" REBAR AND PLASTIC CAP STAMPED "LS 9265", WHERE A REAR CORNER FALLS WITHIN A MASONRY RETAINING WALL, MASONRY SOUND WALL OR CONCRETE FOOTING, A 5/8" REBAR WITH PLASTIC CAP STAMPED "LS 9265" WILL BE SET ON THE SIDE LOT LINE ON A 4.00 FOOT OFFSET TO THE REAR CORNER OR A BRASS TAG STAMPED "LS 9265" WILL BE SET WITH EPOXY TO THE FACE OF WALL 2.00 FOOT ABOVE GROUND OR ON TOP OF WALL WHERE AN OFFSET MONUMENT CANNOT BE SET.
6. PROPERTY IS SUBJECT TO A "RECIPROCAL EASEMENT AGREEMENT (SOLAIRE, PHASE 4: LOT 2, 3, & 4) RECORDED JULY 2, 2020 AS DOCUMENT NUMBER 2020-0066291, OFFICIAL RECORDS OF PLACER COUNTY, WITH THE OWNER OF LOT 2 & 3 A LONG THE WESTERLY BOUNDARY OF THIS SUBDIVISION.

BASIS OF BEARINGS:

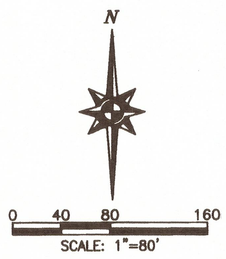
THE BEARING N 88°23'47" E, BEING THE NORTH LINE OF LOT 4 AS SHOWN AND SO DESIGNATED ON THAT CERTAIN FINAL MAP ENTITLED "SIERRA VISTA - FEDERICO, LARGE LOT SUBDIVISION SUBDIVISION NO. PL15-0192", RECORDED ON FEBRUARY 16, 2018 IN BOOK EE OF MAPS, AT PAGE 6, PLACER COUNTY RECORDS. DISTANCES SHOWN HEREON ARE GROUND DISTANCES.

LEGEND

◉	FOUND COPPERWELD SURVEY MONUMENT WITH CENTER PUNCH IN MONUMENT WELL STAMPED "LS 7944"(1)
◎	SET COPPERWELD SURVEY MONUMENT WITH CENTER PUNCH IN MONUMENT WELL STAMPED "LS 9265" PER CITY OF ROSEVILLE STANDARDS
⌀	FOUND 3/4" IRON PIPE WITH PLASTIC PLUG STAMPED "LS 7944"(1)
o	DIMENSION POINT
CB	CHORD BEARING
CD	CHORD DISTANCE
C/L	CENTERLINE
I.O.D.	IRREVOCABLE OFFER OF DEDICATION
(OA)	OVERALL
P.E.	PASEO EASEMENT
P.U.E.	PUBLIC UTILITY EASEMENT
(R)	RADIAL BEARING
R.O.W.	RIGHT-OF-WAY
S.F.±	SQUARE FEET
(1)	DENOTES RECORD INFORMATION
(X)	SHEET NUMBER

REFERENCES:

(1) EE MAPS 6



FINAL MAP OF
FEDERICO PHASE 1
VILLAGE 20A
SUBDIVISION NO. PL17-0024

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SEPTEMBER 2020

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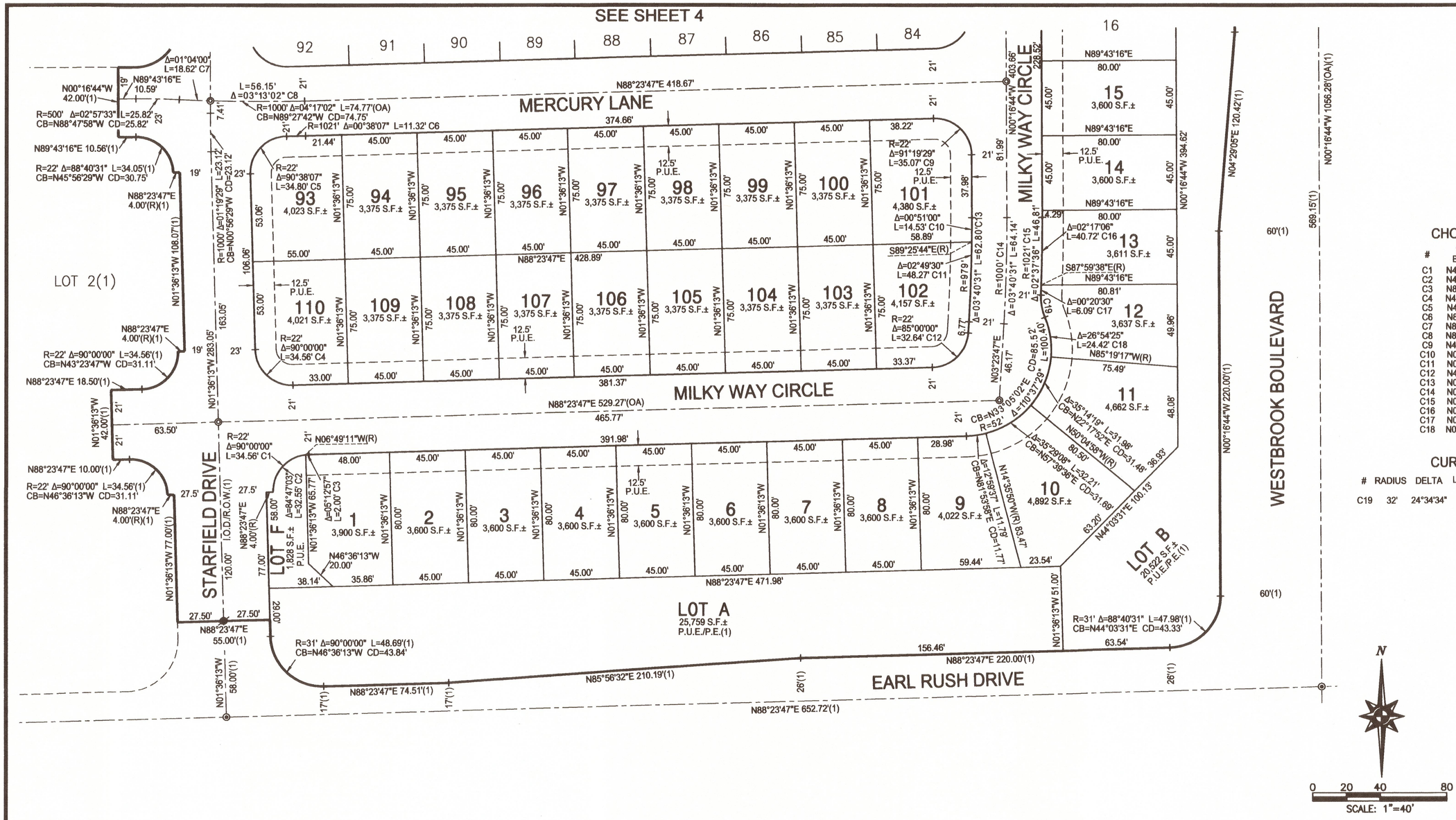
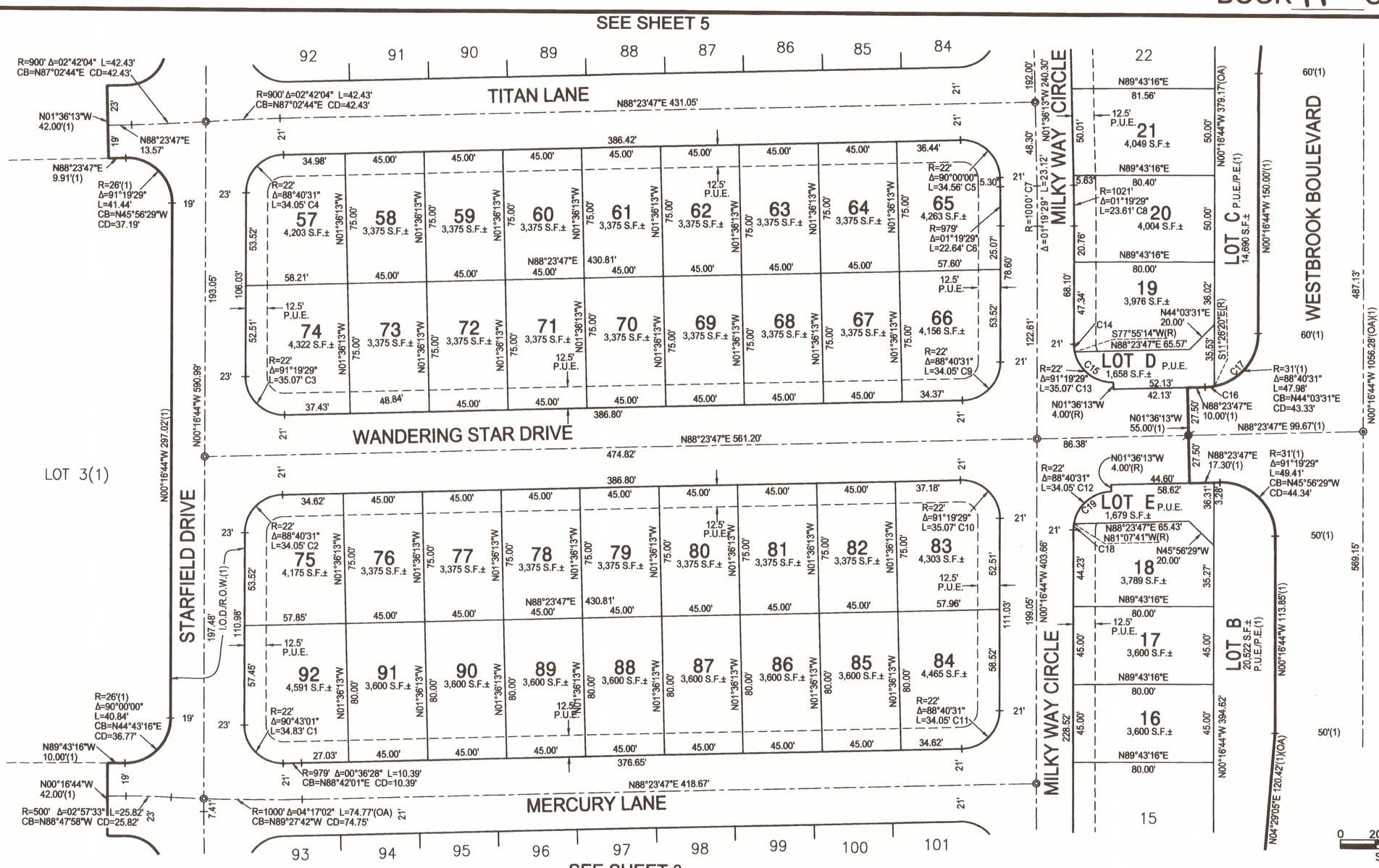

SEE SHEET 4
MERCURY LANE
MILKY WAY CIRCLE
STARFIELD DRIVE
WESTBROOK BOULEVARD
EARL RUSH DRIVE
LOT 2(1)
LOT A
25,759 S.F.±
P.U.E./P.E.(1)
LOT B
20,522 S.F.±
P.U.E./P.E.(1)
LOT F
1,828 S.F.±
P.U.E.
I.O.D./R.O.W.(1)
N88°23'47"E 529.27'(OA)
N88°23'47"E 471.98'
N88°23'47"E 652.72'(1)
N88°23'47"E 220.00'(1)
N85°56'32"E 210.19'(1)
N88°23'47"E 74.51'(1)
N01°36'13"W 283.05'
N01°36'13"W 108.07'(1)
N01°36'13"W 77.00'(1)
N01°36'13"W 58.00'(1)
N00°16'44"W 220.00'(1)
N00°16'44"W 1056.28'(OA)(1)
569.15'(1)
N04°29'05"E 120.42'(1)
381.37'
465.77'
374.66'
391.98'
156.46'
63.54'
63.50'
55.00'(1)
93 4,023 S.F.±
94 3,375 S.F.±
95 3,375 S.F.±
96 3,375 S.F.±
97 3,375 S.F.±
98 3,375 S.F.±
99 3,375 S.F.±
100 3,375 S.F.±
101 4,380 S.F.±
102 4,157 S.F.±
103 3,375 S.F.±
104 3,375 S.F.±
105 3,375 S.F.±
106 3,375 S.F.±
107 3,375 S.F.±
108 3,375 S.F.±
109 3,375 S.F.±
110 4,021 S.F.±
1 3,900 S.F.±
2 3,600 S.F.±
3 3,600 S.F.±
4 3,600 S.F.±
5 3,600 S.F.±
6 3,600 S.F.±
7 3,600 S.F.±
8 3,600 S.F.±
9 4,022 S.F.±
10 4,892 S.F.±
11 4,662 S.F.±
12 3,637 S.F.±
13 3,611 S.F.±
14 3,600 S.F.±
15 3,600 S.F.±
16
12.5' P.U.E.
R=1000' Δ=04°17'02" L=74.77'(OA) CB=N89°27'42"W CD=74.75'
R=1021' Δ=00°38'07" L=11.32' C6
L=56.15' Δ=03°13'02" C8
Δ=01°04'00" L=18.62' C7
R=500' Δ=02°57'33" L=25.82' CB=N88°47'58"W CD=25.82'
R=1000' Δ=01°19'29" L=23.12' CB=N00°56'29"W CD=23.12'
R=22' Δ=90°00'00" L=34.56' C1
R=22' Δ=90°00'00" L=34.56' C4
R=22' Δ=88°40'31" L=34.05'(1) CB=N45°56'29"W CD=30.75'
R=22' Δ=90°00'00" L=34.56'(1) CB=N43°23'47"W CD=31.11'
R=22' Δ=90°00'00" L=34.56'(1) CB=N46°36'13"W CD=31.11'
R=31' Δ=90°00'00" L=48.69'(1) CB=N46°36'13"W CD=43.84'
R=31' Δ=88°40'31" L=47.98'(1) CB=N44°03'31"E CD=43.33'
R=22' Δ=91°19'29" L=35.07' C9
Δ=00°51'00" L=14.53' C10
S89°25'44"E(R)
Δ=02°49'30" L=48.27' C11
R=22' Δ=85°00'00" L=32.64' C12
R=1000' C14
Δ=03°40'31" L=64.14'
R=1021' C15
Δ=02°37'36" L=46.81'
Δ=02°17'06" L=40.72' C16
S87°59'38"E(R)
Δ=00°20'30" L=6.09' C17
Δ=26°54'25" L=24.42' C18
N85°19'17"W(R)
Δ=110°37'29" CD=85.52' L=100.40'
Δ=35°14'19" CB=N22°17'52"E CD=31.48' L=31.98'
N50°04'58"W(R) 80.50'
Δ=35°29'09" CB=N57°39'36"E CD=31.69' L=32.21'
N14°36'50"W(R) 63.47'
Δ=12°59'37" CB=N81°53'38"E CD=11.79' L=11.77'
N06°49'11"W(R)
Δ=84°47'03" L=32.55' C2
Δ=05°12'57" L=2.00' C3
N46°36'13"W 20.00'
R=979'
R=1000' C13
N03°23'47"E 46.17'
N00°16'44"W 403.66'
N00°16'44"W 394.62'
N00°16'44"W 100.13'
N44°03'31"E 100.13'
N88°23'47"E 418.67'
N88°23'47"E 428.89'
N88°23'47"E 10.00'(1)
N88°23'47"E 18.50'(1)
N88°23'47"E 4.00'(R)(1)
N88°23'47"E 55.00'(1)
N89°43'16"E 10.59'
N89°43'16"E 10.56'(1)
N00°16'44"W 42.00'(1)
N01°36'13"W 42.00'(1)
N89°43'16"E 80.00'
N89°43'16"E 80.00'
N89°43'16"E 80.00'
N89°43'16"E 80.81'
N89°43'16"E 75.49'
N88°23'47"E 33.37'
N88°23'47"E 38.22'
N88°23'47"E 59.44'
N88°23'47"E 23.54'
N88°23'47"E 4.00'(R)(1)
N88°23'47"E 4.00'(R)(1)
N88°23'47"E 4.00'(R)(1)



CHORD TABLE

#	CHORD BEARING	CHORD LENGTH
C1	N45°38'15"W	31.31'
C2	N44°03'31"E	30.75'
C3	N45°56'29"W	31.47'
C4	N44°03'31"E	30.75'
C5	N46°36'13"W	31.11'
C6	N00°56'29"W	22.64'
C7	N00°56'29"W	23.12'
C8	N00°56'29"W	23.61'
C9	N44°03'31"E	30.75'
C10	N45°56'29"W	31.47'
C11	N44°03'31"E	30.75'
C12	N44°03'31"E	30.75'
C13	N45°56'29"W	31.47'

CURVE TABLE

#	RADIUS	DELTA	LENGTH	CHORD BEARING	CHORD LENGTH
C14	22'	11°48'02"	4.53'	N06°10'45"W	4.52'
C15	22'	79°31'28"	30.54'	N51°50'30"W	28.14'
C16	31'	09°50'06"	5.32'	N83°28'43"E	5.31'
C17	31'	78°50'24"	42.66'	N39°08'28"E	39.37'
C18	22'	09°09'03"	3.51'	N04°17'47"E	3.51'
C19	22'	79°31'28"	30.54'	N48°38'03"E	28.14'

SEE SHEET 2 FOR BASIS OF BEARINGS, LEGEND, NOTES AND REFERENCES.

FINAL MAP OF
FEDERICO PHASE 1
VILLAGE 20A
SUBDIVISION NO. PL17-0024

ALL OF LOT 4 AS SHOWN ON THAT CERTAIN FINAL MAP ENTITLED "SIERRA VISTA - FEDERICO LARGE LOT SUBDIVISION, SUBDIVISION NO. PL16-0192", FILED FOR RECORD ON FEBRUARY 16, 2018 IN BOOK EE OF MAPS AT PAGE 6 PLACER COUNTY RECORDS, BEING A PORTION OF THE SOUTHEAST ONE-QUARTER OF SECTION 26, TOWNSHIP 11 NORTH, RANGE 5 EAST, MOUNT DIABLO MERIDIAN.

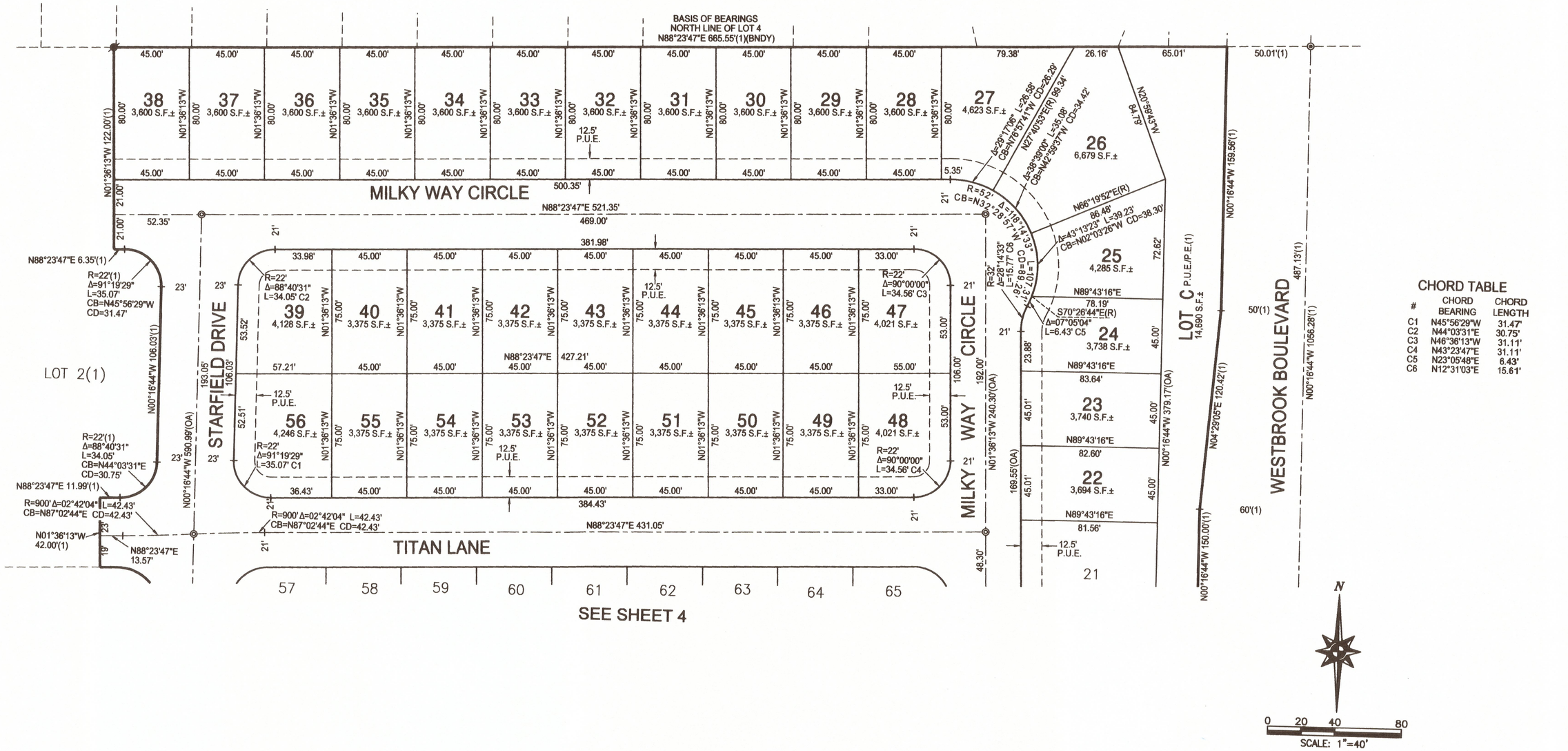
CITY OF ROSEVILLE • PLACER COUNTY • CALIFORNIA

SEPTEMBER 2020

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
1025 Creekside Ridge Drive, Suite 150, Roseville, CA 95678 (916) 773-1189

BOOK FF OF MAPS, PAGE 35

WESTBROOK PHASE 2
VILLAGE 4
EE MAPS 20



CHORD TABLE

#	CHORD BEARING	CHORD LENGTH
C1	N45°56'29"W	31.47'
C2	N44°03'31"E	30.75'
C3	N46°36'13"W	31.11'
C4	N43°23'47"E	31.11'
C5	N23°05'48"E	6.43'
C6	N12°31'03"E	15.61'

SCALE: 1"=40'

FINAL MAP OF

FEDERICO PHASE 1

VILLAGE 20A

SUBDIVISION NO. PL17-0024

ALL OF LOT 4 AS SHOWN ON THAT CERTAIN FINAL MAP ENTITLED "SIERRA VISTA - FEDERICO LARGE LOT SUBDIVISION, SUBDIVISION NO. PL15-0192", FILED FOR RECORD ON FEBRUARY 16, 2018 IN BOOK EE OF MAPS AT PAGE 6 PLACER COUNTY RECORDS, BEING A PORTION OF THE SOUTHEAST ONE-QUARTER OF SECTION 26, TOWNSHIP 11 NORTH, RANGE 5 EAST, MOUNT DIABLO MERIDIAN.

CITY OF ROSEVILLE • PLACER COUNTY • CALIFORNIA

SEPTEMBER 2020

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MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
1025 Creekside Ridge Drive, Suite 150, Roseville, CA 95678 (916) 773-1189

 18254.FED.20

COUNCIL COMMUNICATION

CC #: 1688
File #: 0400-04-09-1 & 0400-07

Title:	Fiddyment Ranch Phase 3 Village F-10 Phase 2 - Final Map and Subdivision Agreement
Contact:	Robert Medina 916-774-5517 rmedina@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 7.8.

RECOMMENDATION TO COUNCIL

Staff recommends that the City Council take the following actions:

1. Approve the final map on file with the City Clerk and accept on behalf of the public the public utility easements, and accept, subject to improvement, Lots A, B, C, D, & E and the rights of way offered thereon; and
2. Adopt a resolution approving the Subdivision Agreement and authorize the City Manager to execute the agreement on behalf of the City.

BACKGROUND

The Development Services, Engineering section, has reviewed the subject final map and found that it is in compliance with the Subdivision Map Act and the City's Subdivision Ordinance and all conditions of the tentative map have been met. This map will create 110 residential lots.

FISCAL IMPACT

There is no fiscal impact to the City's General Fund associated with this approval.

ENVIRONMENTAL REVIEW

Project level CEQA compliance for the Fiddyment Ranch Phase 3 Village F-10 Phase 2 final map was accomplished with the preparation of the West Roseville Specific Plan EIR (SCH# 2002082057, adopted by the City Council on February 4, 2004) and the Fiddyment Ranch Specific Plan Amendment 3 Subsequent EIR (SCH# 2010082075, adopted by the City Council on April 16, 2014). Because the Fiddyment Ranch Phase 3 Village F-10 Phase 2 final map is consistent with the project evaluated in the West Roseville Specific Plan EIR and the Fiddyment Ranch Specific Plan Amendment 3, no new effects would be expected to occur and all applicable

mitigation measures from the West Roseville Specific Plan EIR and Fiddyment Ranch Specific Plan Amendment 3 will be implemented. As such, no additional CEQA action is required at this time.

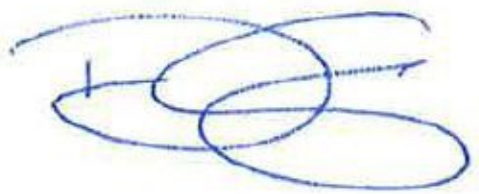
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal F - Invest in well-planned infrastructure and growth

Respectfully Submitted,

Robert Medina, Assistant Engineer

Mike Isom, Development Services Director



Dominick Casey, City Manager

ATTACHMENTS:

Description

Resolution 21-387

Subdivision Agreement

Final Map

RESOLUTION NO. 21-387

APPROVING A SUBDIVISION AGREEMENT, BY AND BETWEEN THE CITY OF ROSEVILLE AND JEN CALIFORNIA 15, LLC, AND AUTHORIZING THE CITY MANAGER TO EXECUTE IT ON BEHALF OF THE CITY OF ROSEVILLE

WHEREAS, a subdivision agreement, by and between the City of Roseville and JEN California 15, LLC, for the Fiddyment Ranch – Phase 3 Village F-10 Phase 2 Subdivision, has been reviewed by the City Council; and

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Roseville that said agreement is approved and that the City Manager is authorized to execute it on behalf of the City of Roseville.

PASSED AND ADOPTED by the Council of the City of Roseville this____day of _____, 20_, by the following vote on roll call:

AYES COUNCILMEMBERS:

NOES COUNCILMEMBERS:

ABSENT COUNCILMEMBERS:

_____
MAYOR

ATTEST:

_____
City Clerk

RECORDING REQUESTED BY AND WHEN RECORDED, PLEASE RETURN TO:

City Clerk
CITY OF ROSEVILLE
311 Vernon Street
Roseville, CA 95678

Exempt from recording fees
Pursuant to Govt. Code §27383

SUBDIVISION AGREEMENT

Fiddyment Ranch - Phase 3 Village F-10 Phase 2 SUBDIVISION

THIS AGREEMENT, made and entered into this ___ day of _____, 20__, by and between the CITY OF ROSEVILLE, a municipal corporation ("CITY"), and JEN California 15, LLC, a California limited liability company, ("SUBDIVIDER"),

W I T N E S S E T H:

WHEREAS, SUBDIVIDER is possessed of a tract of land lying in the City of Roseville, County of Placer, known as "Fiddyment Ranch - Phase 3 Village F-10 Phase 2 Subdivision" (Subdivision no. PL14-0469; "the Subdivision"); and

WHEREAS, a tentative map of the Subdivision was approved by the City Planning Commission on the 23rd day of April, 2015, and the final map of the Subdivision has been approved subject to the execution of this Agreement; and

WHEREAS, the final map has been filed on the ____ day of _____, 20__ in Book _____ of Parcel/Subdivision Maps at Page _____ in the Official Records, Placer County Recorder, file no. _____; and

WHEREAS, Section 18.20.110 of the Roseville Municipal Code, regulating the subdivision of land in the City, requires that SUBDIVIDER shall execute and file an agreement between itself and CITY relating to the improvements to be made in a subdivision, prior to the approval by the City Council of the final map.

NOW, THEREFORE, the parties agree as follows:

1. Rights-of-Way. Except as otherwise provided by this Agreement, CITY rejects all lands, right-of-ways, and easements offered for dedication on the final map of the Subdivision. All such offers shall, however, remain open, and shall constitute irrevocable offers of dedication in accordance with Government Code Section 66477.2. All such offers may be accepted by CITY in its sole discretion at any later date without further notice to SUBDIVIDER as provided by law.

By way of explanation only, it is the current intention of CITY to accept all or part of such irrevocable offers to dedicate upon acceptance of the improvements called for in this Agreement.

2. Improvements - Time Limit. SUBDIVIDER agrees to cause all improvements to be made and constructed in the Subdivision to fully comply with the requirements of the Roseville Municipal Code and the Subdivision Map Act of the State of California according to the improvement plans for the Subdivision prepared by Wood Rodgers, Inc., dated February, 2021 and approved by the City Engineer and including any changes or

alterations to such improvements required by the City Engineer, and to install, on or before March 15, 2022, such survey monuments as may be required by the City Engineer ("the Work"). SUBDIVIDER agrees to pay for any materials, provisions or other supplies used in, upon, for or about the performance of the Work, or for any work or labor of any kind done in connection with the Work, or for any amounts due under the Unemployment Insurance Act with respect to such work or labor.

SUBDIVIDER agrees to complete all of the Work on or before twenty-four (24) months from the date of this Agreement. If in the opinion of the City Engineer of CITY, an extension of this Agreement is not detrimental to the public welfare, he or she is, in his or her sole discretion, hereby authorized to extend the time within which the Work shall be completed for a period not to exceed twelve (12) months. Upon a written application made by SUBDIVIDER, further extensions, not to exceed an additional six (6) months, shall be reviewed and approved at the discretion of the City Engineer of CITY. Any such application extension request by SUBDIVIDER shall fully state the grounds and facts relied upon for the granting of additional extensions.

In the event that SUBDIVIDER shall fail to complete the Work within the time provided by this Agreement, CITY may, in its sole discretion and in addition to any other remedy provided in this Agreement or by law, enter upon the Subdivision and complete the Work and recover the full cost and expense of such construction from SUBDIVIDER, SUBDIVIDER's successors and assigns, or from the then owner of the Subdivision, and/or place a lien upon the Subdivision for such cost and expense.

If at anytime prior to the expiration of the time provided by this Agreement the City Engineer of CITY determines that a safety hazard exists within an existing public right-of-

way, the City Engineer shall give written notice to SUBDIVIDER to eliminate the safety hazard. If SUBDIVIDER fails to eliminate the safety hazard within five (5) calendar days of the written notice, CITY may, in its sole discretion and in addition to any other remedy provided in this Agreement or by law, eliminate the safety hazard and recover the full cost and expense of such work from SUBDIVIDER, SUBDIVIDER's successors and assigns, or from the then owner of the Subdivision, and/or place a lien upon the Subdivision for such cost and expense.

3. Acquisition and Dedication of Easements or Rights-of-Ways. If any of the Work is to be constructed or installed on land not within the Subdivision or already existing public right-of-way, no construction or installation shall be commenced before:

a. The irrevocable offer of dedication or conveyance to CITY of appropriate right-of-ways, easements or other interest in real property, and appropriate authorization from the property owner to allow construction or installation of the improvements or work; or

b. The issuance of an order of possession by a court of competent jurisdiction pursuant to the State Eminent Domain Law. SUBDIVIDER shall comply in all respects with any such order of possession.

Nothing in this Section 3 shall be construed as authorizing or granting an extension of time to SUBDIVIDER for completion of the Work.

4. Inspection Fees and Costs. The City Engineer shall inspect all of the Work improvements made in the Subdivision to see that they comply with CITY's subdivision regulations and specifications. SUBDIVIDER shall deposit the estimated inspection fee and reimburse CITY for the cost of such inspections in accordance with Roseville Municipal Code section 18.20.070.

5. Securities.

a. SUBDIVIDER shall file with this Agreement two (2) improvement securities as set forth in Roseville Municipal Code Sections 18.20.150 and 18.20.160. Each security shall be in the amount of one hundred percent (100%) of the total estimated cost of the Work as determined by the City Engineer which amount is the sum of $2,614,012.00. One improvement security shall secure faithful performance of this Agreement as required by Section 66499.3(a) of the Government Code of the State of California (the "faithful performance" security). The second improvement security shall, as required by Section 66499.3(b) of the Government Code of the State of California, secure the obligations set forth in Title 15 (commencing with Section 3082) of Part 4 of Division 3 of the Civil Code of the State of California for payment to the contractor, his subcontractors and to persons renting equipment or furnishing labor or materials to them for the Work (the "payment security"). The improvement securities required under this paragraph shall also secure placement of monumentation and guarantee payment therefor as provided by California Government Code section 66496.

b. SUBDIVIDER shall also file with this Agreement a "guarantee and warranty security" in the amount of ten percent (10%) of the City Engineer's estimated cost of the Work as set forth in Section 18.20.170 of the Roseville Municipal Code to guarantee and warrant the Work for a period of one year following its completion and acceptance against any defective work or labor done, or defective materials furnished, as required by Section 66499(a)(5) of the Government Code of the State of California. The guarantee and warranty security shall be released upon SUBDIVIDER's request following expiration of the warranty period and subject to the reasonable determination of the City Engineer that SUBDIVIDER's warranty obligations have been satisfied.

c. Any bonds submitted as security pursuant to this section shall be executed by a surety company authorized to transact a surety business in the State of California. All required securities shall be in a form approved by the City Attorney of CITY.

6. Successors and Assigns – Covenant Running with the Land. This Agreement shall inure to the benefit of, and be binding upon, the successors and assigns of the respective parties. It shall be recorded in the Office of the Recorder of Placer County concurrently with the final map of the Subdivision, and shall constitute a covenant running with the land and an equitable servitude upon the real property within the Subdivision.

7. Acceptance of Improvements Upon Completion. Upon satisfactory completion of the Work, in accordance with this Agreement, CITY agrees to accept the Work and its improvements and the offers of dedication described in paragraph 1, subject to the provisions of paragraphs 1 and 10 of this Agreement.

8. Notice Regarding Construction. SUBDIVIDER shall notify the City Engineer of CITY in writing three (3) days prior to the commencement of construction of the Work.

9. Subdivider's Obligation to Warn Public During Construction. Until final acceptance of the Work, SUBDIVIDER shall give good and adequate warning to the public of each and every dangerous condition which may exist in the Work, and will take all reasonable actions to protect the public from any such dangerous condition.

10. Warranty.

a. SUBDIVIDER guarantees and warrants the public improvements which constitute the Work required by this Agreement, and agrees to remedy any defects in the improvements or the Work arising from faulty or defective materials or construction of said improvements or the Work occurring within twelve (12) months after their acceptance by CITY.

SUBDIVIDER agrees to permit inspection of all improvements in the Subdivision by the City Engineer of CITY for such period, and to reimburse CITY for the cost of such inspections.

b. If, within the warranty period, the Work or improvement or any part of the Work done, furnished, installed, or constructed fails to fulfill any of the requirements of this Agreement or the improvement plans and specifications, SUBDIVIDER shall, without delay or cost to CITY, repair, replace or reconstruct any defective or otherwise unsatisfactory part or parts of the Work. CITY may, at its sole option, perform such repair or replacement itself if SUBDIVIDER has failed to commence such repair within twenty (20) days after CITY has mailed written notice of default to SUBDIVIDER and to SUBDIVIDER'S Surety. In such event, SUBDIVIDER agrees to pay the cost of such repair and replacement by CITY and CITY may, at its option, recover such cost as a lien against the Subdivision should the cost exceed the inspection fee deposited pursuant to paragraph 4 of this Agreement.

Should CITY determine that the public safety requires repairs or replacements to be made before SUBDIVIDER can be notified, CITY may, in its sole discretion, make the necessary repairs or replacement or perform the necessary work. SUBDIVIDER shall pay to CITY the cost of such repairs and CITY may at its option recover such cost as a lien against the Subdivision.

11. Indemnification. To the fullest extent allowed by law, SUBDIVIDER shall defend, indemnify, and save and hold harmless CITY, its officers, agents, employees and volunteers from any claims, suits or actions of every name, kind and description brought forth, or on account of, injuries to or death of any person (including but not limited to workers and the public), or damage to property, resulting from or arising out of SUBDIVIDER 's willful misconduct or negligent act or omission while engaged in the performance of obligations or

exercise of rights created by this Agreement, except those matters arising from CITY's sole or active negligence or willful misconduct. The parties intend that this provision shall be broadly construed.

SUBDIVIDER's responsibility for such defense and indemnity obligations shall survive the termination or completion of this Agreement for the full period of time allowed by law. The defense and indemnity obligations of this Agreement are undertaken in addition to, and shall not in any way be limited by, the insurance obligations contained in this Agreement.

12. Insurance. SUBDIVIDER agrees to continuously maintain, in full force and effect, at a minimum the following policies of insurance during the term of this Agreement.

COVERAGE	LIMITS OF LIABILITY
General Liability	$2,000,000 per occurrence $4,000,000 aggregate Personal Injury: $2,000,000 per occurrence $4,000,000 aggregate
Automobile Liability	$1,000,000 combined single limit
Workers' Compensation	Statutory

a. Form. SUBDIVIDER shall submit a certificate evidencing such coverage for the period covered by this Agreement in a form satisfactory to Risk Management and the City Attorney, prior to undertaking any work hereunder. Any insurance written on a claims made basis is subject to the approval of Risk Management and the City Attorney.

b. Additional Insureds. SUBDIVIDER shall also provide a separate endorsement form or section of the policy showing CITY, its officers, agents, employees and volunteers as additional insureds for each type of coverage, except for Workers' Compensation, for ongoing and completed operations. Such insurance shall specifically cover the contractual

liability of SUBDIVIDER. The additional insured coverage under the SUBDIVIDER's policy shall be primary and noncontributory, as evidenced by a separate endorsement or section of the policy, and shall not seek contribution from CITY's insurance or self-insurance. In addition, the additional insured coverage shall be at least as broad as the Insurance Services Office ("ISO") CG 20 01 Endorsement. Any available insurance proceeds in excess of the specified minimum insurance coverage requirements and limits shall be available to the additional insureds. Furthermore, the requirements for coverage and limits shall be: (1) the minimum coverage and limits specified in this Agreement; or (2) the full coverage and maximum limits of any insurance proceeds available to the named insureds, whichever is greater.

c. Cancellation/Modification. SUBDIVIDER shall provide ten (10) days written notice to CITY prior to cancellation or modification of any insurance required by this Agreement.

d. Umbrella/Excess Insurance. The limits of insurance required in this Agreement may be satisfied by a combination of primary and excess insurance. Any excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and noncontributory basis for the benefit of CITY (if agreed to in a written contract) before CITY's own insurance shall be called upon to protect it as a named insured.

e. Self-Insured Retentions. All self-insured retentions ("SIR") must be disclosed to Risk Management for approval and shall not reduce the limits of liability. Policies containing any SIR provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named insured or CITY. CITY reserves the right to obtain a full certified copy of any insurance policy and endorsements. The failure to exercise this right shall not constitute a waiver of such right.

f. Waiver of Subrogation. SUBDIVIDER hereby agrees to waive subrogation which any insurer of SUBDIVIDER may acquire from SUBDIVIDER by virtue of the payment of any loss under a Workers Compensation, Commercial General Liability or Automobile Liability policy. All Workers Compensation, Commercial General Liability and Automobile Liability policies shall be endorsed with a waiver of subrogation in favor of CITY, its officers, agents, employees and volunteers for all worked performed by SUBDIVIDER, its employees, agents and subcontractors.

g. Liability/Remedies. Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve SUBDIVIDER of liability in excess of such coverage, nor shall it preclude CITY from taking such other actions as are available to it under any other provisions of this Agreement or law.

13. Irrevocability of Security. The improvement securities furnished pursuant to paragraph 5 shall be irrevocable, shall not be limited as to time (except as to the one-year guarantee and warranty period specified in paragraph 10) and shall provide that they may be released, in whole or part, only upon the written approval of the City Engineer of CITY.

14. Attorney's Fees; Venue; Governing Law. Any action by any party to this Agreement, or any action concerning a security furnished pursuant to paragraph 5, shall be brought in the appropriate court of competent jurisdiction within the County of Placer, State of California, notwithstanding any other provision of law which may provide that such action may be brought in some other location. In the event it becomes necessary for either party to bring an action with respect to enforcement of the provisions of this Agreement, or the security therefor, the prevailing party in such action shall be awarded a reasonable attorney's fee, as may be

determined by the Court. This Agreement shall be governed by and construed in accordance with the laws of the State of California.

15. Release of Faithful Performance Security. Release of faithful performance security shall be in compliance with and pursuant to the procedures set forth in Government Code Section 66499.7. Upon the completion of all secured Work by SUBDIVIDER and written acceptance of that completed Work by CITY, and the furnishing of the warranty security as required by paragraph 5(b), the City Engineer shall authorize the release of the remaining faithful performance security.

16. Release of Payment Security. Thirty-five (35) days after a notice of completion is recorded with respect to the Work, the City Engineer of CITY may authorize the release of the payment security, in the event that no claims have been filed against said security. In the event that claims or actions are filed against the security, the City Engineer may release so much of such security as is in excess of the total of the claims made against it, plus a reasonable amount of costs and attorney's fees.

17. Automatic Termination Upon Completion and Sale of Residential Unit. This Agreement and any lien pursuant hereto shall automatically be terminated, without any further action by either party or need to record any additional document, with respect to any single-family residential lot within a parcel designated by the Specific Plan for residential use, upon completion of construction and issuance by the City of a final inspection for a dwelling unit upon such residential lot and conveyance of such improved residential lot to a bona-fide good faith purchaser thereof. In connection with its issuance of a final inspection for such improved lot, City shall confirm that: (i) all improvements which are required to serve the lot, as determined by City, have been accepted by City; (ii) the lot is included within the Maintenance CFD required

by Section 3.20 or other financing mechanism acceptable to the City, to the extent required hereby; and (iii) if and to the extent applicable to such lot, an affordable purchase or rental housing agreement has been recorded on the lot. Termination of this Agreement for any such residential lot as provided for in this section shall not in any way be construed to terminate or modify any assessment district or Mello-Roos Community Facilities District lien affecting such lot at the time of termination.

18. Failure of Performance. In addition to any other remedies provided in this Agreement or by law, in the event SUBDIVIDER fails to perform one or more of the covenants or conditions of this Agreement, CITY shall have recourse to the security given to guarantee the performance of such acts. CITY may do, or cause to be done, those acts required of SUBDIVIDER, and shall have recourse against so much of the security as is necessary to discharge the responsibility of SUBDIVIDER. In the event CITY seeks recourse against a security, CITY shall also have recourse against SUBDIVIDER for any and all amounts necessary to complete the obligations of SUBDIVIDER in the event the security is insufficient to pay such amounts. All administrative costs, including reasonable attorney's fees pursuant to Section 66499.4 of the Government Code, incurred by CITY, in addition to the costs of the improvements, shall be a proper charge against the security and SUBDIVIDER.

19. Integration. This Agreement is an integrated agreement. It supersedes all prior negotiations, representations, or agreements, either written or oral.

20. Modification. This Agreement and each provision contained herein may be waived, amended, supplemented or eliminated only by mutual written agreement of the parties.

21. Notices. Any notices sent to the parties relating to this Agreement shall be sent by first class mail, postage prepaid or delivered to the following addresses:

Marc Stout, City Engineer
City of Roseville
311 Vernon Street
Roseville, CA 95678

Clifton Taylor
JEN California 15, LLC
508 Gibson Drive, Suite 260
Roseville, CA 95678

Either party may amend its address by giving written notice to the other.

22. Severability. If any of the provisions contained in this Agreement are for any reason held invalid or unenforceable, such holding shall not affect the remaining provisions or the validity and enforceability of the Agreement as a whole.

IN WITNESS WHEREOF, the City of Roseville, a municipal corporation, has authorized the execution of this Agreement in duplicate by its City Manager and attestation by its City Clerk under authority of Resolution No. ____, adopted by the Council of the City of Roseville on the ___ day of _____, 20__, and SUBDIVIDER has caused this Agreement to be executed.

CITY OF ROSEVILLE, a municipal corporation,

BY: _____
DOMINICK CASEY
City Manager

ATTEST:

BY: _____
SONIA OROZCO
City Clerk

JEN California 15, LLC,
a California limited liability company

BY: _____
Print name: Clifton Taylor
its: Vice President

and

BY: _____
Print name: _____
its: _____

(NOTARIZATION REQUIRED)

[E:\agreement\form agreements\subdivision agmt.docx; 11/7/2019]

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individuals who signed the document, to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
)
County of Placer)

On 7/21/2021 before me, Anton Garcia, a Notary Public,
(insert name and title of the officer)
personally appeared Clifton Taylor, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

(SEAL)

ANTON GARCIA
Notary Public - California
Placer County
Commission # 2335122
My Comm. Expires Oct 9, 2024

APPROVED AS TO FORM:

BY:_____
MICHELLE SHEIDENBERGER
City Attorney

APPROVED AS TO SUFFICIENCY:

BY: _____
MARC STOUT
City Engineer

OWNER'S STATEMENT

THE UNDERSIGNED HEREBY CERTIFY THAT THEY ARE THE ONLY PERSONS HAVING ANY RECORD TITLE INTEREST IN THE REAL PROPERTY INCLUDED WITHIN THE BOUNDARIES OF THIS SUBDIVISION MAP, "FINAL MAP OF FIDDYMENT RANCH PHASE 3 – VILLAGE F–10 PHASE 2" AS SHOWN UPON THIS MAP, AND DO HEREBY CONSENT TO THE PREPARATION AND RECORDING OF SAID MAP AND THAT THE CONSENT OF NO OTHER PERSON IS NECESSARY. WE HEREBY OFFER FOR DEDICATION AND DO HEREBY DEDICATE FOR SPECIFIC PURPOSES THE FOLLOWING:

THE REAL PROPERTY DESCRIBED BELOW IS DEDICATED AS EASEMENT FOR PUBLIC PURPOSES:

A. PUBLIC EASEMENTS FOR INSTALLATION AND MAINTENANCE OF, BUT NOT LIMITED TO, ELECTROLIERS, TRAFFIC CONTROL APPURTENANCES, WATER, SEWER, DRAINAGE AND GAS PIPES, AND FOR UNDERGROUND WIRES AND CONDUITS FOR ELECTRICAL, TELEPHONE AND TELEVISION SERVICES, TOGETHER WITH ANY AND ALL APPURTENANCES PERTAINING THERETO ON, OVER, UNDER AND ACROSS LOTS A, B, C, D AND E, INCLUSIVE STREETS SHOWN HEREON AS CARDERO WAY, HOLT PARKWAY, PROVO COURT, WADSWORTH CIRCLE, WADSWORTH DRIVE AND VAUGHN WAY AND THOSE STRIPS OF LAND TEN (10) FEET AND TWELVE AND ONE–HALF (12.5) FEET IN WIDTH AND CONTIGUOUS TO THE CIRCLE, COURT, DRIVE, WAYS AND PARKWAY SHOWN HEREON AND DESIGNATED "10' PUE" AND "12.5' PUE".

THE REAL PROPERTY DESCRIBED BELOW IS DEDICATED IN FEE FOR PUBLIC PURPOSES:

A. AS PUBLIC RIGHTS–OF–WAY (INCLUDING THE IMPROVEMENTS THEREON), THE CIRCLE, COURT, DRIVE, WAYS AND PARKWAY SHOWN AS CARDERO WAY, HOLT PARKWAY, PROVO COURT, WADSWORTH DRIVE, WADSWORTH CIRCLE AND VAUGHN WAY.

B. FOR OPEN SPACE PURPOSES THE LOT SHOWN HERON AS LOT 'A'.

C. FOR LANDSCAPING PURPOSES AND AS PUBLIC RIGHTS–OF–WAY THE LOTS SHOWN HEREON AS LOTS 'B', 'C', 'D' AND 'E'.

JEN CALIFORNIA 15 LLC,
A CALIFORNIA LIMITED LIABILITY COMPANY

BY: _____
CLIFTON TAYLOR

ITS: VICE PRESIDENT

NOTARY'S ACKNOWLEDGMENT

A NOTARY PUBLIC OR OFFICER COMPLETING THIS CERTIFICATE VERIFIES ONLY THE IDENTITY OF THE INDIVIDUAL WHO SIGNED THE DOCUMENT TO WHICH THIS CERTIFICATE IS ATTACHED, AND NOT THE TRUTHFULNESS, ACCURACY, OR VALIDITY OF THAT DOCUMENT.

STATE OF CALIFORNIA)
COUNTY OF Placer) SS

ON 21st DAY OF July, 2021 BEFORE ME, Anton Garcia, A NOTARY PUBLIC PERSONALLY APPEARED Clifton Taylor WHO PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE/THEY EXECUTED THE SAME IN HIS/HER/THEIR AUTHORIZED CAPACITY(IES), AND THAT BY HIS/HER/THEIR SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S), OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

I CERTIFY UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING PARAGRAPH IS TRUE AND CORRECT.

WITNESS MY HAND AND OFFICIAL SEAL: _____

PRINTED NAME: Anton Garcia

MY PRINCIPLE PLACE OF BUSINESS IS IN THE COUNTY OF: Placer

MY COMMISSION EXPIRES: 10/9/2024

MY COMMISSION No.: 2335122

FINAL MAP OF

FIDDYMENT RANCH - PHASE 3 VILLAGE F-10 PHASE 2

SUBDIVISION NO. PL 14-0469
(WEST ROSEVILLE SPECIFIC PLAN PARCEL F-10B)
BEING THE DESIGNATED REMAINDER OF THAT CERTAIN FINAL MAP ENTITLED "FIDDYMENT RANCH PHASE 3 VILLAGE F-10 PHASE 1", SUBDIVISION NO. PL-14-0438, BOOK FF OF MAPS, PAGE 31, O.R.P.C.
LYING WITHIN A PORTION OF SECTION 13, T. 11 N., R. 5 E., MOUNT DIABLO MERIDIAN
CITY OF ROSEVILLE, COUNTY OF PLACER, STATE OF CALIFORNIA

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
3301 C St, Bldg. 100-B Tel 916.341.7760
Sacramento, CA 95816 Fax 916.341.7767

AUGUST 2021

Sheet 1 of 7

1027.168

CITY ENGINEER'S STATEMENT

I HEREBY STATE THAT I HAVE EXAMINED THIS FINAL MAP OF FIDDYMENT RANCH PHASE 3 – VILLAGE F–10 PHASE 2 AND FIND IT TO BE SUBSTANTIALLY THE SAME AS THE TENTATIVE MAP ON FILE AND ANY APPROVED ALTERATIONS THEREOF; THAT ALL PROVISIONS OF THE SUBDIVISION MAP ACT AND ALL APPLICABLE CITY ORDINANCES HAVE BEEN COMPLIED WITH.

_____ _____
MARC STOUT DATE
CITY ENGINEER, CITY OF ROSEVILLE
R.C.E. #69879 EXPIRATION DATE 09/30/2022

I HEREBY STATE THAT I AM SATISFIED THAT THIS FINAL MAP OF FIDDYMENT RANCH PHASE 3 – VILLAGE F–10 PHASE 2 IS TECHNICALLY CORRECT.

FOR MARC STOUT, CITY ENGINEER, CITY OF ROSEVILLE

_____
TIMOTHY G. BLAIR, P.L.S. 8278

_____
DATE

PROFESSIONAL LAND SURVEYOR ☆ TIMOTHY G. BLAIR ☆ No. 8278 ☆ STATE OF CALIFORNIA

CITY CLERK'S STATEMENT

I HEREBY STATE THAT THE CITY COUNCIL, CITY OF ROSEVILLE HAS APPROVED THIS FINAL MAP OF FIDDYMENT RANCH PHASE 3 – VILLAGE F–10 PHASE 2 AND HAS ACCEPTED ON BEHALF OF THE PUBLIC, THE PUBLIC UTILITY EASEMENTS OFFERED HEREON FOR DEDICATION AND HAS ACCEPTED, SUBJECT TO IMPROVEMENT, LOTS A, B, C AND D, AND THE RIGHTS–OF–WAY OFFERED HEREON FOR DEDICATION. THE CITY COUNCIL AND HAS APPROVED THE ABANDONMENT OF THE IRREVOCABLE OFFERS OF DEDICATION FOR RIGHTS–OF–WAY AND PUBLIC UTILITY EASEMENTS, IN NOTE 7 ON SHEET 2.

_____ _____
DATE CITY CLERK, CITY OF ROSEVILLE

BY: _____
ASSISTANT CITY CLERK

RECORDER'S STATEMENT

FILED THIS _____ DAY OF _____, 2021, AT _____ M. IN BOOK ____ OF MAPS, AT PAGE _____, AT THE REQUEST OF WOOD RODGERS, INC

FEE: $ _____ DOCUMENT NO.: _____

BY: _____ BY: _____
RYAN RONCO DEPUTY RECORDER
COUNTY RECORDER
COUNTY OF PLACER
STATE OF CALIFORNIA

SURVEYOR'S STATEMENT

THIS FINAL MAP OF FIDDYMENT RANCH PHASE 3 – VILLAGE F–10 PHASE 2 WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE AT THE REQUEST OF JEN CALIFORNIA 15 LLC, A CALIFORNIA LIMITED LIABILITY COMPANY, IN APRIL 2020. I HEREBY STATE THAT THIS FINAL MAP SUBSTANTIALLY CONFORMS TO THE CONDITIONALLY APPROVED TENTATIVE MAP; THAT ALL THE MONUMENTS SHOWN HEREON ARE OF THE CHARACTER AND WILL OCCUPY THE POSITIONS AS INDICATED, OR THAT THEY WILL BE SET BY JULY 31, 2023 AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED.

WOOD RODGERS, INC.

PROFESSIONAL LAND SURVEYOR ★ DENNIS L. BARBER ★ No. 8067 ★ STATE OF CALIFORNIA

DENNIS L. BARBER
P.L.S. 8067

7/21/21
DATE

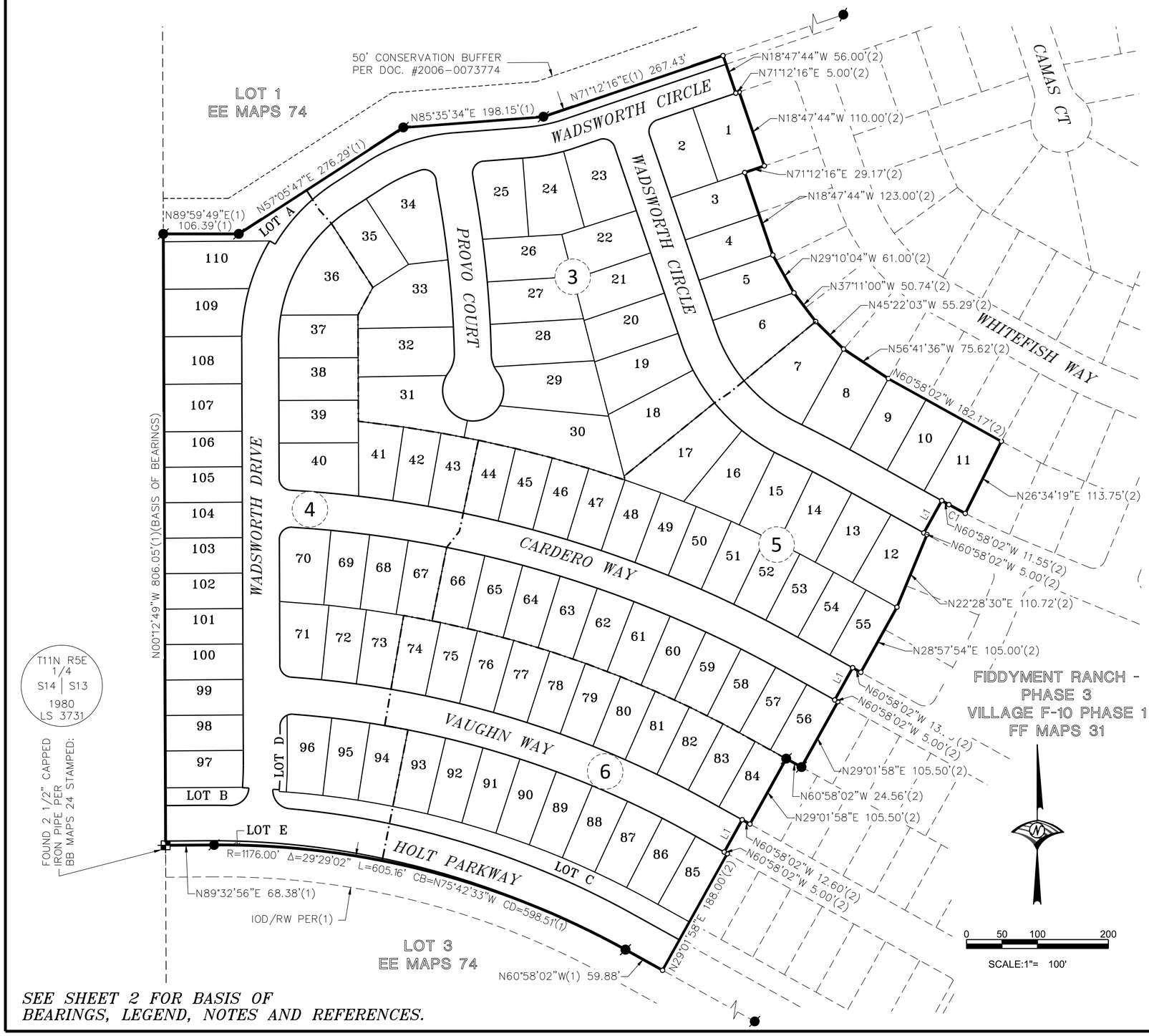
OVERALL BOUNDARY SHEET

REFERENCES:

(1) EE MAPS 74 FINAL MAP OF FIDDYMENT RANCH PHASE 3 – LARGE LOT SUBDIVISION
(2) FF MAPS 31 FINAL MAP OF FIDDYMENT RANCH PHASE 3 – VILLAGE 10 PHASE 1

BASIS OF BEARINGS STATEMENT

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE WEST LINE OF LOT 2 AS SAID LOT IS SHOWN ON THE FINAL MAP OF FIDDYMENT RANCH PHASE 3 – LARGE LOT SUBDIVISION. FILED FOR RECORD IN BOOK EE OF MAPS, AT PAGE 74, PLACER COUNTY RECORDS, SAID LINE IS TAKEN TO BEAR NORTH 00°12'49" WEST. DISTANCES SHOWN HEREON ARE GROUND BASED.



SEE SHEET 2 FOR BASIS OF BEARINGS, LEGEND, NOTES AND REFERENCES.

NOTES

1. ALL CURVES DIMENSIONED WITH RADIUS, DELTA, ARC LENGTH, CHORD BEARING, AND CHORD DISTANCE.
2. ALL DISTANCES SHOWN HEREON ARE EXPRESSED IN FEET AND DECIMALS THEREOF.
3. DUE TO ROUNDING, THE SUM OF THE INDIVIDUAL DIMENSIONS MAY NOT EQUAL THE OVERALL DIMENSION.
4. TOTAL AREA FOR THIS "FIDDYMENT RANCH PHASE 3 – VILLAGE 10 PHASE 2" SUBDIVISION IS 23.045± ACRES, CONSISTING OF 110 RESIDENTIAL LOTS, 1 OPEN SPACE LOT AND 4 LANDSCAPE LOTS.
5. A GEOTECHNICAL ENGINEERING REPORT TITLED "FIDDYMENT RANCH PHASE–3" WAS PREPARED BY MID PACIFIC ENGINEERING, INC., MPE NO. 02525–33, DATED SEPTEMBER 9, 2019. A COPY OF THIS REPORT IS ON FILE FOR PUBLIC INSPECTION AT THE PUBLIC WORKS DEPARTMENT OF THE CITY OF ROSEVILLE (FILE NUMBER 308–922).
6. 5/8" REBAR CAPPED "LS 8067" WILL BE SET AT ALL REAR LOT CORNERS, ALONG WITH ALL LOT LINE ANGLE POINTS OR AT A 2.00 FOOT PROJECTION ALONG LOT LINES ADJACENT TO WALLS (2.00 FOOT BY 2.00 FOOT OFFSETS FOR ANGLE POINTS ADJACENT TO WALLS). FRONT CORNERS WILL BE SET WITH A 1" BRASS DISK STAMPED "LS 8067" AT A 1.00 FOOT PROJECTION OF THE PROPERTY LINE ONTO THE SIDEWALK.
7. PURSUANT TO SECTION 66434(g) OF THE GOVERNMENT CODE, THE FOLLOWING PUBLIC IRREVOCABLE OFFER OF DEDICATION/RIGHT OF WAY(IOD/RW), NOT SHOWN HEREON IS HEREBY ABANDONED:

7.1. THOSE PORTIONS OF THE IOD/RW DEPICTED ON THE MAP ENTITLED "FIDDYMENT RANCH PHASE 3 – LARGE LOT SUBDIVISION", FILED IN BOOK EE OF MAPS, AT PAGE 74, O.R.P.C., WHICH LIE WITHIN THE BOUNDARY OF THIS MAP.

LEGEND

○	DIMENSION POINT		
●	FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "LS 8067" PER EE MAPS 74		
◎	SET BRASS DISK WITH PUNCH STAMPED "LS 8067" IN STANDARD CITY OF ROSEVILLE MONUMENT WELL		
✚	FOUND QUARTER CORNER AS DESCRIBED	REF	INDICATES REFERENCE NUMBER
(OA)	OVERALL DIMENSION	PUE	PUBLIC UTILITY EASEMENT
O.R.P.C.	OFFICIAL RECORDS OF PLACER COUNTY	RW	RIGHT–OF–WAY
IOD	IRREVOCABLE OFFER OF DEDICATION	(R)	RADIAL BEARING
(R)	RADIAL BEARING	(X)	SHEET INDEX NUMBER

LINE TABLE – THIS SHEET ONLY			
No.	Bearing	Length	Ref
L1	N29°01'58"E	52.00'	(2)

CURVE TABLE – THIS SHEET ONLY					
No.	Radius	Delta	Length	Chord Bearing	Chord Dist	Ref
C1	974.00'	1°32'34"	26.22'	N61°44'19"W	26.22'	(2)

FINAL MAP OF

FIDDYMENT RANCH - PHASE 3
VILLAGE F-10 PHASE 2

SUBDIVISION NO. PL 14-0469
(WEST ROSEVILLE SPECIFIC PLAN PARCEL F-10B)
BEING THE DESIGNATED REMAINDER OF THAT CERTAIN FINAL MAP ENTITLED "FIDDYMENT RANCH PHASE 3 VILLAGE F-10 PHASE 1", SUBDIVISION NO. PL-14-0438, BOOK FF OF MAPS, PAGE 31, O.R.P.C.
LYING WITHIN A PORTION OF SECTION 13, T. 11 N., R. 5 E., MOUNT DIABLO MERIDIAN
CITY OF ROSEVILLE, COUNTY OF PLACER, STATE OF CALIFORNIA

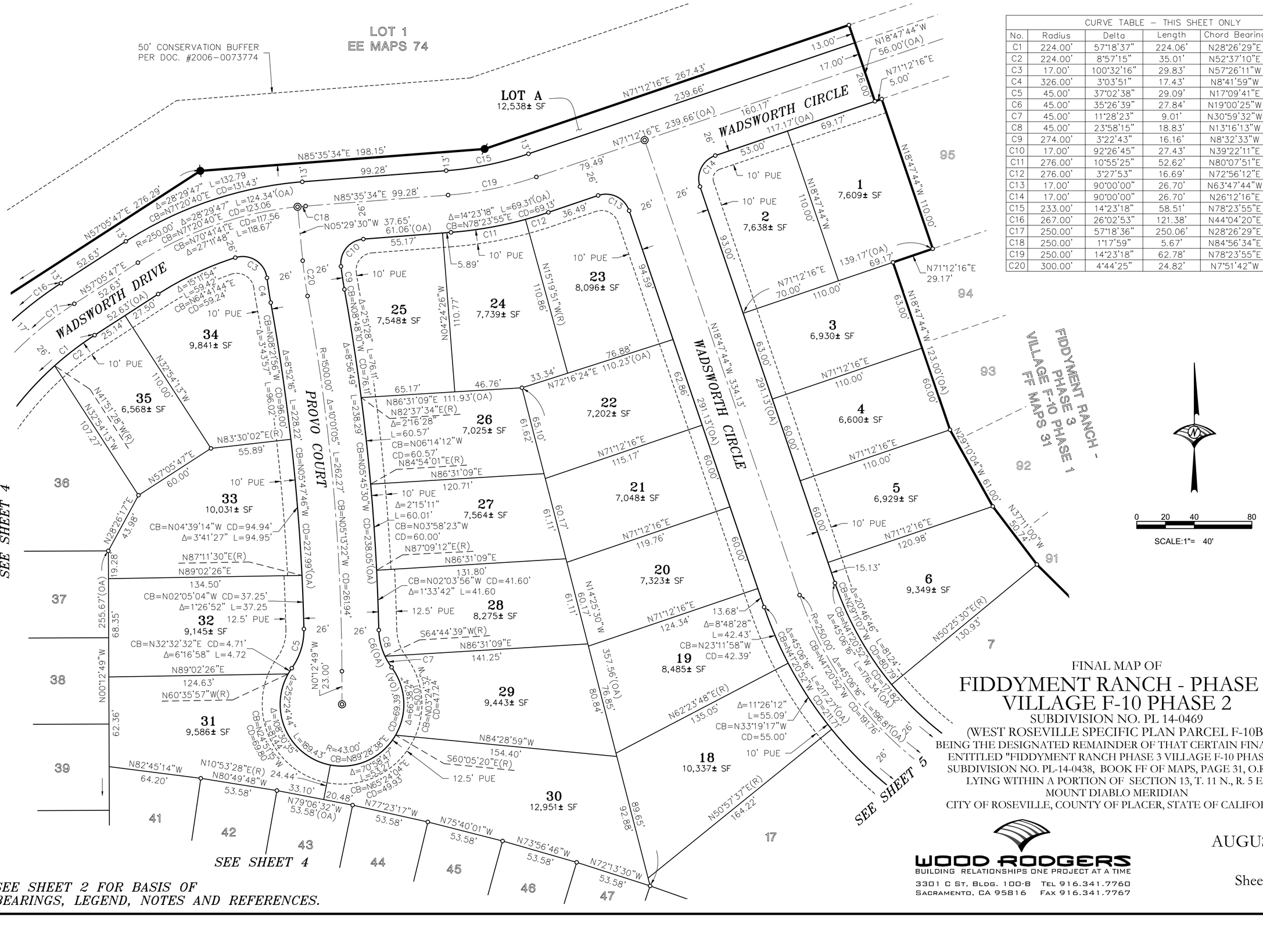
WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
3301 C St, Bldg. 100-B Tel 916.341.7760
Sacramento, CA 95816 Fax 916.341.7767

AUGUST 2021

1027.168

BOOK_____OF MAPS, PAGE_____

CURVE TABLE – THIS SHEET ONLY					
No.	Radius	Delta	Length	Chord Bearing	Chord Dist
C1	224.00'	57°18'37"	224.06'	N28°26'29"E	214.83'
C2	224.00'	8°57'15"	35.01'	N52°37'10"E	34.97'
C3	17.00'	100°32'16"	29.83'	N57°26'11"W	26.15'
C4	326.00'	3°03'51"	17.43'	N8°41'59"W	17.43'
C5	45.00'	37°02'38"	29.09'	N17°09'41"E	28.59'
C6	45.00'	35°26'39"	27.84'	N19°00'25"W	27.40'
C7	45.00'	11°28'23"	9.01'	N30°59'32"W	9.00'
C8	45.00'	23°58'15"	18.83'	N13°16'13"W	18.69'
C9	274.00'	3°22'43"	16.16'	N8°32'33"W	16.15'
C10	17.00'	92°26'45"	27.43'	N39°22'11"E	24.55'
C11	276.00'	10°55'25"	52.62'	N80°07'51"E	52.54'
C12	276.00'	3°27'53"	16.69'	N72°56'12"E	16.69'
C13	17.00'	90°00'00"	26.70'	N63°47'44"W	24.04'
C14	17.00'	90°00'00"	26.70'	N26°12'16"E	24.04'
C15	233.00'	14°23'18"	58.51'	N78°23'55"E	58.36'
C16	267.00'	26°02'53"	121.38'	N44°04'20"E	120.34'
C17	250.00'	57°18'36"	250.06'	N28°26'29"E	239.77'
C18	250.00'	1°17'59"	5.67'	N84°56'34"E	5.67'
C19	250.00'	14°23'18"	62.78'	N78°23'55"E	62.62'
C20	300.00'	4°44'25"	24.82'	N7°51'42"W	24.81'



FINAL MAP OF

FIDDYMENT RANCH - PHASE 3
VILLAGE F-10 PHASE 2

SUBDIVISION NO. PL 14-0469

(WEST ROSEVILLE SPECIFIC PLAN PARCEL F-10B)

BEING THE DESIGNATED REMAINDER OF THAT CERTAIN FINAL MAP ENTITLED "FIDDYMENT RANCH PHASE 3 VILLAGE F-10 PHASE 1", SUBDIVISION NO. PL-14-0438, BOOK FF OF MAPS, PAGE 31, O.R.P.C.
LYING WITHIN A PORTION OF SECTION 13, T. 11 N., R. 5 E., MOUNT DIABLO MERIDIAN
CITY OF ROSEVILLE, COUNTY OF PLACER, STATE OF CALIFORNIA

AUGUST 2021

SEE SHEET 2 FOR BASIS OF BEARINGS, LEGEND, NOTES AND REFERENCES.

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Sacramento, CA 95816 Fax 916.341.7767

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BOOK_____OF MAPS, PAGE_____

CURVE TABLE – THIS SHEET ONLY					
No.	Radius	Delta	Length	Chord Bearing	Chord Dist
C1	1225.00'	1°39'06"	35.31'	N89°37'31"W	35.31'
C2	26.00'	88°01'49"	39.95'	N47°11'07"E	36.13'
C3	324.00'	3°23'02"	19.14'	N1°28'42"E	19.13'
C4	267.00'	26°02'53"	121.38'	N44°04'20"E	120.34'
C5	17.00'	86°25'31"	25.64'	N43°25'35"W	23.28'
C6	17.00'	93°45'57"	27.82'	N46°40'09"E	24.82'
C7	17.00'	85°46'05"	25.45'	N43°05'52"W	23.14'
C8	17.00'	94°30'10"	28.04'	N47°02'15"E	24.97'
C9	17.00'	28°49'06"	8.55'	N79°52'47"E	8.46'
C10	17.00'	65°41'03"	19.49'	N32°37'42"E	18.44'
C11	376.00'	3°23'02"	22.21'	N1°28'42"E	22.20'
C12	26.00'	88°01'49"	39.95'	N40°50'42"W	36.13'
C13	1254.00'	0°27'25"	10.00'	N85°59'53"W	10.00'
C14	386.00'	3°23'02"	22.80'	N1°28'42"E	22.79'
C15	1200.00'	3°37'17"	75.85'	N88°38'26"W	75.83'
C16	350.00'	3°23'02"	20.67'	N1°28'42"E	20.67'

LINE TABLE – THIS SHEET ONLY		
No.	Bearing	Length
L1	N86°49'47"W(R)	9.00'
L2	N58°57'06"W(R)	9.00'

SEE SHEET 2 FOR BASIS OF BEARINGS, LEGEND, NOTES AND REFERENCES.

DETAIL 'A'
1"=10'

SCALE:1"= 40'

FINAL MAP OF

FIDDYMENT RANCH - PHASE 3
VILLAGE F-10 PHASE 2

SUBDIVISION NO. PL 14-0469
(WEST ROSEVILLE SPECIFIC PLAN PARCEL F-10B)
BEING THE DESIGNATED REMAINDER OF THAT CERTAIN FINAL MAP ENTITLED "FIDDYMENT RANCH PHASE 3 VILLAGE F-10 PHASE 1", SUBDIVISION NO. PL-14-0438, BOOK FF OF MAPS, PAGE 31, O.R.P.C.
LYING WITHIN A PORTION OF SECTION 13, T. 11 N., R. 5 E.,
MOUNT DIABLO MERIDIAN
CITY OF ROSEVILLE, COUNTY OF PLACER, STATE OF CALIFORNIA

AUGUST 2021

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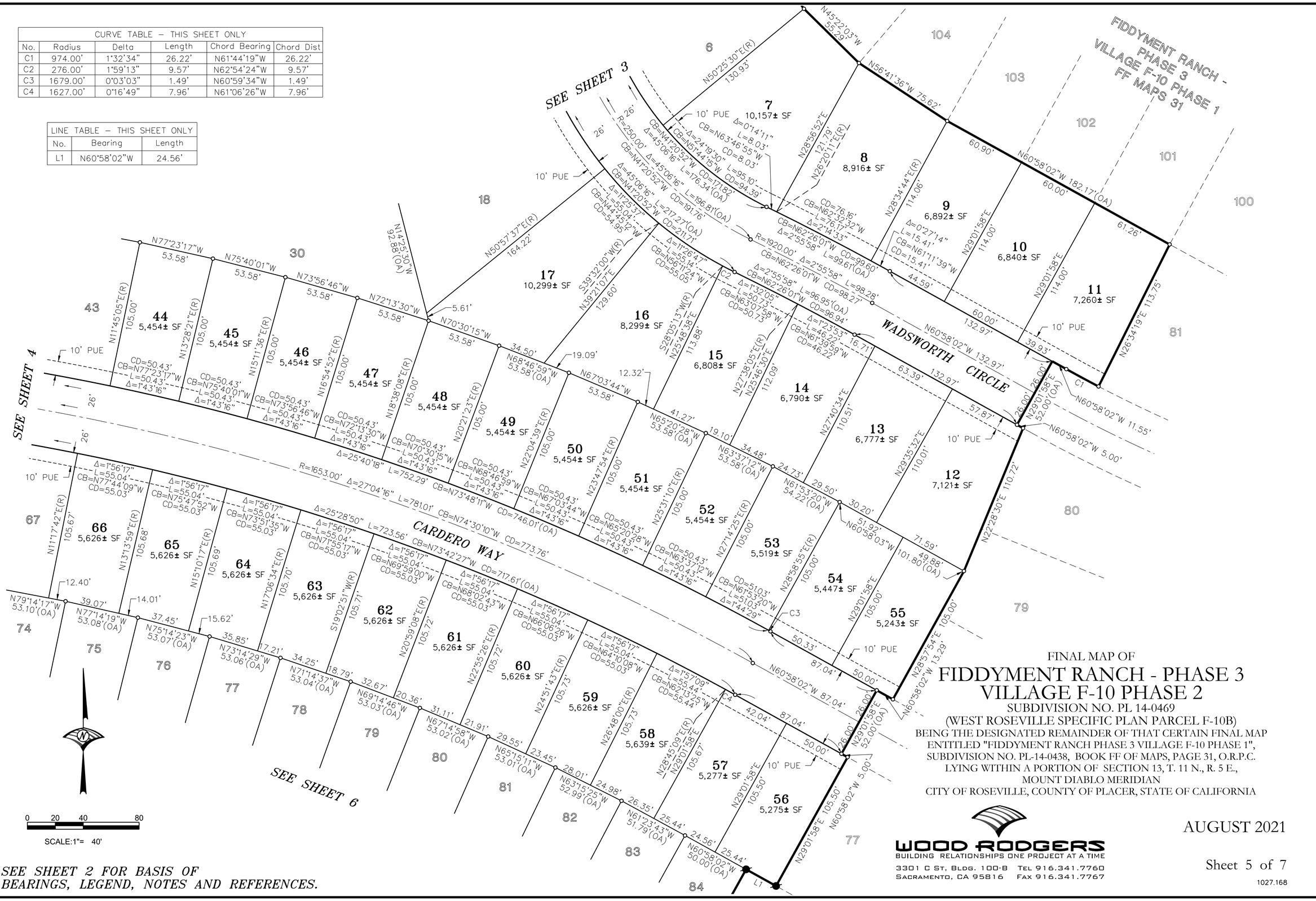
Sacramento, CA 95816 Fax 916.341.7767

1027.168

BOOK_____OF MAPS, PAGE_____

CURVE TABLE – THIS SHEET ONLY					
No.	Radius	Delta	Length	Chord Bearing	Chord Dist
C1	974.00'	1°32'34"	26.22'	N61°44'19"W	26.22'
C2	276.00'	1°59'13"	9.57'	N62°54'24"W	9.57'
C3	1679.00'	0°03'03"	1.49'	N60°59'34"W	1.49'
C4	1627.00'	0°16'49"	7.96'	N61°06'26"W	7.96'

LINE TABLE – THIS SHEET ONLY		
No.	Bearing	Length
L1	N60°58'02"W	24.56'



SEE SHEET 2 FOR BASIS OF BEARINGS, LEGEND, NOTES AND REFERENCES.

FINAL MAP OF

FIDDYMENT RANCH - PHASE 3 VILLAGE F-10 PHASE 2

SUBDIVISION NO. PL 14-0469

(WEST ROSEVILLE SPECIFIC PLAN PARCEL F-10B)

BEING THE DESIGNATED REMAINDER OF THAT CERTAIN FINAL MAP ENTITLED "FIDDYMENT RANCH PHASE 3 VILLAGE F-10 PHASE 1", SUBDIVISION NO. PL-14-0438, BOOK FF OF MAPS, PAGE 31, O.R.P.C. LYING WITHIN A PORTION OF SECTION 13, T. 11 N., R. 5 E., MOUNT DIABLO MERIDIAN

CITY OF ROSEVILLE, COUNTY OF PLACER, STATE OF CALIFORNIA

AUGUST 2021

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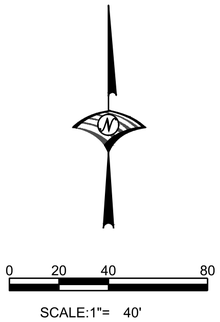
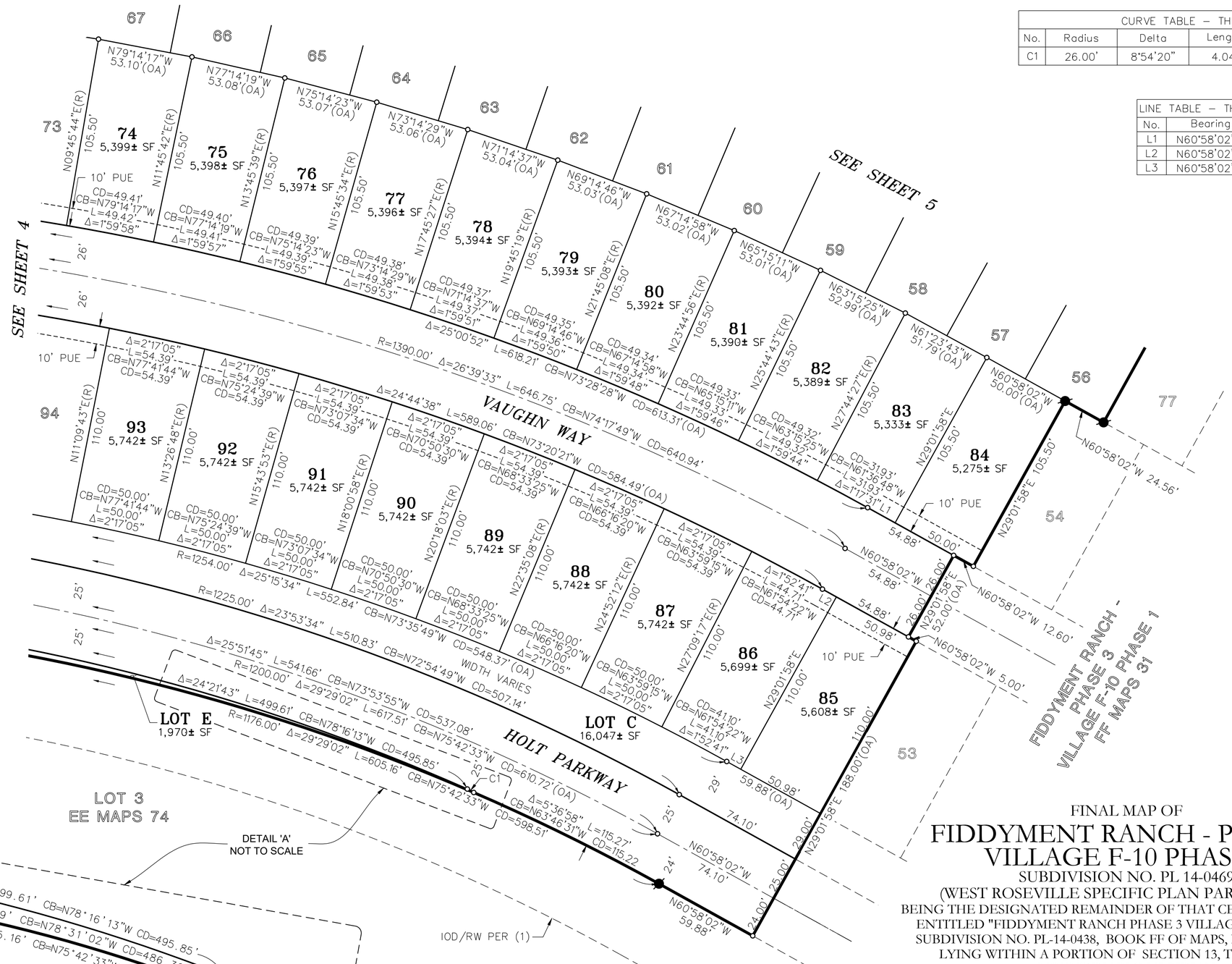
Sacramento, CA 95816 Fax 916.341.7767

CURVE TABLE – THIS SHEET ONLY					
No.	Radius	Delta	Length	Chord Bearing	Chord Dist
C1	26.00'	8°54'20"	4.04'	N61°38'11"W	4.04'

LINE TABLE – THIS SHEET ONLY		
No.	Bearing	Length
L1	N60°58'02"W	17.48'
L2	N60°58'02"W	8.90'
L3	N60°58'02"W	8.90'





SEE SHEET 2 FOR BASIS OF BEARINGS, LEGEND, NOTES AND REFERENCES.

FINAL MAP OF

FIDDYMENT RANCH - PHASE 3 VILLAGE F-10 PHASE 2

SUBDIVISION NO. PL 14-0469

(WEST ROSEVILLE SPECIFIC PLAN PARCEL F-10B)

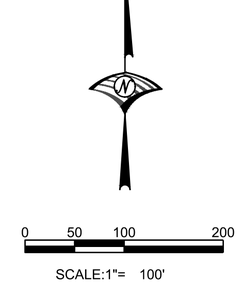
BEING THE DESIGNATED REMAINDER OF THAT CERTAIN FINAL MAP ENTITLED "FIDDYMENT RANCH PHASE 3 VILLAGE F-10 PHASE 1", SUBDIVISION NO. PL-14-0438, BOOK FF OF MAPS, PAGE 31, O.R.P.C. LYING WITHIN A PORTION OF SECTION 13, T. 11 N., R. 5 E., MOUNT DIABLO MERIDIAN

CITY OF ROSEVILLE, COUNTY OF PLACER, STATE OF CALIFORNIA

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
3301 C St, Bldg. 100-B Tel 916.341.7760
Sacramento, CA 95816 Fax 916.341.7767

AUGUST 2021

INFORMATIONAL SHEET



ADDITIONAL INFORMATION FOR INFORMATIONAL PURPOSE ONLY PURSUANT TO SECTION 66434.2 OF THE GOVERNMENT CODE.

EACH RESIDENTIAL DWELLING CONSTRUCTED ON ANY OF THE LOTS INDICATED SHALL BE FITTED WITH A SEWER BACKFLOW PREVENTER VALVE AS APPROVED BY THE CITY OF ROSEVILLE. IT SHALL BE THE RESPONSIBILITY OF THE OWNER OF SAID DWELLING TO MAINTAIN THE VALVE AND PREVENT DAMAGE FROM OCCURRING THERETO. THE CITY OF ROSEVILLE SHALL NOT BE RESPONSIBLE FOR THE MAINTENANCE OR PERFORMANCE OF THE VALVE, AND THE CITY OF ROSEVILLE SHALL NOT BE LIABLE FOR ANY DAMAGE OCCURRING TO ANY SUCH DWELLING, OR ITS CONTENTS DUE TO FAILURE OF THE VALVE FOR ANY REASON WHATSOEVER.

LEGEND

* DENOTES SEWER BACKFLOW PREVENTER VALVE REQUIRED ON SANITARY SEWER CONNECTION BY THE CITY OF ROSEVILLE WITH THE BUILDING PERMIT AND MAINTAINED THEREAFTER BY THE OWNER.

FINAL MAP OF

FIDDYMENT RANCH - PHASE 3 VILLAGE F-10 PHASE 2

SUBDIVISION NO. PL 14-0469
(WEST ROSEVILLE SPECIFIC PLAN PARCEL F-10B)
BEING THE DESIGNATED REMAINDER OF THAT CERTAIN FINAL MAP ENTITLED "FIDDYMENT RANCH PHASE 3 VILLAGE F-10 PHASE 1", SUBDIVISION NO. PL-14-0438, BOOK FF OF MAPS, PAGE 31, O.R.P.C.
LYING WITHIN A PORTION OF SECTION 13, T. 11 N., R. 5 E., MOUNT DIABLO MERIDIAN
CITY OF ROSEVILLE, COUNTY OF PLACER, STATE OF CALIFORNIA

AUGUST 2021

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Sacramento, CA 95816 Fax 916.341.7767

SEE SHEET 2 FOR BASIS OF BEARINGS, LEGEND, NOTES AND REFERENCES.

1027.168

COUNCIL COMMUNICATION

CC #: 1696
File #: 0709-02-01 & 0201-01

Title:	Emergency Housing Voucher Services - Professional Services Agreement
Contact:	Trisha Isom 916-746-1239 tisom@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 7.9.

RECOMMENDATION TO COUNCIL

Staff recommends that City Council, for the benefit of the Roseville Housing Authority, adopt a Resolution to approve the contract with the Homeless Resource Council of the Sierras to benefit homeless residents.

BACKGROUND

With the passage of the American Rescue Plan, Congress allocated $5 billion in funding for new Emergency Housing Vouchers (EHVs) which are designed to assist individuals and families who are experiencing homelessness; at risk of experiencing homelessness; fleeing, or attempting to flee, domestic violence, dating violence, sexual assault, stalking, or human trafficking; or were recently homeless and for whom providing rental assistance will prevent the family's homelessness or having a high risk of housing instability. On May 10, 2021, Roseville Housing Authority (RHA) received notice of an award for 50 EHVs.

RHA received a one-time Services Fee of $175,000 ($3,500 per EHV voucher) to support efforts in implementing and operating an effective EHV services program. HUD requires each Housing Authority to partner with the local Continuum of Care (CoC) to assist qualifying families through a direct referral process. Placer County's CoC, The Homeless Resource Council of the Sierras (HRCS), has begun accepting direct referrals from approved agencies to ensure coordination of services for the most vulnerable households in the County. The non-profit partners will provide supportive services to voucher holders including but not limited to providing:

- support to households in applying for and completing EHV applications to RHA
- housing search assistance
- counseling on compliance with rental lease requirements
- referrals for assistance with security deposits, utility hook-up fees and deposits

HRCS will manage the work of the non-profit partners and invoice RHA monthly based on services provided and fees paid on behalf of the voucher holders, not to exceed $125,000. RHA has reserved $50,000 of the Services Fee for participating landlords to receive a one-time $1,000 payment when they enter into a lease with RHA on behalf of each Emergency Housing Voucher

holder. EHVs were developed specifically for households that have had difficulty maintaining housing. The connection to support services, financial resources and housing search assistance will maximize housing success with the vouchers, local landlords, and the overall program.

FISCAL IMPACT

The Emergency Housing Voucher Services Fee is federally funded through the US Department of Housing and Urban Development. Through this HUD-funded program, RHA provides an important social service to ensure safe and affordable housing for the under-housed population. This contract will not create any additional cost to the City's General Fund.

ENVIRONMENTAL REVIEW

The California Environmental Quality Act (CEQA) does not apply to activities that will not result in a direct or reasonably foreseeable indirect physical change in the environment, or is otherwise not considered a project as defined by CEQA Statute §21065 and CEQA State Guidelines §15060(c)(3) and §15378.

The Emergency Housing Voucher Services Professional Services Agreement meets the above criteria and is not subject to CEQA. No additional environmental review is required.

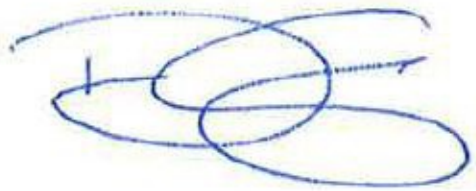
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal C - Maintain a safe and healthy community
Goal D - Enhance economic vitality

Respectfully Submitted,

Trisha Isom, Housing Manager

Ryan Devore, Assistant City Manager



_____
Dominick Casey, City Manager

ATTACHMENTS:

Description

Resolution 21-391

RESOLUTION NO. 21-391

APPROVING A PROFESSIONAL SERVICES AGREEMENT, BY AND BETWEEN THE CITY OF ROSEVILLE AND HOMELESS RESOURCE COUNCIL OF THE SIERRAS, AND AUTHORIZING THE CITY MANAGER TO EXECUTE IT ON BEHALF OF THE CITY OF ROSEVILLE

WHEREAS, a professional services agreement for Emergency Housing Voucher services, by and between the City of Roseville and Homeless Resource Council of the Sierras, has been reviewed by the City Council; and

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Roseville that said professional services agreement is hereby approved and that the City Manager is authorized to execute it on behalf of the City of Roseville.

PASSED AND ADOPTED by the Council of the City of Roseville this____day of _____, 2021, by the following vote on roll call:

AYES COUNCILMEMBERS:

NOES COUNCILMEMBERS:

ABSENT COUNCILMEMBERS:

_____
MAYOR

ATTEST:

_____
City Clerk

PROFESSIONAL SERVICES AGREEMENT

Emergency Housing Voucher Services

THIS AGREEMENT is made and entered into this ___ day of _____, 20__, by and between the City of Roseville, a municipal corporation ("CITY"), and Homeless Resource Council of the Sierras, a California non-profit corporation ("CONSULTANT"); and

W I T N E S S E T H:

WHEREAS, CITY desires professional services consisting of emergency housing voucher services; and

WHEREAS, CONSULTANT has prepared a proposal dated July 27, 2021 which describes the scope of work to be performed by CONSULTANT, the budget for the work, and the schedule for performance of the work; and

WHEREAS, CONSULTANT is qualified and experienced to provide such professional services.

NOW, THEREFORE, the parties agree as follows:

1. Term. The term of this Agreement shall commence upon execution and expire on December 31, 2023.

2. Services. CONSULTANT shall perform, at the direction of CITY, the scope of services as described in EXHIBIT "A," attached hereto and incorporated herein by this reference.

3. Compensation. For its services provided hereunder, CONSULTANT shall be compensated on a time and expense basis in accordance with the budget estimate as described in EXHIBIT "A". Total compensation shall not exceed one hundred twenty-five thousand dollars ($125,000).

CONSULTANT shall submit one monthly invoice for its services. Such invoices shall be delineated by task, the person performing the services, and the hourly rate, which shall be stated in time increments of not greater than one tenth (1/10) hours. CITY shall pay invoices within thirty (30) days after receipt, if the services specified in the invoice have been satisfactorily completed.

4. Indemnification. To the fullest extent allowed by law, CONSULTANT shall defend, indemnify, and save and hold harmless CITY, its officers, agents, employees and volunteers from any claims, suits or actions of every name, kind and description brought forth, or on account of, injuries to or death of any person (including but not limited to workers and the public), or damage to property, resulting from or arising out of CONSULTANT's willful misconduct or negligent act or omission while engaged in the performance of obligations or exercise of rights created by this Agreement, except those matters arising from CITY's sole negligence or willful misconduct. The parties intend that this provision shall be broadly construed.

CONSULTANT agrees to defend and indemnify CITY if, despite the parties intent and practice, any venue, agency, or court with competent jurisdiction determines that CONSULTANT and/or any of its agents, officers, employees, volunteers, independent contractors, or subcontractors, are characterized as employee(s) of CITY.

CONSULTANT's responsibility for such defense and indemnity obligations shall survive the termination or completion of this Agreement for the full period of time allowed by law. The defense and indemnity obligations of this Agreement are undertaken in addition to, and shall not in any way be limited by, the insurance obligations contained in this Agreement.

5. Insurance. CONSULTANT agrees to continuously maintain, in full force and effect, the following minimum policies of insurance during the term of this Agreement.

COVERAGE	LIMITS OF LIABILITY
Workers' Compensation	Statutory
Commercial General Liability	$1,000,000 each occurrence $2,000,000 aggregate Personal Injury: $1,000,000 each occurrence $2,000,000 aggregate
Automobile Liability	$1,000,000 combined single limit
Professional Liability (errors and omissions)	$1,000,000 per claim $2,000,000 aggregate

a. Form. CONSULTANT shall submit a certificate evidencing such coverage for the period covered by this Agreement in a form satisfactory to Risk Management and the City Attorney, prior to undertaking any work hereunder. Any insurance written on a claims made basis is subject to the approval of Risk Management and the City Attorney.

b. Additional Insureds. CONSULTANT shall also provide a separate endorsement form or section of the policy showing CITY, its officers, agents, employees and volunteers as additional insureds for each type of coverage, except for Workers' Compensation and Professional Liability. Such insurance shall specifically cover the contractual liability of CONSULTANT. The additional insured coverage under the CONSULTANT's policy shall be

primary and noncontributory, as evidenced by a separate endorsement or section of the policy, and shall not seek contribution from CITY's insurance or self-insurance. In addition, the additional insured coverage shall be at least as broad as the Insurance Services Office ("ISO") CG 20 01 Endorsement. Any available insurance proceeds in excess of the specified minimum insurance coverage requirements and limits shall be available to the additional insureds. Furthermore, the requirements for coverage and limits shall be: (1) the minimum coverage and limits specified in this Agreement; or (2) the full coverage and maximum limits of any insurance proceeds available to the named insureds, whichever is greater.

c. Cancellation/Modification. CONSULTANT shall provide ten (10) days written notice to CITY prior to cancellation or modification of any insurance required by this Agreement.

d. Umbrella/Excess Insurance. The limits of insurance required in this Agreement may be satisfied by a combination of primary and excess insurance. Any excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and noncontributory basis for the benefit of CITY (if agreed to in a written contract) before CITY's own insurance shall be called upon to protect it as a named insured.

e. Subcontractors. CONSULTANT agrees to include in its contracts with all subcontractors the same requirements and provisions of this Agreement, including the indemnity and insurance requirements, to the extent they apply to the scope of the subcontractor's work. Furthermore, CONSULTANT shall require its subcontractors to agree to be bound to CONSULTANT and CITY in the same manner and to the same extent as CONSULTANT is bound to CITY under this Agreement. Additionally, CONSULTANT shall obligate its subcontractors to comply with these same provisions with respect to any tertiary subcontractor,

regardless of tier. A copy of CITY's indemnity and insurance provisions will be furnished to the subcontractor or tertiary subcontractor upon request.

f. Self-Insured Retentions. All self-insured retentions ("SIR") must be disclosed to Risk Management for approval and shall not reduce the limits of liability. Policies containing any SIR provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named insured or CITY. CITY reserves the right to obtain a full certified copy of any insurance policy and endorsements. The failure to exercise this right shall not constitute a waiver of such right.

g. Waiver of Subrogation. CONSULTANT hereby agrees to waive subrogation which any insurer of CONSULTANT may acquire from CONSULTANT by virtue of the payment of any loss under a Workers Compensation, Commercial General Liability or Automobile Liability policy. All Workers Compensation, Commercial General Liability and Automobile Liability policies shall be endorsed with a waiver of subrogation in favor of CITY, its officers, agents, employees and volunteers for all worked performed by CONSULTANT, its employees, agents and subcontractors.

h. Liability/Remedies. Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve CONSULTANT of liability in excess of such coverage, nor shall it preclude CITY from taking such other actions as are available to it under any other provisions of this Agreement or law.

6. Records. CONSULTANT and its subcontractors shall maintain all files and records relating to the services performed hereunder during the term of this Agreement and for a period of not less than one (1) year after the date of termination or expiration. Provided, however, that in the event of litigation or settlement of claims arising from the performance of

this Agreement, CONSULTANT and its subcontractors shall maintain all files and records until such litigation, appeals or claims are resolved. Duly authorized representatives of CITY shall have right of access during normal business hours and after reasonable notice to CONSULTANT's and subcontractors' files and records relating to the services performed hereunder, and may review and copy the files and records at appropriate stages during performance of the services and during the one (1) year period following termination or expiration of this Agreement. CONSULTANT shall include this provisions in its contracts with all subcontractors.

7. Time is of the Essence. Time is of the essence of this Agreement.

8. Compliance with Laws. CONSULTANT shall comply with all federal, state and local laws, ordinances and policies as may be applicable to the performance of services under this Agreement.

9. Ability to Perform. CONSULTANT agrees and represents that it has the time, ability and professional expertise to perform the services required under this Agreement.

10. Governing Agreement. In the event of any conflict between this Agreement and its EXHIBITS, the provisions of this Agreement shall govern. In the event of any conflict between any of the EXHIBITS, the provisions of the first in order of attachment shall govern.

11. Assignment. CONSULTANT is employed to perform unique personal services. CONSULTANT shall not assign this Agreement without the prior written consent of CITY. CONSULTANT shall not employ or otherwise incur any obligation to pay other specialists or experts for services in connection with this Agreement, without prior written consent of CITY.

12. Independent Contractor. CONSULTANT, inclusive of its agents, officers, employees, volunteers, independent contractors, and subcontractors, shall act as an independent

contractor, and covenants and agrees that it will conduct itself consistent with such status, that it will neither hold itself out as, nor claim to be, an officer or employee of CITY by reason of this Agreement.

CONSULTANT and CITY agree that: (a) CONSULTANT is free from the control and direction of CITY in connection with the performance of the work; (b) CONSULTANT is providing services directly to CITY; (c) CONSULTANT has and will maintain at all relevant times a business license; (d) CONSULTANT maintains a business location that is separate from CITY; (e) CONSULTANT is customarily engaged in an independently established business of the same nature as that involved in the work performed hereunder; (f) CONSULTANT actually contracts with other businesses to provide the same or similar services and maintains a clientele without restrictions from CITY; (g) CONSULTANT advertises and holds itself out to the public as available to provide the same or similar services; (h) CONSULTANT provides its own tools, vehicles, and equipment to perform the services; (i) CONSULTANT has negotiated its own rates; (j) CONSULTANT set its own hours and location of work in accomplishing CITY's on-call needs; and (k) CONSULTANT has the right to control the manner and means of accomplishing the result desired and exercises its own expert independent judgement.

13. Representations and Warranties. CONSULTANT warrants that it has not employed or retained any company or person, other than a bona fide employee working for CONSULTANT, to solicit or secure this Agreement, and that it has not paid or agreed to pay any company or person, other than a bona fide employee, any fee, commission, percentage, brokerage fee, gift or any other consideration, contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, CITY shall have the right to terminate as void this Agreement, without liability, or, in its discretion, to deduct from the

Agreement price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift or contingent fee.

14. Successors in Interest. This Agreement shall be binding upon the heirs, successors, executors, administrators and assigns of the respective parties hereto.

15. Copyright, Ownership and Use of Materials. All tangible material ("Material") created or delivered pursuant to this Agreement is considered a work made for hire under the Copyright Act. To the extent such Material does not qualify as a work made for hire, CONSULTANT hereby assigns to CITY all right, title, and interest, including but not limited to all copyrights, in all Material created by CONSULTANT in its performance under this Agreement. Material constitutes the scope of work outlined in Exhibit A and attached hereto, and all written and other tangible expressions, including but not limited to, drawings (including computer aided drawings), papers, documents, reports, surveys, renderings, exhibits, sketches, maps, models, prints, paintings or photographs, in any and all media or formats in which such materials have been created or are maintained. All Material furnished by CONSULTANT is, and shall remain, the property of CITY.

CONSULTANT shall execute any documents necessary to effectuate such assignment. In the event that CONSULTANT uses, employs, designates, or retains any person or entity who is not an employee of CONSULTANT, to perform any work required of it pursuant to this Agreement, CONSULTANT shall require said person or entity to execute an agreement containing the preceding paragraph.

16. Termination of Agreement. The City may terminate this Agreement without cause by giving CONSULTANT ten (10) days advance written notice from the City Manager. CONSULTANT may terminate this Agreement without cause by giving CITY thirty (30) days

advance written notice. In the event of termination through no fault of CONSULTANT, CITY shall compensate CONSULTANT for services performed as of the date of termination, upon the release to CITY of all Material hereunder, in any and all media or formats in which such materials have been created or are maintained. CITY retains the right to receive and use any Material, notwithstanding any termination or any dispute regarding the amount to be paid.

17. Attorney's Fees; Venue; Governing Law. If either party commences any legal action against the other party arising out of this Agreement or the performance hereof, the prevailing party in such action shall be entitled to recover its reasonable litigation expenses, including but not limited to, court costs, expert witness fees, discovery expenses, and attorney's fees. Any action arising out of this Agreement shall be brought in Placer County, California, regardless of where else venue may lie. This Agreement shall be governed by and construed in accordance with the laws of the State of California.

18. Modification. This Agreement and each provision contained herein may be waived, amended, supplemented or eliminated only by mutual written agreement of the parties.

19. Severability. If any of the provisions contained in this Agreement are for any reason held invalid or unenforceable, such holding shall not affect the remaining provisions or the validity and enforceability of the Agreement as a whole.

20. Notices. Any notices to parties required by this Agreement shall be delivered personally or mailed, U.S. first class postage prepaid, addressed as follows:

CITY OF ROSEVILLE	CONSULTANT
Trisha Isom, Housing Manager 316 Vernon Street, Ste. 150 Roseville, CA 95678	Scott Thurmond P.O. Box 130 Auburn, CA 95603

Either party may amend its address for notice by giving notice to the other party in writing.

21. Integrated Agreement. This is an integrated agreement and contains all of the terms, considerations, understanding and promises of the parties. It shall be read as a whole.

IN WITNESS WHEREOF, the City of Roseville, a municipal corporation, has authorized the execution of this Agreement in duplicate by its City Manager and attested to by its City Clerk under the authority of Resolution No. _____, adopted by the Council of the City of Roseville on the ___ day of _____, 20__, and CONSULTANT has caused this Agreement to be executed.

CITY OF ROSEVILLE, a municipal corporation

BY: _____
DOMINICK CASEY
City Manager

ATTEST:

BY: _____
SONIA OROZCO
City Clerk

APPROVED AS TO FORM:

BY: _____
MICHELLE SHEIDENBERGER
City Attorney

HOMELESS RESOURCE COUNCIL OF THE SIERRAS, a California non-profit corporation

BY: _____
its: Board President

and

BY: _____
its: Board Vice President

[SIGNATURES CONTINUED ON NEXT PAGE]

APPROVED AS TO SUBSTANCE:

BY: _____

RYAN DEVORE
Assistant City Manager

EXHIBIT "A"

HOMELESS RESOURCE COUNCIL OF THE SIERRAS
A home for everyone

P.O. Box 130, Auburn, CA 95603
www.hrcscoc.org

Emergency Housing Voucher Scope of Work – 7/27/2021

Population Served

Households qualified for EHVs are those who are (1) homeless or at risk of homelessness, (2) fleeing or attempting to flee domestic violence, dating violence, sexual assault, stalking, or human trafficking, and (3) recently homeless, as determined by the HUD Secretary and for whom providing rental assistance will prevent the family's homelessness or having high risk of housing instability.

Services to be provided to eligible EHV families

1. Partnering service providers will support individuals and families in completing applications and obtaining necessary supporting documentation to support referrals and applications for assistance, while aiding households in addressing barriers.
2. Partnering service providers will support RHA in ensuring appointment notifications to eligible individuals and families and will assist eligible households in getting to meetings with RHA.
3. RHA will establish windows of time for EHV applicants to complete intake interviews for EHV.
4. Partnering service providers will provide housing search assistance for eligible individuals and families.
5. Partnering service providers will provide counseling on compliance with rental lease requirements.
6. Partnering service providers will assess individuals and families who may require referrals for assistance on security deposits, utility hook-up fees, and utility deposits.
7. Partnering service providers will assess and refer individuals and families to benefits and supportive services, where applicable.

Specific RHA Roles and Responsibilities

1. Coordinate and consult with the CoC in developing the services and assistance to be offered under the EHV services fee.
2. Coordinate and consult with the CoC in developing the services and assistance to be offered under the EHV services fee.
3. Accept direct referrals for eligible individuals and families through the CoC Coordinated Entry System.

4. Commit a sufficient number of staff and necessary resources to ensure that the application, certification, and voucher issuance processes are completed in a timely manner.

5. Commit a sufficient number of staff and resources to ensure that inspections of units are completed in a timely manner.

6. Comply with the provisions of this MOU.

Specific CoC Roles and Responsibilities

1. Refer eligible individuals and families to PHA using the community's coordinated entry system.

2. Support eligible individuals and households in completing and applying for supportive documentation to accompany admissions application to the PHA (i.e. income documentation, birth certificate, social security card, etc)

3. Attend EHV participant briefings when needed.

4. Assess all households referred for EHV for mainstream benefits and supportive services available to support eligible individuals and families through their transition.

5. Identify and provide supportive services to EHV families. (While EHV participants are not required to participate in services, the CoC should assure that services are available and accessible.)

6. Comply with the provisions of this MOU.

Specific Third-Party Entity Roles Responsibilities

The CoC recipients including, local, philanthropic, faith-based organizations and victim service providers will:

1. Certify that families recommended for EHVs meet the qualifications

2. Ensure that applications, certifications and voucher issuance processes are completed in a timely manner
3. Assist with housing searches for EHV families

4. Provide supportive services to EHV families

5. Commit a sufficient number of staff and necessary resources to EHV families

6. Comply with the provisions of this MOU.

Service Fees

Not to exceed $125,000 of the Services Fee to the CoC covering HUD EHV eligible activities.

COUNCIL COMMUNICATION

CC #: 1698
File #: 0900-04-02

Title:	Oak Ridge Drive Bridge Replacement Project - Notice of Completion
Contact:	Rjahja Canlas 916-746-1300 rcanlas@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 7.10.

RECOMMENDATION TO COUNCIL

Staff recommends that the City Council accept the Oak Ridge Drive Bridge Replacement Project as complete and adopt a resolution authorizing the Public Works Director to execute the Notice of Completion.

BACKGROUND

The Oak Ridge Drive Bridge Replacement Project removed the existing functionally obsolete and hydraulically inadequate bridge and constructed a longer, standard two-lane bridge with shoulders and sidewalks on both sides of the road.

The Public Works Engineering Division has made the final inspection of the Oak Ridge Drive Bridge Replacement Project and has found the work to be completed in accordance with the improvement plans and specifications. The project is now ready for acceptance. As required by the specifications, the contractor will guarantee the installation of all improvements for a period of 12 months from the date of the Notice of Completion.

FISCAL IMPACT

The project was funded by Federal Highway Bridge Program (HBP) grant funds, except for $50,000 of Roadway funds budgeted for non-participating project costs. No General Fund resources were used for the project.

The final accounting of project costs is currently ongoing, and staff will be submitting the final reimbursement request to Caltrans in the coming weeks. Included in the final reimbursement request to Caltrans will be the request to fully fund the construction change orders. As previously communicated to Council, the HBP program is impacted, and Caltrans required all reimbursement for change orders to be requested upon submission of the final invoice. In the unlikely event that the City is not awarded HBP funds for construction change orders, staff will come back to Council with a recommendation for a budget adjustment using other eligible non-General Fund resources to fully fund the project.

Costs for maintenance of the new bridge will be similar to the previous bridge, and funding for maintenance will be through the operations budget of the Street Maintenance Division.

ENVIRONMENTAL REVIEW

The California Environmental Quality Act (CEQA) does not apply to activities that will not result in a direct or reasonably foreseeable indirect physical change in the environment, or is otherwise not considered a project as defined by CEQA Statute §21065 and CEQA State Guidelines §15060(c)(3) and §15378.

Acceptance of the Oak Ridge Drive Bridge Replacement Project as complete meets the above criteria and is not subject to CEQA. No additional environmental review is required.

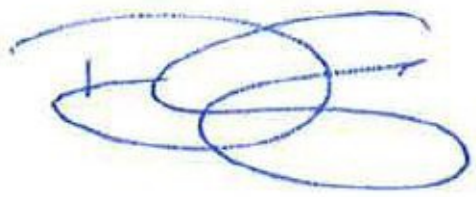
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal F - Invest in well-planned infrastructure and growth

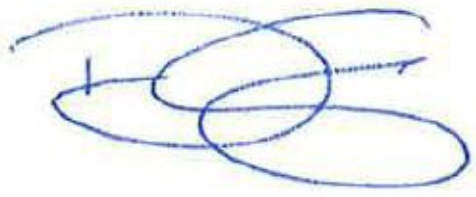
Respectfully Submitted,

Rjahja Canlas, Associate Engineer

Jason Shykowski, Public Works Director



_____
Dominick Casey, City Manager



_____
Dominick Casey, City Manager

ATTACHMENTS:
Description

Resolution 21-392

NOC

Exhibit A

RESOLUTION NO. 21-392

ACCEPTING THE PUBLIC WORK KNOWN AS THE OAK RIDGE DRIVE BRIDGE REPLACEMENT PROJECT, APPROVING THE "NOTICE OF COMPLETION", AND AUTHORIZING THE PUBLIC WORKS DIRECTOR TO EXECUTE SAID NOTICE ON BEHALF OF THE CITY OF ROSEVILLE

BE IT RESOLVED by the City Council of the City of Roseville as follows:

1. The "Notice of Completion" on file in the City Clerk's Department relative to that public work known as the Oak Ridge Drive Bridge Replacement Project, has been approved and the public work accepted.

2. The Public Works Director is hereby authorized and directed to execute said Notice on behalf of the City of Roseville.

PASSED AND ADOPTED by the Council of the City of Roseville this _____ day of _____, 20_____, by the following vote on roll call:

AYES COUNCILMEMBERS:

NOES COUNCILMEMBERS:

ABSENT COUNCILMEMBERS:

_____
MAYOR

ATTEST:

_____
City Clerk

RECORDING REQUESTED BY AND WHEN
RECORDED MAIL TO:

CITY CLERK
CITY OF ROSEVILLE
311 VERNON STREET
ROSEVILLE, CA 95678

Exempt from recording fees
Pursuant to Gov't Code §27383

NOTICE OF COMPLETION

NOTICE IS HEREBY GIVEN that the public work of improvement known as the _____ Project was completed and accepted by the City of Roseville on _____. The location is situated in the City of Roseville, County of Placer, State of California and is indicated on the attached map, marked as Exhibit "A" and incorporated herein by this reference. The real property herein described is owned by the City of Roseville, 311 Vernon Street, Roseville CA 95678.

The direct/general contractor on said project was _____.

The surety on said project was _____

_____.

_____

City of Roseville
Owner

ATTEST:

_____
Sonia Orozco, City Clerk

State of California)
County of Placer)

I,_____, being first duly sworn, depose and say: I am the _____ of the City of Roseville, a municipal corporation in the State of California, owner of the property described in the above Notice. I am duly authorized to make this verification for and on behalf of the City of Roseville. I have read the Notice of Completion and know its contents and the facts stated therein are true.

_____

City of Roseville

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Placer)

Subscribed and sworn to (or affirmed) before me on this _____ day of _____,

20___, _____

proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.

_____

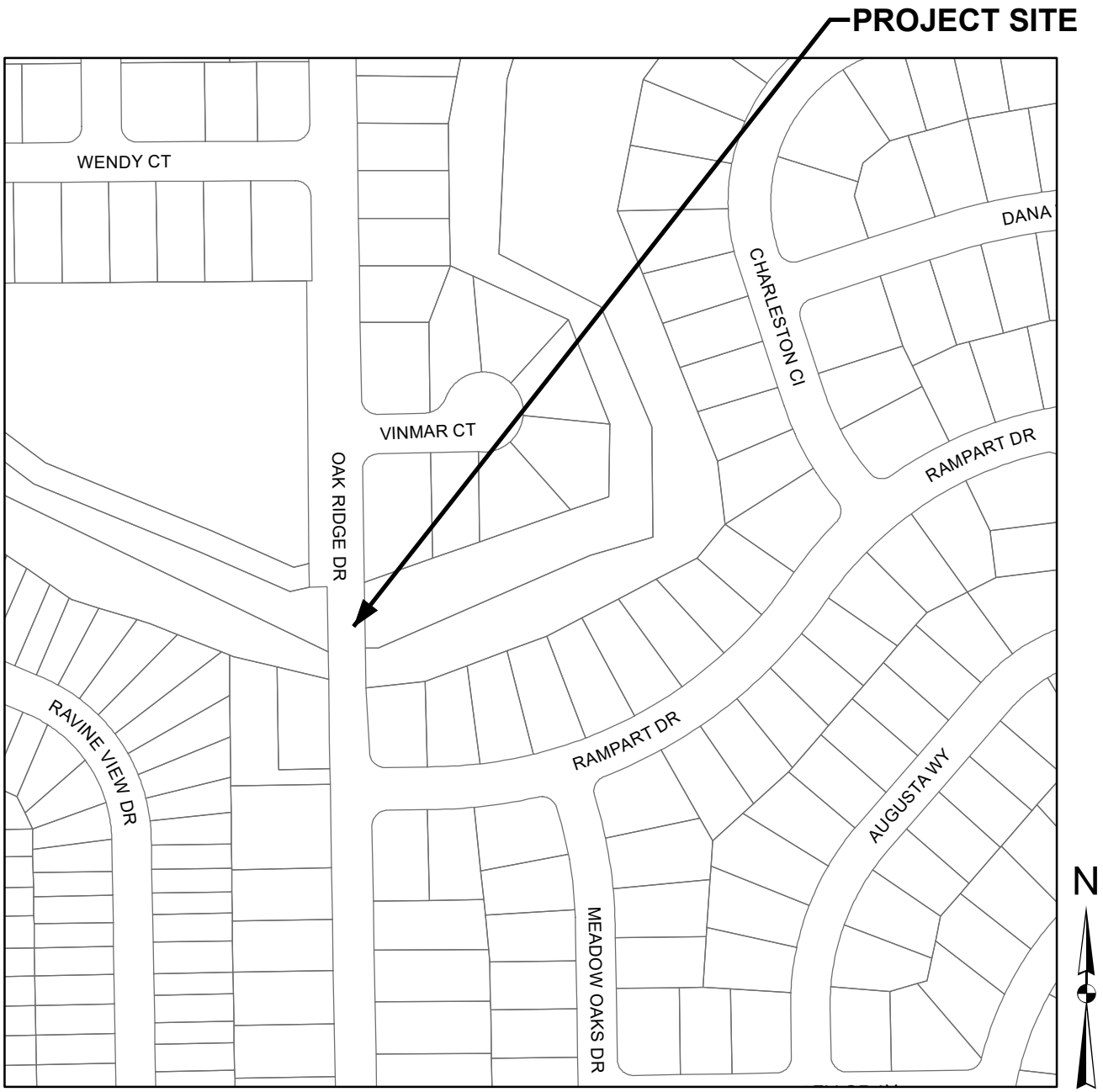
Place Notary Seal and/or Stamp Above

Signature of Notary Public

Exhibit A

Oak Ridge Drive Bridge Replacement Project

The Oak Ridge Drive Bridge Replacement Project removed the existing functionally obsolete and hydraulically inadequate bridge and constructed a longer, standard two-lane bridge with shoulders and sidewalks on both sides of the road.



COUNCIL COMMUNICATION

CC #: 1694
File #: 0721-05 & 0201-01

Title:	Sierra Vista Specific Plan Phase 1 Bike Trail Project - Reimbursement Agreements and Budget Adjustment
Contact:	Jeannie Gandler 916-746-1289 jgandler@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 7.11.

RECOMMENDATION TO COUNCIL

Staff recommends that the City Council take the following actions:

1. Adopt an ordinance approving a budget adjustment in the amount of $296,522, to cover the cost of grading trail segments adjacent to Parcels JM-41, JM-81 and JM-83, and for paving trail segments adjacent Parcels JM-41 and JM- 83; and
2. Adopt a resolution authorizing the City Manager to execute the attached reimbursement agreements between the City of Roseville and John Mourier Construction, Inc., a California Corporation.

BACKGROUND

Per the Sierra Vista Specific Plan (SVSP) and Development Agreement, trails are graded and, when funds are available, paved by adjacent developments. The grading and paving work is eligible for reimbursement through the SVSP Bike Trail Fund, which obtains its resources through a bike trail fee paid with each residential building permit in the SVSP.

As part of the JM-41, JM-81, and JM-83 subdivisions, John Mourier Construction, Inc. (JMC), was required to grade and install post and cable fencing to support future trail construction. The grading and fencing work are complete. The cost for grading and fence installation totaled $112,418 as identified in the first Reimbursement Agreement attached to this report.

At the City's request, JMC also agreed to construct the first phase of trail within SVSP adjacent to parcels JM-41 and JM-83. JMC is planning to pave the trail in the near future. The cost for paving design/construction is $184,104 as identified in the second Reimbursement Agreement attached to this report.

The proposed Reimbursement Agreements will provide JMC reimbursement for these improvements as called for in the SVSP Development Agreement. When construction is complete, the City will maintain the trail with funding provided by the SVSP Community Services District.

FISCAL IMPACT

Sufficient resources are available in the SVSP Bike Trail Fund to cover the reimbursement agreements combined cost of $296,522. There is no impact to the General Fund.

ENVIRONMENTAL REVIEW

Development of the multi-use trail was previously evaluated in the Sierra Vista Specific Plan EIR, certified on May 19, 2010 and SCH NO - 2008032115 and identified in the Sierra Vista Specific Plan. Based on results of an initial study, construction of the bike trail is found to be within the project covered by the Sierra Vista Specific Plan Final EIR. As discussed in the Sierra Vista Specific Plan EIR, the EIR provides environmental analysis of community infrastructure and facilities, including parks, pedestrian bridges, and bike trails, to the extent applicable. Because the project is consistent with the Sierra Vista Specific Plan Final EIR and Specific Plan, no new effects would be expected to occur and all applicable mitigation measures from the Sierra Vista Specific Plan EIR will be implemented during the design and construction of the Sierra Vista Specific Plan multi-use trail. Because the proposed project meets the requirements identified in the State CEQA Guidelines Section 15183, no additional CEQA review is required.

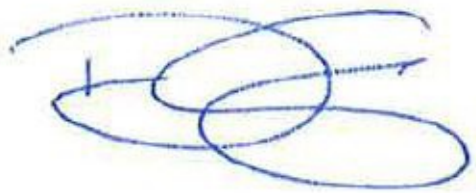
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal A - Remain fiscally responsible in a changing world
Goal C - Maintain a safe and healthy community
Goal F - Invest in well-planned infrastructure and growth

Respectfully Submitted,

Jeannie Gandler, Alternative Transportation Analyst

Jason Shykowski, Public Works Director



_____
Dominick Casey, City Manager

ATTACHMENTS:
Description
Resolution 21-390

RA Sierra Vista Phase 1 Bike Trail for Grading

RA Sierra Vista Phase 1 Bike Trail for Paving

Ordinance 6392

Budget Adjustment

RESOLUTION NO. 21-390

APPROVING TWO CITY/DEVELOPER REIMBURSEMENT AGREEMENTS, BY AND BETWEEN THE CITY OF ROSEVILLE AND JOHN MOURIER CONSTRUCTION, INC., AND AUTHORIZING THE CITY MANAGER TO EXECUTE THEM ON BEHALF OF THE CITY OF ROSEVILLE

WHEREAS, two City/Developer Reimbursement Agreements for the Sierra Vista Specific Plan Phase 1 Trail Project with John Mourier Construction, Inc., one for grading and one for paving, have been reviewed by the City Council, and

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Roseville that said reimbursement agreements are hereby approved and that the City Manager is authorized to execute them on behalf of the City of Roseville; and

PASSED AND ADOPTED by the Council of the City of Roseville this____day of _____, 2021, by the following vote on roll call:

AYES COUNCILMEMBERS:

NOES COUNCILMEMBERS:

ABSENT COUNCILMEMBERS:

_____
MAYOR

ATTEST:

_____
City Clerk

CITY/DEVELOPER
REIMBURSEMENT AGREEMENT

(Project: Sierra Vista Specific Plan Phase 1 Bike Trails)

THIS AGREEMENT is made and entered into this ___ day of _____, 20__, by and between the City of Roseville, a municipal corporation, ("CITY") and John Mourier Construction, Inc., a California corporation ("DEVELOPER"); and

W I T N E S S E T H:

A. DEVELOPER is the owner of a certain parcel of real property under development within the City of Roseville, located at: Sierra Vista Specific Plan and described as Assessor's Parcels Numbers 498-010-023, 498-010-025, 498-010-045, and 498-010-046 (the "Property").

B. DEVELOPER has agreed to construct and install certain Public Improvements as shown in Exhibit "A", attached hereto and made part of this agreement ("Public Improvements").

C. DEVELOPER and CITY will substantially benefit from the construction and installation of the Public Improvements as described in Recital B above.

D. The total cost of constructing the Public Improvements as estimated using current prevailing wages and in accordance with the Improvement Plans is estimated as approximately one hundred twelve thousand, four hundred eighteen dollars ($112,418) ("Improvement Costs"), as more particularly set out in the breakdown of costs ("Breakdown of Costs"), Exhibit "B," attached and incorporated by this reference.

E. Pursuant to the Breakdown of Costs, the parties have determined that the obligation of Improvement Costs will be allocated between CITY, and DEVELOPER as follows:

DEVELOPER	$ 0
CITY	$ 112,418
TOTAL	**$ 112,418**

F. DEVELOPER and CITY desire to enter into this Agreement providing for the direct installation by DEVELOPER of the Public Improvements in accordance with the approved Improvement Plans, for subsequent reimbursement of the total Improvement Costs by CITY directly to DEVELOPER.

NOW, THEREFORE, in consideration of the covenants set forth herein, CITY and DEVELOPER hereby agree as follows:

1. Construction of the Public Improvements. DEVELOPER shall cause the Public Improvements to be constructed and installed in accordance with the approved Improvement Plans. DEVELOPER is also required, and the specifications and bid and contract documents shall require all contractors and subcontractors, to pay prevailing wages and to otherwise comply with applicable provisions of the California Labor Code, Government Code, and Public Contracts Code relating to public works projects of cities and/or as may be required by CITY standards and procedures.

2. Contractor Registration. No contractor or subcontractor may be listed on a bid proposal for the Public Improvements or work on the Public Improvements unless registered

with the Department of Industrial Relations pursuant to Labor Code section 1725.5. DEVELOPER shall be responsible for ensuring that these contractor registration requirements are adhered to since this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

3. Reimbursement of the Costs of the Public Improvements. In consideration of the satisfactory completion of the Public Improvements, CITY shall reimburse DEVELOPER for those portions of the Improvement Costs attributable to CITY as set forth in Recital E, hereof (the "Reimbursable Costs"). CITY and DEVELOPER acknowledge that the actual Reimbursable Costs may vary from the estimated costs, depending upon the actual costs of constructing and installing the Public Improvements. Any variation in costs shall be agreed to by the parties.

The Reimbursable Costs shall include the contract bid amount for the Public Improvements as reflected on the Breakdown of Costs and reasonable change orders, as approved by CITY.

4. Timing of Reimbursements. CITY shall reimburse DEVELOPER for the total Reimbursable Costs following acceptance by CITY of the Public Improvements and within sixty (60) days after submission by DEVELOPER and approval by CITY of itemized invoices evidencing the costs for which reimbursement is to be provided in accordance with this Agreement.

5. Permits. DEVELOPER shall be responsible for obtaining all necessary permits. CITY shall approve all plans prior to issuing any permit.

6. Changes in the Scope of Work. If during the course of construction field conditions require a change of scope different then contemplated in either Exhibit "A" or "B" as

referenced above, and prior to making any changes that will affect the scope of this Agreement, the DEVELOPER shall contact CITY and get approval by CITY for those changes.

7. Prior To Commencement of Work. Prior to commencement of Work, DEVELOPER shall comply with the following: (1) obtain pre-approval from CITY of DEVELOPER's construction documents; (2) cause its contractor to obtain an encroachment permit from City prior to commencement of construction activities in CITY's right of way (and adjacent thereto); and, (3) cause its contractor to provide insurance and related documentation to CITY in accordance with Paragraph 11 of this Agreement. In addition, as required by California Labor Code Section 1773.3, DEVELOPER shall notify the Department of Industrial Relations of the project within five (5) days of the award of a contract to a contractor for the Public Improvements.

8. Indemnification. To the fullest extent allowed by law, DEVELOPER shall defend, indemnify, and save and hold harmless CITY, its officers, agents, employees and volunteers from any claims, suits or actions of every name, kind and description brought forth, or on account of, injuries to or death of any person (including but not limited to workers and the public), or damage to property, resulting from or arising out of DEVELOPER's willful misconduct or negligent act or omission while engaged in the performance of obligations or exercise of rights created by this Agreement, except those matters arising from CITY's sole or active negligence or willful misconduct. The parties intend that this provision shall be broadly construed.

DEVELOPER's responsibility for such defense and indemnity obligations shall survive the termination or completion of this Agreement for the full period of time allowed by law. The

defense and indemnity obligations of this Agreement are undertaken in addition to, and shall not in any way be limited by, the insurance obligations contained in this Agreement.

9. Insurance. Prior to the issuance of an encroachment permit and commencement of any field construction for those certain improvements as shown on Exhibit "A," the DEVELOPER shall, or shall cause its contractor to, have on file with CITY throughout the duration of construction and maintain in full force the following policies of insurance:

POLICY	LIMITS OF LIABILITY
Commercial General Liability, Including endorsements for comprehensive form, premises operations, products/completed operations, broad form property damage, independent contractors, contractual, personal injury, explosion/collapse and underground hazard	Bodily Injury: $2,000,000 each occurrence $4,000,000 aggregate Property Damage: $2,000,000 each occurrence Personal Injury: $2,000,000 each occurrence $4,000,000 aggregate
Workers' Compensation	Statutory
Automobile Liability	$1,000,000 combined single limit

a. Form. DEVELOPER shall submit a certificate evidencing such coverage for the period covered by this Agreement in a form satisfactory to Risk Management and the City Attorney, prior to undertaking any work hereunder. Any insurance written on a claims made basis is subject to the approval of Risk Management and the City Attorney.

b. Additional Insureds. DEVELOPER shall also provide a separate endorsement form or section of the policy showing CITY, its officers, agents, employees and volunteers as additional insureds for each type of coverage, prior to undertaking any work hereunder. Such insurance shall specifically cover the contractual liability of DEVELOPER. The additional insured coverage under the DEVELOPER's policy shall be primary and

noncontributory, as evidenced by a separate endorsement or section of the policy, and shall not seek contribution from CITY's insurance or self-insurance. In addition, the additional insured coverage shall be at least as broad as the Insurance Services Office ("ISO") CG 20 01 Endorsement. Any available insurance proceeds in excess of the specified minimum insurance coverage requirements and limits shall be available to the additional insureds. Furthermore, the requirements for coverage and limits shall be: (1) the minimum coverage and limits specified in this Agreement; or (2) the full coverage and maximum limits of any insurance proceeds available to the named insureds, whichever is greater.

c. Cancellation/Modification. DEVELOPER shall provide ten (10) days written notice to CITY prior to cancellation or modification of any insurance required by this Agreement.

d. Umbrella/Excess Insurance. The limits of insurance required in this Agreement may be satisfied by a combination of primary and excess insurance. Any excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and noncontributory basis for the benefit of CITY (if agreed to in a written contract) before CITY's own insurance shall be called upon to protect it as a named insured.

e. Contractors. DEVELOPER agrees to include in its contracts with all contractors the same requirements and provisions of this Agreement, including the indemnity and insurance requirements, to the extent they apply to the scope of the contractor's work. Furthermore, DEVELOPER shall require its contractors to agree to be bound to DEVELOPER and CITY in the same manner and to the same extent as DEVELOPER is bound to CITY under this Agreement. Additionally, DEVELOPER shall obligate its contractors to comply with these same provisions with respect to any subcontractor, regardless of tier. A copy of CITY's

indemnity and insurance provisions will be furnished to the contractor or any subcontractor upon request.

f. Waiver of Subrogation. DEVELOPER hereby agrees to waive subrogation which any insurer of DEVELOPER may acquire from DEVELOPER by virtue of the payment of any loss under a Workers Compensation, Commercial General Liability or Automobile Liability policy. All Workers Compensation, Commercial General Liability and Automobile Liability policies shall be endorsed with a waiver of subrogation in favor of CITY, its officers, agents, employees and volunteers for all worked performed by DEVELOPER, its employees, agents and subcontractors.

g. Liability/Remedies. Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve DEVELOPER of liability in excess of such coverage, nor shall it preclude CITY from taking such other actions as are available to it under any other provisions of this Agreement or law.

10. Obligations Arising From Agreement. Neither the General Fund, nor any other fund or monies of CITY, except for Roseville Traffic Mitigation Fees or similar traffic mitigation funds or accounts, shall be utilized for payment of any obligations arising from this Agreement. Neither the credit nor the taxing power of CITY is pledged for the payment of any obligations arising from this Agreement. CITY's obligations arising from this Agreement are not a debt of CITY, or a legal or equitable pledge, charge, lien or encumbrance upon any of its property, or upon any of its income, receipts or revenues.

11. Successors and Assigns. Each and every provision of this Agreement shall be binding and inure to the benefit of the successors and assigns of the parties hereto.

12. Attorney's Fees; Venue; Governing Law. If either party commences any legal action against the other party arising out of this Agreement or the performance thereof, the prevailing party in such action shall be entitled to recover its reasonable litigation expenses, including but not limited to, court costs, expert witness fees, discovery expenses, and attorneys' fees. Any action arising out of this Agreement shall be brought in Placer County, California, regardless of where else venue may lie. This Agreement shall be governed by and construed in accordance with the laws of the State of California.

13. Modification. This Agreement and each provision contained herein may be waived, amended, supplemented or eliminated only by mutual written agreement of the parties.

14. Severability. If any of the provisions contained in this Agreement are for any reason held invalid or unenforceable, such holding shall not affect the remaining provisions or the validity and enforceability of the Agreement as a whole.

15. Integrated Agreement. This is an integrated agreement and contains all of the terms, considerations, understanding and promises of the parties. It shall be read as a whole.

IN WITNESS WHEREOF, the City of Roseville, a municipal corporation has authorized the execution of this Agreement in duplicate by its City Manager and attested to by its City Clerk under the authority of Resolution No. _____, adopted by the Council of the City of Roseville on the ___ day of _____, 20___, and DEVELOPER has caused this Agreement to be executed.

[SIGNATURES ON FOLLOWING PAGE]

CITY OF ROSEVILLE, a municipal corporation

BY: _____
DOMINICK CASEY
City Manager

ATTEST:

BY: _____
SONIA OROZCO
City Clerk

APPROVED AS TO FORM:

BY: _____
MICHELLE SHEIDENBERGER
City Attorney

APPROVED AS TO SUBSTANCE:

BY: _____
JASON SHYKOWSKI
Public Works Director

JOHN MOURIER CONSTRUCTION, INC., a California corporation

BY: _____
its: CFO

and

BY: _____
its: _____

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Placer)

On July 22, 2021 before me, Karen Headley, a notary Public,
Date *Here Insert Name and Title of the Officer*

personally appeared Rod Yamanaka
Name(s) of Signer(s)

,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

KAREN HEADLEY
Notary Public - California
Placer County
Commission # 2258771
My Comm. Expires Oct 16, 2022

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

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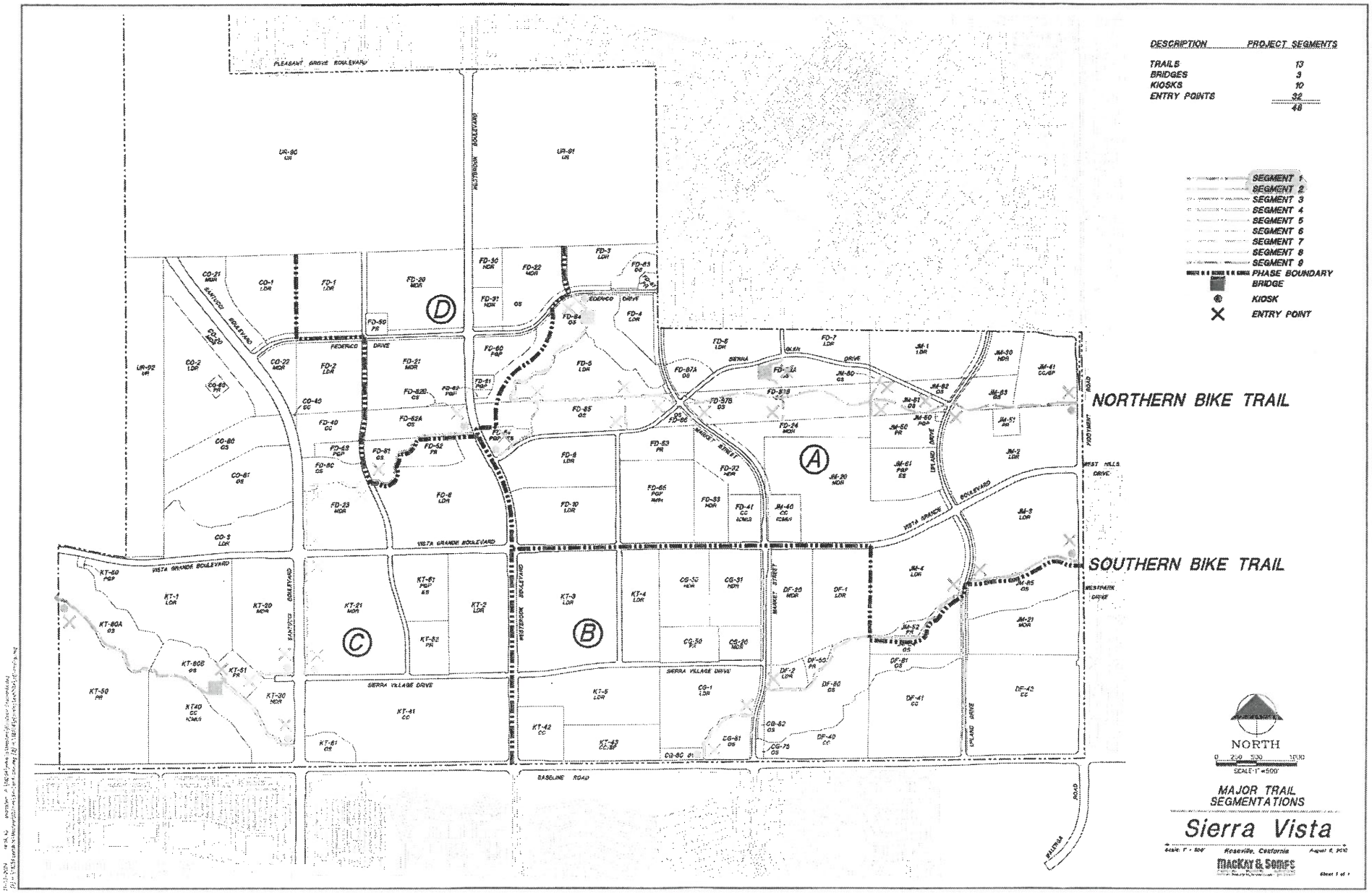
The Villages at Sierra Vista - John Mourier Construction
Trail Reimbursement
Actual Costs

#	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	AMOUNT
A. Village JM-2A Ph 1					
1	470	CY	Rough Grading	$ 12.50	$ 5,875.00
2	23,000	SF	Erosion Control	$ 0.04	$ 920.00
	TOTAL BIKE TRAIL ITEMS				**$ 6,795.00**
B. Village JM-2B Ph 2					
3	1	LS	Rough Grading	$ 9,500.00	$ 9,500.00
4	1,534	LF	Post & Cable	$ 21.19	$ 32,505.46
5	87,120	SF	Erosion Control	$ 0.04	$ 3,223.44
6	1,500	SF	Erosion Control	$ 0.25	$ 375.00
	TOTAL BIKE TRAIL ITEMS				**$ 45,603.90**
C. Village JM-3A Ph 1					
7	395	CY	Rough Grading	$ 12.50	$ 4,937.50
8	19,500	SF	Erosion Control	$ 0.04	$ 780.00
	TOTAL BIKE TRAIL ITEMS				**$ 5,717.50**
D. Village JM-3B Ph 2					
9	1	LS	Rough Grading	$ 3,500.00	$ 3,500.00
10	1,000	LF	Post & Cable	$ 21.19	$ 21,190.00
	TOTAL BIKE TRAIL ITEMS				**$ 24,690.00**
E. Village JM-4A Ph 1					
11	750	CY	Rough Grading	$ 12.50	$ 9,375.00
12	37,500	SF	Erosion Control	$ 0.04	$ 1,500.00
	TOTAL BIKE TRAIL ITEMS				**$ 10,875.00**

CONSTRUCTION COST SUMMARY		
A. Village JM-2A Ph 1	6,795.00	
B. Village JM-2B Ph 2	45,603.90	
C. Village JM-3A Ph 1	5,717.50	
D. Village JM-3B Ph 2	24,690.00	
E. Village JM-4A Ph 1	10,875.00	
SUBTOTAL CONSTRUCTION COST ESTIMATE	**93,681.40**	
Soft Costs at 20%		**$ 18,736.28**
Contingency at 0%		**$ -**
CONSTRUCTION TOTAL	**$ 112,418**	



DESCRIPTION	PROJECT SEGMENTS
TRAILS	13
BRIDGES	3
KIOSKS	10
ENTRY POINTS	32
	48

SEGMENT 1
SEGMENT 2
SEGMENT 3
SEGMENT 4
SEGMENT 5
SEGMENT 6
SEGMENT 7
SEGMENT 8
SEGMENT 9
PHASE BOUNDARY
BRIDGE
KIOSK
ENTRY POINT

NORTH

0 250 500 1000

SCALE: 1" = 500'

MAJOR TRAIL SEGMENTATIONS

Sierra Vista

Scale: 1" = 500' Roseville, California August 6, 2020

MacKay & Somps

Sheet 1 of 1

CITY/DEVELOPER
REIMBURSEMENT AGREEMENT

(Project: Sierra Vista Specific Plan Phase 1 Bike Trail)

THIS AGREEMENT is made and entered into this ___ day of _____, 20__, by and between the City of Roseville, a municipal corporation, ("CITY") and John Mourier Construction, Inc., a California corporation ("DEVELOPER"); and

W I T N E S S E T H:

A. DEVELOPER is the owner of a certain parcel of real property under development within the City of Roseville, located at: Sierra Vista Specific Plan and described as Assessor's Parcels Number JM-41 (498-010-023) and JM-83 (498-010-025) (the " Property").

B. DEVELOPER has agreed to construct and install certain Public Improvements as shown within Exhibit "A" attached hereto and made part of this agreement ("Public Improvements").

C. DEVELOPER and CITY will substantially benefit from the construction and installation of the Public Improvements as described in Recital B above.

D. The total cost of constructing the Public Improvements as estimated using current prevailing wages and in accordance with the Improvement Plans is estimated as approximately one hundred eighty-four thousand, one hundred and four dollars ($184,104) ("Improvement Costs"), as more particularly set out in the breakdown of costs ("Breakdown of Costs"), Exhibit "B," attached and incorporated by this reference.

E. Pursuant to the Breakdown of Costs, the parties have determined that the obligation of Improvement Costs will be allocated between CITY, and DEVELOPER as follows:

DEVELOPER	$ 0
CITY	$ 184,104
TOTAL	**$ 184,104**

F. DEVELOPER and CITY desire to enter into this Agreement providing for the direct installation by DEVELOPER of the Public Improvements in accordance with the approved Improvement Plans, for subsequent reimbursement of the total Improvement Costs by CITY directly to DEVELOPER.

NOW, THEREFORE, in consideration of the covenants set forth herein, CITY and DEVELOPER hereby agree as follows:

1. Construction of the Public Improvements. DEVELOPER shall cause the Public Improvements to be constructed and installed in accordance with the approved Improvement Plans. DEVELOPER is also required, and the specifications and bid and contract documents shall require all contractors and subcontractors, to pay prevailing wages and to otherwise comply with applicable provisions of the California Labor Code, Government Code, and Public Contracts Code relating to public works projects of cities and/or as may be required by CITY standards and procedures.

2. Contractor Registration. No contractor or subcontractor may be listed on a bid proposal for the Public Improvements or work on the Public Improvements unless registered

with the Department of Industrial Relations pursuant to Labor Code section 1725.5. DEVELOPER shall be responsible for ensuring that these contractor registration requirements are adhered to since this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

3. Reimbursement of the Costs of the Public Improvements. In consideration of the satisfactory completion of the Public Improvements, CITY shall reimburse DEVELOPER for those portions of the Improvement Costs attributable to CITY as set forth in Recital E, hereof (the "Reimbursable Costs"). CITY and DEVELOPER acknowledge that the actual Reimbursable Costs may vary from the estimated costs, depending upon the actual costs of constructing and installing the Public Improvements. Any variation in costs shall be agreed to by the parties.

The Reimbursable Costs shall include the contract bid amount for the Public Improvements as reflected on the Breakdown of Costs and reasonable change orders, as approved by CITY.

4. Timing of Reimbursements. CITY shall reimburse DEVELOPER for the total Reimbursable Costs following acceptance by CITY of the Public Improvements and within thirty (30) days after submission by DEVELOPER and approval by CITY of itemized invoices evidencing the costs for which reimbursement is to be provided in accordance with this Agreement.

5. Permits. DEVELOPER shall be responsible for obtaining all necessary permits. CITY shall approve all plans prior to issuing any permit.

6. Changes in the Scope of Work. If during the course of construction field conditions require a change of scope different then contemplated in either Exhibit "A" or "B" as

referenced above, and prior to making any changes that will affect the scope of this Agreement, the DEVELOPER shall contact CITY and get approval by CITY for those changes.

7. Prior To Commencement of Work. Prior to commencement of Work, DEVELOPER shall comply with the following: (1) obtain pre-approval from CITY of DEVELOPER's construction documents; (2) cause its contractor to obtain an encroachment permit from City prior to commencement of construction activities in CITY's right of way (and adjacent thereto); and, (3) cause its contractor to provide insurance and related documentation to CITY in accordance with Paragraph 9 of this Agreement. In addition, as required by California Labor Code Section 1773.3, DEVELOPER shall notify the Department of Industrial Relations of the project within five (5) days of the award of a contract to a contractor for the Public Improvements.

8. Indemnification. To the fullest extent allowed by law, DEVELOPER shall defend, indemnify, and save and hold harmless CITY, its officers, agents, employees and volunteers from any claims, suits or actions of every name, kind and description brought forth, or on account of, injuries to or death of any person (including but not limited to workers and the public), or damage to property, resulting from or arising out of DEVELOPER's willful misconduct or negligent act or omission while engaged in the performance of obligations or exercise of rights created by this Agreement, except those matters arising from CITY's sole or active negligence or willful misconduct. The parties intend that this provision shall be broadly construed.

DEVELOPER's responsibility for such defense and indemnity obligations shall survive the termination or completion of this Agreement for the full period of time allowed by law. The

defense and indemnity obligations of this Agreement are undertaken in addition to, and shall not in any way be limited by, the insurance obligations contained in this Agreement.

9. Insurance. Prior to the issuance of an encroachment permit and commencement of any field construction for those certain improvements as shown on Exhibit "A," the DEVELOPER shall, or shall cause its contractor to, have on file with CITY throughout the duration of construction and maintain in full force the following policies of insurance:

POLICY	LIMITS OF LIABILITY
Commercial General Liability, Including endorsements for comprehensive form, premises operations, products/completed operations, broad form property damage, independent contractors, contractual, personal injury, explosion/collapse and underground hazard	Bodily Injury: $2,000,000 each occurrence $4,000,000 aggregate Property Damage: $2,000,000 each occurrence Personal Injury: $2,000,000 each occurrence $4,000,000 aggregate
Workers' Compensation	Statutory
Automobile Liability	$1,000,000 combined single limit

a. Form. DEVELOPER shall submit a certificate evidencing such coverage for the period covered by this Agreement in a form satisfactory to Risk Management and the City Attorney, prior to undertaking any work hereunder. Any insurance written on a claims made basis is subject to the approval of Risk Management and the City Attorney.

b. Additional Insureds. DEVELOPER shall also provide a separate endorsement form or section of the policy showing CITY, its officers, agents, employees and volunteers as additional insureds for each type of coverage, prior to undertaking any work hereunder. Such insurance shall specifically cover the contractual liability of DEVELOPER. The additional insured coverage under the DEVELOPER's policy shall be primary and

noncontributory, as evidenced by a separate endorsement or section of the policy, and shall not seek contribution from CITY's insurance or self-insurance. In addition, the additional insured coverage shall be at least as broad as the Insurance Services Office ("ISO") CG 20 01 Endorsement. Any available insurance proceeds in excess of the specified minimum insurance coverage requirements and limits shall be available to the additional insureds. Furthermore, the requirements for coverage and limits shall be: (1) the minimum coverage and limits specified in this Agreement; or (2) the full coverage and maximum limits of any insurance proceeds available to the named insureds, whichever is greater.

c. Cancellation/Modification. DEVELOPER shall provide ten (10) days written notice to CITY prior to cancellation or modification of any insurance required by this Agreement.

d. Umbrella/Excess Insurance. The limits of insurance required in this Agreement may be satisfied by a combination of primary and excess insurance. Any excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and noncontributory basis for the benefit of CITY (if agreed to in a written contract) before CITY's own insurance shall be called upon to protect it as a named insured.

e. Contractors. DEVELOPER agrees to include in its contracts with all contractors the same requirements and provisions of this Agreement, including the indemnity and insurance requirements, to the extent they apply to the scope of the contractor's work. Furthermore, DEVELOPER shall require its contractors to agree to be bound to DEVELOPER and CITY in the same manner and to the same extent as DEVELOPER is bound to CITY under this Agreement. Additionally, DEVELOPER shall obligate its contractors to comply with these same provisions with respect to any subcontractor, regardless of tier. A copy of CITY's

indemnity and insurance provisions will be furnished to the contractor or any subcontractor upon request.

f. Waiver of Subrogation. DEVELOPER hereby agrees to waive subrogation which any insurer of DEVELOPER may acquire from DEVELOPER by virtue of the payment of any loss under a Workers Compensation, Commercial General Liability or Automobile Liability policy. All Workers Compensation, Commercial General Liability and Automobile Liability policies shall be endorsed with a waiver of subrogation in favor of CITY, its officers, agents, employees and volunteers for all worked performed by DEVELOPER, its employees, agents and subcontractors.

g. Liability/Remedies. Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve DEVELOPER of liability in excess of such coverage, nor shall it preclude CITY from taking such other actions as are available to it under any other provisions of this Agreement or law.

10. Obligations Arising From Agreement. Neither the General Fund, nor any other fund or monies of CITY, except for Roseville Traffic Mitigation Fees or similar traffic mitigation funds or accounts, shall be utilized for payment of any obligations arising from this Agreement. Neither the credit nor the taxing power of CITY is pledged for the payment of any obligations arising from this Agreement. CITY's obligations arising from this Agreement are not a debt of CITY, or a legal or equitable pledge, charge, lien or encumbrance upon any of its property, or upon any of its income, receipts or revenues.

11. Successors and Assigns. Each and every provision of this Agreement shall be binding and inure to the benefit of the successors and assigns of the parties hereto.

12. Attorney's Fees; Venue; Governing Law. If either party commences any legal action against the other party arising out of this Agreement or the performance thereof, the prevailing party in such action shall be entitled to recover its reasonable litigation expenses, including but not limited to, court costs, expert witness fees, discovery expenses, and attorneys' fees. Any action arising out of this Agreement shall be brought in Placer County, California, regardless of where else venue may lie. This Agreement shall be governed by and construed in accordance with the laws of the State of California.

13. Modification. This Agreement and each provision contained herein may be waived, amended, supplemented or eliminated only by mutual written agreement of the parties.

14. Severability. If any of the provisions contained in this Agreement are for any reason held invalid or unenforceable, such holding shall not affect the remaining provisions or the validity and enforceability of the Agreement as a whole.

15. Integrated Agreement. This is an integrated agreement and contains all of the terms, considerations, understanding and promises of the parties. It shall be read as a whole.

IN WITNESS WHEREOF, the City of Roseville, a municipal corporation has authorized the execution of this Agreement in duplicate by its City Manager and attested to by its City Clerk under the authority of Resolution No. _____, adopted by the Council of the City of Roseville on the ___ day of _____, 20___, and DEVELOPER has caused this Agreement to be executed.

[SIGNATURES ON FOLLOWING PAGE]

CITY OF ROSEVILLE, a
municipal corporation

BY: _____
DOMINICK CASEY
City Manager

ATTEST:

BY: _____
SONIA OROZCO
City Clerk

APPROVED AS TO FORM:

BY: _____
MICHELLE SHEIDENBERGER
City Attorney

APPROVED AS TO SUBSTANCE:

BY: _____
JASON SHYKOWSKI
Public Works Director

JOHN MOURIER CONSTRUCTION,
INC., a California corporation

BY: _____
its: CFO

and

BY: _____
its: _____

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Placer)

On July 26, 2021 before me, Karen Headley, a notary Public
Date *Here Insert Name and Title of the Officer*

personally appeared Rod Yamanaka
Name(s) of Signer(s)

,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

KAREN HEADLEY
Notary Public - California
Placer County
Commission # 2258771
My Comm. Expires Oct 16, 2022

Signature _____
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

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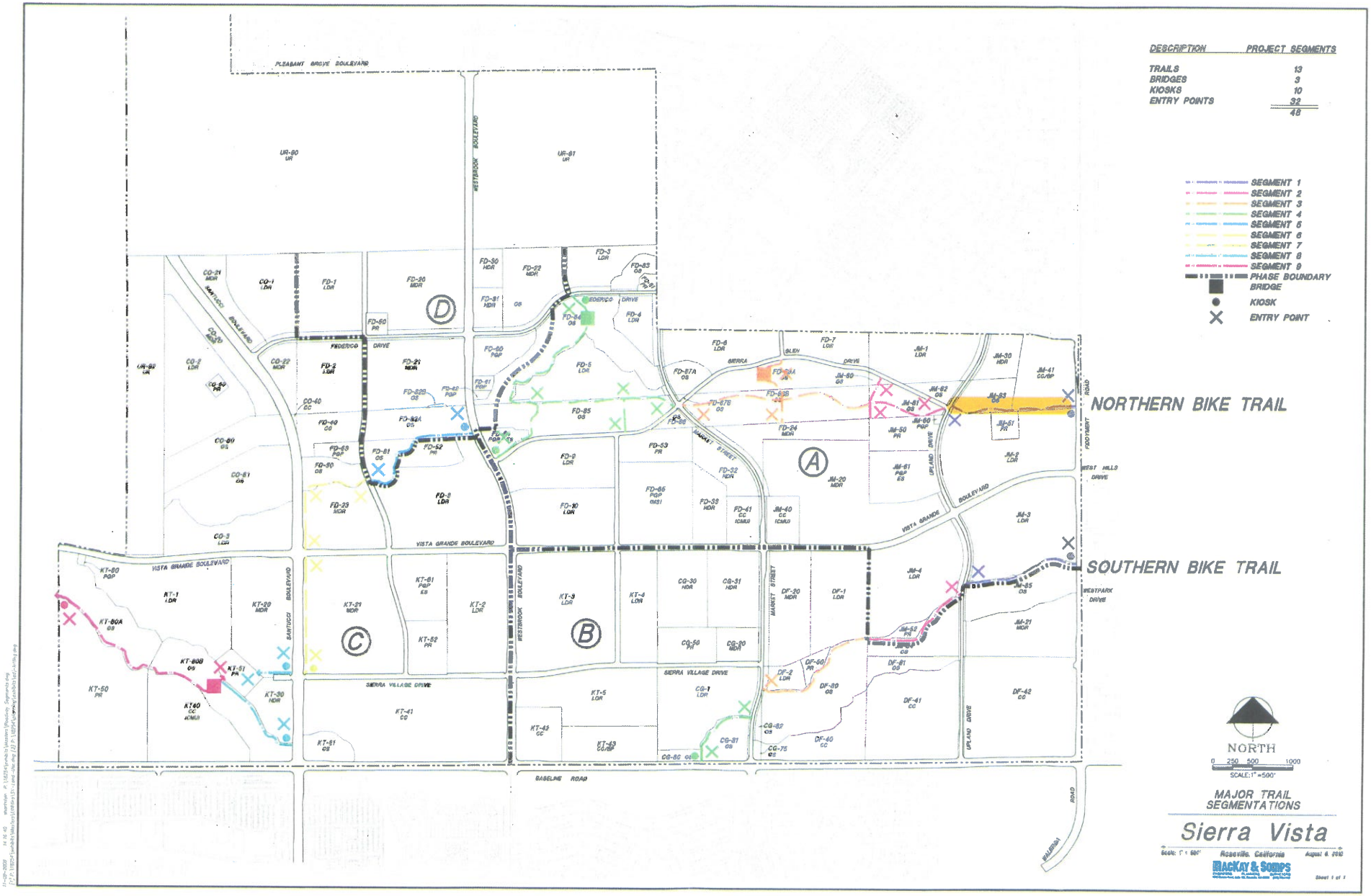
PLEASANT GROVE BOULEVARD
WESTBROOK BOULEVARD
SANTUCCI BOULEVARD
FEDERICO DRIVE
VISTA GRANDE BOULEVARD
SIERRA VILLAGE DRIVE
MARKET STREET
UPLAND DRIVE
WESTPARK DRIVE
WEST HILLS DRIVE
FOOTHILL ROAD
BASELINE ROAD
A
B
C
D
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SOUTHERN BIKE TRAIL
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SEGMENT 6
SEGMENT 7
SEGMENT 8
SEGMENT 9
PHASE BOUNDARY
BRIDGE
KIOSK
ENTRY POINT
NORTH
0 250 500 1000
SCALE:1" =500'
MAJOR TRAIL SEGMENTATIONS
Sierra Vista
Roseville, California
August 6, 2018
MACKAY & SOMPS

The Villages at Sierra Vista - John Mourier Construction
Trail Reimbursement
Estimated Costs for Construction

#	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	AMOUNT
A. Northern Bike Trail Segment 1					
1	20,393	SF	Clear & Grub	$ 0.25	$ 5,098.25
2	20,393	SF	Subgrade Bike Trail	$ 0.75	$ 15,294.75
3	14,465	SF	2" AC / 4" AB	$ 4.30	$ 62,199.50
4	2,834	SF	2" Wide X 3" DG Shoulder	$ 4.00	$ 11,336.00
5	3,094	SF	2" Wide X 4" DG Shoulder	$ 4.50	$ 13,923.00
6	1	LS	Protect (E) Post & Cable Fence	$ 500.00	$ 500.00
7	1,417	LF	4" Yellow Stripe	$ 3.00	$ 4,251.00
8	1	LS	Hydroseed (Type 3 OS Mix)	$ 12,500.00	$ 12,500.00
9	2	EA	Stationary Bollard	$ 1,950.00	$ 3,900.00
10	1	EA	Collapsible Bollard	$ 2,500.00	$ 2,500.00
TOTAL BIKE TRAIL ITEMS					**$ 131,502.50**

CONSTRUCTION COST SUMMARY

A. Northern Bike Trail Segment 1	$ 131,502.50
SUBTOTAL CONSTRUCTION COST ESTIMATE	**$ 131,502.50**
Soft Costs at 20%	**$ 26,300.50**
Contingency at 20%	**$ 26,300.50**
CONSTRUCTION TOTAL	**$ 184,103.50**

ORDINANCE NO. 6392

ORDINANCE OF THE COUNCIL OF THE CITY OF ROSEVILLE AUTHORIZING CERTAIN AMENDMENTS TO THE FISCAL YEAR 2021-22 BUDGET AND DECLARING THIS ORDINANCE TO BE IMMEDIATELY EFFECTIVE AS AN APPROPRIATION MEASURE

THE CITY OF ROSEVILLE ORDAINS:

SECTION 1. The City of Roseville Annual Budget, Fiscal Year 2021-22, is hereby amended as listed on the attached budget adjustment for the Sierra Vista Specific Plan Phase 1 Bike Trail project.

SECTION 2. This ordinance is hereby declared to be an appropriation measure, immediately effective pursuant to the provisions of Section 5.03 of the Charter.

SECTION 3. The City Clerk is hereby authorized and directed to post a true copy of the foregoing ordinance in each of three (3) conspicuous locations in the City and she shall immediately after such posting enter in the ordinance book, under the record of the ordinance, a certificate under her hand stating the time and place of such publication by posting.

PASSED AND ADOPTED by the Council of the City of Roseville, this _____ day of _____, 2021, by the following vote on roll call:

AYES COUNCILMEMBERS:

NOES COUNCILMEMBERS:

ABSENT COUNCILMEMBERS:

_____
MAYOR

ATTEST:

_____
City Clerk

REQUEST FOR BUDGET ADJUSTMENT

REQUESTER NAME & TITLE: Michael Dour, Alternative Transportation Manager
FISCAL YEAR: 2021-22

PREPARER NAME & TITLE: Jeannie Gandler, Alternative Transportation Analyst II
COUNCIL DATE (if applicable): 9/1/2021

DEPARTMENT/DIVISION: Public Works/Alternative Transportation
ORDINANCE:

EXPENDITURES/EXPENSES/TRANSFERS OUT

ACCOUNT STRING				BUDGET ($)	DESCRIPTION
Fund	Account	Center	Project	Adjustment	
3319	6587	84001	500216	184,104	Paving trail through parcels JM-41 and JM-83 per the SVSP Circulation Element & DA
3319	6587	84001	500216	112,418	Rough grading through parcels JM-41, JM-81 and JM-83 per the SVSP Circulation Element & DA
			TOTAL	296,522	

REVENUES/TRANSFERS IN

ACCOUNT STRING				BUDGET ($)	DESCRIPTION
Fund	Account	Center	Project	Adjustment	
			TOTAL	-	

	NET ADJUSTMENT	296,522

FUND BALANCE

ACCOUNT STRING				BUDGET ($)	DESCRIPTION
Fund	Account	Center	Project	Adjustment	
3319				(296,522)	Reduce SVSP Park Development Fee Fund Balance
			TOTAL	(296,522)	

Justification for Budget Adjustment:

This budget adjustment is requested to establish project #500126 - Sierra Vista Specific Plan Phase 1 Bike Trail. This budget will pay for two reimbursement agreements with JMC (John Mourier Construction Inc) - one in the amount of $184,104 for paving, the other is in the amount of $112,418 for rough grading. The funding for this phase of the bike project will come from available fees collected in the SVSP Park Development Fee Fund. Future phases of the project and associated reimbursement agreements will be brought to City Council at a later date.

REQUIRED APPROVALS:

Stefanie A. Kemen Digitally signed by Stefanie A. Kemen Date: 2021.08.05 11:39:24 -07'00'

REQUESTING DEPARTMENT HEAD / DESIGNEE	DATE	BUDGET MANAGER / DESIGNEE	DATE
CHIEF FINANCIAL OFFICER / DESIGNEE	DATE	CITY MANAGER / DESIGNEE	DATE

BUDGET DEPARTMENT USE ONLY:

POSTED BY	DATE

Revised: June 24, 2019

8/5/20219:00 AM

COUNCIL COMMUNICATION

CC #: 1695
File #: 1002 & 0800-02 & 0201-01

Title:	Warnick Property - Transfer of Property and Budget Adjustment
Contact:	Devin Whittington 916-774-5783 dwhittington@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 7.12.

RECOMMENDATION TO COUNCIL

Staff is requesting City Council:

- Approve the transfer of the Warnick Property from the Pleasant Grove Drainage Basin Fund to Environmental Utilities (Waste Services Operations Fund) to support future utility operations.
- Adopt an ordinance to approve a budget adjustment to transfer $3,650,000 (the appraised value of the Warnick Property) from the Waste Services Operations Fund and the Water Operations Fund via the Environmental Utilities (EU) Land Acquisition project to the Pleasant Grove Drainage Basin Fund ($1,159,344) and the Strategic Improvement Fund ($2,490,656).

BACKGROUND

Several City departments and divisions operate out of the Corporation Yard on PFE Road. This facility, constructed in 1993 on 40 acres, is near capacity in building space, parking, and equipment storage.

Current regulations, including organics-processing mandates (SB 1383) and new water efficiency standards, will impact EU space and staffing needs. In late 2018, EU contracted with HDR to analyze data, evaluate Roseville growth, anticipate regional impacts, and hedge the City's interest against non-compatible uses near utility operations. HDR focused on waste services operations and water utility growth while considering other City departments.

At the May 5, 2021, City Council meeting, Council directed staff to move forward with EU land acquisition to provide reliability and space for continued utility operations. EU has identified a City-owned site for this purpose. The “Warnick Property”, located on Phillip Road on the City's border with Placer County to the northwest, is well-situated for EU’s future operational needs.

In November 2004, the City purchased 418.9 acres of land for $1,673,800 via the Pleasant Grove Drainage Basin Fund to construct a floodwater retention basin. Staff subsequently determined that the retention basin would only require 175.5 acres of this land, leaving 243.4 acres vacant and available for repurposing.

In October 2020, the City obtained an appraisal of $3,650,000 for the vacant 243.4 acres. EU has identified this parcel as a suitable site for future operational requirements. EU has adequate funds appropriated for this property in its EU Land Acquisition project, consisting of $2,920,000 from the Waste Services Operations Fund and $730,000 from the Water Operations Fund.

To use this property for any purpose other than a retention basin requires that the proportional purchase price plus interest ($1,159,344) be transferred to the fund that initially funded the purchase - the Pleasant Grove Drainage Basin Fund. Staff recommends that the remaining balance of $2,490,656 be transferred to the Strategic Improvement Fund for future initiatives.

This recommended budget adjustment will recognize interfund transfers from the EU operating funds to the Pleasant Grove Drainage Basin Fund ($1,159,344) and the Strategic Improvement Fund ($2,490,656).

Details regarding specific future use of the site are as yet unknown. Following completion of the proposed fund transfer, EU will begin the process of identifying optimal uses of the parcel relative to utility operations, and conduct environmental review as necessary to comply with the California Environmental Quality Act (CEQA).

FISCAL IMPACT

The EU Land Acquisition project, with a remaining budget of $14,870,338, will cover the cost of this $3,650,000 property purchase. The Waste Services Operations Fund will contribute $2,920,000 and the Water Operations Fund will contribute $730,000. The Pleasant Grove Drainage Basin Fund will receive transfers totaling $1,159,344 for the original proportional purchase price of the property plus interest and the Strategic Improvement Fund will receive transfers totaling $2,490,656 for the difference between the property purchase price of $3,650,000 and the amount going to the Pleasant Grove Drainage Basin Fund.

Property maintenance costs are included in the FY2021-22 Water Operations Fund and Solid Waste Operations Fund budgets. Upon completion of this transfer, EU will determine the improvements for the property and come back to Council with additional requests as needed.

ENVIRONMENTAL REVIEW

The California Environmental Quality Act (CEQA) does not apply to activities that will not result in a direct or reasonably foreseeable indirect physical change in the environment, or is otherwise not considered a project as defined by CEQA Statute §21065 and CEQA Guidelines §15060(c)(3) and §15378.

The interfund transfer and budget adjustment meet the above criteria and are not subject to CEQA. No additional environmental review is required. Any potential future development of the site will be subject to compliance with CEQA.

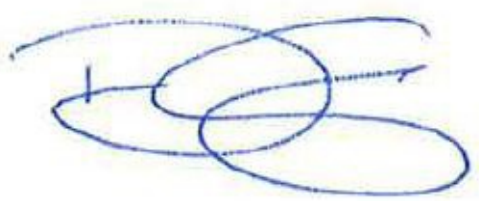
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal E: Deliver exceptional City Services

Respectfully Submitted,

Devin Whittington, Refuse and Stormwater Manager

Richard Plecker, Environmental Utilities Director



_____

Dominick Casey, City Manager

ATTACHMENTS:

Description

Property Appraisal

Ordinance 6393

Budget Adjustment

Property Location

Property History

Integra Realty Resources
Sacramento

Appraisal of Real Property

East of S. Brewer Road and North of Phillip Road
Vacant Land
East of S. Brewer Road and North of Phillip Road
Roseville, Placer County, California 95747

Prepared For:
City of Roseville

Effective Date of the Appraisal:
October 23, 2020

Report Format:
Appraisal Report – Standard Format

IRR - Sacramento
File Number: 193-2020-0489

East of S. Brewer Road and North of Phillip Road
Roseville, California

Integra Realty Resources
Sacramento

590 Menlo Drive
Suite 1
Rocklin, CA 95765

T 916.435.3883
F 916.435.4774
www.irr.com

November 6, 2020

Laura Matteoli
Development Director
City of Roseville
311 Vernon Street
Roseville, CA 95678

SUBJECT: Market Value Appraisal
East of S. Brewer Road and North of Phillip Road
Roseville, Placer County, California 95747

IRR - Sacramento File No. 193-2020-0489

Dear Ms. Matteoli:

Integra Realty Resources – Sacramento is pleased to submit the accompanying appraisal of the referenced property. The purpose of the appraisal is to develop an opinion of the market value of the fee simple interest in the property. The client for the assignment is City of Roseville, and the intended use is for property disposition purposes.

The subject property comprises 243.40± acres of vacant land that represents a portion of three contiguous Assessor's parcels (017-010-033; 017-090-054 -055) which in total comprise 418.90± acres. The assembled site is zoned for public/quasi-public use by the city of Roseville. This report considers the value of the subject property based on its highest and best economic use, which is agricultural development. This valuation is subject to a hypothetical condition the subject is a 243.40± acre parcel that is zoned for agricultural development and is legally transferable. While there are existing improvements on the subject site, they are deemed to be at the end of their useful lives and are planned for demolition by the city of Roseville. Consequently, no contributory value is given to the existing improvements. The subject property is located within the city limits of Roseville proximate to the western boundary. Consequently, the subject is located within the path of suburban growth. Consequently, the subject property is representative of transitional land. For the purpose herein, and specific to the subject property, transitional land refers to property that is moving from a once agricultural use to a more suburban/urban use. A more

detailed description of the subject property and related market area characteristics is contained within the attached report.

The appraisal is intended to conform with the Uniform Standards of Professional Appraisal Practice (USPAP), the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute, applicable state appraisal regulations, and the appraisal guidelines of City of Roseville.

To report the assignment results, we use the Appraisal Report option of Standards Rule 2-2(a) of USPAP. As USPAP gives appraisers the flexibility to vary the level of information in an Appraisal Report depending on the intended use and intended users of the appraisal, we adhere to the Integra Realty Resources internal standards for an Appraisal Report – Standard Format. This format summarizes the information analyzed, the appraisal methods employed, and the reasoning that supports the analyses, opinions, and conclusions.

Based on the valuation analysis in the accompanying report, and subject to the definitions, assumptions, and limiting conditions expressed in the report, our opinion of value is as follows:

Value Conclusion

Appraisal Premise	Interest Appraised	Date of Value	Value Conclusion
Market Value	Fee Simple	October 23, 2020	$3,650,000

Extraordinary Assumptions and Hypothetical Conditions

The value conclusions are subject to the following extraordinary assumptions. An extraordinary assumption is an assignment-specific assumption as of the effective date regarding uncertain information used in an analysis which, if found to be false, could alter the appraiser's opinions or conclusions.

None.

The value conclusions are based on the following hypothetical conditions. A hypothetical condition is a condition, directly related to a specific assignment, which is contrary to what is known by the appraiser to exist on the effective date of the assignment results, but is used for the purpose of analysis.

1. The subject property comprises 243.40± acres of vacant land that represents a portion of three contiguous Assessor's parcels (017-010-033; 017-090-054 -055) which in total comprise 418.90± acres. The assembled site is zoned for public/quasi-public use by the city of Roseville. This report considers the value of the subject property based on its highest and best economic use, which is agricultural development. This valuation is subject to a hypothetical condition the subject is a 243.40± acre parcel that is zoned for agricultural development and is legally transferable.

The use of any extraordinary assumption or hypothetical condition may have affected the assignment results.

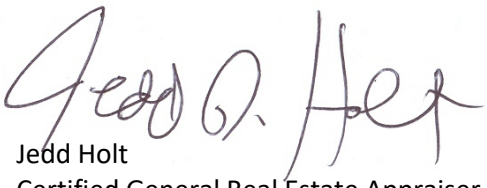
As of the date of value, the economy (globally, nationally, and locally) was in a state of rapid transition with a widespread expectation of the imminent onset of a significant recession. The outbreak of COVID-19 (coronavirus disease of 2019) in China was declared a global pandemic by the World Health Organization (WHO) on March 11, 2020. Some market deterioration had occurred shortly before this date, but the declaration by the WHO soon led to municipal and statewide orders to "shelter in place," causing widespread closures of

businesses and a massive disruption to general commerce. The status of economic conditions is changing rapidly, creating great uncertainty in the markets. Our analysis of these and related issues is presented in the attached report. The value expressed herein represents our opinion based on the best available data reflective as of the date of value. While values are always subject to change over time, we caution the reader that in the current economic climate, market volatility creates the potential for a more significant change in value over a relatively short period of time.

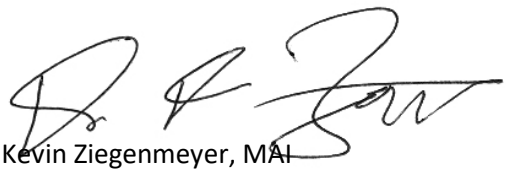
If you have any questions or comments, please contact the undersigned. Thank you for the opportunity to be of service.

Respectfully submitted,

INTEGRA REALTY RESOURCES - SACRAMENTO



Jedd Holt
Certified General Real Estate Appraiser
California Certificate # AG043883
Telephone: 916-435-3883, ext. 242
Email: jholt@irr.com



Kevin Ziegenmeyer, MAI
Certified General Real Estate Appraiser
California Certificate # AG013567
Telephone: 916-435-3883, ext. 224
Email: kziegenmeyer@irr.com

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Addenda
A. Appraiser Qualifications
B. Comparable Data
C. Engagement Letter

Executive Summary

Address	East of S. Brewer Road and North of Phillip Road Roseville, Placer County, California 95747	
Property Type	Land - Agricutural	
Owner of Record	City of Roseville	
Tax ID	017-010-033; 017-090-054 & -055 (Portion)	
Land Area (Gross)	243.40 acres; 10,602,504 SF	
Zoning Designation	P/QP, Public/Quasi-Public	
Highest and Best Use	Agricultural use	
Exposure Time; Marketing Period	9-12 months; 12 months	
Effective Date of the Appraisal	October 23, 2020	
Date of the Report	November 6, 2020	
Property Interest Appraised	Fee Simple	
Sales Comparison Approach		
Number of Sales	5	
Range of Sale Dates	Aug 18 to Aug 20	
Range of Prices per Acre (Unadjusted)	$11,448 - $26,828	
Market Value Conclusion	$3,650,000	($14,996/Acre)

The values reported above are subject to the definitions, assumptions, and limiting conditions set forth in the accompanying report of which this summary is a part. No party other than City of Roseville may use or rely on the information, opinions, and conclusions contained in the report. It is assumed that the users of the report have read the entire report, including all of the definitions, assumptions, and limiting conditions contained therein.

Extraordinary Assumptions and Hypothetical Conditions

The value conclusions are subject to the following extraordinary assumptions. An extraordinary assumption is an assignment-specific assumption as of the effective date regarding uncertain information used in an analysis which, if found to be false, could alter the appraiser's opinions or conclusions.

None.

The value conclusions are based on the following hypothetical conditions. A hypothetical condition is a condition, directly related to a specific assignment, which is contrary to what is known by the appraiser to exist on the effective date of the assignment results, but is used for the purpose of analysis.

1. The subject property comprises 243.40± acres of vacant land that represents a portion of three contiguous Assessor's parcels (017-010-033; 017-090-054 -055) which in total comprise 418.90± acres. The assembled site is zoned for public/quasi-public use by the city of Roseville. This report considers the value of the subject property based on its highest and best economic use, which is agricultural development. This valuation is subject to a hypothetical condition the subject is a 243.40± acre parcel that is zoned for agricultural development and is legally transferable.

The use of any extraordinary assumption or hypothetical condition may have affected the assignment results.

Strengths, Weaknesses, Opportunities, Threats (SWOT Analysis)

Strengths

- The subject property is situated within the path of growth for the city of Roseville adjacent to two master planned communities to the east and south.
- Demand for agricultural properties has been steady over the past several years

Weaknesses

- Backbone infrastructure (utilities, sewer, and drainage) improvements will be necessary for development of the site to its ultimate highest and best use.
- A portion of the site is within the 100-year floodplain. In total, 111.60 acres are considered undevelopable.

Opportunities

- The subject is located within the path of growth and should benefit from the continued growth of Roseville and the on-going development of the immediate area.

Threats

- The impact of COVID-19 on economic conditions is considered throughout this appraisal. The Market Analysis section looks at the best available empirical data while the valuation sections turn to parallels with prior recessions along with real time data sources that provide guidance on input metrics applied within the various approaches.

General Information

Identification of Subject

The subject property comprises 243.40± acres of vacant land that represents a portion of three contiguous Assessor's parcels (017-010-033; 017-090-054 -055) which in total comprise 418.90± acres. The assembled site is zoned for public/quasi-public use by the city of Roseville. This report considers the value of the subject property based on its highest and best economic use, which is agricultural development. This valuation is subject to a hypothetical condition the subject is a 243.40± acre parcel that is zoned for agricultural development and is legally transferable. While there are existing improvements on the subject site, they are deemed to be at the end of their useful lives and are planned for demolition by the city of Roseville. Consequently, no contributory value is given to the existing improvements. The subject property is located within the city limits of Roseville proximate to the western boundary. Consequently, the subject is located within the path of suburban growth. Consequently, the subject property is representative of transitional land. For the purpose herein, and specific to the subject property, transitional land refers to property that is moving from a once agricultural use to a more suburban/urban use. A legal description of the property was requested but not provided.

Property Identification	
Address	East of S. Brewer Road and North of Phillip Road Roseville, California 95747
Tax ID	017-010-033; 017-090-054 & -055 (Portion)
Owner of Record	City of Roseville

Sale History

To the best of our knowledge, no arm’s length sale or transfer of ownership has occurred within the past three years. In addition, the subject is not currently being marketed for sale.

Pending Transactions

To the best of our knowledge, the property is not subject to an agreement of sale or an option to buy, nor is it listed for sale, as of the effective appraisal date.

Purpose of the Appraisal

The purpose of the appraisal is to develop an opinion of the market value of the fee simple interest in the property as of the effective date of the appraisal, October 23, 2020. The date of the report is November 6, 2020. The appraisal is valid only as of the stated effective date or dates.

Definition of Market Value

Market value is defined as:

"The most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- Buyer and seller are typically motivated;
- Both parties are well informed or well advised, and acting in what they consider their own best interests;
- A reasonable time is allowed for exposure in the open market;
- Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
- The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale."

(Source: Code of Federal Regulations, Title 12, Chapter I, Part 34.42[h]; also Interagency Appraisal and Evaluation Guidelines, Federal Register, 75 FR 77449, December 10, 2010, page 77472)

Definition of Property Rights Appraised

Fee simple estate is defined as, "Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat."

Source: Appraisal Institute, *The Dictionary of Real Estate Appraisal*, 6th ed. (Chicago: Appraisal Institute, 2015)

Intended Use and User

The intended use of the appraisal is for property disposition purposes. The client and intended user is the City of Roseville. The appraisal is not intended for any other use or user. No party or parties other than City of Roseville may use or rely on the information, opinions, and conclusions contained in this report.

Applicable Requirements

This appraisal is intended to conform to the requirements of the following:

- Uniform Standards of Professional Appraisal Practice (USPAP);
- Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute;
- Applicable state appraisal regulations;
- Interagency Appraisal and Evaluation Guidelines issued December 10, 2010;
- Appraisal guidelines of City of Roseville.

Report Format

This report is prepared under the Appraisal Report option of Standards Rule 2-2(a) of USPAP. As USPAP gives appraisers the flexibility to vary the level of information in an Appraisal Report depending on the intended use and intended users of the appraisal, we adhere to the Integra Realty Resources internal standards for an Appraisal Report – Standard Format. This format summarizes the information analyzed, the appraisal methods employed, and the reasoning that supports the analyses, opinions, and conclusions.

Prior Services

USPAP requires appraisers to disclose to the client any other services they have provided in connection with the subject property in the prior three years, including valuation, consulting, property management, brokerage, or any other services. We have performed no services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding the agreement to perform this assignment.

Scope of Work

To determine the appropriate scope of work for the assignment, we considered the intended use of the appraisal, the needs of the user, the complexity of the property, and other pertinent factors. Our concluded scope of work is described below.

Valuation Methodology

Appraisers usually consider the use of three approaches to value when developing a market value opinion for real property. These are the cost approach, sales comparison approach, and income capitalization approach. Use of the approaches in this assignment is summarized as follows:

Approaches to Value

Approach	Applicability to Subject	Use in Assignment
Cost Approach	Not Applicable	Not Utilized
Sales Comparison Approach	Applicable	Utilized
Income Capitalization Approach	Not Applicable	Not Utilized

We use only the sales comparison approach in developing an opinion of value for the subject. This approach is applicable to the subject because there is an active market for similar properties, and sufficient sales data is available for analysis.

The cost approach is not applicable because there are no improvements that contribute value to the property, and the income approach is not applicable because the subject is not likely to generate rental income in its current state.

Research and Analysis

The type and extent of our research and analysis is detailed in individual sections of the report. This includes the steps we took to verify comparable sales, which are disclosed in the comparable sale profile sheets in the addenda to the report. Although we make an effort to confirm the arms-length

nature of each sale with a party to the transaction, it is sometimes necessary to rely on secondary verification from sources deemed reliable.

Inspection

Jedd Holt conducted an on-site inspection of the property on October 23, 2020. Kevin Ziegenmeyer conducted an on-site inspection of the property on November 4, 2020.

Economic Analysis

Area Analysis

Introduction

The worldwide outbreak of the COVID-19 virus and the subsequent chain of events enacted in an effort to minimize the impacts of the pandemic are still in process and evolving. Healthcare and economic responses to this crisis are unfolding in the present, with limited quantifiable data available to gauge the future impact on the local, state and national economies. The following analysis is largely based on historical information as a means of identifying past demographic and general economic trends, both of which will be impacted as more time passes and data becomes available for analysis.

The Sacramento MSA is comprised of four counties – Sacramento, Placer, El Dorado and Yolo – and spans from the Sacramento River Delta in the west to the Sierra Nevada mountain range in the east. It represents portions of two key regions in California – the Central Valley and the Sierra Nevada mountains. The Sacramento MSA is the most populous metropolitan area in the Central Valley and the fifth-largest in the state of California. The region's largest city, Sacramento, is the State Capital and the seat of government for Sacramento County. Sacramento is located approximately 385 miles north of Los Angeles, 500 miles south of Oregon, 85 miles northeast of San Francisco, 105 miles west of South Lake Tahoe, and 135 miles southwest of Reno, Nevada. The region has relatively stable seismic conditions, especially compared to the San Francisco Bay Area and Southern California. Sacramento and adjoining cities rank among the lowest in the state for the probability of a major earthquake.

Population

The region has a population of over 2.37 million and has grown at a moderate, average rate of 1.1% per year for the past five years. The following table illustrates recent population trends for each county in the region. The figures are estimated as of January each year.

Population Trends

County	2015	2016	2017	2018	2019	2020	%/Yr
Sacramento	1,481,751	1,496,385	1,512,721	1,527,132	1,541,301	1,555,365	1.0%
Placer	371,264	376,508	383,598	389,387	395,978	403,711	1.7%
El Dorado	182,540	183,684	185,147	188,185	190,018	193,227	1.2%
Yolo	210,801	215,016	218,039	219,990	220,896	221,705	1.0%
Total	**2,246,356**	**2,271,593**	**2,299,505**	**2,324,694**	**2,348,193**	**2,374,008**	**1.1%**

Source: California Department of Finance

Placer and El Dorado Counties have led the region with growth of 1.7% and 1.2% per year, respectively. Most of this growth has occurred in the cities of Roseville, Rocklin, Lincoln and El Dorado Hills. The region's growth is attributed in large to in-migration of residents from other locations.

The population in the region is expected to continue growing. According to the California Department of Finance, the population in the Sacramento MSA is projected to increase to around 2,601,607 by

2030 and 2,914,939 by 2050. The region's growth is expected to outpace the growth of most other metropolitan areas in California, as well as the state as a whole.

Employment & Economy

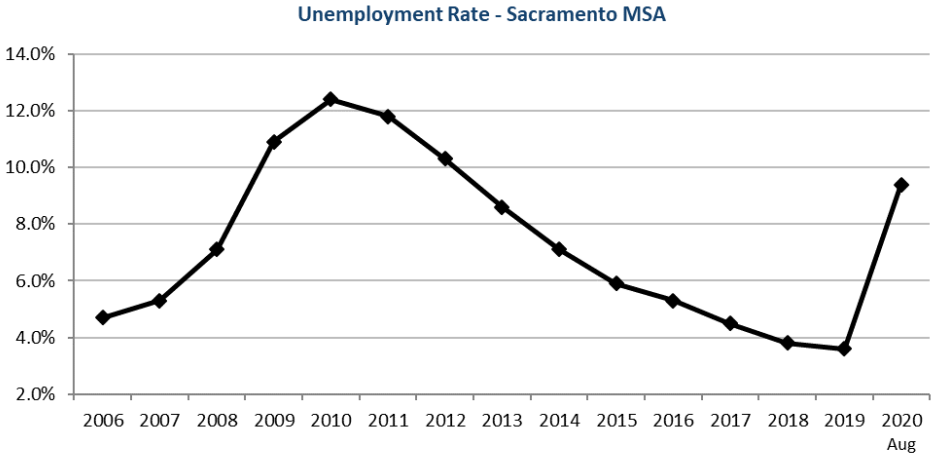
Historically, the Sacramento region has been one of the more stable employment centers in California, with a significant number of jobs in State government. The California Employment Development Department has reported the following employment data for the Sacramento MSA over the past five years.

Employment Trends

	2014	2015	2016	2017	2018	2019
Labor Force	1,044,700	1,052,800	1,068,400	1,075,300	1,089,600	1,101,000
Employment	970,300	991,200	1,011,900	1,026,400	1,048,200	1,061,400
Job Growth	14,400	20,900	20,700	14,500	21,800	13,200
Unemployment Rate	7.1%	5.9%	5.3%	4.5%	3.8%	3.6%

Source: California Employment Development Department

For most areas within the state and nation, including the Sacramento MSA, unemployment declined from 2004 through 2006, increased from 2007 to 2010, and declined between 2011 to 2019. Unemployment spiked in April 2020 as a result of COVID-19 business closures and remains elevated. A depiction of the unemployment rate trend since 2006 is provided below.



Source: California Employment Development Department

The region experienced a significant decline in jobs in 2009, but the rate of decline moderated in 2010, and job growth was positive in each year from 2011 through 2019. Prior to the coronavirus outbreak, unemployment rates had been at historical lows in recent years. The 2017 unemployment rate of 4.5% was the lowest experienced since 2001 and the 2018 and 2019 rates further decreased, closing out 2019 with an average rate of 3.6%. However, this downward trend has shifted as a result of the current COVID-19 crisis. In an effort to prevent the spread and impact of the virus, statewide public health Stay-At-Home orders were on March 19th, which directed residents to stay at home except to perform essential activities necessary for the health and safety of individuals and their families. These

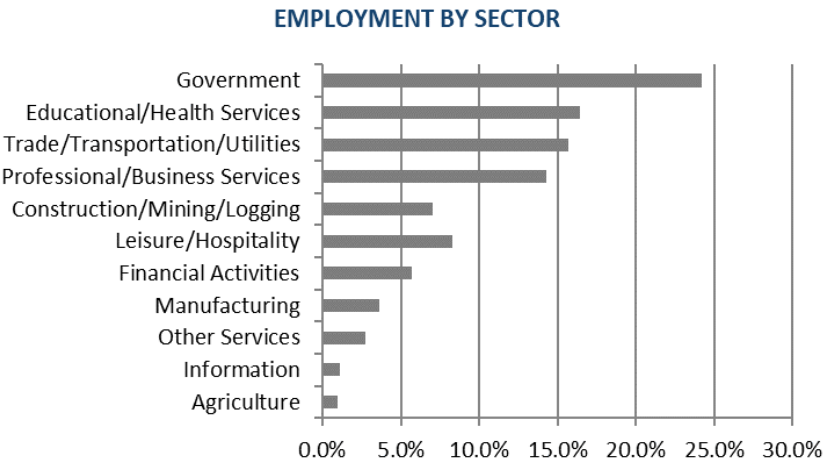
unprecedented measures left just "essential" businesses open. The closure of non-essential businesses has had a significant impact on employment, with some sectors of the workforce impacted more significantly than others.

The average annual unemployment rate in the Sacramento MSA was 3.6% in 2019 and remained in the 3.8%-4.8% range during the first quarter 2020. However, the California Employment Development Department reports an unemployment rate of 14.0% in April 2020 and 13.6% in May 2020. As of August 2020, the rate has dropped slightly to 9.4%, which is above the year ago estimate of 3.7%. This compares to rates of 11.6% for California and 8.5% for the nation in August 2020.

It was reported 89,500 jobs were lost year-over-year as of August 2020 (8.7%). The greatest job loss was in the Leisure/Hospitality sector with 32,800 jobs lost, followed by the Trade/Transportation/Utilities sector with 13,700 jobs lost and Educational/Health Services with 11,600 jobs lost.

The local economy has transitioned from a government and agricultural center to a more diverse economy. Growing industries in the region include healthcare, technology, clean energy and life sciences. The region is a western hub for data processing, customer call centers and other corporate back office support activities. However, the Sacramento market is also largely dependent on the services sector and, as a result, it may be impacted more significantly by the economic disruption caused by COVID-19. The degree of impact will depend at some level on local, state and federal government economic responses and relief aid.

The following chart indicates the percentage of total employment for each sector within the region as of August 2020.



Source: California Employment Development Department

The region's largest employment sectors are Government, Educational and Health Services, Trade/Transportation/Utilities (including retail and wholesale trade), and Professional and Business Services. Government jobs account for approximately 24% of total employment in the region. This percentage has declined in the past couple of decades – government employment was near 30% of

the total in 1990. The region's largest employers are listed in the following table (based on the number of employees in the four-county region).

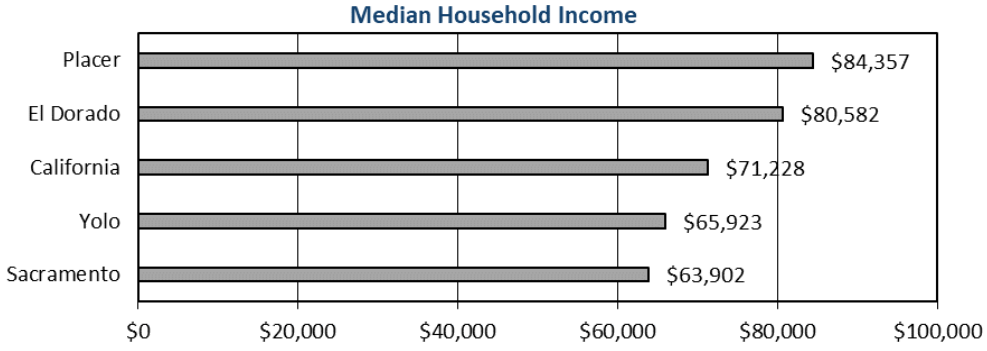
Largest Employers

	Employer	Industry	Employees
1	State of California	Government	81,085
2	Kaiser Permanente	Healthcare	17,419
3	Sutter Health	Healthcare	15,497
4	U.S. Government	Government	13,256
5	UC Davis Health System	Healthcare	12,674
6	Sacramento County	Government	11,330
7	University of California Davis	Education	10,032
8	Dignity Health (formerly Mercy)	Healthcare	7,000
9	Elk Grove Unified School District	Education	6,381
10	Intel Corp.	Semiconductors	6,200

Source: Sacramento Business Journal, Book of Lists 2019

Household Income

Median household income represents a broad statistical measure of well-being or standard of living in a community. The median income level divides households into two equal segments with one half of households earning less than the median and the other half earning more. The median income is considered to be a better indicator than the average household income as it is not dramatically affected by unusually high or low values. The following chart illustrates the median household income (in 2018 inflation-adjusted dollars) for each county in the region, as well as the state of California.



Source: U.S. Census Bureau, QuickFacts

Placer and El Dorado Counties exhibit the highest income levels in the Sacramento region. Household incomes in these counties are among the highest in California.

Transportation

A significant strategic advantage of the Sacramento region is its proximity to large markets and its transportation accessibility to these markets provided by extensive highway, rail, water and air systems.

The Sacramento region has over 800 miles of maintained state highways. The hub of freeways in the region makes the Sacramento area a good center for freight distribution. U.S. Highway 50, Interstate 80, and the Capital City Freeway are the principal routes for commuters living in the densely populated eastern suburbs. Commuters from the north and south of Sacramento travel on Interstate 5 and State Highway 99. State Highways 65 and 70 link Placer County to Yuba and Sutter Counties to the north. Interstate 5 provides a direct route to Redding, Oregon and Washington to the north and Los Angeles to the south. Interstate 80 extends travel to Nevada and Utah to the east and the San Francisco Bay Area to the west. Lake Tahoe and Nevada are accessible within a couple hours traveling east on U.S. Highway 50, which originates in Sacramento. State Highway 99 provides access from the upper Sacramento Valley through the San Joaquin Valley to the south.

The main public transit system in the Sacramento area is operated by Sacramento Regional Transit District (SacRT), with additional service provided by other local public and private transit operators. SacRT covers nearly 400 square miles and transports approximately 23 million passengers annually by means of 205 buses, 23 shuttle vans and 97 light rail vehicles. Light Rail began operation in 1987 along a two-pronged route linking Downtown Sacramento with populous suburbs to the east and north. In 2003 and 2004, SacRT completed extensions to the Meadowview area in South Sacramento (Blue Line) and Sunrise Boulevard in Rancho Cordova (Gold Line) to the east. In 2005, an eastward extension to the city of Folsom was completed. In 2012, SacRT completed the first phase of the Green Line to the Airport light rail extension project with the opening of the Green Line to the River District. This 1.1-mile light rail extension to the north connected Downtown Sacramento to the River District. In August 2015, SacRT opened the second phase of the Blue Line project, which extended the line 4.3 miles south to Cosumnes River College.

The Sacramento region has access to a number of railroads. The north-south and east-west main lines of the Union Pacific Railroad intersect in Sacramento; Sacramento also has access to the Burlington Northern Santa Fe Railway as a result of the merger of Union Pacific and Southern Pacific in 1996. Union Pacific's major freight classification facility for Northern California, Nevada and Oregon is located in Roseville (Placer County). Amtrak provides daily passenger service from Sacramento. The Capital Corridor system provides high-speed commuter rail service from Roseville to San Jose.

The region has good water transportation capabilities. The Port of Sacramento is a deep-water port located 79 miles northeast of San Francisco in the city of West Sacramento, serving ocean-going vessels handling a variety of cargo types. The 30-foot depth of the channel, along with extensive rail and truck cargo handling facilities, make the Port highly productive for long distance shipping. The Port is equipped for handling bulk cargo and some agricultural and forest products.

Finally, the region includes several air transport facilities. Most notably, Sacramento International Airport is served by 12 passenger carriers and numerous cargo carriers. Major expansions of the terminals and parking facilities were completed between 2004 and 2012. In 2017, 10.9 million

passengers traveled through Sacramento International Airport; 12.05 million passengers traveled during 2018 and 13.17 million passengers traveled in 2019. The region is also served by Sacramento Executive Airport, Lincoln Regional Airport, McClellan Airfield, Mather Airport (the latter two being former Air Force Bases) and several smaller airports and airfields.

Recreation & Culture

The Sacramento region offers innumerable recreational and cultural opportunities. The American River Parkway offers 5,000 acres of recreation area along both sides of the river for 30 miles, with Folsom Lake situated at the eastern end. The Sacramento-San Joaquin Delta has over 1,000 miles of waterways. The rivers and lakes within the Sacramento Area offer boating, fishing and water-skiing opportunities. In addition, numerous parks and golf courses are located throughout the region. Professional sports teams in Sacramento include an NBA team (the Sacramento Kings) and a Triple-A minor league baseball team (the River Cats).

Cultural attractions in the region include the Old Sacramento Historic District, California State Railroad Museum, Crocker Art Museum, Historic Governor's Mansion, Sutter's Fort State Historic Park and Sacramento Zoo. Sacramento is home to several theaters and performing arts centers offering world-class shows. Annual events in Sacramento include the California State Fair and the Music Circus.

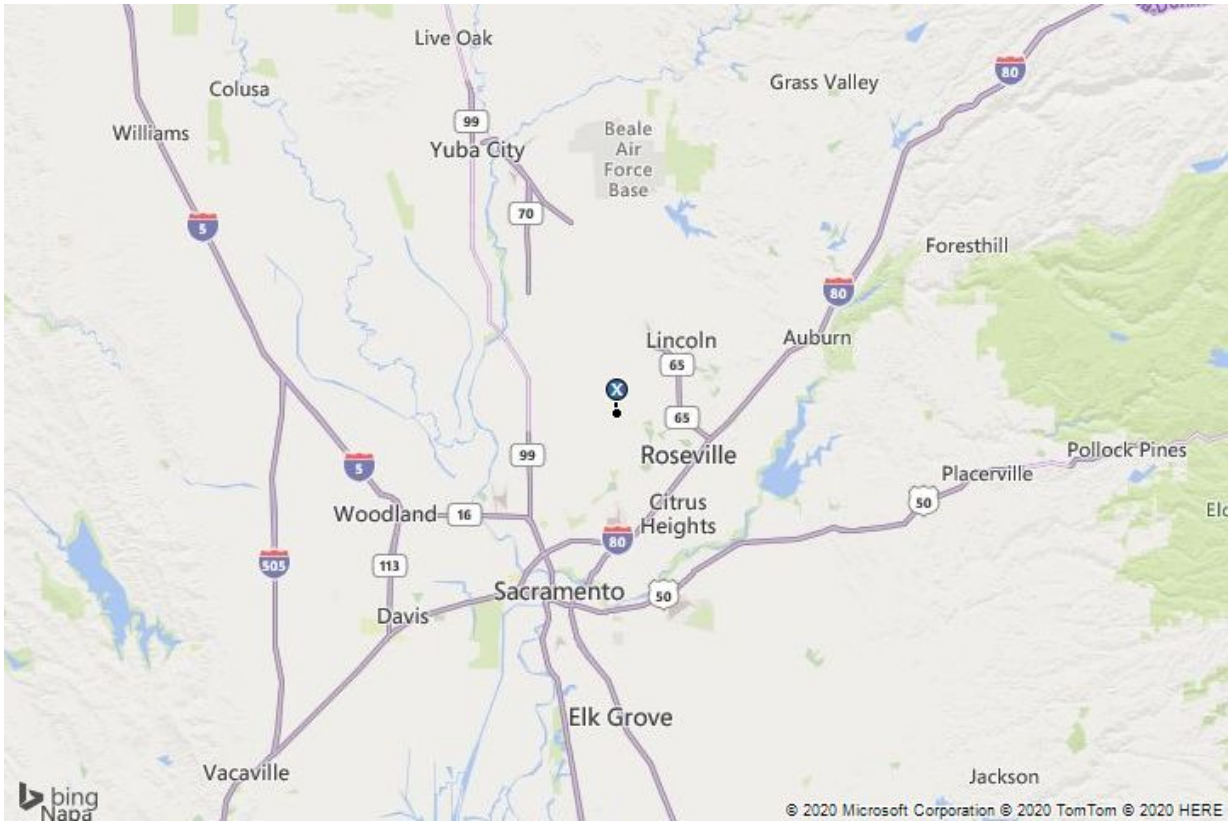
In terms of higher education, the region's largest universities are the University of California Davis and California State University, Sacramento. Six community colleges are located in the region, including Sierra College, American River, Cosumnes River, Folsom Lake, Sacramento City and Woodland Community College. Several private colleges are located in the area, as well as satellite campuses of colleges headquartered elsewhere. The region also contains numerous vocational schools.

Other recreational and cultural opportunities are available within a short drive of the Sacramento area. To the west are the San Francisco Bay Area, the Napa Valley wine country, the coastal redwood forests, and the beaches of the Pacific Ocean. To the east are Lake Tahoe and the Sierra Nevada Mountains, which are home to more than a dozen snow-skiing resorts. Legalized casino gambling is available in Nevada, as well as several tribal casinos in the Sacramento region.

Conclusion

The Sacramento region is the fifth-largest metropolitan area in California and has seen moderate population growth of 1.1% per year over the past five years. The area's advantages include a diverse economy, mild climate, seismic stability, ample recreational and cultural opportunities, and expansive transportation systems. Further, the region offers greater affordability compared to the Bay Area and Southern California. After a period of contraction in the economy and real estate markets around 2008-2010, the region experienced improvement in employment and economic conditions over the past few years and most real estate sectors showed signs of expansion. However, employment conditions declined sharply in April 2020 following stay-at-home mandates and non-essential business closures, and the near-term outlook is uncertain as a result of the COVID-19 pandemic. A better understanding of the potential impacts will be gained as economic policies aimed at financial relief and resuming business operations are implemented. The historical stability of the local economy and emergence from past recessions bodes well for the long-term outlook for the region.

Area Map


Live Oak
Colusa
Grass Valley
Williams
Yuba City
Beale Air Force Base
Foresthill
Lincoln
Auburn
Roseville
Pollock Pines
Placerville
Citrus Heights
Woodland
Sacramento
Davis
Elk Grove
Vacaville
Jackson
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Surrounding Area Analysis

Introduction

This section of the report provides an analysis of the observable data that indicate patterns of growth, structure and/or change that may enhance or detract from property values. For the purpose of this analysis, a neighborhood is defined as "a group of complementary land uses; a congruous grouping of inhabitants, buildings or business enterprises."

Neighborhood Boundaries

The boundaries of a neighborhood identify the physical area that influences the value of the subject property. These boundaries may coincide with observable changes in prevailing land use or occupant characteristics. Physical features such as the type of development, street patterns, terrain, vegetation and parcel size tend to identify neighborhoods. Roadways, waterways and changing elevations can also create neighborhood boundaries.

The subject property is located within the city of Roseville, Placer County, California. Specifically, the subject is situated in the west Roseville area. The subject's neighborhood boundaries can generally be described as Foothills Boulevard to the east, Baseline Road to the south, and the city limits of Roseville to the west and north.

Demographic Factors

A demographic profile of the surrounding area, including population, households, and income data, is presented in the table below.

Surrounding Area Demographics

2020 Estimates	1-Mile Radius	3-Mile Radius	5-Mile Radius	95747 (Roseville, CA)	Placer County, CA
Population 2010	14,548	67,255	196,371	52,316	348,432
Population 2020	16,491	82,834	224,465	67,001	398,650
Population 2025	17,328	87,684	235,640	71,241	419,234
Compound % Change 2010-2020	1.3%	2.1%	1.3%	2.5%	1.4%
Compound % Change 2020-2025	1.0%	1.1%	1.0%	1.2%	1.0%
Households 2010	5,556	24,529	69,402	19,070	132,627
Households 2020	6,172	30,163	78,881	24,277	153,060
Households 2025	6,446	31,960	82,728	25,809	161,485
Compound % Change 2010-2020	1.1%	2.1%	1.3%	2.4%	1.4%
Compound % Change 2020-2025	0.9%	1.2%	1.0%	1.2%	1.1%
Median Household Income 2020	$95,132	$98,598	$82,080	$105,426	$88,748
Average Household Size	2.7	2.7	2.8	2.8	2.6
College Graduate %	39%	38%	31%	40%	38%
Median Age	43	40	38	40	43
Owner Occupied %	77%	74%	66%	78%	71%
Renter Occupied %	23%	26%	34%	22%	29%
Median Owner Occupied Housing Value	$502,392	$507,787	$438,194	$530,164	$557,525
Median Year Structure Built	2000	2000	1994	2002	1994
Average Travel Time to Work in Minutes	30	30	29	31	30

Source: Environics Analytics

As shown above, the current population within a 3-mile radius of the subject is 82,834, and the average household size is 2.7. Population in the area has grown since the 2010 census, and this trend is projected to continue over the next five years. Compared to Placer County overall, the population within a 3-mile radius is projected to grow at a similar rate.

Median household income is $98,598, which is higher than the household income for Placer County. Residents within a 3-mile radius have a similar level of educational attainment than those of Placer County, while median owner occupied home values are lower.

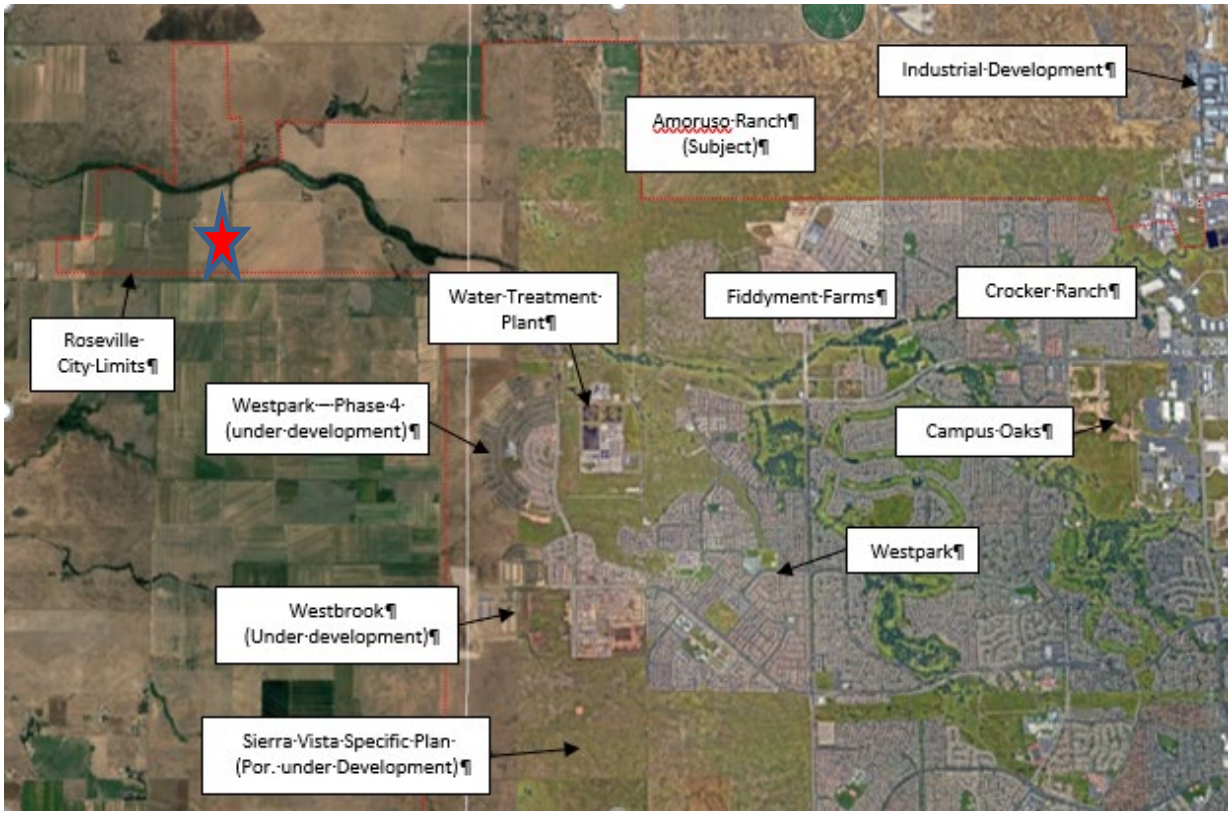
Transportation

The subject is located along Phillips Road which connects with Westpark Drive to the southwest of the subject. Westpark Drive is a north/south neighborhood thoroughfare that connects with Pleasant Grove Boulevard to the south. Pleasant Grove Boulevard is a primary east-west connector that extends through the neighborhood and leads to State Highway 65. Other primary connectors in the neighborhood are Fiddyment Road, Woodcreek Boulevard and Foothills Boulevard (which extend north-south) and Blue Oaks Boulevard (which extends east-west, and also leads to State Highway 65). State Highway 65 is a major north-south highway in the neighborhood, and provides access to the city of Lincoln to the north, then connects with State Highway 70 to provide access into the Marysville/Yuba City area. To the south, State Highway 65 travels through the cities of Rocklin and Roseville, and provides access to Interstate 80 about five to six miles to the south. Interstate 80 is a primary east-west transportation route for the Sacramento Metropolitan Area. To the east, Interstate 80 provides access to the outlying portions of Placer County and continues toward the state of Nevada, and points further east. To the west, the freeway connects with various submarkets of the Sacramento MSA (e.g., Citrus Heights, Foothill Farms, Del Paso Heights, Natomas, West Sacramento) and continues toward Davis and San Francisco.

The neighborhood also has access to rail transportation. The Union Pacific Railroad runs in a north-south direction along the west side of Industrial Avenue, with a regional rail yard located in the city of Roseville about five miles to the south. Sacramento International Airport is located about 18 miles to the southwest, and is the major location of air transportation services in the area.

Land Uses

A map of land uses in the vicinity of the subject (identified with a red star) is provided on the following page:



Red star = subject property

Community Uses

There are several community uses in the neighborhood, such as schools, churches, medical facilities, parks, and recreational and cultural facilities. The most prominent recreational facility in the neighborhood is Mahany Park, a regional park at the southwest quadrant of Woodcreek Oaks Boulevard and Pleasant Grove Boulevard. This facility offers a softball complex and the neighboring Roseville Aquatics Complex and Roseville Sports Center. There are several golf courses in the neighborhood, including the public Woodcreek Oaks Golf Club and Diamond Oaks Municipal Golf Course, as well as the private Sierra View Country Club and 27 holes in the Sun City Roseville development.

Woodcreek High School is located on the west line of Woodcreek Oaks Boulevard, south of Pleasant Grove Boulevard. The Placer County Fairgrounds is located at the intersection of Junction Boulevard and Washington Boulevard. WestPark High school, which is located southeast of the subject, recently completed construction and is open for the school year 2020-21.

There are two main hospitals in Roseville, both of which are located in east Roseville, just south of Interstate 80 – Kaiser Permanente, located at the northeast corner of Rocky Ridge Drive and Douglas Boulevard, and Sutter Roseville Medical Center on Roseville Parkway.

Agricultural Trends

As previously indicated, the subject property is located within Placer County. According to the 2019 Placer County Crop Report (the latest available), the gross agricultural production value totaled $86,707,959. This figure represents a 17% increase from 2018's gross crop value.

Top Ten Commodities for Placer County 2019

The leading crop values in Placer County are presented in the following table. Note this is the most recent data available.

Top Placer County Crops 2019

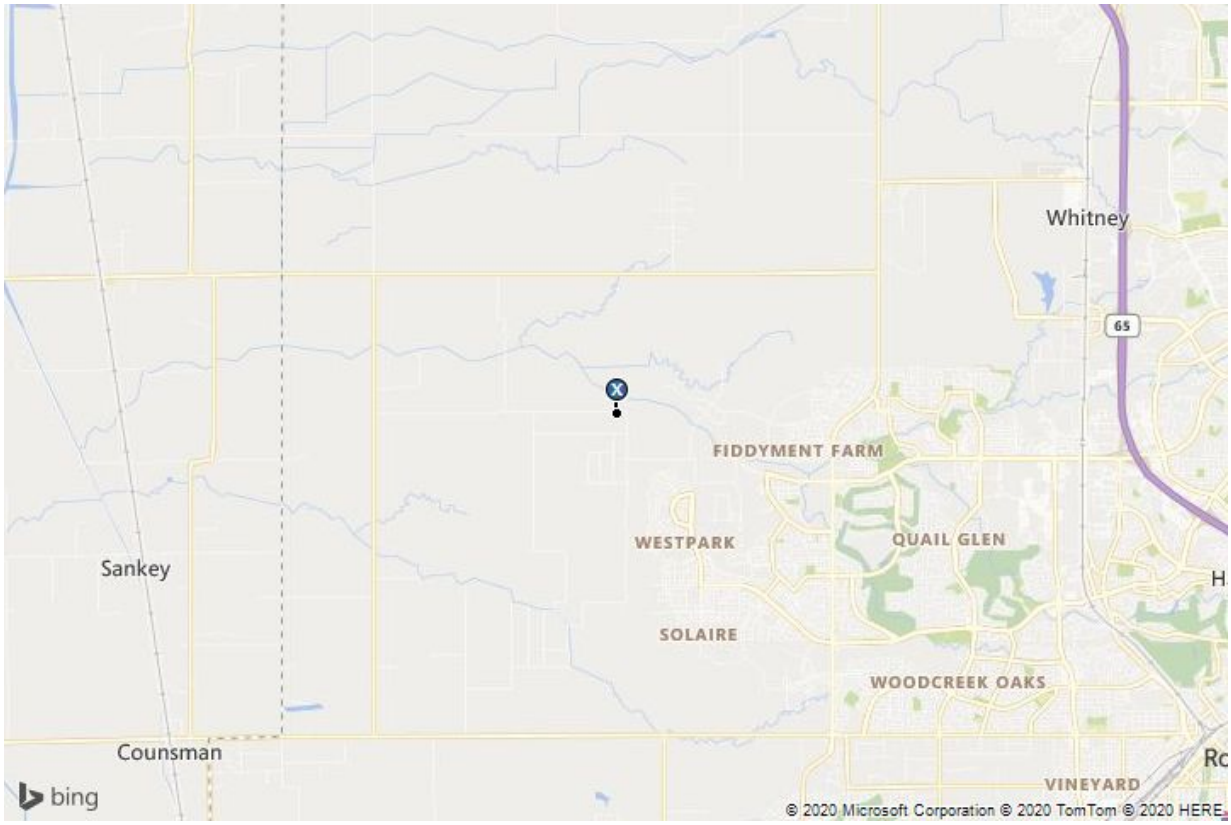
Crop	Million Dollars
Rice	$25.767
Cattle & Calves	$12.925
Walnuts	$11.778
Nursery Stock	$7.049
Timber	$6.026

Source: Crop Report

Conclusion

In conclusion, while the immediate area consists of agricultural uses the subject is located in an expanding suburban area that should continue to experience adequate demand for various urban property uses. While the subject is located on the edge of its neighborhood, and within an expanding area, overall the neighborhood will offer a balanced mix of land uses. The area has good access to neighborhood thoroughfares. Households in the area have above-average income levels, and the community appeal is good. The characteristics of the neighborhood relative to other parts of the Sacramento region are desirable.

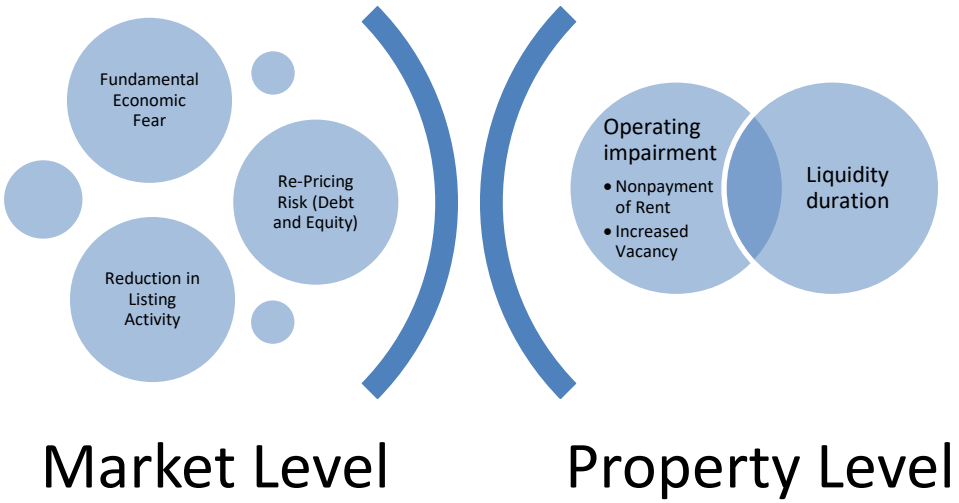
Surrounding Area Map



East of S. Brewer Road and North of Phillip Road

COVID-19 Impact on Current Valuations

Transaction indicators are the best measure of any impact on values due to COVID-19. Given the unique nature and recency of this event, minimal activity is evident from which to draw benchmark comparisons based on transactional data. In the absence of transaction data, market and property specific empirical data can be gleaned to assist in estimating current value. In this initial phase of the pandemic, early emerging trends include:



All or some of the above may be shorter-term issues, but others may linger and have a lasting impact on valuations in the commercial real estate (CRE) sector along a continuum of time.

At this juncture, the global question facing market participants is: “How long does this crisis last and how deep will its impact become?” At a minimum, Q2 economic results will prove dismal based upon Shelter-in-Place and Stay-at-Home Executive Orders for most of the U.S. states largely in place into late June. At the direction of State Governors all states have begun a phased “reopening.”

Based on discussions and interviews with a wide range of market participants, a variety of factors and concerns are prevalent in the market that will likely have a negative impact broadly on CRE values, depending on property type and region. Essential Service Providers have and will be less impacted (distribution facilities, medical facilities, grocery service) as the performance of these sectors is expected to continue.

However, the broader market will experience a myriad of issues based on survey respondents including:

Uncertainty	Lender Concerns	Publicly Traded Securities	Return Requirements
• Restricted access to capital • Unemployment concerns (increasing to 15% in Q2) • GDP decline (-30% in Q2) • Duration of crisis	• DSCR are impacted based on changes in rental revenue and collections • Loan covenants could trigger due to changes in near-term value • Borrowers are concerned about their tenants' ability to pay rent • Borrowers are concerned about their ability to keep their loans current • Lenders are also concerned about the need for loan modifications or work outs	• Stock indexes were down approximately 25% to 30% but have since rebounded • REIT pricing was down approximately 25% but have since rebounded • Crude oil was down approximately 40% but has since partially rebounded	• Interest rates may stay in the 4% - 4.5% range, despite the Federal Reserve's reduction efforts. Banks tightly manage their capital reserves and ratios, and therefore are requiring higher spreads for current risk profile • Durability of Cash Flow forces (new) equity investors to reprice risk. Standby (available, uncommitted) equity now has to be patient until a clearer "path forward" emerges • Impact on cap rates would be upward

Each of the above observations provides empirical evidence that the market has shifted downward and real estate values will likewise be impacted, but to what degree is not certain.

Few experts or economists at this point are willing to state a threshold duration at which point everything will return to normal quickly, versus a duration of limited economic activity that spirals into worldwide recession. At the moment, the prevailing hope of the world is that science miraculously manufactures a cure, while in the meantime, social activity has slowed worldwide.

Integra Current Valuation Framework (June 15 - present)

The preceding property market analysis focuses on recent historic trends before the physical and social impacts of the COVID-19 pandemic were revealed in the U.S. in early March 2020. The property market analysis was current through Q4-2019 with trends and indications for solid growth by most all market indicators. Many current market participants believe the commercial real estate (CRE) markets will return to trend - the lingering question, "How long will it take?" remains uncertain.

What we do know with reasonable certainty:

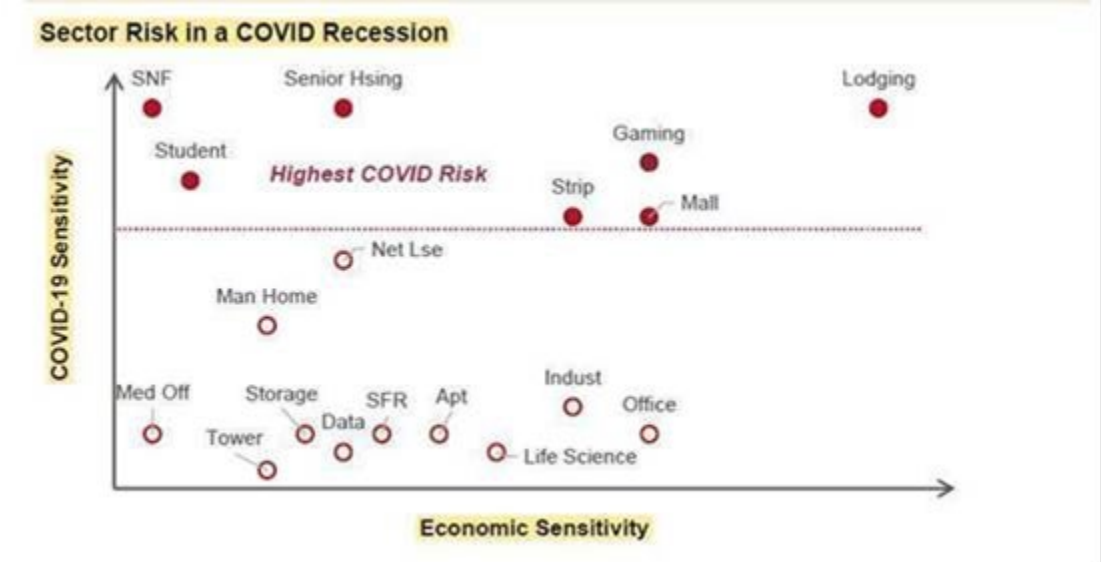
- At a minimum, Q2 economic performance will be dismal.
- Shelter-in-Place and Stay-at-Home executive orders and phased reopening's will have a profound impact on GDP with rising unemployment damaging forward economic performance for six months at a minimum.
- The Federal Reserve's attempt to lower nominal rates was thwarted by lenders setting floors on spreads. Congress subsequently approved a $2 Trillion stimulus package on March 27, 2020. This provided some economic relief, but businesses, owners, investors, and bankers need to support payroll retention and an aggressive program of economic goodwill throughout all sectors of the economy.

Everything forward beyond those three known factors remains subject to considerable risk/uncertainty. Our recent surveys of market participants indicate a focus in the following areas impacting value:

- Impacts could (should) vary by property type, class, and location
- Cost of capital (both debt and equity) is increasing, but at different rates for different asset classes
- Declines in property operations/forecasts (NOI) vary in duration based on property type, class; location, and tenant durability under potential recessionary pressures
- Increases in cap rates (and normalized yields) will vary by property type, class and location as will the underlying assumptions on stabilized or periodic cash flow
- Marketing times for most assets will increase. To a large extent, deal flow was halted based on the sheer physical constraints imposed on property showings/due diligence, etc. under distancing restrictions. As these restrictions are lifted, the market is showing signs of activity, some pent up demand and increased interest, although commercial property deal flow remains muted.

Impact by Property Type, Class & Location

Below is a graph prepared by Greenstreet Advisors plotting the sensitivity (and risk) associated with various property types with the negative impact on value being greater for those assets with greater sensitivity. Those assets relating to essential business operations (grocery, medical, distribution) are less affected than for example lodging and malls where social distancing is more difficult.



Cost of Capital/Liquidity

The cost of capital, both for debt and equity, had been at near historic lows pre crisis. As lenders are coming to grips with the severity of the economic outlook, many have pulled back while others have reacted by raising interest rates, lowering loan to values, or a combination of both. There are clearly

some lenders who are “out” while others remain in the market. Fewer options are available in the market and those options are more expensive today. The rise in cost varies notably by property type with agency lenders and HUD determined to provide liquidity to the multi-family market, while at the other end of the spectrum, financing a hotel is challenging and land financing is nonexistent. Assets focused on essential business operations (e.g., grocery or last mile industrial) remain in favor as do net leased assets with recession-resistant business profiles.

Equity is less clear at the moment. While large pools of capital were being raised through 2019 and into Q1-2020, the strategy has suddenly shifted. Equity is available, but will be deployed with stricter underwriting criteria and more cautious income growth and exit assumptions.

Declines in Property Operations/Forecasts

The lodging, retail, student housing and senior sectors are generally viewed as expecting to suffer the greatest in the short term. Once again, this varies by location and type. Restaurant retail is generally viewed as having greatest risk but is expected to rebound quickly as pent-up demand is evident as everyone can now leave their homes. Grocery retail is currently performing well with big box stores setting record sales per square foot.

Radical changes in the employment picture will begin to affect the housing sector, both single-family and apartments. Apartments will not be immune or “safe” from lost rent, varying by type and location depending on the tenant base employment and its ability to weather a 6 to 12-month contraction.

Rent projections are being held flat in modeling cash flows going forward with the length of time dependent on the asset type.

Depending upon whether values are based on yield capitalization (DCF) or direct capitalization, care must be given to provide “stabilized” forecasts to capitalize; and to normalize yield levels for projecting variable year yield cap.

Premiums on Capitalization Rates

While many deals have fallen out of contract, other deals are still closing. Some are closing at their pre-crisis contract price levels, while many deals are being re-traded in the market with discounts influenced by property type, location and buyer/seller motivations.

As the transaction market solidifies, the impact on capitalization rates will become more clear. Some market participants believe the answer to market value lies in capitalization rates while others believe rates are not moving, but net operating income in the short run is being impacted. Once again, the answers vary by property type and location.

With a rise in the cost of capital (debt and equity), valuation theory suggests a rise in capitalization rates. A 100 basis point upward movement in interest rates for example, combined with a modest rise in equity returns, can move capitalization rates up over 100 basis points. This analysis is tempered, however with the understanding that it is difficult to settle on the inputs given the wide range of data in the market. In addition, care must be taken not to “double hit” the analysis by modeling

significantly lower net income via lower performance projections and at the same time raising the return requirements.

Normalization of Yields

All yield capitalization is based on forward forecasting of property performance to generate a current cash flow, and future forecasted reversion. Therefore, the timeframe for the market to reach a point of pricing transparency to "return to par" is the critical assumption in the yield cap.

The longer or less likely the assumptions are, the higher the near-term yields. Valuation theory and past downward economic cycles suggest a shortening of the holding period and a normalization of "overall yield" applied over the shorter holding period.

As the transaction market solidifies, the impact on investment rates and relationship of assumption risk to market risk will become clearer.

Marketing and Exposure Time

At the present time, there is consensus of declining market demand in CRE transactions, due to market conditions ensuing from COVID-19. It is natural to assume that exposure time on properties either for sale or lease, will likely be extended. Comparing pre-COVID-19 exposure periods (perhaps the best) to the banking crisis of 2008/2009 (perhaps the worst) can glean some differences that could extrapolate to exposure time going forward, i.e. from peak to trough.

Sector	Months on Market March 2008-09	Months on Market March 2018-19	Change in Months	% Change Peak to Trough
Office	29.6	14.8	14.8	100%
Retail	15	11.4	3.6	32%
Industrial	19.6	6.7	12.9	192%
Average	21.4	11.0	10.4	95%

Source: Costar – data presented in Months

Days on the market increased substantially in the last economic crisis of 2008-2009, with an average of 21 months on market for major property classes. The trailing 12 months preceding the COVID-19 crisis, average days on the market were 11 months.

Based on this historical perspective, marketing time could potentially double from current levels. This would have to be tempered recognizing that the depth and duration of this current economic crisis is tied to a health crisis and may have a conclusion more closely tied to its resolution.

General Public Market Sentiment

General public market sentiment is a changing rollercoaster with each passing day. Right now, sentiment is cautious and trying not to overreact, but provide some relief, negotiate in good faith; try and be humane and understand the entire world is in this together. Some countries take two weeks off each year for holiday, and their entire economy doesn't fall apart. The world is not going to take another four-week vacation from large components of consumer-facing and public activities.

Most humans have been sequestered in their homes with limited social contact, with reasoned concerns for the health and safety of families and friends, all the while consuming worldwide coverage and analysis of atypical death rates from an infectious virus not seen in over 100 years.

Market sentiment more than likely gets worse in the coming weeks before it gets better, absent the announcement of a miracle cure/treatment during that time.

Agriculture Market Sentiment

As of the effective date, agricultural realtors are not projecting a long-term impact on many agricultural real estate sectors from COVID-19. Some industries are beginning to feel impacts such as those that rely upon the restaurant sector to sell its commodities. However, the agricultural sector has been deemed an essential service. Market data for the subject's land-type that has occurred during the pandemic does not indicate any retraction in pricing.

Conclusion

This heightened uncertainty forms the basis of defined risk. Considering the subject's relative sensitivity to the COVID-19 risks as of the effective date of the valuation, Integra rates the relative risks of the subject property as of the effective date as follows:

This heightened uncertainty forms the basis of defined risk. Considering the subject's relative sensitivity to the COVID-19 risks as of the effective date, the valuation Integra rates the relative risks of the subject property as of the effective date as follows:

Property Type Sensitivity to Risk	Low – The subject is vacant land zoned for agricultural development (subject to a hypothetical condition).
Property Location Sensitivity to Risk	Low – The subject is located in a rural area with a low population and density in the immediate area. Further, while still located in California where a large portion of the nation's confirmed cases are, Placer County has a less dense population and has only seen a small number of cases.
Capital Impact Risk	Low – Continued capital appears available and investment in agricultural properties is expected to continue. Spreads are currently reasonable, and agency lending remains available competitively.

While the near-term outlook for the Roseville/Placer County agricultural market is uncertain, the fundamentals in place prior to the recent events surrounding COVID-19 position the market for stability over the long term.

Property Analysis

Land Description and Analysis

Land Description	
Land Area (Gross)	243.40 acres; 10,602,504 SF
Land Area (Usable)	131.80 acres; 5,741,208 SF
Source of Land Area	City or Roseville GIS Department
Primary Street Frontage	East of S. Brewer Road and North of Phillip Road
Shape	Irregular
Corner	No
Topography	Generally level and at street grade
Drainage	No problems reported or observed
Environmental Hazards	None reported or observed
Ground Stability	No problems reported or observed
Flood Area Panel Number	06061C0920H
Date	November 2, 2018
Zone	X
Description	Outside of 500-year floodplain
Insurance Required?	No
Zoning; Other Regulations	
Zoning Jurisdiction	City of Roseville
Zoning Designation	P/QP
Description	Public/Quasi-Public
Legally Conforming?	Appears to be legally conforming
Permitted Uses	The P/QP designation is used to establish areas for municipal, governmental or public facilities.
Utilities	
Service	Provider
Water	Water Well
Sewer	Septic needed
Electricity	PG&E

It should be noted the subject is currently zoned Public/Quasi-Public. The P/QP designation is used to establish areas for municipal, governmental or public facilities. However, we have been requested to appraise the subject under the hypothetical condition the subject is zoned for agricultural uses. Which is the highest and best economic use of the subject site.

We are not experts in the interpretation of zoning ordinances. An appropriately qualified land use attorney should be engaged if a determination of compliance with zoning is required.

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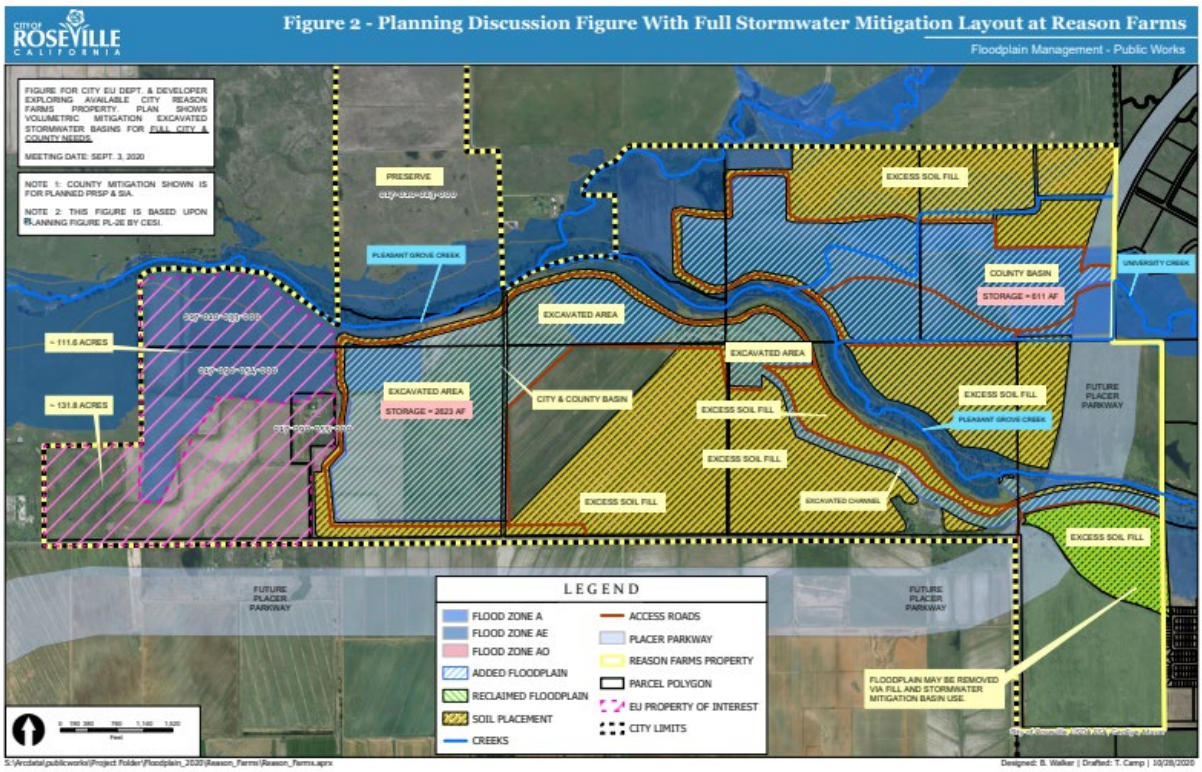
Land Area



It should be noted the subject property represents 243.40 acre portion of Assessor's parcels 017-010-033, 017-090-054 and -055, which have a total land area of 418.90 acres. The land area pertaining to the subject is outlined in the table above by pink diagonal lines. As shown in the table above, a portion of the site is within the 100-year floodplain. In total, 111.60 acres are considered undevelopable. Consequently, the useable or net land area of the subject is 131.80 acres as shown in the table below.

Land Area Summary

Tax ID	SF	Usable SF	Unusable SF	Acres	Usable Acres	Unusable Acres
017-010-033; 017-090-054 & -055 (Portion)	10,602,504	5,741,208	4,861,296	243.40	131.80	111.60

Source: Public Records

Flood Hazard Status

The following table provides flood hazard information.

Flood Hazard Status	
Community Panel Number	06061C0920H
Date	November 2, 2018
Zone	X
Description	Outside of 500-year floodplain
Insurance Required?	No

While a majority of the subject's land area (131.80 acres) is within Flood Zone X, a large portion (111.60 acres) is located within the following zone:

FEMA Zone AE: Special flood hazard areas subject to inundation by the 100-year flood determined in a Flood Insurance Study by detailed methods. Base flood elevations are shown within these zones. Mandatory flood insurance purchase requirements apply.

Easements, Encroachments and Restrictions

We were not provided a current title report to review. We are not aware of any easements, encroachments, or restrictions that would adversely affect value. Our valuation assumes no adverse impacts from easements, encroachments, or restrictions, and further assumes that the subject has clear and marketable title.

Seismic Hazards

According to the Seismic Safety Commission, the subject property is located within Zone 3, which is considered to be the lowest risk zone in California. There are only two zones in California: Zone 4, which is assigned to areas near major faults; and Zone 3, which is assigned to all other areas of more moderate seismic activity. In addition, the subject is not located in a Fault-Rupture Hazard Zone (formerly referred to as an Alquist-Priolo Special Study Zone), as defined by Special Publication 42 (revised January 1994) of the California Department of Conservation, Division of Mines and Geology.

Soil Report

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Capability Class - I
- Capability Class - II
- Capability Class - III
- Capability Class - IV
- Capability Class - V
- Capability Class - VI
- Capability Class - VII
- Capability Class - VIII
- Not rated or not available

Soil Rating Lines
- Capability Class - I
- Capability Class - II
- Capability Class - III
- Capability Class - IV
- Capability Class - V
- Capability Class - VI
- Capability Class - VII
- Capability Class - VIII
- Not rated or not available

Soil Rating Points
- Capability Class - I
- Capability Class - II
- Capability Class - III
- Capability Class - IV
- Capability Class - V
- Capability Class - VI
- Capability Class - VII
- Capability Class - VIII
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

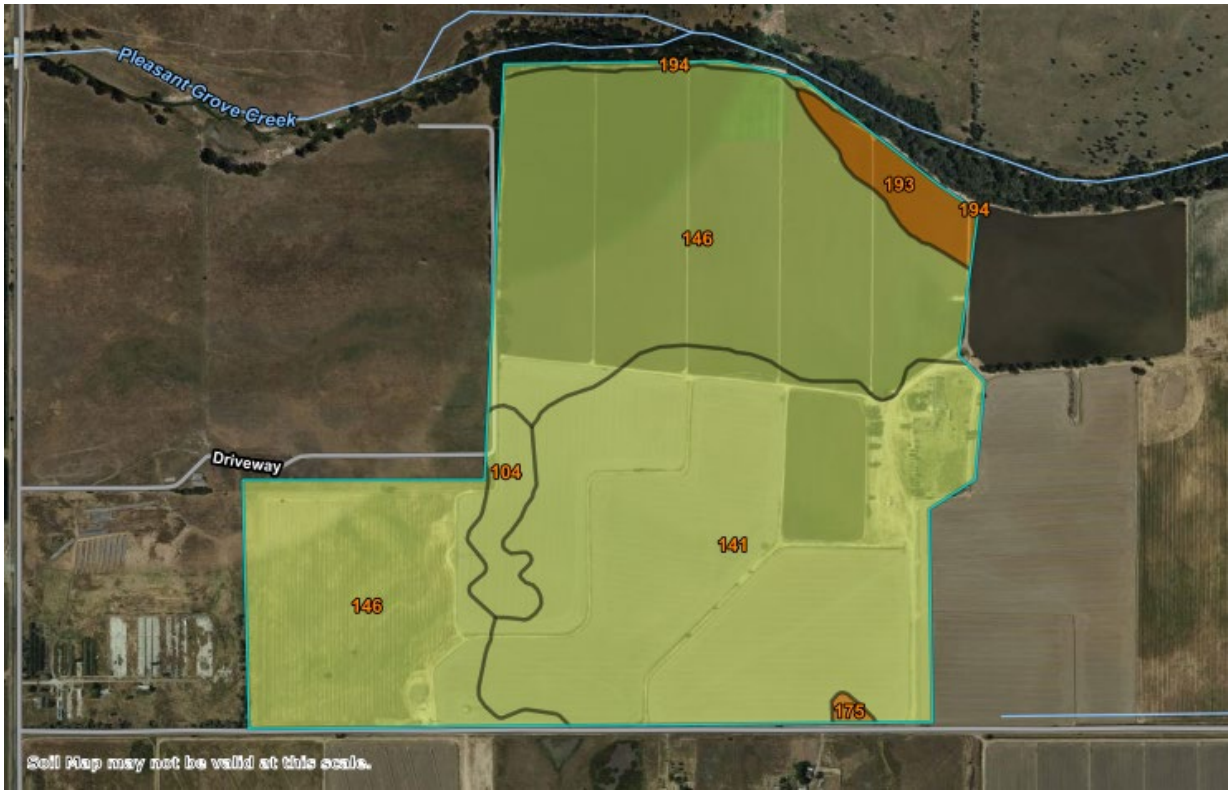
This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Placer County, California, Western Part
Survey Area Data: Version 12, May 29, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
104	Alamo-Fiddyment complex, 0 to 5 percent slopes	4	6.8	2.7%
141	Cometa-Fiddyment complex, 1 to 5 percent slopes	4	105.9	42.5%
146	Fiddyment loam, 1 to 8 percent slopes	4	127.5	51.2%
175	Ramona sandy loam, 2 to 9 percent slopes	2	0.6	0.3%
193	Xerofluvents, occasionally flooded	2	6.7	2.7%
194	Xerofluvents, frequently flooded	4	1.6	0.6%
Totals for Area of Interest			**249.1**	**100.0%**

It is noted the area of interest shown above is slightly larger than the subject's total land area of 243.40 acres.

Conclusion of Land Analysis

Overall, the physical characteristics of the site result in its suitability for agricultural use. This is supported by the fact the subject has historically been planted with rice.

Looking northwest across subject property

Looking north across subject property

Looking northeast across subject property

Looking east across subject property

Looking west along Phillip Road

Looking east along Phillip Road

Real Estate Taxes

The property tax system in California was amended in 1978 by Article XIII to the State Constitution, commonly referred to as Proposition 13. It provides for a limitation on property taxes and for a procedure to establish the current taxable value of real property by reference to a base year value, which is then modified annually to reflect inflation (if any). Annual increases cannot exceed 2% per year.

The base year was set at 1975-76 or any year thereafter in which the property is substantially improved or changes ownership. When either of these two conditions occurs, the property is to be re-appraised at market value, which becomes the new base year assessed value. Proposition 13 also limits the maximum tax rate to 1% of the value of the property, exclusive of bonds and direct charges. Bonded indebtedness approved prior to 1978, and any bonds subsequently approved by a two-thirds vote of the district in which the property is located, can be added to the 1% tax rate.

The subject property is currently owned by a government entity and is exempt from taxes. In examining property tax records for an adjacent property, the subject is located in a tax rate area with an ad valorem rate of 1.085576%.

Highest and Best Use

Process

Before a property can be valued, an opinion of highest and best use must be developed for the subject site, both as vacant, and as improved. By definition, the highest and best use must be:

- Physically possible.
- Legally permissible under the zoning regulations and other restrictions that apply to the site.
- Financially feasible.
- Maximally productive, i.e., capable of producing the highest value from among the permissible, possible, and financially feasible uses.

As Vacant

In accordance with the definition of highest and best use, it is appropriate to analyze the subject property as it relates to legal permissibility, physical possibility, financial feasibility and maximum productivity. As discussed previously in this report, while the subject is currently zoned for public/quasi-public use; however we are appraising the subject based on its highest and best economic use and under the hypothetical condition it is currently zoned for agricultural use.

The subject property is located within the city limits of Roseville proximate to the western boundary. Consequently, the subject is located within the path of suburban growth. We estimate a long term development timeline for the subject's acreage (20+ years). As support for our conclusion it is noted the owner of a property about two miles east planted an almond orchard two years ago. Almonds trees have an economic life of 30 years indicating the owner doesn't think the area will transition to suburban use in the near term.

The physical characteristics of the subject do not appear to impose any unusual restrictions on development. The water availability, size and location of the subject property are ideal for a wide variety of agricultural uses. While a majority of the subject's land area (131.80 acres) is within Flood Zone X, a large portion (111.60 acres) is located within the 100-year floodplain. Flood insurance would be required if this portion of the subject were to be developed with vertical improvements. However, agricultural use such as rice crops would be an appropriate use. The 131.80 acres not located in the flood plain could be planed with rice as well or an orchard. Both agricultural uses are located proximate to the subject (both rice and almond orchards).

As indicated by market research, ground capable of supporting permanent plantings is in high demand. The outlook for agricultural use continues to be positive with planting expansion occurring when suitable vacant land becomes available. Given the demand for mid-to-long-term agricultural use, the property's most financially feasible use is to utilize the property for an agricultural use. There is an active market for agricultural properties in the area. However, demand and prices are greater for properties located in the path of growth, with potential for long-term future suburban development.

Conclusion

Legal, physical and market conditions have been analyzed to evaluate the highest and best use of the subject property. The analysis is presented to evaluate the type of use(s) that will generate the greatest level of future benefits possible to the property. Based on the factors previously discussed, agricultural use is legally permissible, physically possible and financially feasible. However, the subject is located in the distant path of growth and has long-term development potential. Eventually the subject will be assigned a suburban land use zone, which will lead to increasing land values. Considering the subject's specific characteristics, the highest and best use of the subject property – as vacant – is for interim agricultural use with potential for long-term future suburban development.

Most Probable Buyer

Taking into account the functional utility of the site and area development trends, the most probable buyer is a land speculator or farmer.

Valuation

Valuation Methodology

Appraisers usually consider three approaches to estimating the market value of real property. These are the cost approach, sales comparison approach and the income capitalization approach.

The **cost approach** assumes that the informed purchaser would pay no more than the cost of producing a substitute property with the same utility. This approach is particularly applicable when the improvements being appraised are relatively new and represent the highest and best use of the land or when the property has unique or specialized improvements for which there is little or no sales data from comparable properties.

The **sales comparison approach** assumes that an informed purchaser would pay no more for a property than the cost of acquiring another existing property with the same utility. This approach is especially appropriate when an active market provides sufficient reliable data. The sales comparison approach is less reliable in an inactive market or when estimating the value of properties for which no directly comparable sales data is available. The sales comparison approach is often relied upon for owner-user properties.

The **income capitalization approach** reflects the market's perception of a relationship between a property's potential income and its market value. This approach converts the anticipated net income from ownership of a property into a value indication through capitalization. The primary methods are direct capitalization and discounted cash flow analysis, with one or both methods applied, as appropriate. This approach is widely used in appraising income-producing properties.

Reconciliation of the various indications into a conclusion of value is based on an evaluation of the quantity and quality of available data in each approach and the applicability of each approach to the property type.

The methodology employed in this assignment is summarized as follows:

Approaches to Value

Approach	Applicability to Subject	Use in Assignment
Cost Approach	Not Applicable	Not Utilized
Sales Comparison Approach	Applicable	Utilized
Income Capitalization Approach	Not Applicable	Not Utilized

Sales Comparison Approach

To develop an opinion of the subject's land value, as if vacant and available to be developed to its highest and best use, we utilize the sales comparison approach. This approach develops an indication of value by researching, verifying, and analyzing sales of similar properties.

Our sales research focused on transactions within the following parameters:

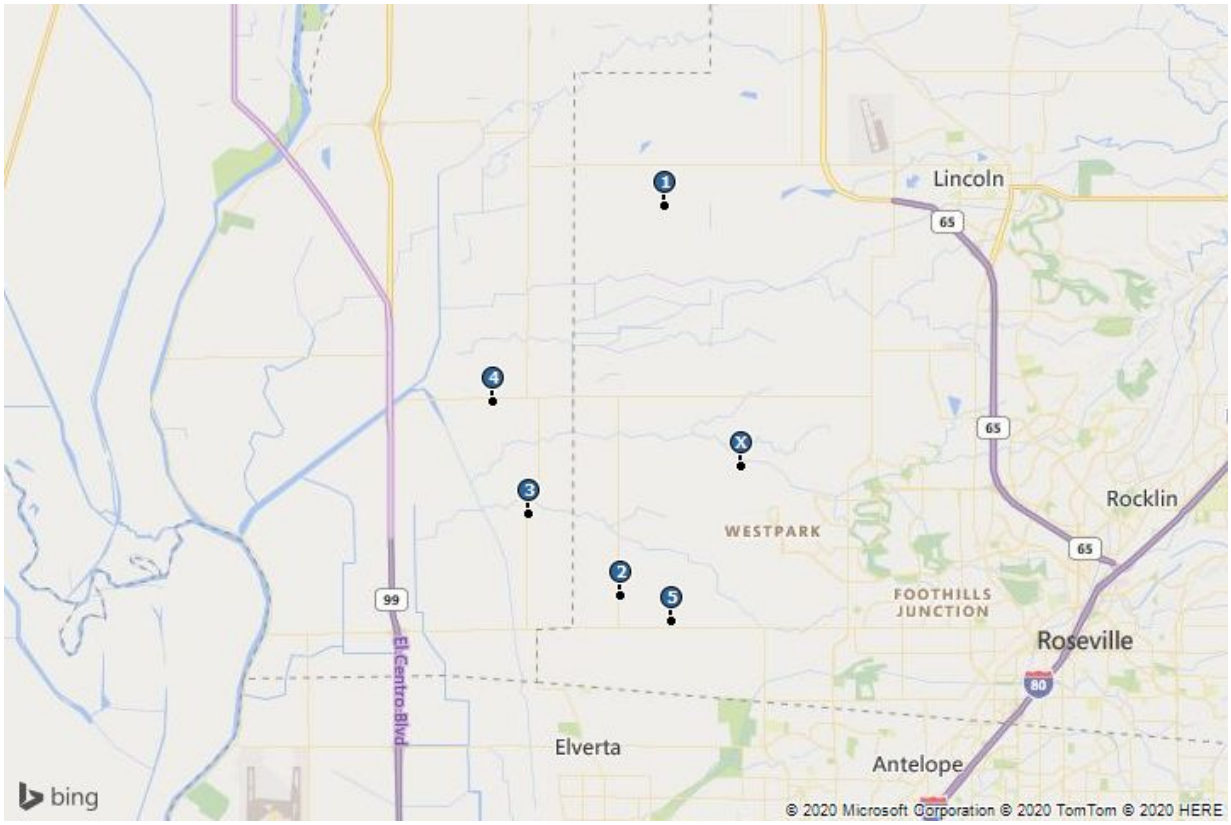
- Location: Placer/Sutter County
- Size: 15 to 250 acres
- Use: Agricultural use
- Transaction Date: August 2018 or later

For this analysis, we use price per acre as the appropriate unit of comparison because market participants typically compare sale prices and property values on this basis. The most relevant sales are summarized in the following table.

Summary of Comparable Land Sales

No.	Name/Address	Sale Date; Status	Effective Sale Price	SF; Acres	Zoning	$/SF Land	$/Acre
1	0 Critter Creek Road 0 Critter Creek Rd. Lincoln Placer County CA	Aug-20 Closed	$389,000	631,620 14.50	Agriculture, 80-acre minimum	$0.62	$26,828
	Comments: At the time of sale, this property was utilized for horse pasture grazing and had three shade structures. It has an agricultural well and is not within a water district. The property was listed on the open market. The buyer knew the seller. The property has some long-term development potential which factored into the sale price for the buyer. Since the sale, the buyer has removed the shade structures, deep ripped the property, and will be planting almond trees.						
2	West line of Brewer Rd., south of Phillip Rd. Brewer Rd. Pleasant Grove Placer County CA	Oct-19 Closed	$2,000,000	7,609,932 174.70	Agricultural	$0.26	$11,448
	Comments: This property sold in October 2019 and has historically been planted with rice.						
3	5745 Pleasant Grove Road 5745 Pleasant Grove Rd. Pleasant Grove Sutter County CA	Feb-19 Closed	$1,000,000	3,138,498 72.05	Agriculture, 80-acre minimum	$0.32	$13,879
	Comments: Soil Quality: 71% IV, 20% II, 9% III. There is a 1,836 SF modular home in fair condition, a 3,000 SF steel shop in fair condition, and miscellaneous outbuildings in poor condition. The property is within a flood zone and has historically been used for field crops. The property receives irrigation water from two onsite wells, though one needs to be replaced. The property is also within South Sutter W.D. The buyer is a large area almond grower.						
4	Proposed 206 Acre Almond Orchard 3098 Howsley Rd. Pleasant Grove Sutter County CA	Sep-18 Closed	$2,856,000	8,980,330 206.16	Agriculture, 80-acre minimum	$0.32	$13,853
	Comments: Soils: 51% IV, 26% III, 23% II. The buyer purchased the property to plant almonds. The property has historically been utilized for rice production. There are four onsite wells and the property has access to South Sutter W.D. There are no improvements.						
5	8010 Baseline Road 8010 Baseline Rd. Roseville Placer County CA	Aug-18 Closed	$1,207,000	3,327,984 76.40	Agricultural and single	$0.36	$15,798
	Comments: The property has a 2,582-square-foot residence which was in need of repairs but contributed value in the sale. The site has Class IV soils and the buyer intends to plant an almond orchard. The property is located in the proposed Curry Creek Community Plan and has long-term development potential.						
	Subject East of S. Brewer Road and North of Phillip Road Roseville, CA			10,602,504 243.40	Public/Quasi-Public		

Comparable Land Sales Map



Sale 1
0 Critter Creek Road

Sale 2
West line of Brewer Rd., south of Phillip Rd.

Sale 3
5745 Pleasant Grove Road

Sale 4
Proposed 206 Acre Almond Orchard

Sale 5
8010 Baseline Road

Analysis and Adjustment of Sales

The sales are compared to the subject and adjusted to account for material differences that affect value. Adjustments are considered for the following factors, in the sequence shown below.

Adjustment Factors	
Effective Sale Price	Accounts for atypical economics of a transaction, such as demolition cost, expenditures by the buyer at time of purchase, or other similar factors. Usually applied directly to sale price on a lump sum basis. ***For the purpose of this analysis, the contribution of existing improvements has been removed from the sale price of Comparable 5.***
Real Property Rights	Fee simple, leased fee, leasehold, partial interest, etc. ***No Comparables required adjustment.***
Financing Terms	Seller financing, or assumption of existing financing, at non-market terms. ***No Comparables required adjustment.***
Conditions of Sale	Extraordinary motivation of buyer or seller, assemblage, forced sale, related parties transaction. ***No Comparables required adjustment.***
Market Conditions	Changes in the economic environment over time that affect the appreciation and depreciation of real estate. ***Comparing the comparables that occurred prior to the COVID pandemic to those occurring more recently does not indicate an adjustment. Therefore, no Comparables required adjustment.***
Location	Market or submarket area influences on sale price; surrounding land use influences. ***Sales 2, 3 and 4 are located within unincorporated areas of Placer or Sutter Counties deemed inferior to the subject's location within the city limits of Roseville and have been adjusted upward.***
Size	Inverse relationship that often exists between parcel size and unit value. ***Comparables 1, 3 and 5 are appreciably smaller than the subject and have been adjusted downward by varying degrees.***
Site Utility	Shape, topography, and other characteristics may also enhance or detract from a property's utility and desirability. As previously discussed, 111.60 acres (46%) of the subject's 243.40 acres is located within the flood zone. ***Comparables 1, 2 and 5 are not located within the flood zone and are adjusted downward for their superior site utility. Comparables 3 and 4 are located entirely in the flood zone. These comparables are adjusted upward for their inferior site utility in comparison to the subject.***
Water Availability	Due to water insecurity, properties that offer more reliable sources of water receive premium prices in the marketplace. Optimal availability is characterized by multiple sources including groundwater from on-site wells and access to surface water from a reliable irrigation district or reliable waterway. ***Comparable 5 did not have a water source and has been adjusted upward.***

Development Timeline	For speculative properties, the anticipated development timeline or holding period significantly affects the purchase price. Longer holding periods generally relate to lower prices per acre, while shorter holding periods contribute to higher prices per acre. Development timelines may hinge on remaining entitlements, necessary infrastructure and/or path of growth. The estimated development timeline of the comparables is compared to the subject and adjusted accordingly. ***The subject's area has a development timeline greater than 20 years. Comparables 1 and 5 have shorter timelines and have been adjusted downward. Comparable 2, 3 and 4 have longer timelines and have been adjusted upward.***

The table on the following page summarizes the adjustments we make to the comparable sales.

The following table summarizes the adjustments we make to each sale.

Land Sales Adjustment Grid

	Subject	Comparable 1	Comparable 2	Comparable 3	Comparable 4	Comparable 5
Address	East of S. Brewer Road and North of Phillip Road	0 Critter Creek Rd.	Brewer Rd.	5745 Pleasant Grove Rd.	3098 Howsley Rd.	8010 Baseline Rd.
City	Roseville	Lincoln	Pleasant Grove	Pleasant Grove	Pleasant Grove	Roseville
County	Placer	Placer	Placer	Sutter	Sutter	Placer
Sale Date		Aug-20	Oct-19	Feb-19	Sep-18	Aug-18
Sale Status		Closed	Closed	Closed	Closed	Closed
Sale Price		$389,000	$2,000,000	$1,150,000	$2,856,000	$1,397,000
Other Adjustment		$0	$0	$0	$0	$190,000
Price Adjustment		–	–	–	–	–
Description of Adjustment						Improvements
Effective Sale Price		$389,000	$2,000,000	$1,000,000	$2,856,000	$1,207,000
Square Feet	10,602,504	631,620	7,609,932	3,138,498	8,980,330	3,327,984
Acres	243.40	14.50	174.70	72.05	206.16	76.40
Well Water Irrigation	Yes	Yes	Yes	Yes	Yes	No
Price per Acre		**$26,828**	**$11,448**	**$13,879**	**$13,853**	**$15,798**
Property Rights		Fee Simple	Fee Simple	Fee Simple	Fee Simple	Fee Simple
Adjustment		=	=	=	=	=
Financing Terms		Cash to seller	Cash to seller	Cash to seller	Cash to seller	cash to seller
Adjustment		=	=	=	=	=
Conditions of Sale		Market	Market	Market	Market	Market
Adjustment		=	=	=	=	=
Market Conditions	10/23/2020	Aug-20	Oct-19	Feb-19	Sep-18	Aug-18
Adjustment		=	=	=	=	=
Location		=	+	+	+	=
Size		--	=	-	=	-
Site Utility		-	-	+	+	-
Water Availibility		=	=	=	=	+
Development Timeline		-	++	+	+	-
Overall Adjustment		**----**	**++**	**++**	**+++**	**--**
Indicated Value		**$15,000**				

Land Value Conclusion

The market data set consists of land sales that are considered to be reasonable indicators of market value for the subject property. Adjustments were required to the sales for differing characteristics. The comparable sales reflect a price range of $11,448 - $26,828 per acre. Overall, the comparables are deemed reliable and applicable to produce a credible estimate of the land value for the property. The adjusted range of the data set indicates a land value estimate close to Comparables 3 and 5. The following table arrays the indicators from the Sales Comparison Approach along with the subject.

Sales Ranking

Comparable	Ranking	Per SF Indicator
1	Sig. Superior	< $26,828
5	Sl. Superior	> $15,798
	Subject Property	
3	Inferior	> $13,879
4	Inferior	> $13,853
2	Inferior	> $11,448

Considering the characteristics of the subject property and indicators within the data set, a land value indicator of **$15,000 per acre** is concluded for the subject which will be used in estimating the market value of the subject via the sales comparison approach.

Land Value Conclusion

Indicated Value per Acre	$15,000
Subject Acres	243.40
Indicated Value	$3,651,000
Rounded	$3,650,000

Reconciliation and Conclusion of Value

As discussed previously, we use only the sales comparison approach in developing an opinion of value for the subject. The cost and income approaches are not applicable, and are not used.

Based on the preceding valuation analysis and subject to the definitions, assumptions, and limiting conditions expressed in the report, our value opinion follows:

Value Conclusion

Appraisal Premise	Interest Appraised	Date of Value	Value Conclusion
Market Value	Fee Simple	October 23, 2020	$3,650,000

Extraordinary Assumptions and Hypothetical Conditions

The value conclusions are subject to the following extraordinary assumptions. An extraordinary assumption is an assignment-specific assumption as of the effective date regarding uncertain information used in an analysis which, if found to be false, could alter the appraiser's opinions or conclusions.

None.

The value conclusions are based on the following hypothetical conditions. A hypothetical condition is a condition, directly related to a specific assignment, which is contrary to what is known by the appraiser to exist on the effective date of the assignment results, but is used for the purpose of analysis.

1. The subject property comprises 243.40± acres of vacant land that represents a portion of three contiguous Assessor's parcels (017-010-033; 017-090-054 -055) which in total comprise 418.90± acres. The assembled site is zoned for public/quasi-public use by the city of Roseville. This report considers the value of the subject property based on its highest and best economic use, which is agricultural development. This valuation is subject to a hypothetical condition the subject is a 243.40± acre parcel that is zoned for agricultural development and is legally transferable.

The use of any extraordinary assumption or hypothetical condition may have affected the assignment results.

As of the date of value, the economy (globally, nationally, and locally) was in a state of rapid transition with a widespread expectation of the imminent onset of a significant recession. The outbreak of COVID-19 (coronavirus disease of 2019) in China was declared a global pandemic by the World Health Organization (WHO) on March 11, 2020. Some market deterioration had occurred shortly before this date, but the declaration by the WHO soon led to municipal and statewide orders to "shelter in place," causing widespread closures of businesses and a massive disruption to general commerce. The status of economic conditions is changing rapidly, creating great uncertainty in the markets. The value expressed herein represents our opinion based on the best available data reflective as of the date of value. While values are always subject to change over time, we caution the reader that in the current economic climate, market volatility creates the potential for a more significant change in value over a relatively short period of time.

Exposure Time

Exposure time is the length of time the subject property would have been exposed for sale in the market had it sold on the effective valuation date at the concluded market value. Based on the

concluded market value stated previously, it is our opinion that the probable exposure time is 9-12 months.

Marketing Period

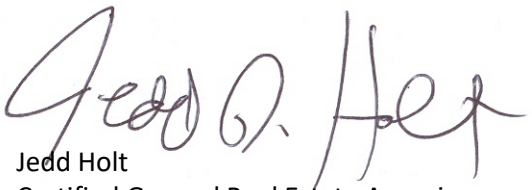
Marketing time is an estimate of the amount of time it might take to sell a property at the concluded market value immediately following the effective date of value. Because of the COVID-19 pandemic and market uncertainty which has stalled market transactions, we estimate the subject's marketing period at 12 months.

Certification

We certify that, to the best of our knowledge and belief:

1. The statements of fact contained in this report are true and correct.
2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are our personal, impartial, and unbiased professional analyses, opinions, and conclusions.
3. We have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
4. We have performed no services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding the agreement to perform this assignment.
5. We have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
6. Our engagement in this assignment was not contingent upon developing or reporting predetermined results.
7. Our compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
8. Our analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice as well as applicable state appraisal regulations.
9. The reported analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute.
10. The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
11. Jedd Holt made a personal inspection of the property that is the subject of this report. Kevin Ziegenmeyer, MAI, also made a personal inspection of the property that is the subject of this report.
12. No one provided significant real property appraisal assistance to the person(s) signing this certification.
13. We have experience in appraising properties similar to the subject and are in compliance with the Competency Rule of USPAP.
14. As of the date of this report, Kevin Ziegenmeyer, MAI, has completed the continuing education program for Designated Members of the Appraisal Institute.

15. As of the date of this report, Jedd Holt, has completed the Standards and Ethics Education Requirements for Candidates/Practicing Affiliates of the Appraisal Institute.



Jedd Holt
Certified General Real Estate Appraiser
California Certificate # AG043883

Kevin Ziegenmeyer, MAI
Certified General Real Estate Appraiser
California Certificate # AG013567

Assumptions and Limiting Conditions

This appraisal and any other work product related to this engagement are limited by the following standard assumptions, except as otherwise noted in the report:

1. The title is marketable and free and clear of all liens, encumbrances, encroachments, easements and restrictions. The property is under responsible ownership and competent management and is available for its highest and best use.
2. There are no existing judgments or pending or threatened litigation that could affect the value of the property.
3. There are no hidden or undisclosed conditions of the land or of the improvements that would render the property more or less valuable. Furthermore, there is no asbestos in the property.
4. The revenue stamps placed on any deed referenced herein to indicate the sale price are in correct relation to the actual dollar amount of the transaction.
5. The property is in compliance with all applicable building, environmental, zoning, and other federal, state and local laws, regulations and codes.
6. The information furnished by others is believed to be reliable, but no warranty is given for its accuracy.

This appraisal and any other work product related to this engagement are subject to the following limiting conditions, except as otherwise noted in the report:

1. An appraisal is inherently subjective and represents our opinion as to the value of the property appraised.
2. The conclusions stated in our appraisal apply only as of the effective date of the appraisal, and no representation is made as to the effect of subsequent events.
3. No changes in any federal, state or local laws, regulations or codes (including, without limitation, the Internal Revenue Code) are anticipated.
4. No environmental impact studies were either requested or made in conjunction with this appraisal, and we reserve the right to revise or rescind any of the value opinions based upon any subsequent environmental impact studies. If any environmental impact statement is required by law, the appraisal assumes that such statement will be favorable and will be approved by the appropriate regulatory bodies.
5. Unless otherwise agreed to in writing, we are not required to give testimony, respond to any subpoena or attend any court, governmental or other hearing with reference to the property without compensation relative to such additional employment.
6. We have made no survey of the property and assume no responsibility in connection with such matters. Any sketch or survey of the property included in this report is for illustrative purposes only and should not be considered to be scaled accurately for size. The appraisal

covers the property as described in this report, and the areas and dimensions set forth are assumed to be correct.

7. No opinion is expressed as to the value of subsurface oil, gas or mineral rights, if any, and we have assumed that the property is not subject to surface entry for the exploration or removal of such materials, unless otherwise noted in our appraisal.

8. We accept no responsibility for considerations requiring expertise in other fields. Such considerations include, but are not limited to, legal descriptions and other legal matters such as legal title, geologic considerations such as soils and seismic stability; and civil, mechanical, electrical, structural and other engineering and environmental matters. Such considerations may also include determinations of compliance with zoning and other federal, state, and local laws, regulations and codes.

9. The distribution of the total valuation in the report between land and improvements applies only under the reported highest and best use of the property. The allocations of value for land and improvements must not be used in conjunction with any other appraisal and are invalid if so used. The appraisal report shall be considered only in its entirety. No part of the appraisal report shall be utilized separately or out of context.

10. Neither all nor any part of the contents of this report (especially any conclusions as to value, the identity of the appraisers, or any reference to the Appraisal Institute) shall be disseminated through advertising media, public relations media, news media or any other means of communication (including without limitation prospectuses, private offering memoranda and other offering material provided to prospective investors) without the prior written consent of the persons signing the report.

11. Information, estimates and opinions contained in the report and obtained from third-party sources are assumed to be reliable and have not been independently verified.

12. Any income and expense estimates contained in the appraisal report are used only for the purpose of estimating value and do not constitute predictions of future operating results.

13. If the property is subject to one or more leases, any estimate of residual value contained in the appraisal may be particularly affected by significant changes in the condition of the economy, of the real estate industry, or of the appraised property at the time these leases expire or otherwise terminate.

14. Unless otherwise stated in the report, no consideration has been given to personal property located on the premises or to the cost of moving or relocating such personal property; only the real property has been considered.

15. The current purchasing power of the dollar is the basis for the values stated in the appraisal; we have assumed that no extreme fluctuations in economic cycles will occur.

16. The values found herein are subject to these and to any other assumptions or conditions set forth in the body of this report but which may have been omitted from this list of Assumptions and Limiting Conditions.

17. The analyses contained in the report necessarily incorporate numerous estimates and assumptions regarding property performance, general and local business and economic

conditions, the absence of material changes in the competitive environment and other matters. Some estimates or assumptions, however, inevitably will not materialize, and unanticipated events and circumstances may occur; therefore, actual results achieved during the period covered by our analysis will vary from our estimates, and the variations may be material.

18. The Americans with Disabilities Act (ADA) became effective January 26, 1992. We have not made a specific survey or analysis of the property to determine whether the physical aspects of the improvements meet the ADA accessibility guidelines. We claim no expertise in ADA issues, and render no opinion regarding compliance of the subject with ADA regulations. Inasmuch as compliance matches each owner's financial ability with the cost to cure the non-conforming physical characteristics of a property, a specific study of both the owner's financial ability and the cost to cure any deficiencies would be needed for the Department of Justice to determine compliance.

19. The appraisal report is prepared for the exclusive benefit of you, your subsidiaries and/or affiliates. It may not be used or relied upon by any other party. All parties who use or rely upon any information in the report without our written consent do so at their own risk.

20. No studies have been provided to us indicating the presence or absence of hazardous materials on the subject property or in the improvements, and our valuation is predicated upon the assumption that the subject property is free and clear of any environment hazards including, without limitation, hazardous wastes, toxic substances and mold. No representations or warranties are made regarding the environmental condition of the subject property. IRR - Sacramento, Integra Realty Resources, Inc., and their respective officers, owners, managers, directors, agents, subcontractors or employees (the "Integra Parties"), shall not be responsible for any such environmental conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because we are not experts in the field of environmental conditions, the appraisal report cannot be considered as an environmental assessment of the subject property.

21. The persons signing the report may have reviewed available flood maps and may have noted in the appraisal report whether the subject property is located in an identified Special Flood Hazard Area. However, we are not qualified to detect such areas and therefore do not guarantee such determinations. The presence of flood plain areas and/or wetlands may affect the value of the property, and the value conclusion is predicated on the assumption that wetlands are non-existent or minimal.

22. We are not a building or environmental inspector. The Integra Parties do not guarantee that the subject property is free of defects or environmental problems. Mold may be present in the subject property and a professional inspection is recommended.

23. The appraisal report and value conclusions for an appraisal assume the satisfactory completion of construction, repairs or alterations in a workmanlike manner.

24. **IRR - Sacramento is an independently owned and operated company. The parties hereto agree that Integra shall not be liable for any claim arising out of or relating to any appraisal report or any information or opinions contained therein as such appraisal report is the sole and exclusive responsibility of IRR - Sacramento. In addition, it is expressly agreed that in**

any action which may be brought against the Integra Parties arising out of, relating to, or in any way pertaining to the engagement letter, the appraisal reports or any related work product, the Integra Parties shall not be responsible or liable for any incidental or consequential damages or losses, unless the appraisal was fraudulent or prepared with intentional misconduct. It is further expressly agreed that the collective liability of the Integra Parties in any such action shall not exceed the fees paid for the preparation of the assignment (unless the appraisal was fraudulent or prepared with intentional misconduct). It is expressly agreed that the fees charged herein are in reliance upon the foregoing limitations of liability.

25. IRR - Sacramento is an independently owned and operated company, which has prepared the appraisal for the specific intended use stated elsewhere in the report. The use of the appraisal report by anyone other than the Client is prohibited except as otherwise provided. Accordingly, the appraisal report is addressed to and shall be solely for the Client's use and benefit unless we provide our prior written consent. We expressly reserve the unrestricted right to withhold our consent to your disclosure of the appraisal report or any other work product related to the engagement (or any part thereof including, without limitation, conclusions of value and our identity), to any third parties. Stated again for clarification, unless our prior written consent is obtained, no third party may rely on the appraisal report (even if their reliance was foreseeable).

26. The conclusions of this report are estimates based on known current trends and reasonably foreseeable future occurrences. These estimates are based partly on property information, data obtained in public records, interviews, existing trends, buyer-seller decision criteria in the current market, and research conducted by third parties, and such data are not always completely reliable. The Integra Parties are not responsible for these and other future occurrences that could not have reasonably been foreseen on the effective date of this assignment. Furthermore, it is inevitable that some assumptions will not materialize and that unanticipated events may occur that will likely affect actual performance. While we are of the opinion that our findings are reasonable based on current market conditions, we do not represent that these estimates will actually be achieved, as they are subject to considerable risk and uncertainty. Moreover, we assume competent and effective management and marketing for the duration of the projected holding period of this property.

27. All prospective value opinions presented in this report are estimates and forecasts which are prospective in nature and are subject to considerable risk and uncertainty. In addition to the contingencies noted in the preceding paragraph, several events may occur that could substantially alter the outcome of our estimates such as, but not limited to changes in the economy, interest rates, and capitalization rates, behavior of consumers, investors and lenders, fire and other physical destruction, changes in title or conveyances of easements and deed restrictions, etc. It is assumed that conditions reasonably foreseeable at the present time are consistent or similar with the future.

28. The appraisal is also subject to the following:

Extraordinary Assumptions and Hypothetical Conditions

The value conclusions are subject to the following extraordinary assumptions. An extraordinary assumption is an assignment-specific assumption as of the effective date regarding uncertain information used in an analysis which, if found to be false, could alter the appraiser's opinions or conclusions.

None.

The value conclusions are based on the following hypothetical conditions. A hypothetical condition is a condition, directly related to a specific assignment, which is contrary to what is known by the appraiser to exist on the effective date of the assignment results, but is used for the purpose of analysis.

1. The subject property comprises 243.40± acres of vacant land that represents a portion of three contiguous Assessor's parcels (017-010-033; 017-090-054 -055) which in total comprise 418.90± acres. The assembled site is zoned for public/quasi-public use by the city of Roseville. This report considers the value of the subject property based on its highest and best economic use, which is agricultural development. This valuation is subject to a hypothetical condition the subject is a 243.40± acre parcel that is zoned for agricultural development and is legally transferable.

The use of any extraordinary assumption or hypothetical condition may have affected the assignment results.

Addendum A

Appraiser Qualifications

Jedd Holt

Experience

Mr. Holt is a Certified General real estate appraiser. After serving six years in the United States Air Force, Mr. Holt began his career in real estate in April 2005, and has been writing narrative appraisal reports for a variety of properties. Today, he is involved in appraisal assignments covering office, retail, industrial, apartments, subdivisions, land and special-purpose properties. Mr. Holt has developed the experience and background necessary to deal with complex assignments covering an array of property types.

Licenses

California, Certified General Real Estate, AG043883, Expires April 2022

Education

Academic:
Bachelor of Science in Managerial Economics, University of California, Davis

Appraisal and Real Estate Courses:
Uniform Standards of Professional Appraisal Practice
Appraisal Principles
Appraisal Procedures
Basic Income Capitalization
General Applications
Real Estate Economics
Report Writing and Valuation Analysis
The Appraisal of Partial Acquisitions

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Business, Consumer Services & Housing Agency

BUREAU OF REAL ESTATE APPRAISERS

REAL ESTATE APPRAISER LICENSE

Jedd D. Holt

has successfully met the requirements for a license as a residential and commercial real estate appraiser in the State of California and is, therefore, entitled to use the title:

"Certified General Real Estate Appraiser"

This license has been issued in accordance with the provisions of the Real Estate Appraisers' Licensing and Certification Law.

BREA APPRAISER IDENTIFICATION NUMBER: AG 043883

Effective Date: April 16, 2020
Date Expires: April 15, 2022

Jim Martin, Bureau Chief, BREA

3051893

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Kevin Ziegenmeyer, MAI

Experience

Mr. Ziegenmeyer is a Certified General real estate appraiser and holds the Appraisal Institute's MAI designation. In 1989, Mr. Ziegenmeyer began his career in real estate as a controller for a commercial and residential real estate development corporation. In 1991 he began appraising and continued to be involved in appraisal assignments covering a wide variety of properties, including office, retail, industrial, residential income and subdivisions throughout the Central Valley area of California, Northern Nevada, and within the Sacramento Metropolitan Area. Over the past several years, Mr. Ziegenmeyer has handled many of the firm's master-planned property appraisals and has developed expertise in the valuation of Community Facilities Districts and Assessment Districts. In early 2015, Mr. Ziegenmeyer obtained the Appraisal Institute's MAI designation. Kevin is currently Senior Managing Director of the Integra-San Francisco office and Managing Director of the Integra-Sacramento office.

Licenses

California, Certified General Real Estate Appraiser, AG013567, Expires June 2021

Education

Academic:
Bachelor of Science in Accounting, Azusa Pacific University, California

Appraisal and Real Estate Courses:
Standards of Professional Practice, Parts A, B & C
Basic Valuation Procedures
Real Estate Appraisal Principles
Capitalization Theory and Techniques, Part A
Advanced Income Capitalization
Report Writing and Valuation Analysis
Advanced Applications
IRS Valuation Summit I & II
2008, 2009, 2010 & 2011 Economic Forecast
Business Practices and Ethics
Contemporary Appraisal Issues with Small Business Administration Financing
General Demonstration Appraisal Report Writing Seminar
7-Hour National USPAP Update Course
Valuation of Easements and Other Partial Interests
2009 Summer Conference
Uniform Appraisal Standards for Federal Land Acquisitions
2008 Economic Update
Valuation of Conservation Easements
Subdivision Valuation
2005 Annual Fall Conference
General Comprehensive Exam Module I, II, III & IV
Advanced Income Capitalization
Advanced Sales Comparison & Cost Approaches
2004 Central CA Market Update
Computer-Enhanced Cash Flow Modeling
Forecast 2000, 2001, 2002, 2003 & 2004
Land Valuation Assignments

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Kevin Ziegenmeyer, MAI

Education (Cont'd)

Land Valuation Adjustment Procedures
Highest & Best Use and Market Analysis
Entitlements, Land Subdivision & Valuation
Real Estate Value Cycles
El Dorado Hills Housing Symposium
Federal Land Exchanges
M & S Computer Cost-Estimating, Nonresidential

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BUREAU OF REAL ESTATE APPRAISERS

REAL ESTATE APPRAISER LICENSE

Kevin K. Ziegenmeyer

has successfully met the requirements for a license as a residential and commercial real estate appraiser in the State of California and is, therefore, entitled to use the title:

"Certified General Real Estate Appraiser"

This license has been issued in accordance with the provisions of the Real Estate Appraisers' Licensing and Certification Law.

BREA APPRAISER IDENTIFICATION NUMBER: AG 013567

Effective Date: June 5, 2019
Date Expires: June 4, 2021

Jim Martin, Bureau Chief, BREA

3045137

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About IRR

Integra Realty Resources, Inc. (IRR) provides world-class commercial real estate valuation, counseling, and advisory services. Routinely ranked among leading property valuation and consulting firms, we are now the largest independent firm in our industry in the United States, with local offices coast to coast and in the Caribbean.

IRR offices are led by MAI-designated Senior Managing Directors, industry leaders who have over 25 years, on average, of commercial real estate experience in their local markets. This experience, coupled with our understanding of how national trends affect the local markets, empowers our clients with the unique knowledge, access, and historical perspective they need to make the most informed decisions.

Many of the nation's top financial institutions, developers, corporations, law firms, and government agencies rely on our professional real estate opinions to best understand the value, use, and feasibility of real estate in their market.

Local Expertise...Nationally!

irr.com

Addendum B

Comparable Data

Land Sale Profile

Sale No. 1

Location & Property Identification

Property Name:	0 Critter Creek Road
Sub-Property Type:	Specialty, Undeveloped Agricultural
Address:	0 Critter Creek Rd.
City/State/Zip:	Lincoln, CA 95648
County:	Placer
Market Orientation:	Rural
IRR Event ID:	2504749

Sale Information

Sale Price:	$389,000
Effective Sale Price:	$389,000
Sale Date:	08/05/2020
Sale Status:	Closed
$/Acre(Gross):	$26,828
$/Land SF(Gross):	$0.62
$/Acre(Usable):	$26,828
$/Land SF(Usable):	$0.62
Grantor/Seller:	Daniel & Gerri Builta
Grantee/Buyer:	Sukhjinder Bhullar
Property Rights:	Fee Simple
Financing:	Cash to seller
Document Type:	Deed
Recording No.:	83116
Rent Controlled:	No

Improvement and Site Data

MSA:	Sacramento--Roseville--Arden-Arcade, CA
Legal/Tax/Parcel ID:	021-370-021
Acres(Usable/Gross):	14.50/14.50
Land-SF(Usable/Gross):	631,620/631,620
Usable/Gross Ratio:	1.00

Shape:	Square
Topography:	Level
Corner Lot:	No
Frontage Desc.:	Critter Creek
Frontage Type:	2 way, 1 lane each way
Traffic Flow:	Low
Zoning Code:	F-B-X
Zoning Desc.:	Agriculture, 80-acre minimum
Flood Plain:	No
Flood Zone Designation:	X
Comm. Panel No.:	06061C0700H
Date:	11/02/2018
Source of Land Info.:	Public Records

Comments

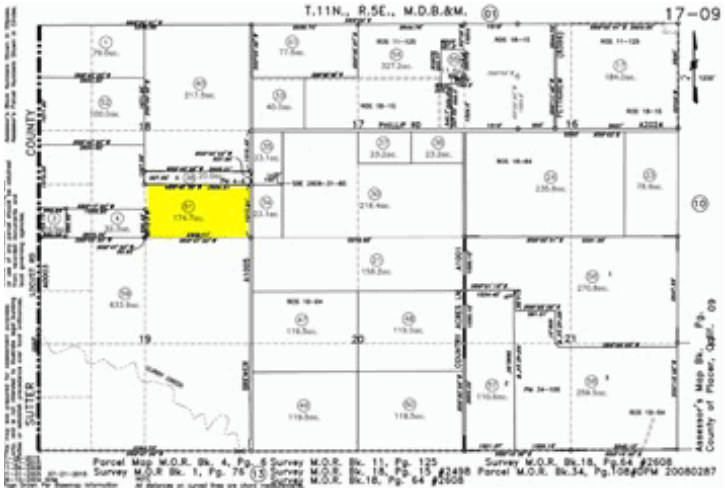
At the time of sale, this property was utilized for horse pasture grazing and had three shade structures. It has an agricultural well and is not within a water district. The property was listed on the open market. The buyer knew the seller. The property has some long-term development potential which factored into the sale price for the buyer. Since the sale, the buyer has removed the shade structures, deep ripped the property, and will be planting almond trees.

Land Sale Profile

Sale No. 2

Location & Property Identification

Property Name:	West line of Brewer Rd., south of Phillip Rd.
Sub-Property Type:	Specialty, Undeveloped Agricultural
Address:	Brewer Rd.
City/State/Zip:	Pleasant Grove, CA 95668
County:	Placer
Market Orientation:	Rural
IRR Event ID:	2522814



Sale Information

Sale Price:	$2,000,000
Effective Sale Price:	$2,000,000
Sale Date:	10/21/2019
Recording Date:	11/18/2019
Sale Status:	Closed
$/Acre(Gross):	$11,448
$/Land SF(Gross):	$0.26
$/Acre(Usable):	$11,448
$/Land SF(Usable):	$0.26
Grantor/Seller:	Grundy
Grantee/Buyer:	Balraj S. Randhawa
Assemblage:	No
Portfolio Sale:	No
Assets Sold:	Real estate only
Property Rights:	Fee Simple
Financing:	Cash to seller

Sale Analysis

Sale Price Includes FF&E?	No

Improvement and Site Data

Legal/Tax/Parcel ID:	017-090-051
Acres(Usable/Gross):	174.70/174.70
Land-SF(Usable/Gross):	7,609,932/7,609,932
Usable/Gross Ratio:	1.00
Vegetation:	Grass and shrubs
Corner Lot:	No
Frontage Type:	2 way, 1 lane each way
Traffic Control at Entry:	None
Traffic Flow:	Low
AccessibilityRating:	Average
Visibility Rating:	Average
Zoning Code:	F-B-X
Zoning Desc.:	Agricultural
Easements:	No
Environmental Issues:	No
Flood Plain:	No
Flood Zone Designation:	X
Utilities:	Electricity, Water Well Irrigation
Source of Land Info.:	Public Records

Comments

This property sold in October 2019 and has historically been planted with rice.

This property has historically been planted with rice and is located within an unincorporated area of Placer County.

Land Sale Profile

Sale No. 3

Location & Property Identification

Property Name:	5745 Pleasant Grove Road
Sub-Property Type:	Commercial
Address:	5745 Pleasant Grove Rd.
City/State/Zip:	Pleasant Grove, CA 95668
County:	Sutter
Market Orientation:	Rural
IRR Event ID:	2266872

Sale Information

Sale Price:	$1,150,000
Effective Sale Price:	$1,000,000
Sale Date:	02/20/2019
Recording Date:	03/25/2019
Sale Status:	Closed
$/SF GBA:	$166.33
$/Acre(Gross):	$13,879
$/Land SF(Gross):	$0.32
$/Acre(Usable):	$13,879
$/Land SF(Usable):	$0.32
$/Land SF(Potential):	$166.33
Grantor/Seller:	Xor Wang
Grantee/Buyer:	Arun Ohri
Property Rights:	Fee Simple
Financing:	Cash to seller
Document Type:	Deed
Recording No.:	3436
Rent Subsidized:	No

Improvement and Site Data

MSA:	Yuba City, CA
Legal/Tax/Parcel ID:	35-090-016
GBA-SF:	6,012
Acres(Usable/Gross):	72.05/72.05

Land-SF(Usable/Gross):	3,138,498/3,138,498
Usable/Gross Ratio:	1.00
Exterior Walls:	Wood siding
Roof,Heating,AC Comm.:	Shingle
Shape:	Irregular
Topography:	Level
Corner Lot:	No
Frontage Desc.:	Pleasant Grove
Frontage Type:	2 way, 1 lane each way
Traffic Control at Entry:	None
Traffic Flow:	Low
Visibility Rating:	Average
Zoning Code:	AG-80
Zoning Desc.:	Agriculture, 80-acre minimum
Flood Plain:	Yes
Flood Zone Designation:	AH
Comm. Panel No.:	0603940265F
Date:	06/16/2015
Source of Land Info.:	Public Records

Comments

Soil Quality: 71% IV, 20% II, 9% III. There is a 1,836 SF modular home in fair condition, a 3,000 SF steel shop in fair condition, and miscellaneous outbuildings in poor condition. The property is within a flood zone and has historically been used for field crops. The property receives irrigation water from two onsite wells, though one needs to be replaced. The property is also within South Sutter W.D. The buyer is a large area almond

Comments (Cont'd)

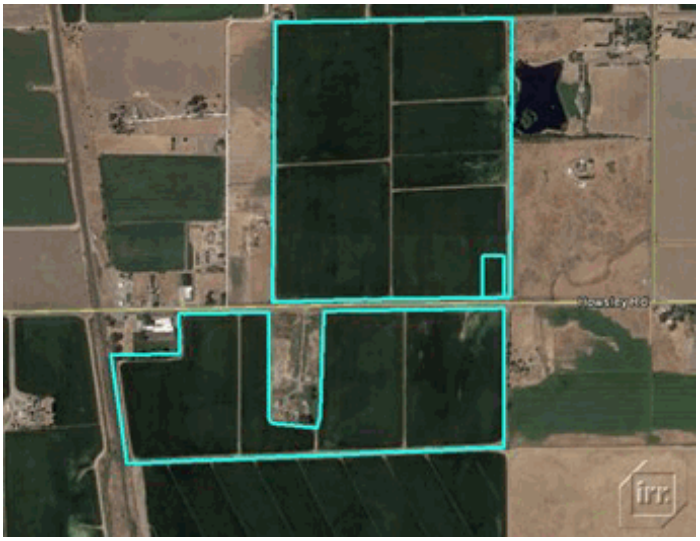
grower.

Special Purpose Sale Profile

Sale No. 4

Location & Property Identification

Property Name:	Proposed 206 Acre Almond Orchard
Sub-Property Type:	Agricultural, Permanent Crops
Address:	3098 Howsley Rd.
City/State/Zip:	Pleasant Grove, CA 95668
County:	Sutter
Market Orientation:	Rural
IRR Event ID:	2221387



Sale Information

Sale Price:	$2,856,000
Effective Sale Price:	$2,856,000
Sale Date:	09/13/2018
Recording Date:	09/17/2018
Sale Status:	Closed
Grantor/Seller:	Ronald F. Souza
Grantee/Buyer:	Ohri
Property Rights:	Fee Simple
Financing:	Cash to seller
Document Type:	Deed
Recording No.:	12241
Rent Subsidized:	No

Improvement and Site Data

MSA:	Yuba City, CA
Legal/Tax/Parcel ID:	35-090-034, 35-040-040 and 35-040-041
Acres(Usable/Gross):	206.16/206.16
Land-SF(Usable/Gross):	8,980,329/8,980,329
Usable/Gross Ratio:	1.00
Property Class:	A
Shape:	Irregular

Topography:	Level
Corner Lot:	No
Frontage Desc.:	Howsley
Frontage Type:	2 way, 1 lane each way
Traffic Control at Entry:	None
Traffic Flow:	Moderate
Zoning Code:	AG-80
Zoning Desc.:	Agriculture, 80-acre minimum
Flood Plain:	Yes
Flood Zone Designation:	AE
Comm. Panel No.:	0603940810F and
Date:	06/16/2015
Source of Land Info.:	Public Records

Comments

Soils: 51% IV, 26% III, 23% II. The buyer purchased the property to plant almonds. The property has historically been utilized for rice production. There are four onsite wells and the property has access to South Sutter W.D. There are no improvements.

Land Sale Profile

Sale No. 5

Location & Property Identification

Property Name:	8010 Baseline Road
Sub-Property Type:	Other
Address:	8010 Baseline Rd.
City/State/Zip:	Roseville, CA 95747
County:	Placer
Market Orientation:	Rural
IRR Event ID:	2110956

Sale Information

Sale Price:	$1,397,000
Effective Sale Price:	$1,207,000
Sale Date:	08/24/2018
Recording Date:	09/07/2018
Sale Status:	Closed
$/SF GBA:	$222.20
$/SF NRA:	$467.47
Eff. Price/Unit:	$467 /Unit
$/Acre(Gross):	$15,798
$/Land SF(Gross):	$0.36
$/Acre(Usable):	$15,798
$/Land SF(Usable):	$0.36
$/Building SF:	$24.14
$/Unit:	$1,207,000 /Unit
$/Land SF(Potential):	$222.20
Grantor/Seller:	Monica Cornacchioli
Grantee/Buyer:	PCH PROPERTIES LLC
Property Rights:	Fee Simple
Document Type:	Deed
Recording No.:	65029
Rent Controlled:	No

Sale Analysis

Other Adj.:	$190,000
Adjust. Comments:	Improvements

Improvement and Site Data

Legal/Tax/Parcel ID:	017-130-055
GBA-SF:	5,432
NRA-SF:	2,582
Acres(Usable/Gross):	76.40/76.40
Land-SF(Usable/Gross):	3,327,984/3,327,984
Usable/Gross Ratio:	1.00
Potential Building SF:	50,000
No. of Units (Potential):	1
Year Built:	1980
M&S Class:	C
Construction Quality:	Average
Improvements Cond.:	Poor
Exterior Walls:	Wood siding
No. of Buildings/Stories:	2/1
Air-Conditioning Type:	Roof Central Mounted
Roof,Heating,AC Comm.:	Tile
Shape:	Rectangular
Topography:	Level
Corner Lot:	Yes
Frontage Feet:	818
Frontage Desc.:	Baseline Road
Frontage Type:	2 way, 1 lane each way
Traffic Control at Entry:	None
Traffic Flow:	Moderate
Visibility Rating:	Good
Density-Unit/Gross Acre:	33.80

Land Sale Profile

Sale No. 5

Improvement and Site Data (Cont'd)

Density-Unit/Usable Acre:	33.80
Zoning Code:	F-B-X-AO
Zoning Desc.:	Agricultural and single
Flood Plain:	No
Flood Zone Designation:	X
Comm. Panel No.:	06061C0458F
Date:	06/08/1998
Source of Land Info.:	Public Records

Comments

The property has a 2,582-square-foot residence which was in need of repairs but contributed value in the sale. The site has Class IV soils and the buyer intends to plant an almond orchard. The property is located in the proposed Curry Creek Community Plan and has long-term development potential.

Addendum C

Engagement Letter

Integra Realty Resources
Sacramento

590 Menlo Drive
Suite 1
Rocklin, CA 95765

T 916.435.3883
F 916.435.4774
www.irr.com

October 6, 2020

Laura Matteoli
Economic Development Director
City of Roseville - Economic Development Department
Civic Center
311 Vernon Street
Roseville, California 95678

SUBJECT: Land Property
APNs 017-010-033-000, 017-090-054-000 and 017-090-055-000
East of S. Brewer Road and North of Phillip Road
Roseville, Placer County, California 95747

Dear Ms. Matteoli:

Thank you for considering Integra Realty Resources – Sacramento for your real estate valuation needs. Enclosed is my Agreement for Appraisal Services pertaining to the above referenced property. The total fee for delivery of the completed appraisal report is $6,000.

Please return a signed copy of the attached Agreement to my office at your earliest convenience. The appraisal fee will be due immediately preceding delivery of the completed report. Provided the signed contract is received within 3 business days, we anticipate delivery of the completed report no later than October 31, 2020.

In accordance with the attached Agreement for Appraisal Services, the scope of this assignment will require IRR – Sacramento to consider all relevant and applicable approaches to value as determined during the course of our research, analysis of the subject property and preparation of the report.

If you have any questions, please do not hesitate to contact me at 916-435-3883, ext. 224 or by e-mail at kziegenmeyer@irr.com.

Respectfully submitted,

Integra Realty Resources - Sacramento

Kevin Ziegenmeyer
Certified General Real Estate Appraiser
CA Certificate # AG013567
Telephone: 916-435-3883, ext. 224
Email: kziegenmeyer@irr.com

Attachments

Agreement for Appraisal Services

The terms of the agreement are outlined as follows:

Date of the Agreement	October 6, 2020
Parties to the Agreement	Integra Realty Resources – Sacramento (also identified as "IRR") and Troy Holt of City of Roseville (the "Client").
Purpose of the Appraisal	To provide an opinion of market value of the fee simple interest in the subject property.
Intended User	The client and intended user is City of Roseville. The appraisal is not intended for any other user.
Intended Use	The intended use of the appraisal is for disposition purposes. The appraisal is not intended for any other use.
Effective Date of Value	Date of inspection.
Appraised Property	The subject property represents APNs 017-010-033-000, 017-090-054-000 and 017-090-055-000, located East of S. Brewer Road and North of Phillip Road Roseville, Placer County, California 95747
USPAP Compliance	The appraisal will be prepared in conformance with and subject to the *Code of Professional Ethics and Standards of Professional Appraisal Practice* of the Appraisal Institute and the *Uniform Standards of Professional Appraisal Practice* (USPAP) developed by the Appraisal Standards Board of the Appraisal Foundation.
Prior Services	The Ethics Rule of USPAP requires appraisers to disclose to the client any other services they have provided in connection with the subject property in the prior three years, including valuation, consulting, property management, brokerage, or any other services. We have not performed any services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
Scope of Work	In accordance with our correspondence, the scope of this assignment will require IRR – Sacramento to consider all relevant and applicable approaches to value as determined during the course of our research, subject property analysis and preparation of the report.

	Please note, Federal banking regulations require banks and other lending institutions to engage appraisers where FIRREA compliant appraisals must be used in connection with mortgage loans or other transactions involving federally regulated lending institutions. Given that requirement, this appraisal may not be accepted by a Federally-regulated financial institution.
Appraisal Report Format	The appraisal will be communicated in an Appraisal Report – Summary / Standard format. All work will be performed under the direct supervision of the undersigned, together with other staff members. The appraisal and this letter agreement will be subject to our standard assumptions and limiting conditions a copy of which is attached as Attachment I.
Fee	The total fee for this assignment will be $6,000. It is understood that simple interest of 15% per annum will accrue on any unpaid balance for compensation due, subject to reduction pursuant to any applicable usury law. We shall also be entitled to recover our costs (including attorneys' fees), associated with collecting any amounts owed or otherwise incurred in connection with this assignment. If the assignment is cancelled by either party prior to completion, you agree to pay us for all our expenses and our time to date based upon the percentage of work completed. Upon default, we shall be permitted to file a lien against the subject property for any amounts owed pursuant to this engagement.
Start, Acceptance, and Delivery Dates	Provided the signed contract and retainer (if applicable) are received within 3 business days, we will commence work on the assignment. Additionally, with these conditions met we anticipate delivery of the appraisal report by October 31, 2020. This delivery date is contingent on the absence of events outside our control, timely access for inspection of the subject property, as well as our receipt of all requested information necessary to complete the assignment.
Report Copies	A PDF of the appraisal report will be provided.
Inspection Disclosure	Please be advised that we are not experts in the areas of building inspection (including mold), environmental hazards, ADA compliance or wetlands. Therefore, unless we have been provided with appropriate third-party expert reports, the appraisal will assume that there are no

	environmental, wetlands, or ADA compliance problems. The agreed upon fees for our services assume the absence of such issues inasmuch as additional research and analysis may be required. If an expert is required, you are responsible for their selection, payment and actions.
Litigation Clause	In the event that we receive a subpoena or are called to testify in any litigation, arbitration or administrative hearing of any nature whatsoever or as a result of this engagement or the related report, to which we are not a party, you agree to pay our then current hourly rates for such preparation and presentation of testimony.
Use of Data	You agree that: (i) the data collected by us in this assignment will remain our property; and (ii) with respect to any data provided by you, IRR – Sacramento and its partner companies may utilize, sell and include such data (either in the aggregate or individually), in the Integra database and for use in derivative products. You agree that all data already in the public domain may be utilized on an unrestricted basis. Finally, you agree that we may use commercially available as well as proprietary software programs to perform your assignment (web based and others).
Conflicts of Interest	If we discover during the course of preparing the appraisal there is a conflict of interest with a separate IRR office, we reserve the right to cancel the agreement and withdraw from the assignment without incurring penalties.

If you agree with the terms set forth in this letter and wish us to proceed with the engagement, please sign below and return one copy to us. Thank you for this opportunity to be of service and we look forward to working with you.

AGREED & ACCEPTED BY:

Integra Realty Resources – Sacramento

Kevin Ziegenmeyer
Senior Managing Director

October 6, 2020

AGREED & ACCEPTED BY:

Laura Matteoli

Laura Matteoli
lmatteoli@roseville.ca.us
916-774-5284

October 7, 2020

Date

ATTACHMENT I

STANDARD ASSUMPTIONS & LIMITING CONDITIONS

The appraisal report and any work product related to the engagement will be limited by the following standard assumptions:

1. The title is marketable and free and clear of all liens, encumbrances, encroachments, easements and restrictions. The subject property is under responsible ownership and competent management and is available for its highest and best use.
2. There are no existing judgments or pending or threatened litigation that could affect the value of the subject property.
3. There are no hidden or undisclosed conditions of the land or of the improvements that would render the subject property more or less valuable. Furthermore, there is no asbestos in the subject property.
4. The revenue stamps placed on any deed referenced herein to indicate the sale price are in correct relation to the actual dollar amount of the transaction.
5. The subject property is in compliance with all applicable building, environmental, zoning, and other federal, state and local laws, regulations and codes.
6. The information furnished by others is believed to be reliable, but no warranty is given for its accuracy.

The appraisal report and any work product related to the engagement will be subject to the following limiting conditions, except as otherwise noted in the report:

1. An appraisal is inherently subjective and represents our opinion as to the value of the subject property appraised.
2. The conclusions stated in our appraisal apply only as of the effective date of the appraisal, and no representation is made as to the effect of subsequent events.
3. No changes in any federal, state or local laws, regulations or codes (including, without limitation, the Internal Revenue Code) are anticipated.
4. No environmental impact studies were either requested or made in conjunction with this appraisal, and we reserve the right to revise or rescind any of the value opinions based upon any subsequent environmental impact studies. If any environmental impact statement is required by law, the appraisal assumes that such statement will be favorable and will be approved by the appropriate regulatory bodies.
5. Unless otherwise agreed to in writing, we are not required to give testimony, respond to any subpoena or attend any court, governmental or other hearing with reference to the subject property without compensation relative to such additional employment.
6. We have made no survey of the subject property and assume no responsibility in connection with such matters. Any sketch or survey of the subject property included in this report is for illustrative purposes only and should not be considered to be scaled accurately for size. The appraisal covers

the subject property as described in this report, and the areas and dimensions set forth are assumed to be correct.

7. No opinion is expressed as to the value of subsurface oil, gas or mineral rights, if any, and we have assumed that the subject property is not subject to surface entry for the exploration or removal of such materials, unless otherwise noted in our appraisal.
8. We accept no responsibility for considerations requiring expertise in other fields. Such considerations include, but are not limited to, legal descriptions and other legal matters such as legal title, geologic considerations, such as soils and seismic stability, and civil, mechanical, electrical, structural and other engineering and environmental matters. Such considerations may also include determinations of compliance with zoning and other federal, state, and local laws, regulations and codes.
9. The distribution of the total valuation in the report between land and improvements applies only under the reported highest and best use of the subject property. The allocations of value for land and improvements must not be used in conjunction with any other appraisal and are invalid if so used. The appraisal report shall be considered only in its entirety. No part of the appraisal report shall be utilized separately or out of context.
10. Neither all nor any part of the contents of this report (especially any conclusions as to value, the identity of the appraisers, or any reference to the Appraisal Institute) shall be disseminated through advertising media, public relations media, news media or any other means of communication (including without limitation prospectuses, private offering memoranda and other offering material provided to prospective investors) without the prior written consent of the persons signing the report.
11. Information, estimates and opinions contained in the report and obtained from third-party sources are assumed to be reliable and have not been independently verified.
12. Any income and expense estimates contained in the appraisal report are used only for the purpose of estimating value and do not constitute predictions of future operating results.
13. If the subject property is subject to one or more leases, any estimate of residual value contained in the appraisal may be particularly affected by significant changes in the condition of the economy, of the real estate industry, or of the subject property at the time these leases expire or otherwise terminate.
14. Unless otherwise stated in the report, no consideration has been given to personal property located on the subject property or to the cost of moving or relocating such personal property; only the real property has been considered.
15. The current purchasing power of the dollar is the basis for the value stated in the appraisal; we have assumed that no extreme fluctuations in economic cycles will occur.
16. The values found herein are subject to these and to any other assumptions or conditions set forth in the body of this report but which may have been omitted from this list of Assumptions and Limiting Conditions.
17. The analyses contained in the report necessarily incorporate numerous estimates and assumptions regarding property performance, general and local business and economic

conditions, the absence of material changes in the competitive environment and other matters. Some estimates or assumptions, however, inevitably will not materialize, and unanticipated events and circumstances may occur; therefore, actual results achieved during the period covered by our analysis will vary from our estimates, and the variations may be material.

18. The Americans with Disabilities Act (ADA) became effective January 26, 1992. We have not made a specific survey or analysis of the subject property to determine whether the physical aspects of the improvements meet the ADA accessibility guidelines. We claim no expertise in ADA issues, and render no opinion regarding compliance of the subject property with ADA regulations. Inasmuch as compliance matches each owner's financial ability with the cost to cure the non-conforming physical characteristics of a property, a specific study of both the owner's financial ability and the cost to cure any deficiencies would be needed for the Department of Justice to determine compliance.

19. The appraisal report is prepared for the exclusive benefit of you, your subsidiaries and/or affiliates. It may not be used or relied upon by any other party. All parties who use or rely upon any information in the report without our written consent do so at their own risk.

20. No studies have been provided to us indicating the presence or absence of hazardous materials on the subject property or in the improvements, and our valuation is predicated upon the assumption that the subject property is free and clear of any environment hazards including, without limitation, hazardous wastes, toxic substances and mold. No representations or warranties are made regarding the environmental condition of the subject property. IRR – Sacramento and/or any of its officers, owners, managers, directors, agents, subcontractors or employees (the "Integra Parties") shall not be responsible for any such environmental conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because we are not experts in the field of environmental conditions, the appraisal report cannot be considered as an environmental assessment of the subject property.

21. The persons signing the report may have reviewed available flood maps and may have noted in the appraisal report whether the subject property is located in an identified Special Flood Hazard Area. However, we are not qualified to detect such areas and therefore do not guarantee such determinations. The presence of flood plain areas and/or wetlands may affect the value of the subject property, and the value conclusion is predicated on the assumption that wetlands are non-existent or minimal.

22. We are not a building or environmental inspector. The Integra Parties do not guarantee that the subject property is free of defects or environmental problems. Mold may be present in the subject property and a professional inspection is recommended.

23. The appraisal report and value conclusions for an appraisal assumes the satisfactory completion of construction, repairs or alterations in a workmanlike manner.

24. IRR – Sacramento is an independently owned and operated company, which has prepared the appraisal for the specific intended use stated elsewhere in the report. The use of the appraisal report by anyone other than the Client is prohibited except as otherwise provided. Accordingly, the appraisal report is addressed to and shall be solely for the Client's use and benefit unless we provide our prior written consent. We expressly reserve the unrestricted right to withhold our consent to your disclosure of the appraisal report or any other work product related to the

engagement (or any part thereof including, without limitation, conclusions of value and our identity), to any third parties. Stated again for clarification, unless our prior written consent is obtained, no third party may rely on the appraisal report (even if their reliance was foreseeable).

25. The conclusions of this report are estimates based on known current trends and reasonably foreseeable future occurrences. These estimates are based partly on property information, data obtained in public records, interviews, existing trends, buyer-seller decision criteria in the current market, and research conducted by third parties, and such data are not always completely reliable. The Integra Parties are not responsible for these and other future occurrences that could not have reasonably been foreseen on the effective date of this assignment. Furthermore, it is inevitable that some assumptions will not materialize and that unanticipated events may occur that will likely affect actual performance. While we are of the opinion that our findings are reasonable based on current market conditions, we do not represent that these estimates will actually be achieved, as they are subject to considerable risk and uncertainty. Moreover, we assume competent and effective management and marketing for the duration of the projected holding period of the subject property.

26. All prospective value opinions presented in this report are estimates and forecasts which are prospective in nature and are subject to considerable risk and uncertainty. In addition to the contingencies noted in the preceding paragraph, several events may occur that could substantially alter the outcome of our estimates such as, but not limited to changes in the economy, interest rates, capitalization rates, behavior of consumers, investors and lenders, fire and other physical destruction, changes in title or conveyances of easements and deed restrictions, etc. It is assumed that conditions reasonably foreseeable at the present time are consistent or similar with the future.

As will be determined during the course of the assignment, additional extraordinary or hypothetical conditions may be required in order to complete the assignment. The appraisal shall also be subject to those assumptions.

ORDINANCE NO. 6393

ORDINANCE OF THE COUNCIL OF THE CITY OF ROSEVILLE AUTHORIZING CERTAIN AMENDMENTS TO THE FISCAL YEAR 2021-22 BUDGET AND DECLARING THIS ORDINANCE TO BE IMMEDIATELY EFFECTIVE AS AN APPROPRIATION MEASURE

THE CITY OF ROSEVILLE ORDAINS:

SECTION 1. The City of Roseville Annual Budget, Fiscal Year 2021-22, is hereby amended as listed on the attached budget adjustment for Warnick property transfer.

SECTION 2. This ordinance is hereby declared to be an appropriation measure, immediately effective pursuant to the provisions of Section 5.03 of the Charter.

SECTION 3. The City Clerk is hereby authorized and directed to post a true copy of the foregoing ordinance in each of three (3) conspicuous locations in the City and she shall immediately after such posting enter in the ordinance book, under the record of the ordinance, a certificate under her hand stating the time and place of such publication by posting.

PASSED AND ADOPTED by the Council of the City of Roseville, this _____ day of _____, 2021, by the following vote on roll call:

AYES COUNCILMEMBERS:

NOES COUNCILMEMBERS:

ABSENT COUNCILMEMBERS:

_____
MAYOR

ATTEST:

_____
City Clerk

REQUEST FOR BUDGET ADJUSTMENT

REQUESTER NAME & TITLE: Devin Whittington, Refuse & Stormwater Manager
FISCAL YEAR: 2022

PREPARER NAME & TITLE: Nick Rosas, Accounting Manager
COUNCIL DATE (if applicable): 9/1/2021

DEPARTMENT/DIVISION: EU/Waste Services
ORDINANCE:

EXPENDITURES/EXPENSES/TRANSFERS OUT

ACCOUNT STRING				BUDGET ($)	DESCRIPTION
Fund	Account	Center	Project	Adjustment	
			TOTAL	-	

REVENUES/TRANSFERS IN

ACCOUNT STRING				BUDGET ($)	DESCRIPTION
Fund	Account	Center	Project	Adjustment	
3385	4801	10001		1,159,344	Transfers in from Water Operations Fund (6101) and Waste Services Operations Fund (6301) to the Pleasant Grove Drainage Basin Fund (3385)
1030	4801	10001		2,490,656	Transfers in from Water Operations Fund (6101) and Waste Services Operations Fund (6301) to the Strategic Improvement Fund (1030)
			TOTAL	3,650,000	

	NET ADJUSTMENT	(3,650,000)

FUND BALANCE

ACCOUNT STRING				BUDGET ($)	DESCRIPTION
Fund	Account	Center	Project	Adjustment	
3385				1,159,344	Increase available resources in the Pleasant Grove Drainage Basin Fund (3385)
1030				2,490,656	Increase available resources in the Strategic Improvement Fund (1030)
			TOTAL	3,650,000	

Justification for Budget Adjustment:

On November 1, 2004, the City purchased 418.9 acres of land for $1,673,800 via the Pleasant Grove Drainage Basin Fund (3385) to construct a floodwater retention basin. Staff subsequently determined that the retention basin would only require 175.5 acres of this land, leaving 243.4 acres vacant located east of S. Brewer Road and north of Phillip Road. As a result, the portion of this property not required for the watershed was identified for repurposing.

On October 23, 2020, the City obtained an appraisal of $3,650,000 for the vacant 243.4 acres. The Environmental Utilities (EU) Department has identified this vacant land as a suitable site for future operational requirements. EU has adequate funds appropriated for this property in the EU Land Acquisition project (500009), consisting of $2,920,000 from the Waste Services Operations Fund (6301) and $730,000 from the Water Operations Fund (6101).

To use this property for any purpose other than a retention basin requires that the proportional purchase price plus interest ($1,159,344) be transferred to the fund that initially funded the purchase - the Pleasant Grove Drainage Basin Fund (3385). Staff recommends that the remaining balance of $2,490,656 be transferred to the Strategic Improvement Fund (1030) for future initiatives.

This recommended budget adjustment will recognize interfund transfers from the EU operating funds to the Pleasant Grove Drainage Basin Fund (3385) for $1,159,344 and the Strategic Improvement Fund (1030) for $2,490,656 and increase available resources in each of these funds in equivalent amounts.

REQUIRED APPROVALS:

Jimmy D. Cross	8/11/21	Valerie DePeel	8/11/2021
REQUESTING DEPARTMENT HEAD / DESIGNEE	DATE	BUDGET MANAGER / DESIGNEE	DATE
CHIEF FINANCIAL OFFICER / DESIGNEE	DATE	CITY MANAGER / DESIGNEE	DATE

BUDGET DEPARTMENT USE ONLY:

POSTED BY DATE

Revised: June 24, 2019

Figure 1 - Planning Discussion Figure With Most Likely Stormwater Mitigation Layout at Reason Farms

Floodplain Management - Public Works

FIGURE FOR CITY EU DEPT. & DEVELOPER EXPLORING AVAILABLE CITY REASON FARMS PROPERTY. PLAN SHOWS MOST LIKELY CITY AND COUNTY VOLUMETRIC MITIGATION - EXCAVATED STORMWATER BASINS.

MEETING DATE: SEPT. 3, 2020

NOTE 1: COUNTY MITIGATION SHOWN IS FOR PLANNED PRSP DEVELOPMENT.

NOTE 2: THIS FIGURE IS BASED UPON PLANNING FIGURE PL-2C2 BY CESI.

PRESERVE

017-010-023-000

PLEASANT GROVE CREEK

017-010-033-000

~ 111.6 ACRES

017-090-054-000

~ 131.8 ACRES

017-090-055-000

EXCAVATED AREA

STORAGE = 2300 AF

EXCAVATED AREA

EXCESS SOIL FILL

CITY BASIN

EXCESS SOIL FILL

COUNTY BASIN

STORAGE = 518 AF

UNIVERSITY CREEK

EXCAVATED AREA

EXCESS SOIL FILL

EXCESS SOIL FILL

EXCAVATED CHANNEL

FUTURE PLACER PARKWAY

PLEASANT GROVE CREEK

EXCESS SOIL FILL

FUTURE PLACER PARKWAY

FUTURE PLACER PARKWAY

FLOODPLAIN MAY BE REMOVED VIA FILL AND STORMWATER MITIGATION BASIN USE.

LEGEND

- FLOOD ZONE A
- FLOOD ZONE AE
- FLOOD ZONE AO
- ADDED FLOODPLAIN
- RECLAIMED FLOODPLAIN
- CREEKS
- ACCESS ROADS
- PLACER PARKWAY
- REASON FARMS PROPERTY
- PARCEL POLYGON
- EU PROPERTY OF INTEREST
- CITY LIMITS

0 190 380 760 1,140 1,520

Feet

City of Roseville, USDA FSA, GeoEye, Maxar

S:\Arcdata\publicworks\Project Folder\Floodplain_2020\Reason_Farms\Reason_Farms.aprx

Designed: B. Walker | Drafted: T. Camp | 11/2/2020

01
1002-04
~~0902-02-02~~
0704-02

COUNCIL COMMUNICATION

TO: THE CITY COUNCIL FROM: THE CITY ATTORNEY'S OFFICE	DATE: August 23, 2002	7423
SUBJECT: Assignment Agreement Regarding Option to Purchase Warnick Property		

RECOMMENDATION:

Approve the attached Assignment Agreement between the City and Westpark Associates and Signature Properties ("WA/SP") and authorize the City Manager to execute the Agreement on behalf of the City.

BACKGROUND:

Beginning in 1991, the City has collected a Watershed Drainage Mitigation Fee from new development within the area of the Pleasant Grove Creek watershed. The purpose of the fee is to fund the acquisition of property sufficient for the construction of a floodwater retention basin. The retention basin, sized to handle an estimated 1800 acre feet of floodwater, would provide protection to properties in Sutter County in times of heavy rainfall. The City has collected approximately $10 million dollars in Watershed Mitigation Fees to date.

In August 2001, City Council authorized acquisition of an option to purchase the Reason Farms property, an approximately 1,335 acre parcel straddling Pleasant Grove Creek in the unincorporated area of Placer County just northwest of the new Pleasant Grove Wastewater Treatment Plant, for an estimated price of $7,348,000, less certain option credits. As shown on the Pleasant Grove Retention Basin map (Attachment A), the proposed design of the retention basin requires a substantial portion of the Warnick property in addition to the Reason Farms property.

In March 2002, HC Partners, LLC, acquired an option to purchase approximately 418.9 acres adjacent to the western boundary of the Reason Farms property (the Warnick property). HCP Partners, LLC, subsequently assigned its option to Signature Properties, Inc. and Westpark Associates. Under the terms of the option agreement, the purchase price of the property is $4,000 per acre, for a total estimated purchase price of $1,676,600, subject to confirmation of acreage.

To acquire the option, the city would have to reimburse WA/SP for its deposit of $50,000 in option consideration. Additional $50,000 deposits would be due on September 6 annually in 2003 and 2004, if escrow has not closed. Those deposits would apply to the purchase price. The option would remain open for two additional years upon annual payments of $75,000, which would not apply to the purchase price. Reservation of a life estate in a designated five-acre

9/4/02 Adopted Res. 02-390

AGENDA ITEM
15

of

portion of the property would allow Mabel Plunkett, one of the current owners, to continue living in her current residence.

WA/SP has offered to make its option rights in the property available to the City so that the City can acquire the property. Preliminary investigations reveal that the Warnick property is well suited for use as a floodwater retention basin. It could also be used for a variety of complementary public and quasi-public uses such as wetlands mitigation, passive recreation and agriculture. A Phase One Environmental Assessment on the property is nearly complete and the consultant reports no unexpected conditions. However, she is recommending a Phase Two assessment to determine the extent of soil contamination due to incidental spillage in the area of an above-ground fuel tank.

An Assignment Agreement has been prepared for execution by the City and WA/SP (Attachment B). Under the proposed Agreement, the City would gain WA/SP's option rights to purchase the Warnick property.

Entering into the Assignment Agreement will allow the City to lock in its right to purchase the Warnick property while enabling it to complete the detailed studies (including appraisals, geotechnical and environmental studies) necessary to determine whether the property is suitable to acquire for flood mitigation and other uses.

CONCLUSION:

Staff recommends that the City Council approve the attached Assignment Agreement and authorize the City Manager to execute it on behalf of the City.

Respectfully submitted,

MARK J. DOANE
City Attorney

APPROVED:

ALLEN E. JOHNSON
City Manager

RESOLUTION NO. 02-390

APPROVING AN AGREEMENT BETWEEN THE CITY OF ROSEVILLE, WESTPARK ASSOCIATES AND SIGNATURE PROPERTIES AND AUTHORIZING THE CITY MANAGER TO EXECUTE IT ON BEHALF OF THE CITY OF ROSEVILLE

WHEREAS, an assignment agreement regarding an option to purchase approximately 418.9 acres of land (the Warnick property) for the proposed Pleasant Grove Retention Basin and other complementary uses, between the City of Roseville, Westpark Associates and Signature Properties, has been reviewed by the Council; and

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Roseville that said agreement is approved and that the City Manager is authorized to execute it on behalf of the City of Roseville upon receipt and approval of all signed documents by the City Attorney.

PASSED AND ADOPTED by the Council of the City of Roseville this 4th day of September, 20 02, by the following vote on roll call:

AYES COUNCILMEMBERS: Earl Rush, Richard Roccucci, Gina Garbolino, Rocky Rockholm, Claudia Gamar

NOES COUNCILMEMBERS: None

ABSENT COUNCILMEMBERS: None

Claudia Gamar
MAYOR

ATTEST:

Sonia Orozco ASSISTANT
City Clerk

ASSIGNMENT AGREEMENT

This Assignment Agreement (the "Agreement") is made and entered into as of this 4th day of September, 2002 by and between the City of Roseville ("Roseville") and Westpark Associates and Signature Properties ("WA/SP") with reference to the following:

RECITALS:

A. WHEREAS, Mabel Plunkett, Betty Warnick and Dean Warnick (collectively, "Optionor") and HC Partners, LLC ("Optionee") entered into that certain Warnick/HC Partners Option Agreement, dated March 22, 2002 (the "Option Agreement"), a copy of which is attached hereto as Exhibit A and incorporated herein by this reference, with regard to those certain parcels of real property consisting of approximately 418.9 acres of land, more or less, situated in the unincorporated area of Placer County (the "Property"), as more particularly described in the Option Agreement; and

B. WHEREAS, Optionee assigned to WA/SP all of its right, title and interest in and to said Option Agreement by that certain Assignment of Option Agreement made and entered into as of April 24, 2002 (the "Assignment Agreement"), a copy of which is attached hereto and incorporated herein by this reference as Exhibit B; and

C. WHEREAS, Roseville desires to obtain the right to purchase the Property for drainage, floodwater retention and such other beneficial public uses as may be designated by Roseville (the "Primary Uses"); and

D. WHEREAS, Roseville and WA/SP agree that during the term of this agreement they will negotiate a mechanism for the potential use of portions of the Property by WA/SP for habitat preservation/restoration, open space, species mitigation, and such other uses agreed to by the parties to the extent that such uses do not conflict with the Primary Uses intended for the Property (the "Ancillary Uses"). Such negotiations shall not require Roseville to substantially modify its proposed use of the Property, as is presently depicted in part on the Pleasant Grove Retention Basin map, a copy of which is attached as Exhibit A.

NOW, THEREFORE, for valuable consideration, receipt of which is hereby acknowledged, the parties hereto agree as follows:

1. Assignment of Option to Purchase. WA/SP hereby assigns to Roseville and Roseville accepts assignment from WA/SP of the exclusive option to purchase the Property.

2. Purchase Price. The Purchase Price for the Property will be no more than the Purchase Price to be paid to the Assignor under the Assignment Agreement and the Optionor under the Option Agreement. Currently, the Purchase Price that has been negotiated is $4,000 per acre and the total area is estimated to be 418.9 acres. The final Purchase Price shall be subject to adjustment according to survey of the Property prior to close of escrow, and is

currently estimated at $1,675,600. WA/SP and Roseville will cooperate in any further negotiation of this Purchase Price with Optionor and Assignor

3. Retention/Conservation Easement. The parties agree that the Primary Uses of the Property shall be for floodwater retention purposes with regard to regional drainage issues, and such other beneficial public uses as designated by Roseville. The parties further agree that title to the Property may be acquired by Roseville directly, or if so determined and agreed by Roseville and WA/SP during the term of this agreement, by WA/SP directly, and/or by a conservancy trust holding beneficial title to the Property.

4. Conservancy Trust. In the event that the parties elect to acquire title to the Property through a conservancy trust, Roseville and WA/SP will jointly select the parties to participate in this trust. Prior to making initial appointments to the board of such conservancy trust, the parties will review the appointments with Placer County and will seek the County's input.

5. Mitigation Land. During the term of this agreement, the parties will work together in good faith to define what mitigation land would be available for potential use by WA/SP in association with any Specific Plan entitlement which WA/SP may obtain regarding the 3,000 acres, more or less, adjacent to and west of Roseville's current boundaries (the "Entitlement Property"); provided, however, that Roseville shall not be required to substantially modify its proposed use of the Property. All costs of mitigation for the benefit of WA/SP shall be borne by WA/SP.

6. Water Usage. The parties will work together in good faith to negotiate any potential use of the Property and its water supply or entitlements for an emergency back-up water supply system to provide service to the Entitlement Property and other properties supplied by Roseville's water supply system.

7. Potential Roadway Alignment. During the term of this agreement, the parties will work together in good faith to negotiate any potential roadway alignments which may go through all, or a portion of, the Property.

8. Consideration for Agreement. Within ten (10) days of this Agreement, Roseville shall reimburse WA/SP for its deposits made in escrow pursuant to the Option Agreement, but not more than FIFTY THOUSAND DOLLARS ($50,000.00). Roseville shall also pay all of the ongoing option payments directly to the Optionor under the Option Agreement. These payments are all more particularly described in sections 4 and 6 of the Option Agreement. Any consideration paid herein by Roseville will be credited against the final purchase price of the Property, in accordance with the terms of the Option Agreement. WA/SP has the right, pursuant to the Option Agreement and the Assignment Agreement, to cure its defaults thereunder, particularly any default in the payment of any Option Consideration. WA/SP hereby assigns those rights to City, and has secured the written approval of such assignment from Optionor.

9. Acquisition Costs. Roseville will pay the Purchase Price for the acquisition of the Property and WA/SP will contribute such funds to the acquisition in connection with any uses of the Property which it may acquire from Roseville as may be agreed upon by WA/SP and

Roseville. WA/SP and Roseville will agree upon what credits and/or reimbursements will be allocated to WA/SP for funds expended by WA/SP in connection with the Option Agreement in addition to deposits reimbursed to WA/SP by Roseville pursuant to this Agreement.

10. Closing/Condition Precedent. The parties agree that the following shall be conditions prior to Roseville incurring a binding obligation to acquire the property or to close escrow: (a) there is a final certified Environmental Impact Report ("EIR") for the Property permitting the Primary and Ancillary Uses described herein, with Roseville serving as the lead agency, and (b) Roseville has obtained all necessary approvals of its governing board.

11. CEQA and Engineering Costs. The EIR for the Primary and Ancillary Uses of the Property will be prepared and certified independently of the EIR for the West Roseville Specific Plan. Roseville and WA/SP shall bear their fair share of the costs of the preparation of this separate EIR, based upon the extent of the EIR's treatment of Primary Uses versus Ancillary Uses. Roseville shall bear all engineering costs, including, but not limited to, retention studies, drainage studies, and the cost of any wetlands delineation and the costs incurred in obtaining requisite agency permits required in connection with Roseville's potential use of the Property.

12. Cooperation. The parties agree that they will cooperate with one another with regard to pursuing the Primary and Ancillary Uses described herein. The parties shall keep each other fully informed of all undertakings and actions arising in connection with this Agreement and the implementation of any of its terms.

13. Further Agreement. These are the essential terms of the current agreement between Roseville and WA/SP. The parties agree that they will negotiate in good faith to resolve all of the issues identified in this Agreement with regard to the acquisition, use, and potential disposition of all or portions of the Property.

14. Recording. Upon the execution of this agreement, and the payment of any amount due to WA/SP under Section 8 of this Agreement, WA/SP and Roseville shall execute and acknowledge a Memorandum of this Agreement and Roseville shall be entitled to record it in the Official Records of Placer County.

15. No Further Assignment. The parties agree that there shall be no assignment of this Agreement or any of the rights and obligations hereunder without the prior written consent of the non-assigning party, which consent shall not be unreasonably withheld or delayed.

16. Publicity. Neither party shall issue a press release or make any public statement with respect to the Property without the prior approval of the other party, which approval shall not be unreasonably withheld or delayed.

17. Relationship of the Parties. Roseville and WA/SP are not and shall not be deemed to be partners, nor shall they be deemed to be acting as a joint venture, by virtue of this Agreement. Moreover, neither party shall act as or be deemed to be an agent, representative, trustee or fiduciary of the other party.

In witness whereof, the parties hereto have entered into this Agreement as of this 4th day of September, 2002:

WESTPARK ASSOCIATES

By: _____
William A. Falik
Its: Managing Partner

SIGNATURE PROPERTIES, INC.

By: _____
Jim McKeehan
Its: Executive Vice President

CITY OF ROSEVILLE

By: _____
Allen E. Johnson
Its: City Manager

Approved as to form:

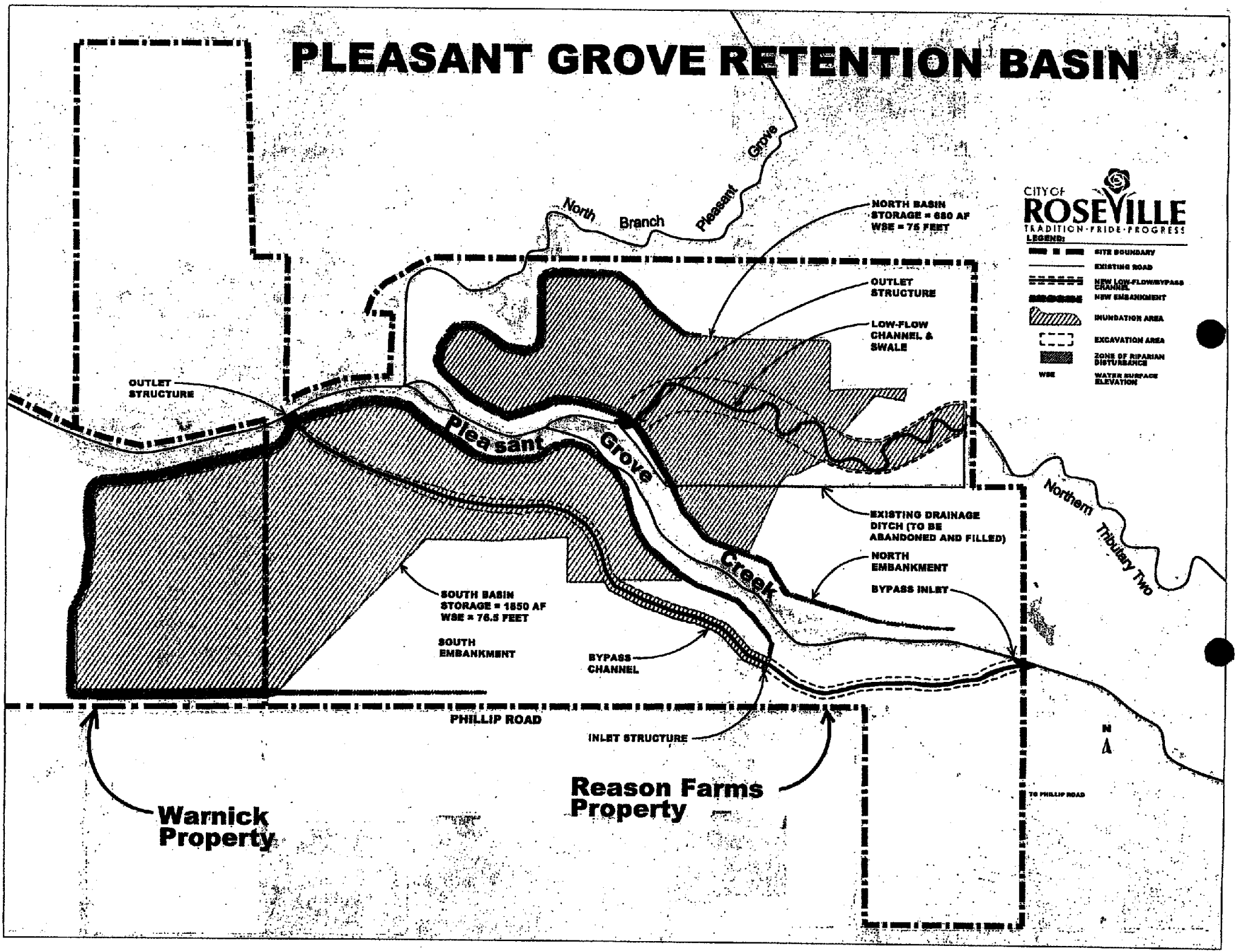
_____
Mark J. Doane, City Attorney

The undersigned owners of the Property hereby consent to the assignment of the Option Agreement by Westpark Associates and Signature Properties to the City of Roseville and to the recordation of a memorandum of this agreement.

_____
Mabel Plunkett

_____
Betty Warnick

_____
Dean Warnick


PLEASANT GROVE RETENTION BASIN
CITY OF ROSEVILLE
TRADITION · PRIDE · PROGRESS
LEGEND:
SITE BOUNDARY
EXISTING ROAD
NEW LOW-FLOW/BYPASS CHANNEL
NEW EMBANKMENT
INUNDATION AREA
EXCAVATION AREA
ZONE OF RIPARIAN DISTURBANCE
WSE
WATER SURFACE ELEVATION
North Branch Pleasant Grove
NORTH BASIN STORAGE = 680 AF WSE = 75 FEET
OUTLET STRUCTURE
LOW-FLOW CHANNEL & SWALE
OUTLET STRUCTURE
Pleasant Grove Creek
EXISTING DRAINAGE DITCH (TO BE ABANDONED AND FILLED)
NORTH EMBANKMENT
BYPASS INLET
Northern Tributary Two
SOUTH BASIN STORAGE = 1850 AF WSE = 76.5 FEET
SOUTH EMBANKMENT
BYPASS CHANNEL
PHILLIP ROAD
INLET STRUCTURE
Warnick Property
Reason Farms Property
N
TO PHILLIP ROAD

1002-04

CITY OF ROSEVILLE
TRADITION • PRIDE • PROGRESS

City Clerk
311 Vernon Street
Roseville, California 95678-2649

September 10, 2002

Westpark Associates
2130 Professional Drive, Suite 240
Roseville, CA 95661

ASSIGNMENT AGREEMENT REGARDING OPTION TO PURCHASE WARNICK PROPERTY

At the meeting of September 4, 2002 the City Council adopted a resolution authorizing the City Manager to execute an agreement for the above. A signed copy of the agreement is enclosed along with a certified copy of authorizing Resolution No. 02-390.

If you have any questions, please contact City Attorney Mark Doane at 774-5325.

CAROLYN PARKINSON, CMC
CITY CLERK

By:

Elly Allen,
Senior Deputy Clerk

cc: Signature Properties
Attorney
Finance

FILED
SEP 05 2002
BY CITY OF ROSEVILLE

COUNCIL COMMUNICATION

CC #: 1697
File #: 0400-04-13-2 & 0400-02

Title:	Second Reading - Creekview Specific Plan – Rezone and Development Agreement Amendment
Contact:	Kinarik Shallow 916-746-1309 kshallow@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 7.13.

RECOMMENDATION TO COUNCIL

ORDINANCE NO. 6394 OF THE COUNCIL OF THE CITY OF ROSEVILLE AMENDING ZONING ORDINANCE NO. 5428 OF THE CITY OF ROSEVILLE CHANGING THE ZONING OF CERTAIN REAL PROPERTY LOCATED WITHIN THE CITY OF ROSEVILLE; and adopt ORDINANCE NO. 6395 OF THE COUNCIL OF THE CITY OF ROSEVILLE ADOPTING A SECOND AMENDMENT OF THE DEVELOPMENT AGREEMENT BY AND BETWEEN THE CITY OF ROSEVILLE AND ANTHEM UNITED CREEKVIEW DEVELOPMENTS LIMITED PARTNERSHIP RELATIVE TO THE CREEKVIEW SPECIFIC PLAN AND AUTHORIZING THE CITY MANAGER TO EXECUTE IT ON BEHALF OF THE CITY OF ROSEVILLE, for second reading and adoption.

BACKGROUND

Not applicable.

FISCAL IMPACT

Not applicable.

ENVIRONMENTAL REVIEW

Not applicable.

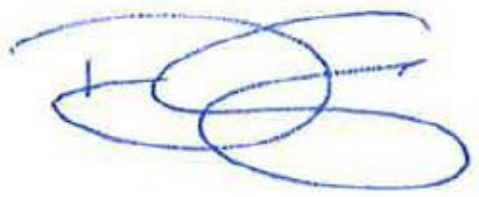
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Not applicable.

Respectfully Submitted,

Kinarik Shallow, Associate Planner

Mike Isom, Development Services Director



_____

Dominick Casey, City Manager

ATTACHMENTS:

Description

Ordinance 6394

Ordinance 6395

ORDINANCE NO. 6394

ORDINANCE OF THE COUNCIL OF THE CITY OF ROSEVILLE
AMENDING ZONING ORDINANCE NO. 5428 OF THE CITY OF ROSEVILLE
CHANGING THE ZONING OF CERTAIN REAL PROPERTY LOCATED
WITHIN THE CITY OF ROSEVILLE

THE CITY OF ROSEVILLE ORDAINS:

SECTION 1. The Council of the City of Roseville has reviewed the findings of the Planning Commission recommending approval of the rezone specified herein, and makes the following findings pursuant to Section 19.86.050 of the Zoning Ordinance:

1. The rezone is in conformance with the public interest, health, safety, or welfare of the City; and

2. The rezone is consistent with the objectives, policies, programs, and land use designations of the City of Roseville General Plan and the Creekview Specific Plan.

SECTION 2. That Section 19.06.020 of the Zoning Ordinance of the City of Roseville, Ordinance No. 5428, is amended to change the zoning of that portion of certain real property within the City of Roseville known as the Creekview Specific Plan, as shown and so designated in Exhibit E, attached and incorporated herein by reference.

SECTION 3. This ordinance shall be effective at the expiration of thirty (30) days from the date of adoption.

SECTION 4. The City Clerk is hereby directed to cause this ordinance to be published in full at least once within fourteen (14) days after it is adopted in a newspaper of general circulation in the City, or shall within fourteen (14) days after its adoption cause this ordinance to be posted in full in at least three (3) public places in the City and enter in the Ordinance Book a certificate stating the time and place of said publication byposting.

PASSED AND ADOPTED by the Council of the City of Roseville this_____day of _____, 20_, by the following vote on roll call:

AYES COUNCILMEMBERS:

NOES COUNCILMEMBERS:

ABSENT COUNCILMEMBERS:

_____
MAYOR

ATTEST:

_____
City Clerk

ORDINANCE NO. 6395

ADOPTING A SECOND AMENDMENT OF THE DEVELOPMENT AGREEMENT BY AND BETWEEN THE CITY OF ROSEVILLE AND ANTHEM UNITED CREEKVIEW DEVELOPMENTS LIMITED PARTNERSHIP RELATIVE TO THE CREEKVIEW SPECIFIC PLAN AND AUTHORIZING THE CITY MANAGER TO EXECUTE IT ON BEHALF OF THE CITY OF ROSEVILLE

THE CITY OF ROSEVILLE ORDAINS:

SECTION 1. In accordance with Chapter 19.84 of Title 19 of the Roseville Municipal Code (the Zoning Ordinance) of the City of Roseville, the City Council has received the recommendation of the Planning Commission that the City of Roseville enter into a Second Amendment of the Development Agreement by and between the City of Roseville and Anthem United Creekview Developments Limited Partnership, pertaining to property located within the Creekview Specific Plan area.

SECTION 2. Prior to considering the proposed Second Amendment to Development Agreement, the City Council considered the 2nd Addendum to the Creekview Specific Plan Environmental Impact Report (EIR) (SCH #02008032017, certified September, 19, 2012), pursuant to the California Environmental Quality Act, California Public Resources Code Section 21000 *et seq.*

SECTION 3. The Council of the City of Roseville has reviewed the findings of the Planning Commission recommending approval of the Second Amendment to Development Agreement, and makes the following findings:

1. The Second Amendment to the Development Agreement is consistent with the objectives, policies, programs and land use designations of the City of Roseville General Plan and the Creekview Specific Plan;

2. The Second Amendment to the Development Agreement is consistent with the City of Roseville Zoning Ordinance;

3. The Second Amendment to the Development Agreement is in conformance with the public health, safety and welfare;

4. The Second Amendment to the Development Agreement will not adversely affect the orderly development of the property or the preservation of property values; and

5. The provisions of the Second Amendment to the Development Agreement will provide sufficient benefit to the City to justify entering into said Amendment.

SECTION 4. The Second Amendment to Development Agreement, by and between the City of Roseville and Anthem United Creekview Developments Limited Partnership, a copy of which is on file in the City Clerk's Department and incorporated herein by reference, is hereby approved and the City Manager is authorized to execute it on behalf of the City of Roseville.

SECTION 5. The City Clerk is directed to record the executed Development Agreement Amendment within ten (10) days of the execution of the agreement by the City Manager with the County Recorder's Office of the County of Placer.

SECTION 6. This ordinance shall be effective at the expiration of thirty (30) days from the date of its adoption.

SECTION 7. The City Clerk is hereby directed to cause this ordinance to be published in full at least once within fourteen (14) days after it is adopted in a newspaper of general circulation in the City, or shall within fourteen (14) days after its adoption cause this ordinance to be posted in full in at least three (3) public places in the City and enter in the Ordinance Book a certificate stating the time and place of said publication byposting.

PASSED AND ADOPTED by the Council of the City of Roseville this_____day of _____2021, by the following vote on roll call:

AYES COUNCILMEMBERS:

NOES COUNCILMEMBERS:

ABSENT COUNCILMEMBERS:

_____
MAYOR

ATTEST:

_____
City Clerk

COUNCIL COMMUNICATION

CC #: 1684
File #: 0600-02

Title: Out-of-State Travel Request - Public Works Department
Contact: Dan Allen 916 774-5741 dallen@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 7.14.

RECOMMENDATION TO COUNCIL

Staff recommends Council approve travel for two Public Works Department staff members to attend the International Facility Management Association (IFMA) World Workplace Conference and Expo in Florida in October of 2021.

BACKGROUND

The International Facility Management Association (IFMA) World Workplace Conference and Expo was originally scheduled to be held in Anaheim, California. Due to the uncertainty of California's COVID requirements IFMA decided to move the conference to Florida.

Attending this conference will provide development opportunities for the City's facility professionals. World Workplace will provide staff with new ideas, tactics and strategies for facility improvements.

The four-day event features sessions led by facility management and business experts, educators, authors and workplace innovators. Sessions are categorized by topic areas, allowing staff to customize a learning program specific to their job responsibilities and our facility concerns.

Over three days, staff will take advantage of 45+ hours of education on:
• Designing for well-being
• Post-COVID19 lessons learned
• Writing business continuity plans
• Crisis communications
• How to slash expert service costs
• Women in facility management
• Building better workplaces post-pandemic
• How to start talking about diversity and inclusion at work
• New insights from The Experts' Assessment
• Facility managers as disruptors

• Managing a hybrid workforce

FISCAL IMPACT

Funding for travel and lodging costs for two Public Works staff members is estimated to be $6,000. Funding is included in the FY2021-22 operating budget in the Facility Services Fund.

ENVIRONMENTAL REVIEW

The California Environmental Quality Act (CEQA) does not apply to activities that will not result in a direct or reasonably foreseeable indirect physical change in the environment, or is otherwise not considered a project as defined by CEQA Statute §21065 and CEQA State Guidelines §15060(c)(3) and §15378. Approval of out-of-state travel meets the above criteria and is not subject to CEQA. No additional environmental review is required.

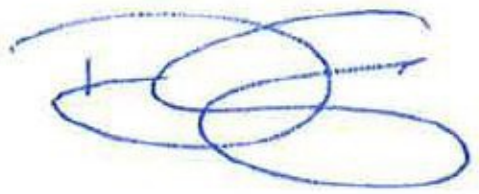
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal F - Invest in well-planned infrastructure and growth

Respectfully Submitted,

Dan Allen, Facility Manager

Jason Shykowski, Public Works Director



_____
Dominick Casey, City Manager

COUNCIL COMMUNICATION

CC #: 1689
File #: 0709-02-01

Title: HOUSING AUTHORITY - Quarterly Status Report
Contact: Suzi Cook-Turner 916-774-5414 smcook-turner@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 7.15.

RECOMMENDATION TO COUNCIL

The City Council, acting as the Roseville Housing Authority Board, is not required to take any action on this item. This quarterly report is for informational purposes only.

BACKGROUND

Pursuant to the bylaws of the Roseville Housing Authority, the City Council, acting as the Board of Directors for the Housing Authority, holds its quarterly meeting the first Wednesday of March, June, September, and December, or as soon as possible thereafter. Staff has prepared the following status report regarding lease-up activity for the Housing Choice Voucher (HCV) Program. The HCV Program provides income-qualified households in Roseville and Rocklin with rental assistance using funding from the US Department of Housing and Urban Development (HUD). This assistance is utilized at rental units that meet program specific housing standards, are owned by a willing landlord, and are within Roseville or Rocklin city limits. This rental assistance ensures that the household is able to afford to live in safe and decent housing.

RHA is authorized to provide 735 households with HCV rental assistance. This total includes 75 vouchers allocated specifically for families on the waiting list with a head-of-household or spouse that are non-elderly and disabled (NED vouchers), 65 Veterans Affairs Supportive Housing (VASH) vouchers used with veteran households that come by referral from the Veterans Affairs (VA) Department, and 33 Mainstream vouchers that assist households who have a non-elderly adult person with a disability and are transitioning out of institutional and other segregated settings, or are currently homeless or at risk of becoming homeless.
RHA administers the Family Self-Sufficiency Program (FSS), which is a component of the HCV Program. The FSS Program provides assistance to families who are working to become free of all public assistance. RHA currently has 25 families enrolled in this worthwhile program. RHA also committed 30 Project-Based vouchers to the Main Street Plaza affordable housing project in Old Town Roseville. Project basing vouchers allows developers to secure necessary funding resulting in project feasibility and allows HCV participants increased housing opportunities not previously available.
For RHA to be in compliance with HUD's regulations, the lease-up rate for a calendar year cannot exceed 100% of its allocation of vouchers (per voucher type), and each Housing Authority is

required to be at least 95% leased up for its voucher allocation or utilizing at least 95% of its annual budget authority. Agencies leasing up 98% or more of its allocated vouchers can reach high-performing status. The term “lease-up” refers to the number of families receiving rental assistance from RHA. Below is a summary chart of voucher lease-up. This translates to the following lease-up rates: regular vouchers, 90.8%, NED vouchers, 99.8%, VASH vouchers, 68.2%, Mainstream vouchers, 88.9% and Project Based vouchers, 91.7%.
RHA continues to meet HUD program requirements for high-performing status through 100% expenditure of its annual budget allocation for the program. Lease-up has stayed consistent during the second quarter; and although it appears the VASH utilization is still low, this is due to the 25 new VASH vouchers that RHA received in January 2021. Staff is currently working with the Veteran's Administration to fully lease all new vouchers. The table below provides a monthly summary of the RHA’s voucher programs for first and second quarters of calendar year 2021:

	Actual Lease-up of Regular	HUD Regular (562)	Actual Lease-up of Non-Elderly Disabled	HUD Non-Elderly Disabled (75)	Actual Lease-up of VASH	HUD VASH (65)	Actual Lease-up of Mainstream	HUD Mainstream (33)	Actual Lease-up of Project Based Vouchers	Project Based Vouchers (30)
Jan-21	499	562	76	75	30	65	28	33	17	30
Feb-21	499	562	76	75	29	65	31	33	30	30
Mar-21	499	562	75	75	48	65	30	33	30	30
Apr-21	539	562	74	75	52	65	29	33	30	30
May-21	517	562	74	75	55	65	29	33	29	30
Jun-21	509	562	74	75	56	65	29	33	29	30
YTD Total	3062	3372	449	450	270	390	176	198	165	180
YTD % Leased	90.81%		99.78%		69.23%		88.89%		91.67%	

RHA recently partnered with GoSection8.com for current rent reasonableness data. This contract also allows landlords to post unit vacancies online so participants and potential tenants can view available units. RHA is grateful for its established and new community partners and continues efforts to build owner relationships and increase additional housing inventory.

FISCAL IMPACT

The HCV Program is federally-funded through the US Department of Housing and Urban Development (HUD). Through this HUD-funded program, RHA provides an important social service locally to ensure safe and affordable housing for residents, which is an essential component of the foundation of the community’s economic stability. Through monthly rental assistance payments, the HCV Program invests $6.1 million into the local rental economy annually.

This Housing Authority status report does not create any additional cost to the City’s General Fund.

ENVIRONMENTAL REVIEW

The California Environmental Quality Act (CEQA) does not apply to activities that will not result in a direct or reasonably foreseeable indirect physical change in the environment, or is otherwise not considered a project as defined by CEQA Statute §21065 and CEQA State Guidelines

§15060(c)(3) and §15378.

The Roseville Housing Authority Quarterly Report meets the above criteria and is not subject to CEQA. No additional environmental review is required.

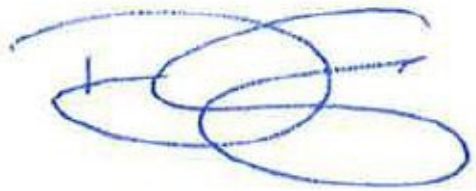
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal C - Maintain a safe and healthy community
Goal D - Enhance economic vitality

Respectfully Submitted,

Suzi Cook-Turner, Housing Supervisor

Ryan DeVore, Assistant City Manager



_____
Dominick Casey, City Manager

COUNCIL COMMUNICATION

CC #: 1699
File #: 0800-02

Title:	Emergency Generation Capacity for California Department of Water Resources - Site Use and Installation Agreement
Contact:	William Forsythe 916-774-5619 wforsythe@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 8.1.

RECOMMENDATION TO COUNCIL

Staff recommends that the City Council adopt a resolution authorizing the City Manager to execute the Site Use and Installation Agreement (Site Use Agreement) between the City of Roseville (City) and the California Department of Water Resources (CDWR) for the installation of temporary electric generation facilities at the Roseville Energy Park (REP).

BACKGROUND

California is suffering an extended drought which has reduced the availability of hydropower and generating capacity in California. The CDWR operates the California State Water Project (SWP) and is both a large producer of hydropower and a large consumer of electricity in operating the SWP. To offset the large decline in generating capability from drought, CDWR is seeking sites that can rapidly add generating capability to the California grid, with a goal of new natural gas peaking units available to provide grid support by mid-September 2021.

When the Roseville Energy Park (REP) was designed and constructed, the site was planned as a hub for various generating technologies. Accordingly, the site has the ability to accommodate additional generating capacity. CDWR has identified the REP site as one of a very few in California capable of rapidly developing generation capacity.

On August 16, 2021, the City Council adopted a resolution authorizing the City Manager to execute a Right of Entry and authorizing staff to negotiate at least three separate agreements between Roseville and CDWR related to this transaction: Site Use and Installation Agreement; Operation and Maintenance Agreement; and an Energy Services Agreement. This item relates to the Site Use Agreement; the remaining two agreements will be presented to City Council for consideration at a later date.

FISCAL IMPACT

CDWR will pay Roseville $8 million for service provided under the Site Use Agreement over the

term of the contract, which expires on December 31, 2023. All costs for construction, operations and maintenance will be borne or reimbursed by CDWR. In addition, Roseville will have the option to procure the generating units at the end of the contract term for an agreed upon purchase price.

ENVIRONMENTAL REVIEW

The proposed project involves the construction of a limited number of small facilities. This activity is categorically exempt from CEQA as a Class 3 Exemption (State CEQA Guidelines Section 15303). The Exemption has been filed and no further CEQA action is required.

Additionally, the proposed project involves minor alteration in the condition of the land, water, and or vegetation which will not remove healthy, mature scenic trees. This activity is categorically exempt from CEQA as a Class 4 Exemption (State CEQA Guidelines Section 15304). The Exemption has been filed and no further CEQA action is required.

Lastly, Governor Newsom issued a "Proclamation of a State of Emergency" on July 30, 2021, and pursuant to section 10 of that Proclamation of a State of Emergency, the California Environmental Quality Act in Public Resources Code, Division 13 (commencing with section 21000) and regulations adopted pursuant to that Division, are suspended for this project.

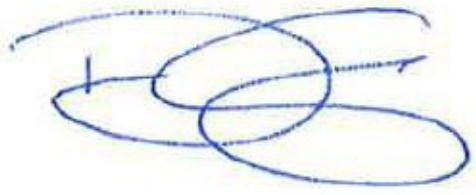
CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal A - Remain fiscally responsible in a changing world
Goal F - Invest in well-planned infrastructure and growth

Respectfully Submitted,

William Forsythe, Power Supply and Portfolio Administrator

Michelle Bertolino, Electric Utility Director



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Dominick Casey, City Manager

ATTACHMENTS:
Description
Resolution 21-393

RESOLUTION NO. 21-393

APPROVING A SITE USE AND INSTALLATION AGREEMENT, BY AND BETWEEN THE CITY OF ROSEVILLE AND THE CALIFORNIA DEPARTMENT OF WATER RESOURCES, AND AUTHORIZING THE CITY MANAGER TO EXECUTE IT ON BEHALF OF THE CITY OF ROSEVILLE

WHEREAS, a Site Use and Installation Agreement relating to the installation of temporary electric generation facilities at the Roseville Energy Park, by and between the City of Roseville and the California Department of Water Resources, has been reviewed by the City Council; and

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Roseville that said Site Use and Installation Agreement is hereby approved and the City Manager is authorized to execute it on behalf of the City of Roseville.

BE IT FURTHER RESOLVED that the City Attorney of the City of Roseville is authorized to approve non-substantive changes to the Site Use and Installation Agreement.

PASSED AND ADOPTED by the Council of the City of Roseville this ___ day of _____, 2021, by the following vote on roll call:

AYES COUNCILMEMBERS:

NOES COUNCILMEMBERS:

ABSENT COUNCILMEMBERS:

_____
MAYOR

ATTEST:

_____
City Clerk

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SITE USE AND INSTALLATION AGREEMENT

THIS SITE USE AND INSTALLATION AGREEMENT ("**Agreement**" or "**Site Agreement**"), dated as of September __, 2021 ("**Effective Date**"), is made and entered into by and between THE CITY OF ROSEVILLE, a municipal corporation ("**Owner**") and the CALIFORNIA DEPARTMENT OF WATER RESOURCES ("**CDWR**" or "**Licensee**"). Each of Owner and CDWR are also referred to herein as a "**Party**" and collectively as the "**Parties**".

RECITALS

A, On July 30, 2021, the Governor of the State of California proclaimed a state of emergency due to the accelerating and compounding effects of continuing wildfires, ongoing drought, and extreme heat conditions caused by climate change, which have resulted in an additional projected energy supply shortage of up to 3,500 megawatts during the afternoon-evening "net-peak" period of high power demand on days when there are extreme weather conditions. The proclamation directs CDWR to enter into contracts for the procurement of materials, goods and services necessary for projects likely to be online by October 31, 2021 that would expand energy supply and storage to respond to these projected energy supply shortages.

B. Owner owns a site with available interconnection capacity that can be used for the siting and installation of two General Electric LM2500 combustion turbine generators with selective catalytic reduction systems (the "**Units**") through the end of 2023. The Units could be used to provide some of the additional energy supplies required by the State of California during this period.

C. Owner is willing to grant CDWR a license to use the Site (as defined below) through the end of 2023 on the terms and conditions set forth herein.

D. CDWR is willing to grant Owner the right to purchase one or both of the Units, during a specified period during the term of the Site Agreement.

NOW, THEREFORE, for good and valuable consideration, the Parties agree as follows:

1. **Definitions**.

(a) When used herein, the following capitalized terms will have the meanings set forth below:

"**Access Area**" means the area designated "Access Area" on Exhibit A.

"**Access License**" has the meaning defined in Section 2(a)(ii).

"Affected System" means an electric system other than the Owner's electric system that may be affected by the installation and interconnection of the Units.

"**Affiliate**" means, with respect to any Person, each other Person that, directly or indirectly, through one or more intermediaries, controls, or is controlled by, that Person. For the purposes of this definition, "control" (including, with correlative meanings, the terms "controlled by" and "under common control with"), as used with respect to any Person, means the possession, directly

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or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities or by contract or otherwise.

"**BANC**" means the Balancing Authority of Northern California.

"**Bankrupt**" means with respect to any entity, such entity (i) files a petition or otherwise commences, authorizes or acquiesces in the commencement of a proceeding or cause of action under any bankruptcy, insolvency, reorganization or similar law, or has any such petition filed or commenced against it and such petition filed or commenced against it is not stayed or dismissed within ninety (90) days thereafter, (ii) makes an assignment or any general arrangement for the benefit of creditors, (iii) otherwise becomes bankrupt or insolvent (however evidenced), (iv) has a liquidator, administrator, receiver, trustee, conservator or similar official appointed with respect to it or any substantial portion of its property or assets, or (v) is generally unable to pay its debts as they become due.

"**Business Day**" means any day other than Saturday, Sunday, and any day that is a holiday observed by Federal Reserve member banks in San Francisco, California.

"**CAISO**" means the California Independent System Operator Corporation or any successor entity performing similar functions.

"**CAISO Controlled Grid**" means the system of transmission lines and associated facilities of the participating transmission owners that have been placed under the CAISO's operational control.

"**CAISO Tariff**" means the California Independent System Operator Corporation Open Access Transmission Tariff, Business Practice Manuals (BPMs), and Operating Procedures, as the same may be amended or modified from time-to-time and approved by FERC.

"**CDWR Indemnified Parties**" has the meaning defined in Section 12(b).

"**CDWR's Representative**" has the meaning defined in Section 3(h).

"**CEC**" means the California Energy Commission, or any successor agency performing similar functions.

"**Claiming Party**" has the meaning defined in Section 8(b).

"**Confidential Information**" means any information disclosed in writing or orally by one Party to the other Party that is or relates to (a) the terms and conditions of, and proposals and negotiations related to, this Agreement, (b) information necessary to protect the reliability and security of each Party's electric systems, information defined as Critical Energy Infrastructure Information, as defined in Title 18 of the Code of Federal Regulations, or information related to any aspect of the business of a Party which is either information not known by actual or potential competitors of the other Party or is proprietary information of a Party, whether of a technical nature or otherwise, or (c) information that the Disclosing Party stamps or otherwise identifies as "confidential" or "proprietary" before disclosing it to the Receiving Party; provided however, that Confidential Information shall not include (i) information that was publicly available at the time of the disclosure, other than as a result of a disclosure in breach of this Agreement; (ii) information

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that becomes publicly available through no fault of the Receiving Party after the time of the delivery; (iii) information that was rightfully in the possession of the Receiving Party (without confidential or proprietary restriction) at the time of delivery or that becomes available to the Receiving Party from a source not subject to any restriction against disclosing such information to the Receiving Party; and (iv) information that the Receiving Party independently developed without a violation of this Agreement.

"**Contract Year**" means, as applicable, (i) the period from the Effective Date through December 31, 2021 and (ii) each subsequent calendar year thereafter.

"**Contractor**" means each of the Installation Contractor and the Equipment Vendor.

"**Contractor's Representative**" has the meaning defined in Section 3(h).

"**Defaulting Party**" has the meaning set forth in Section 9.

"**Early Termination Date**" has the meaning set forth in Section 10(a)(i).

"**Effective Date**" has the meaning set forth on the Preamble.

"**Emission Reduction Credits**" or "**ERCs**" means credits earned by a Person when it reduces air emissions beyond what is required by applicable permits and rules. ERCs are assets that can be used by its owner or sold to Persons that need emission offsets.

"**Energy Services Agreement**" means that certain Energy Services Agreement, dated as of the Effective Date, by and between CDWR, as owner, and the City of Roseville, as service provider.

"**Equipment Vendor**" means General Electric Company.

"**Event of Default**" has the meaning defined in Section 9.

"**Force Majeure**" has the meaning defined in Section 8(a).

"**Gas Interconnection Point**" has the meaning defined in Section 3(g)(ii).

"**GHG Costs**" means the cost of ERCs and/or other pollution mitigation measures or offsets incurred by Owner in satisfying the conditions of any Required Permit to allow the units to be operated in the ordinary course of business and as required by its contractual obligations and the CAISO.

"**Good Industry Practice**" means those practices, methods and acts that would be implemented and followed by prudent builders,, owners, lessors, and operators of electric generation facilities similar to the Units in the western United States during the relevant time period, which practices, methods and acts, in the exercise of prudent and responsible professional judgment in the light of the facts known at the time the decision was made, could reasonably have been expected to accomplish the desired result consistent with good business practices, reliability and safety, and shall include, at a minimum, those professionally responsible practices, methods and acts described in the preceding sentence that comply with manufacturers' warranties,

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restrictions in this Agreement, and the requirements of governmental authorities, NERC or WECC reliability standards, the CAISO and applicable Laws. Good Industry Practice is not intended to be the optimum practice, method or act to the exclusion of all others, but rather is intended to be any of the practices, methods and/or actions generally accepted in the region.

"**Governmental Authority**" means any federal, state, local or municipal government, any political subdivision thereof or any other governmental, regulatory or judicial instrumentality, authority, body, agency, department, bureau, or entity with authority to bind a Party at law, including CAISO; provided, however, that "Governmental Authority" shall not in any event include any Party.

"**Greenhouse Gases**" or "**GHGs**" means emissions into the atmosphere of carbon dioxide (CO_2), nitrous oxide (N_2O), and methane (CH_4) which are produced as the result of combustion of fossil fuels and which have been found or determined by a Governmental Authority to contribute to global warming or climate change. Other greenhouse gases included in this definition are hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF_6). Greenhouse Gases may be defined or expressed in terms of a ton of CO_2-equivalent, in order to allow comparison between the different effects of gases on the environment.

"**GSU**" has the meaning defined in Section 3(g).

"**GSU Interconnection Point**" has the meaning defined in Section 3(g).

"**Hazardous Substances**" means (a) any chemical, material or substance that is listed or regulated under applicable Laws as a "hazardous" or "toxic" substance or waste, or as a "contaminant" or "pollutant" or words of similar import, (b) any petroleum or petroleum products, flammable materials, explosives, radioactive materials, asbestos, urea formaldehyde foam insulation, and transformers or other equipment that contain polychlorinated biphenyls, and (c) any other chemical or other material or substance, exposure to which is prohibited, limited or regulated by any Laws.

"**Indemnified Party**" means (i) if CDWR is the Indemnifying Party, each Owner Indemnified Party, and (ii) if Owner is the Indemnifying Party, each CDWR Indemnified Party.

"**Indemnifying Party**" means CDWR with respect to the indemnification obligations under Section 12(a), CDWR, and (ii) with respect to the indemnification obligations under Section 12(b), Owner.

"**Installation Contractor**" means Kiewit Corporation.

"**Installation Plans and Specifications**" has the meaning defined in Section 3(a).

"**Interconnection Delays**" means all delays in the modification of any interconnection facilities, or in the receipt of resource IDs and other approvals or certifications from the CAISO or any other applicable Person requiring approvals or certifications, necessary to permit interconnection of the Units to the CAISO Controlled Grid, as an EIM asset, and to schedule energy deliveries from the Units, and all other delays in providing interconnection service, including failures to obtain any required permissions or cancellations of such service, that are not due to the gross negligence or willful misconduct of Owner or its Affiliates.

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"**Law**" means any law, statute, rule, regulation, decision, writ, order, decree or judgment, permit, license or authorization, or any interpretation thereof, promulgated, adopted or issued by a Governmental Authority.

"**Lender**" means, individually and collectively, any bank, financial institution, insurance company or other lender, including its or their agents and trustees, providing Owner and/or its Affiliates with financing or other credit facilities.

"**License**" means each of the Access License, the Site License and the Utility License.

"**License Area**" means each of the Site, Access Area and Utility Installation Area.

"**License Fee**" has the meaning defined in Section 6(a).

"**Losses**" has the meaning defined in Section 12(a).

"NERC" means North American Electric Reliability Corporation.

"**Non-Defaulting Party**" has the meaning defined in Section 10(a).

"**O&M Agreement**" means that certain Operation and Maintenance Agreement, dated as of the Effective Date, by and between CDWR, as owner of the Units, and the City of Roseville, as O&M Contractor.

"**Owner Indemnified Parties**" has the meaning defined in Section 12(a).

"**Owner Supplied Facilities**" has the meaning defined in Section 3(g).

"**Owner's Reimbursable Site Costs**" has the meaning defined in Section 3(g).

"**Owner's Representative**" has the meaning defined in Section 3(h).

"**Permit**" means any permit, authorization, consent, approval, license, order, filing, waiver, exception, variance or exemption filed with or issued by any Governmental Authority and shall include those siting and operating permits and licenses required for the installation, testing, commissioning, operation, maintenance, decommissioning or removal of the Units in compliance with all applicable Laws.

"**Permit Applications**" has the meaning defined in Section 5(a).

"**Permitting Costs**" means (i) all costs of preparing and submitting the Permit Applications, including the costs of all studies and modeling required for the Permit Applications and all costs of third party consultants or fees of attorneys engaged to prepare or assist in the preparation of the Permit Applications, (ii) all application fees and similar costs paid to Governmental Authorities in connection with submission of the Permit Applications, (iii) all other third party costs incurred by Owner or its Affiliates in applying for, acquiring and maintaining the Required Permits, (iv) all mitigation fees, ERCs, in lieu fees and other similar required to in order to obtain and maintain the Required Permits, (v) all GHG Costs, and (vi) other related costs.

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"**Person**" means any individual, sole proprietorship, corporation, limited liability company, limited or general partnership, joint venture, association, joint-stock company, trust, incorporated organization, institution, public benefit corporation, unincorporated organization, government entity or other entity.

"Recycled Water Interconnection Point" has the meaning defined in Section 3(g).

"**Requested Confidential Information**" has the meaning defined in Section 17b).

"**Required Permits**" has the meaning defined in Section 5(a).

"**SCR**" has the meaning defined in Section 3(d).

"**Site**" means the area designated as the "Site" on Exhibit A.

"**Site License**" has the meaning defined in Section 2(a)(i).

"**Telemetry Interconnection Point**" has the meaning defined in Section 3(g).

"**Term**" has the meaning defined in Section 4.

"**Unit Specifications**" has the meaning defined in Section 5(a).

"**Units**" has the meaning defined in the recitals to this Agreement.

"**Utility Installation Area**" means the area shown as "Utility Installation Area" on Exhibit A.

"**Utility License**" has the meaning defined in Section 2(a)(iii).

"**WAPA**" means the Western Area Power Administration.

"WECC" means Western Electricity Coordinating Council.

(b) The following rules of interpretation shall apply to this Agreement, unless otherwise specified or required by the context:

(i) Terms defined in the singular shall include the plural and vice versa;

(ii) References to "Sections" and "Exhibits" shall be to sections or exhibits of this Agreement;

(iii) All references to a particular entity shall include a reference to such entity's successors and permitted assigns;

(iv) The words "herein," "hereof," and "hereunder" shall refer to this Agreement as a whole and not to any particular section or subsection hereof;

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(v) References to this Agreement shall include a reference to all exhibits hereto, as the same may be amended, modified, supplemented, or replaced from time to time;

(vi) Terms used in the masculine shall include the feminine and vice versa;

(vii) The terms "include" and "including," when used in this Agreement, shall mean to include without limitation; and

(viii) The term "day" when used in this Agreement shall mean a calendar day unless specified otherwise.

Capitalized terms, used but not otherwise defined herein, shall have the meaning ascribed to them in the CAISO Tariff.

2. **Use of Site.**

(a) Owner hereby grants to Licensee the following licenses on and subject to the terms of this Agreement:

(i) A license to use the Site for the purposes of installing, testing, commissioning, operating, maintaining and decommissioning the Units (the "**Site License**");

(ii) A license to use the Access Area for purposes of access to the Site for the purposes of installing, testing, commissioning, operating, maintaining and decommissioning the Units (the "**Access License**"); and

(iii) A license to use the Utility Installation Area for the purposes of installing, using and maintaining (A) pipes and related gas facilities between the Units and the Gas Interconnection Point, (B) electrical cables between the Units and the GSU Interconnection Point, (C) pipes and related water facilities between the Units and the Recycled Water Interconnection Point, (D) wires, meters and other telemetry and communications facilities and equipment between the Units and the Telemetry Interconnection Point (the "**Utility License**").

(b) The Site License will be an exclusive license with respect to the Utility Installation Area on which the Units are physically located and a non-exclusive license for the remainder of the Site, but the use of the Site pursuant to the Site License shall be strictly limited to the purposes described in Section 2(a)(i) and must comply with the terms and conditions of this Agreement. Except as provided in the Installation Plans and Specifications or as approved in writing by Owner in its discretion, and other than as may necessary to install the Units, the Site License shall not include any right to disturb any of Owner's existing improvements on the Site, to disturb the ground surface of the Site, to make any permanent changes to the Site, or to install any permanent improvements on the Site.

(c) The Access License and the Utility License will be non-exclusive licenses and will be subject to use by Owner and its Affiliates for such purposes as they may choose; provided that such uses do not materially interfere with the essential purposes of each such License. The uses

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of the Access Area pursuant to the Access License and of the Utility Installation Area pursuant to the Utility License shall be strictly limited to the purposes described in Sections 2(a)(ii) and 2(a)(iii), respectively, must comply with the terms and conditions of this Agreement, and shall not interfere with the use by Owner or its Affiliates of the Access Area or the Utility Installation Area, including for the installation of improvements, equipment and facilities for Owner's or its Affiliate's intended use of such property as described in the recitals to this Agreement. The Access License and Utility License do not include any right to disturb any of Owner's existing improvements within the License Areas, to disturb the ground surface, to make any permanent changes, or to install any permanent improvements except as provided in the Installation Plans and Specifications or approved in writing by Owner in its discretion.

(d) The Licenses granted under this Agreement are licenses only and do not convey any estate or interest in real property or any right or interest to use or occupy the Site, the Access Area or the Utility Installation Area beyond the Term or other than as expressly provided in this Agreement.

(e) All use of the Licenses by CDWR, its agents, employees, representatives, contractors and consultants, shall comply with applicable Law and Permits, as well as with Owner's site safety and security rules as in effect from time to time. All Persons entering on to or using any of the License Areas shall be required to sign an agreement acknowledging such site safety and security rules and agreeing to comply with them.

3. **Installation of the Units.**

(a) Except as expressly provided in Sections 3(f), 3(g) and 5, CDWR and its Contractors will be fully responsible for the design, purchase, delivery, installation, testing, commissioning, operation, maintenance, decommissioning and removal of the Units and for the acts and omissions of the Contractors and their subcontractors, and of any other contractors or subcontractors engaged by CDWR. Except for Owner's obligation to provide Licenses for the Site and the other License Areas and to make the Owner Supplied Facilities available to CDWR, CDWR and its Contractors will be responsible for all work necessary to design, install, test and commission the Units. The Units and related facilities and equipment shall be installed on the Site, the Access Area and the Utility Installation Area in accordance with the Installation Plans and Specifications attached hereto as Exhibit C, with such modifications and supplements as may be agreed to by both Parties in writing from time to time (the "**Installation Plans and Specifications**"), covering both the initial installation of the Units and the subsequent installation of the SCRs as provided in Section 3(d) below.

(b) CDWR will purchase the Units from the Equipment Vendor and arrange for the delivery of the Units to the Site. CDWR has engaged the Installation Contractor to install, test and commission the Units on the Site and, in the event that Owner does not exercise its right to purchase one or both of the Units, will, prior to the end of the Term, engage one or more qualified contractors to decommission and remove the Units from the Site. Without limiting the foregoing, the Installation Contractor's scope of work shall include all interconnections between the Units and the Owner Supplied Facilities, all security fencing around the Site and such other matters as may be described in the Installation Plans and Specifications. Owner reserves the right to monitor the Installation Contractor's work.

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(c) CDWR will hold Owner harmless from any and all costs of purchasing, delivering, installing, testing, commissioning, decommissioning and removing the Units. CDWR will keep the Site, the other License Areas and all other property of Owner and its Affiliates free and clean of all mechanic's and materialmen's liens and other liens or stop payment notices relating to payment or nonpayment of such costs and will pay or discharge any such liens within forty-five (45) days after notice thereof from Owner. If CDWR fails to do so, Owner may, without limiting its rights under Sections 9 or 10, pay or discharge any or all such liens, and CDWR shall promptly reimburse Owner for all amounts incurred in connection with the payment or discharge of such liens, including all amounts paid to the lien holder, attorneys' fees, filing or recording fees and title insurance costs.

(d) The Parties acknowledge and agree that the Permit Applications for the Units will include the installation of a selective catalytic reduction system ("**SCR**") on each of the Units, but that the SCRs are not currently available and therefore will not be part of the initial installation of the Units. CDWR agrees that, as part of its purchase of the Units, it will purchase SCRs for each Unit and that such SCRs will be delivered and installed as soon as reasonably possible and in all events within the time period required by the Permits for the Units. CDWR and its Contractors will be fully responsible for the delivery, installation, testing and commissioning of the SCRs in conformance with the Installation Plans and Specifications and otherwise in the same manner as the Units, including payment of all costs and keeping the Site, the other License Areas and all other property of Owner and its Affiliates free and clean of all mechanic's and materialmen's liens and stop payment notices as provided in Section 3(c). Upon installation, testing and commissioning of the SCRs, they will become part of the Units for all purposes hereunder. To the extent that the SCRs are not installed within the time period required by the Permits for the Units, Owner may exercise the right to terminate this Agreement, as provided in Section 10(c)(iii).

(e) All contractors and subcontractors other than the Contractors entering on to any of the License Areas shall be subject to Owner's prior review and approval, which will not be unreasonably withheld, prior to entry. Such approval may be conditioned on, among other things, proof that such contractor or subcontractor is properly licensed and is carrying adequate liability insurance that protects Owner and is Affiliates. In addition, all contractors and subcontractors entering on to any of the License Areas shall comply with Owner's safety and COVID-19 protocols.

(f) The Parties acknowledge that, as between them, operation and maintenance of the Units and the payment of the costs thereof are addressed in the O&M Agreement.

(g) In connection with the installation of the Units, Owner will provide the following (the "**Owner Supplied Facilities**"):

(i) Owner will provide an interconnection point to its two existing generation step up transformers (each a "**GSU**") in the location shown on the Installation Plans and Specifications (the "**GSU Interconnection Point**").

(ii) Owner will provide an interconnection point to its existing natural gas yard in the location shown on the Installation Plans and Specifications (the "**Gas Interconnection Point**").

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(iii) Owner will provide an interconnection point to a supply of recycled water in the location shown on the Installation Plans and Specifications (the "**Recycled Water Interconnection Point**").

(iv) Owner will provide an interconnection point to telemetry and communication facilities for communicating with WAPA and BANC in the location shown on the Installation Plans and Specifications (the "**Telemetry Interconnection Point**").

Owner's only obligation is to provide the Owner Supplied Facilities, and Owner does not have any other obligations with respect to the installation, testing, commissioning, operation, maintenance, decommissioning or removal of the Units or any related equipment or facilities. CDWR and its Contractor will be responsible for all interconnections between the Units and the Owner Supplied Facilities. CDWR will reimburse Owner for all third party costs and expenses, including consultant and legal fees, and Owner's expenses and employee fully burdened labor rates, reasonably incurred by Owner and its Affiliates in carrying out Owner's obligations under this Agreement and in making the Owner Supplied Facilities available to CDWR, including (A) costs of restoring and updating the gas yard and the electrical switchyard, (B) costs of preparing and, if necessary, modifying the GSUs, (C) costs of all metering and telemetry required by WAPA, BANC, CAISO or NERC with respect to the Units, (D) costs of extending recycled water facilities to the Recycled Water Interconnection Point, and (E) costs of preparation of the Site and other License Areas for use by CDWR pursuant to this Agreement (collectively, "**Owner's Reimbursable Site Costs**"); provided that Owner's Reimbursable Site Costs shall not in the aggregate exceed $850,000.00 without CDWR's written consent, which will not be unreasonably withheld. Owner will use commercially reasonable efforts to make the Owner Supplied Facilities on or before the target availability dates set forth in the Installation Plans and Specifications, but such dates may be extended due to Force Majeure, Interconnection Delays or delays in receipt of the Required Permits or any approvals, certifications, agreements or other actions by or from the CAISO. The Parties acknowledge and agree that this Agreement may be terminated for various reasons provided for herein prior to the Units having been installed, tested and commissioned, but agree that, so long as Owner uses commercially reasonable efforts to carry out its obligations under this Agreement and to make the Owner Supplied Facilities available to CDWR and its Contractors, CDWR will reimburse Owner and its Affiliates for all Owner's Reimbursable Site Costs incurred hereunder (but not in excess of the maximum amount set forth above), regardless of whether or not the Units are ultimately installed, tested and commissioned.

(h) Owner will designate one or more individuals (collectively, "**Owner's Representative**") to act as the point of contact between Owner and CDWR and its Contractors and will notify CDWR and the Contractors of the name and contact information of such Owner Representative. CDWR will also designate one or more individuals (collectively, "**CDWR's Representative**") to act as the point of contact for CDWR and will cause its Contractors to likewise designate one or more individuals (each a "**Contractor's Representative**") to act as the point of contact for that Contractor and will notify Owner or cause each Contractor to notify Owner of the name and contact information of CDWR's Representative and the respective Contractor Representatives. Owner's Representative will coordinate with CDWR and its Contractors in connection with the installation, testing, commissioning, decommissioning and removal of the Units, including coordination of the schedules for work to be done by the Contractors and by Owner, respectively; provided that no such coordination or other activities by Owner's Representative shall be considered an approval of or assumption of liability with respect to any work done by CDWR or its Contractors.

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(i) During the Term of this Agreement, CDWR will be the owner of the Units, including the equipment and facilities installed by CDWR's Contractors to interconnect to the Owner Supplied Facilities, and Owner will not have any ownership interest in them. The Units will remain the personal property of CDWR and will not be deemed fixtures to the Site or any other License Area. CDWR will be responsible for and will timely pay all property taxes and other taxes, including possessory interest taxes if applicable, assessed against or with respect to the Units or assessed due to use of the License Areas. The Parties acknowledge and agree that Owner or its Affiliates own the GSUs, the gas yard, electrical switchyard, the recycled water facilities and the other gas, electric and utility facilities outside of the boundaries of the Site, except for equipment and facilities installed by CDWR and its Contractors in the License Areas pursuant to this Agreement. Owner will be responsible for and will timely pay all property taxes and other taxes assessed against or with respect to its property.

4. **Term.** This Agreement will be effective as of the Effective Date and will continue in effect until December 31, 2023, unless sooner terminated as provided herein (the "**Term**"). CDWR acknowledges and agrees that after December 31, 2023, there are no rights to extend the Term beyond that date.

5. **Permitting.**

(a) Owner will use commercially reasonable efforts to (i) determine what new Permits, or amendments or modifications to existing Permits are necessary in order to permit the installation, testing, commissioning, operation, maintenance, decommissioning and removal of the Units as contemplated by this Agreement, the O&M Agreement and the Energy Services Agreement in accordance with all applicable Laws (the "**Required Permits**"), (ii) submit applications ("**Permit Applications**") for the Required Permits to the appropriate Governmental Authorities, and (iii) seek to obtain approval of the Required Permits on the terms and conditions proposed in the Permit Applications or on such other terms and conditions as may be approved by the applicable Governmental Authorities that will permit the installation, testing, commissioning, operation, maintenance, decommissioning and removal of the Units as described in clause (i); provided, however, that if the terms and conditions of approval of a Required Permit proposed by the applicable Governmental Authority are materially different from those proposed in the Permit Application, Owner will consult with CDWR before accepting such terms and conditions and will not accept such new terms and conditions without CDWR's written consent. The Permit Applications may be submitted, and the Required Permits may be obtained, in the name of Owner and/or one or more of its Affiliates, as Owner may consider necessary or appropriate. All Permit Applications will be based on the design and specifications of the Units set forth on Exhibit B (the "**Unit Specifications**"), and CDWR shall not install, test or commission any Unit, or permit or cause the installation, testing or commissioning of any Unit, that differs from the Unit Specifications. Owner shall have the right to prohibit the installation, testing or commissioning of any Unit that does not conform to the Unit Specifications. In the event that Owner is unable to obtain one or more Required Permits based on Units as described in the Unit Specifications on terms and conditions that will permit the installation, testing, commissioning, operation, maintenance, decommissioning and removal of the Units as described in clause (i), the Parties will confer and use commercially reasonable efforts to agree on revisions to the Unit Specifications that will enable Owner to obtain the Required Permits consistent with the description in clause (i). Owner neither incurs nor assumes any liability under this Agreement if

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CDWR will not accept new terms and conditions proposed by the applicable Governmental Authority for a Required Permit.

(b) The Parties acknowledge and agree that the Permit Applications will be based on the Units being installed with SCRs as provided in the Unit Specifications, *provided that* Owner will use commercially reasonable efforts to obtain temporary waivers or exceptions as may be necessary to allow the installation, testing, commissioning, operation and maintenance of the Units without SCRs. If Owner is unable to obtain such temporary waivers or exceptions, or is unable to obtain for the period of time that CDWR or its Contractor requires to deliver, install, test and commission the SCRs, the Parties will confer and use commercially reasonable efforts to agree on an accelerated schedule for the delivery, installation, testing and commissioning of the SCRs so that the foregoing can be completed as allowed by the temporary waivers or exceptions that can reasonably be obtained. For the avoidance of doubt, Owner neither incurs nor assumes any liability under this Agreement due to the inability using commercially reasonable efforts to obtain temporary waivers or exceptions for the installation, testing, commissioning, operation and maintenance of the Units without SCRs.

(c) CDWR will reimburse Owner and its Affiliates for all Permitting Costs reasonably incurred in preparing the Permit Applications and applying for, obtaining and maintaining the Required Permits; provided that Permitting Costs shall not in the aggregate exceed one hundred thousand dollars ($100,000) without CDWR's written consent, which will not be unreasonably withheld. The Parties acknowledge and agree that there is no assurance that Owner and its Affiliates will be able to obtain the Required Permits, but agree that, so long as Owner uses commercially reasonable efforts to obtain the Required Permits as provided herein, CDWR will reimburse Owner and its Affiliates all Permitting Costs reasonably incurred by Owner and its Affiliates (but not in excess of the maximum amount set forth above), regardless of whether or not the Required Permits are ultimately obtained or the Units are installed, tested and commissioned.

(d) If Owner is unable, despite using commercially reasonable efforts, to obtain one or more of the Required Permits by October 31, 2021, the Parties will convene in an attempt to reach an agreement on a course of action within 60-days, otherwise, either party may elect, by written notice to the other Party, to terminate this Agreement with no further liability on the part of either Party, except (i) CDWR will reimburse Owner and its Affiliates for all Permitting Costs and Owner's Reimbursable Site Costs incurred by Owner and its Affiliates through the effective date of termination, (ii) no part of the License Fee previously paid shall be refundable or refunded on account of such termination, and (iii) all indemnification obligations in Section 12 shall survive such termination and shall continue in effect.

(e) CDWR shall design, install, test, commission, decommission, remove and, subject to compliance by Owner's Affiliates with their respective obligations under the O&M Agreement and the Energy Services Agreement, operate and maintain the Units in accordance with the Required Permits, all other applicable Permits and all applicable Laws.

6. **Compensation; Billing.**

(a) In addition to the reimbursement of Owner's Reimbursable Site Costs and Permitting Costs, CDWR will pay to Owner a fee for the Licenses granted herein ("**License Fee**")

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for each Contract Year or part thereof during the Term, as of the target Commercial Operation Date of Sept 17, 2021, and as follows:

First Contract Year	$1,000,000.00 upon full execution of this Agreement, the Operation and Maintenance Agreement, and the Energy Services Agreement
Second Contract Year	$3,500,000.00 Payable in four equal installments on or before the first business day of each calendar quarter.
Third Contract Year	$3,500,000.00 Payable in four equal installments on or before the first business day of each calendar quarter.

Unless stated otherwise in this Agreement, payment of the License Fee as and when required will be Owner's full compensation for the grant of the Licenses and use of the License Areas and for internal costs incurred by Owner and its Affiliates in carrying out Owner's obligations under this Agreement and making the Owner Supplied Facilities available to CDWR. CDWR shall pay the License Fee timely, irrespective of whether the Units are operating at full capacity or not at the time payment is due.

(b) The License Fee shall be payable by CDWR to Owner in accordance with the amounts and dates set forth in Section 6(a). Subject to CDWR's rights under Section 6(d), payments for reimbursement of Permitting Costs and other reimbursable amounts under this Agreement shall be made on or before the forty-fifth (45th) day after receipt of the invoice (California Prompt Payment Act; Government Code, Section 927, et seq). If the due date falls on a non-Business Day, then the payment shall be due on the following Business Day. Payment shall be deemed delivered on time if sent via electronic funds transfer, as set forth in Exhibit E, prior to 5 p.m. Pacific time on the due date. CDWR shall submit all payments under this Agreement to Owner at the payment address shown in Exhibit E. Any changes to the address designated for purposes of payment must be made by written notice to CDWR at the address listed in Exhibit E at least sixty (60) days prior to the first submittal of payment to the new address.

(c) The License Fee payable in each Contract Year is a fixed amount and is not subject to dispute. If CDWR wishes to dispute an invoice for Permitting Costs or other reimbursable costs in whole or in part, it must give Owner written notice of the amount in dispute on or before the due date for the invoice, including a reasonably detailed statement of the basis for such dispute (including supporting documentation), but it shall nonetheless pay the amount billed, including any disputed portion, on the due date for the invoice. If it is determined by a court of applicable jurisdiction that a disputed amount or part thereof that was paid was not in fact due and owing, Owner shall refund such amount to CDWR within thirty (30) days after resolution of

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such dispute, together with interest on such amount from the date paid to, but not including, the date refunded at the interest rate set forth in Section 6(e).

(d) Penalties for delinquent payments shall be assessed in accordance with the California Prompt Payment Act (Government Code Section 927 et seq.) as may be amended. Interest on delinquent amounts (including amounts determined to be owed as a result of the resolution of a billing dispute) shall be calculated at the interest rate specified in the California Prompt Payment Act (Government Code Section 927 et seq.) as may be amended: from the original due date (or, for amounts not properly invoiced, the date that would have been the due date if such amounts were properly invoiced) to the date of payment.

(e) Owner and its Affiliates shall keep complete and accurate records of Permitting Costs and other reimbursable amounts hereunder and shall maintain records for a period of three (3) years from the due date of the applicable invoices. Within a three (3) year period from the original due date of an invoice, CDWR may request in writing copies of such records to the extent reasonably necessary to verify the accuracy of any invoice.

7. **Purchase Option.**

At any time beginning from the first day after completion of the First Contract Year until the end of the Term of the Agreement, Owner may notify CDWR of its intent to purchase one or both of the Units at the end of the term of the Agreement. CDWR and Owner shall execute the Option Agreement appended to and incorporated into this Agreement as Exhibit F. Owner is not required to exercise the purchase option set forth in this section. Except as permitted by Section 16, CDWR represents, warrants and covenants that it shall not sell or otherwise transfer, or offer to sell or transfer, either or both of the Units to any third party other than Owner until after this Agreement has terminated without Owner exercising its option to purchase.

8. **Force Majeure.**

(a) "**Force Majeure**" means: any cause or event beyond the reasonable control of the affected Party which causes the affected Party to fail to perform that (i) was not specifically foreseeable as of the Effective Date, (ii) was not due to the fault or negligence of the affected Party, and (iii) could not reasonably have been avoided, overcome, prevented, or mitigated, by the affected Party's exercise of due diligence and use of reasonable precautions and efforts. Subject to the foregoing requirements, events that could qualify as Force Majeure include (x) acts of God, such as droughts, floods, earthquakes, volcanic eruption, epidemics, pandemics or other natural disasters, (y) fires, explosions, or accidents that could not have been prevented by acting in accordance with Good Industry Practice, or (z) war (declared or undeclared), riots, insurrection, rebellion, acts of the public enemy, acts of vandalism, terrorism and/or sabotage, civil disturbance, public disorder, blockades, embargoes, sanctions, import-export controls, or industry-wide strikes. However, Force Majeure shall not include the following events except the portions of such events caused solely by an event of Force Majeure as enumerated in clauses (x), (y) and (z) of the preceding sentence: (1) general market conditions or the economic hardship of either Party, (2) events arising from the failure to design, install, test, commission, operate, maintain, decommission or remove the Units in accordance with Good Industry Practice, (3) failure of third parties to provide goods or services essential to a Party's performance, (4) mechanical breakdown, or electrical breakdown, or failure of any machinery or equipment constituting all or part of a Unit, (5) Owner's ability to license the use of the Site or the other Licenses Premises for

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more than the License Fee, (6) CDWR's ability to license or obtain the use of an alternate Site for less than the License Fee, (7) any delay in obtaining, or denial of, any Required Permit, (8) any delay in providing, failure to obtain, or cancellation of, interconnection service, (9) the inability of CDWR to make payments when due under this Agreement, (10) a strike, work stoppage or labor dispute limited only to any one or more of CDWR, its Contractor, and their respective Affiliates or subcontractors or any other third party employed by CDWR to work on the Units, or (11) any delay resulting from litigation relating to or affecting the Units or the Site.

(b) To the extent either Party is prevented by Force Majeure from carrying out, in whole or part, its obligations under this Agreement, and such Party (the "**Claiming Party**") gives notice and details of the Force Majeure to the other Party as soon as practicable, then, unless as otherwise expressly provided herein, and as limited in Section 8(c), the Claiming Party shall be excused from the performance of its obligations (other than the obligation to make payments then due or becoming due with respect to performance prior to the Force Majeure) to the extent affected by the Force Majeure, and no Event of Default shall occur as a result of the failure to perform any excused obligation. The Claiming Party shall remedy the Force Majeure with all reasonable dispatch. The non-Claiming Party shall not be required to perform or resume performance of its obligations to the Claiming Party corresponding to the obligations of the Claiming Party excused by Force Majeure.

(c) Any Party claiming Force Majeure shall advise the other Party as soon as possible of the occurrence of the Force Majeure event and shall provide the other Party with the basis of the claim, in writing, within ten (10) days of the occurrence of the Force Majeure event. The Parties shall make reasonable efforts to avoid the adverse impacts of a Force Majeure and to resolve the event or occurrence once it has occurred to resume performance.

9. **Events of Default.** An "**Event of Default**" shall mean, with respect to a Party (a "**Defaulting Party**"), the occurrence of any of the following:

(a) With respect to either Party:

(i) The failure to make, when due, any payment required pursuant to this Agreement if such failure is not remedied within five (5) Business Days after written notice of the failure;

(ii) Any representation or warranty made by such Party herein that is false or misleading in any material respect when made or when deemed made or repeated if the representation or warranty is continuing in nature, which misrepresentation or breach of warranty is not cured within thirty (30) days after written notice thereof;

(iii) Except for an obligation to make payment when due, the failure to perform any material covenant or obligation set forth in this Agreement (except to the extent constituting a separate Event of Default or to the extent excused by a Force Majeure) if such failure is not remedied within thirty (30) days after written notice, which written notice sets forth in reasonable detail the nature of the failure; provided, however, that if such failure is not reasonably capable of being remedied within the thirty (30) day cure period, such Party may have such additional time as the Parties agree is reasonably necessary to remedy such failure, so long as such Party promptly commences and diligently pursues such remedy;

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(iv) Such Party becomes Bankrupt;

(v) Such Party consolidates or amalgamates with, or merges with or into, or transfers all or substantially all of its assets to, another entity and, at the time of such consolidation, amalgamation, merger or transfer, the resulting surviving or transferee entity fails to assume all the obligations of that Party under this Agreement to which it or its predecessor was a party by operation of law or pursuant to an agreement reasonably satisfactory to the other Party;

(vi) Such Party assigns this Agreement or any of its rights hereunder other than in compliance with Section 16; or

(b) With respect to CDWR as the Defaulting Party, the occurrence of any of the following:

(i) The installation, testing or commissioning of any Unit that does not conform to the Unit Specifications and the requirements of the Required Permits;

(ii) Failure of CDWR to comply and to cause its Contractors to comply with the obligations under Section 5(e);

(iii) Failure by CDWR to comply with its obligations under Section 3(c) within the time periods provided therein;

(iv) Failure by CDWR to install the SCRs by the time required under the Required Permits (including any temporary waivers or exceptions); provided that the remedies for this Event of Default shall be limited as provided in Section 10(b);

(v) Failure by CDWR to comply with its obligations under Section 12 within the time frames provided therein;

(vi) Use of any License Area other than as specifically permitted by the grant of the applicable License in Section 2, or interference with Owner or its Affiliates concurrent use of the Access Area or the Utility Installation Area, or any other property of Owner or its Affiliates, unless such non-licensed use or interference is remedied within ten (10) Business Days after written notice thereof; or

(vii) The O&M Agreement or the Energy Services Agreement is terminated as the result of an event of default by CDWR thereunder.

(c) With respect to Owner as the Defaulting Party, the occurrence of any of the following:

(i) Subject to CDWR's compliance with its obligations under this Agreement and receipt of the Required Permits, failure by Owner to provide CDWR access to the Site or other License Areas as provided in Section 2, unless such failure is remedied within ten (10) Business Days after written notice thereof;

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(ii) Failure by Owner to use commercially reasonable efforts to prepare and submit the Permit Applications for the Required Permits as provided in Section 5(a), unless such failure is remedied within ten (10) Business Days after written notice thereof or this Agreement is terminated pursuant to Section 5(d); or

(iii) Failure by Owner to comply with its obligations under Section 12 within the time frames provided therein.

10. **Remedies; Termination Rights.**

(a) If an Event of Default with respect to a Defaulting Party has occurred and is continuing, the other Party ("**Non-Defaulting Party**") shall have the right to do any one or more of the following, which rights shall be cumulative and in addition to the rights of the Parties otherwise provided in this Agreement:

(i) Terminate this Agreement by sending a written notice, designating a day, no earlier than the forty-fifth (45th) day after such notice is deemed to be received, as an early termination date of this Agreement ("**Early Termination Date**");

(ii) Accelerate all amounts owing between the Parties as of the Early Termination Date;

(iii) Withhold any payments due to the Defaulting Party under this Agreement pending resolution of amounts owed by or to each Party;

(iv) Suspend performance of its obligations under this Agreement;

(v) Subject to Section 15(c), recover monetary damages as allowed by law; and

(vi) Exercise any other rights or remedies available at law or in equity to the extent otherwise permitted under this Agreement.

The Non-Defaulting Party's election to exercise or not exercise any of the above rights following an Event of Default shall not constitute a waiver by the Non-Defaulting Party of any remedy with respect to any subsequent Event of Default by the Defaulting Party. Amounts accelerated pursuant to Section 10(a)(ii) shall be netted, and the Party owing the net amount shall pay such amount to the other Party (or apply such amount against other amounts owed by the Defaulting Party, if the Non-Defaulting Party owes the net amount).

(b) Notwithstanding the foregoing, if an Event of Default occurs under Section 9(b)(iv), so long as CDWR has paid and continues to timely pay the License Fee and to timely reimburse Owner for all Permitting Costs and Owner's Reimbursable Site Costs, Owner shall not terminate this Agreement, but Owner shall be entitled to suspend its performance hereunder and under the O&M Agreement and the Energy Services Agreement, and to require CDWR to suspend operation of the Units, until the SCRs are installed, tested and commissioned in accordance with the Required Permits.

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(c) In addition to a Non-Defaulting Party's right to terminate as the result of an Event of Default with respect to the Defaulting Party, the Parties will have the following rights to terminate this Agreement by sending written notice designating an Early Termination Date in the same manner as provided in Section 10(a)(i) (although such termination is not due to an Event of Default). Any such termination shall be with no further liability on the part of either Party, except (x) CDWR will reimburse Owner and its Affiliates for all Owner's Reimbursable Site Costs and Permitting Costs incurred by Owner and its Affiliates through the effective date of termination, (y) no part of the License Fee previously paid shall be refundable or refunded on account of such termination, and (z) all indemnification obligations in Section 10 shall survive such termination and shall continue in effect:

(i) Either Party may terminate this Agreement as provided in Section 5(d);

(ii) Owner may terminate this Agreement if after consultation with CDWR, it reasonably determines that operation of either or both of the Units, whether or not permitted under the Required Permits, would or is likely to adversely affect its or its Affiliate's ability to operate the Roseville Energy Park in any material respect, including as a result of limitations on air emissions, natural gas consumption or hours of operation;

(iii) Owner may terminate this Agreement if after consultation with CDWR it reasonably determines that installation, testing, commissioning or operation of either or both Units will violate the Required Permits or any other Laws or Permits applicable to Owner or its Affiliates or their respective properties, including the Roseville Energy Park for any reason other than the gross negligence or willful misconduct of Owner's Affiliates under the O&M Agreement or the Energy Services Agreement;

(iv) Owner may terminate this Agreement if it reasonably concludes after consultation with CDWR that any Losses or other liabilities, obligations or expenses that it or any of the Owner Indemnified Parties could incur and that are described in Section 12(a) would not be covered in full by CDWR's indemnification obligations under Section 12 or that CDWR would be excused from covering any such Losses or other liabilities, obligations or expenses under Section 12 for any reason other than Owner's breach of this Agreement or its gross negligence or willful misconduct; and

11. **Obligations Upon Termination.** In connection with the termination of this Agreement, whether as a result of the expiration of the stated Term of this Agreement, the declaration of an Early Termination Date, or otherwise, in addition to such obligations or liabilities as may arise due to an Event of Default, if Owner has not exercised its right to purchase one of more of the Units, CDWR shall, on or before the termination date, at its sole cost and expense, (i) decommission the Units, including obtaining all necessary consents and approvals from the applicable Governmental Authorities, (ii) disconnect the Units from the Owner Supplied Facilities, (iii) remove the Units and all related equipment and facilities owned by CDWR from the License Areas in accordance with all applicable Laws and Permits, and (iv) except as otherwise agreed by Owner and CDWR, restore the Site to substantially the same condition as it was on the Effective Date, and repair any damage to the Access Area or the Utility Installation Area caused by CDWR or its employees, agents, representatives, contractors or subcontractors during the Term or in connection with the decommissioning and removal of the Units. CDWR shall also

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reimburse Owner for all Owner's Reimbursable Site Costs for installation of the Units and $300,000 for the removal and Permitting Costs incurred by Owner and its Affiliates through the effective date of termination, and no part of the License Fee previously paid shall be refundable or refunded on account of such termination.

12. **Indemnification.**

(a) To the fullest extent allowed by law, CDWR shall indemnify, defend, save and hold harmless Owner, its Affiliates and their respective officers, directors, employees, partners, lenders, agents and representatives, and their respective successors and assigns (the "**Owner Indemnified Parties**") from and against any and all losses, claims, demands, damages, liabilities, judgments, fines, penalties, costs and expenses, including reasonable attorneys' fees, expert fees and court costs ("**Losses**"), incurred by or asserted against any Owner Indemnified Party arising out of or resulting from (i) any injury or damage to persons or property as a result of any acts or omissions of CDWR, its employees, agents, representative, contractors or subcontractors in, on or about the License Areas or in the performance of any work or activities related to this Agreement, (ii) the breach of any covenant or representation made by CDWR under this Agreement; (iii) any challenge to or invalidation of any Required Permit, (iv) all Permitting Costs and Owner's Reimbursable Site Costs (subject to the maximum amount limitations set forth above), (v) any use or operation of the Units in violation of this Agreement, the Required Permits or any other applicable Permit or Law, except to the extent caused by Owner's gross negligence or willful misconduct or the gross negligence or willful misconduct of its Affiliates under the O&M Agreement or the Energy Services Agreement, (vi) all costs and expenses that CDWR, its contractors and subcontractors are required to pay under this Agreement, (vii) all costs, charges, fees, penalties and other amounts assessed or charged by or payable to the CAISO or any other Governmental Authority in connection with the installation, testing, commissioning, operation, maintenance, decommissioning or removal of the Units, including interconnection- related costs, charges and fees, except to the extent caused by Owner's gross negligence or willful misconduct or the gross negligence or willful misconduct of its Affiliates under the O&M Agreement or the Energy Services Agreement, (viii) any claim, dispute or litigation, including those based on non-compliance with the requirements of Public Resources Code Division 13 (commencing with 21000) or regulations adopted pursuant to that Division, alleging, and any determination, that installation or operation of the Units was not permitted under applicable Law or that the Required Permits were issued in violation of applicable Law, (ix) any mitigation costs or payments required by a neighboring electric utility asserting a claim that it is an Affected System; (x) all GHG Costs, including any penalties, offset requirements, taxes, and compliance costs, or (xi) all costs, claims, clean up and remediation costs, fines, penalties and other liabilities arising from or related to the cleanup or disposal of any Hazardous Substances or air emissions brought on to or emitted from the Site, the other License Areas or any adjacent property of Owner or its Affiliates by CDWR, its employees, agents, representatives, contractors or subcontractors, or used by CDWR, its employees, agents, representatives, contractors or subcontractors, in connection with the installation, testing, commissioning, operation, maintenance, decommissioning or removal of the Units by CDWR, its employees, agents, representatives, contractors or subcontractors, except to the extent caused by Owner's gross negligence or willful misconduct or the gross negligence or willful misconduct of the Owner's Affiliates under the O&M Agreement or the Energy Services Agreement.

(b) To the fullest extent allowed by law, Owner shall indemnify and hold harmless CDWR and its officers, directors, employees, agents and representatives, and their respective

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successors and assigns (the "**CDWR Indemnified Parties**") from and against any and all Losses incurred by or asserted against any CDWR Indemnified Party arising out of or resulting from (i) any injury or damage to persons or property as a result of any acts or omissions of Owner, its employees, agents, representative, contractors or subcontractors in, on or about the License Areas or in the performance of any work or activities related to this Agreement, or (ii) the breach of any covenant or representation made by Owner under this Agreement.

(c) Promptly following receipt by an Indemnified Party of notice of a matter subject to indemnification under Section 12(a), including the commencement of any action, administrative or legal proceeding, or investigation as to which an indemnity provided for in Section 12(a) may apply, the Indemnified Party shall give the Indemnifying Party written notice of such matter. The Indemnifying Party shall assume the defense of such matter with, if applicable, counsel designated by the Indemnifying Party and reasonably satisfactory to the Indemnified Party, *provided*, if both the Indemnified Party and the Indemnifying Party are involved in such matter (including as co-defendants) and the Indemnified Party shall have reasonably concluded that there may be legal defenses available to it which are different from or additional to, or inconsistent with, those available to the Indemnifying Party or that there is a conflict of interest between the interests of the Indemnified Party and the Indemnifying Party in such matter, the Indemnified Party shall have the right to select and be represented by separate counsel, at the Indemnifying Party's expense. If the Indemnifying Party fails to assume the defense of a claim or other matter properly indemnifiable under Section 12(a), the Indemnified Party may at the expense of the Indemnifying Party contest, settle, or pay such claim as it considers appropriate.

(d) The provisions of this Section 12 shall survive the termination of this Agreement.

13. **Insurance.** Each Party will obtain and maintain in force the insurance described in Exhibit D. However, such insurance shall not be a limitation on a Party's liabilities or obligations hereunder, nor will failure to obtain or maintain any insurance relieve a Party of any such obligations or liabilities. Each Party shall be responsible for all deductible amounts under such insurance policies.

14. **Representations and Warranties.** As of the Effective Date, each Party represents and warrants to the other Party that:

(a) it is duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation;

(b) except for the Required Permits, it has received all known regulatory authorizations necessary for it to legally perform its obligations under this Agreement;

(c) it is registered with the California Secretary of State to do business in California, except it is agreed that CDWR and Owner are not required to do so;

(d) the execution, delivery and performance of this Agreement are within its powers, have been duly authorized by all necessary action and do not violate any of the terms and conditions in its governing documents, any contracts to which it is a party or any applicable Law;

(e) this Agreement, and any other document executed and delivered in accordance with this Agreement, constitutes its legally valid and binding obligation enforceable against it in

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accordance with its terms, subject to Laws of general applicability limiting the enforcement of creditors' rights and to any equitable defenses;

(f) it is not Bankrupt and there are no proceedings pending or being contemplated by it or, to its knowledge, threatened against it which would result in it being or becoming Bankrupt; and

(g) there is not pending or, to its knowledge, threatened against it any legal proceedings that could materially adversely affect its ability to perform its obligations under this Agreement.

15. **Limitations of Liability.**

(a) Amounts due under this Agreement from CDWR shall not be payable from funds available in the State Water Resources Development Fund (which is authorized by statute at sections 12930 et seq. of the California Water Code), or any successor fund to which the funds currently allocated to the State Water Resources Development Fund may be reallocated.

(b) Notwithstanding anything herein to the contrary, except for liability resulting from its gross negligence or willful misconduct, Owner's liability under this Agreement in any Contract Year shall not exceed the License Fee paid in that Contract Year.

(c) THE PARTIES CONFIRM THAT THE EXPRESS REMEDIES AND MEASURES OF DAMAGES PROVIDED IN THIS AGREEMENT SATISFY THE ESSENTIAL PURPOSES HEREOF. FOR BREACH OF ANY PROVISION FOR WHICH AN EXPRESS REMEDY OR MEASURE OF DAMAGES IS PROVIDED, SUCH EXPRESS REMEDY OR MEASURE OF DAMAGES SHALL BE THE SOLE AND EXCLUSIVE REMEDY, THE OBLIGOR'S LIABILITY SHALL BE LIMITED AS SET FORTH IN SUCH PROVISION AND ALL OTHER REMEDIES OR DAMAGES AT LAW OR IN EQUITY ARE WAIVED. EXCEPT AS EXPRESSLY PROVIDED IN THIS AGREEMENT WITH RESPECT TO LIABILITIES TO THIRD PARTIES, NEITHER PARTY SHALL BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, PUNITIVE, EXEMPLARY OR INDIRECT DAMAGES, LOST PROFITS OR OTHER BUSINESS INTERRUPTION DAMAGES, BY STATUTE, IN TORT OR CONTRACT, UNDER ANY INDEMNITY PROVISION OR OTHERWISE. IT IS THE INTENT OF THE PARTIES THAT THE LIMITATIONS HEREIN IMPOSED ON REMEDIES AND THE MEASURE OF DAMAGES BE WITHOUT REGARD TO THE CAUSE OR CAUSES RELATED THERETO, INCLUDING THE NEGLIGENCE OF ANY PARTY, WHETHER SUCH NEGLIGENCE BE SOLE, JOINT OR CONCURRENT, OR ACTIVE OR PASSIVE. TO THE EXTENT ANY DAMAGES REQUIRED TO BE PAID HEREUNDER ARE LIQUIDATED, THE PARTIES ACKNOWLEDGE THAT THE DAMAGES ARE DIFFICULT OR IMPOSSIBLE TO DETERMINE, OR OTHERWISE OBTAINING AN ADEQUATE REMEDY IS INCONVENIENT AND THE DAMAGES CALCULATED HEREUNDER CONSTITUTE A REASONABLE APPROXIMATION OF THE HARM OR LOSS. THE PARTIES FURTHER AGREE THAT PAYMENT OF SUCH AMOUNT SHALL BE LIQUIDATED DAMAGES AND NOT AS A PENALTY, AND IS THEREFORE NOT SUBJECT TO AVOIDANCE UNDER CALIFORNIA CIVIL CODE SECTION 1671.

16. **Assignment.**

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(a) Except as specifically provided herein, neither Party shall transfer or assign, or offer to transfer or assign, this Agreement or its rights hereunder, without the prior written consent of the other Party, which consent may not be unreasonably withheld, conditioned or delayed. Either Party may, without the consent of the other Party (and without relieving itself from any liabilities hereunder that arose prior to the date of such transfer unless assumed by the assignee) transfer or assign this Agreement or its rights hereunder: (i) to an Affiliate of such Party, or (ii) to any Person succeeding to all or substantially all of the assets of such Party; provided that the assignee assumes all of assignor's obligations; provided that such assignee assumes in writing all of assignor's obligations hereunder at least from and after the date of such assignment or transfer, and agrees to be bound by this Agreement. Owner also may, without CDWR's consent (and without relieving itself from any liabilities hereunder that arose prior to the date of such transfer unless assumed by the assignee) transfer or assign this Agreement or its rights hereunder to any purchaser of Owner's interest in the License Areas; provided that such purchaser assumes in writing all of Owner's obligations hereunder, at least from and after the date of such assignment or transfer, and agrees to be bound by this Agreement.

(b) Notwithstanding anything herein to the contrary, Owner may, without the consent of CDWR (and without relieving itself from any liabilities hereunder that arose prior to the date of such transfer), assign this Agreement to one or more Lenders as collateral for any financing or refinancing by Owner and/or its Affiliates. In connection with any such assignment of this Agreement by Owner, or any transfer, sale, pledge, encumbrance or assignment of this Agreement or the accounts, revenues or proceeds hereof in connection with any financing or other financial arrangements, if requested by Owner, CDWR (acting reasonably) shall enter into a mutually agreeable consent to collateral assignment with the Lender(s) on market terms and conditions and containing market notice and cure provisions, rights to payment and performance, limitations of liability and other provisions; provided that Owner shall be responsible at CDWR's request for CDWR's reasonable costs associated with the review, negotiation and execution of such consent to collateral assignment, including without limitation reasonable attorneys' fees.

(c) Subject to the foregoing, this Agreement shall benefit and be binding on the permitted successors and assigns of the Parties hereto. Any assignment or transfer not made in compliance with these provisions shall be null and void and of no force or effect.

17. **Confidentiality.**

(a) The Party receiving Confidential Information (the "**Receiving Party**") from the other Party (the "**Disclosing Party**") shall not disclose Confidential Information to a third party (other than the Party's officers, employees, directors, Lenders (including potential Lenders), counsel, accountants, directors or advisors, or any such representatives of a Party's Affiliates, who have a need to know such information and have agreed to keep such terms confidential as provided herein) except in order to comply with any applicable Law, regulation, or any exchange, balancing authority area or independent system operator rule or in connection with any court or regulatory proceeding applicable to such Party or any of its Affiliates; provided, each Party shall use commercially reasonable efforts to prevent or limit the disclosure. The Parties shall be entitled to all remedies available at law or in equity to enforce, or seek relief in connection with, this confidentiality obligation.

(b) The Parties acknowledge and agree that each Party, this Agreement and the transactions hereunder are subject to the requirements of the California Public Records Act

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(Government Code Section 6250 *et seq*.). Upon a Receiving Party's receipt of a request or demand from any Person not a Party hereto pursuant to the California Public Records Act for production, inspection and/or copying of Confidential Information ("**Requested Confidential Information**"), such Receiving Party shall promptly notify the Disclosing Party in writing via email that such request has been made. The Disclosing Party shall have the right to take, at its sole expense, whatever legal steps are necessary to prevent release of the Requested Confidential Information to such Person by the Receiving Party. If the Disclosing Party takes no such action within a reasonable period of time after receiving the foregoing notice from the Receiving Party, the Receiving Party may, in its discretion, comply with such third party request or demand and is not required to defend against it. If the Disclosing Party does take or attempt to take such action, the Receiving Party shall cooperate with the Disclosing Party in a timely manner, if and as requested by the Disclosing Party, and the Disclosing Party shall indemnify and hold harmless the Receiving Party from the non-disclosure of any Requested Confidential Information.

(c) Each Party acknowledges that its obligations hereunder as Receiving Party are necessary and reasonable in order to protect Disclosing Party and Disclosing Party's business, and expressly acknowledges that monetary damages would be inadequate to compensate Disclosing Party for any breach or threatened breach by Receiving Party of any covenants and agreements set forth herein. Accordingly, each Party acknowledges that any such breach or threatened breach by it as Receiving Party will cause irreparable injury to Disclosing Party and that, in addition to any other remedies that may be available, in law, in equity or otherwise, Disclosing Party will be entitled to obtain injunctive relief against the threatened breach of this Agreement or the continuation of any such breach, without the necessity of proving actual damages.

(d) Neither Party shall issue (or cause or permit its Affiliates to issue) a press release regarding the transactions contemplated by this Agreement unless both Parties have agreed upon the contents of any such public statement.

18. **Notices.** All notices required to be given under this Agreement shall, except as otherwise provided herein, be in writing and shall be sent by prepaid mail or overnight courier addressed to the respective Party at the addresses listed in Exhibit E or to such other address as may designated hereafter by a Party in writing by like notice from time to time. The Business Day the e-mail was sent shall be the date notice was deemed given if there is an electronic record on the date of transmission. Any notice delivered after 5:00 p.m. Pacific Time on a Business Day shall be deemed to have been delivered on the following Business Day.

19. **General.**

(a) This Agreement shall be governed by, construed under and enforced in accordance with the laws of the State of California without regard to principles of conflicts of law. The venue for any court action brought pursuant to this Agreement shall be Sacramento, California.

(b) To the extent that any provision of this Agreement or any paragraph, term, sentence, phrase, clause or word of this Agreement shall be found by a court of law having jurisdiction to be void, illegal or unenforceable for any reason, the Parties shall meet to determine whether this Agreement can fulfill the objectives of each Party notwithstanding such ruling. If either Party determines that this Agreement can no longer fulfill its objectives under such ruling, then either

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Party may terminate this Agreement. Otherwise, such paragraph, term, sentence, phrase, clause or word shall be deemed modified or deleted in such a manner as to make the Agreement, as so modified, legal and enforceable under applicable Laws. The remainder of the Agreement shall remain in full force and effect.

(c) This Agreement does not create, modify, or diminish any ownership or property rights, nor creates any easements or rights of entry, except as set forth explicitly in this Agreement.

(d) This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which shall constitute one Agreement after each Party has signed at least one counterpart, and the Parties have exchanged signed counterparts. The exchange of copies of this Agreement and of signature pages by facsimile transmission, in portable document format (pdf) or by other electronic means shall constitute effective execution and delivery of this Agreement and may be used in lieu of the original Agreement for all purposes.

(e) Together with the O&M Agreement and the Energy Services Agreement and the respective exhibits attached thereto, this Agreement and the Exhibits attached hereto constitute the entire agreement and understanding between Owner and CDWR with respect to the subject matter hereof and supersedes all prior agreements relating to the subject matter hereof, which shall be of no further force or effect. The Exhibits attached hereto are integral parts of this Agreement and are made a part of this Agreement by reference.

(f) This Agreement may only be amended by an instrument in writing duly executed by CDWR and Owner.

(g) No waiver of either Party of an Event of Default by the other Party, nor any election to exercise or not exercise any rights following an Event of Default, shall constitute a waiver by such Party of any subsequent Event of Default by the other Party, whether similar or dissimilar, or of any remedy with respect thereto.

(h) Nothing herein is intended to create or is to be construed as creating a joint venture, partnership, agency or other similar relationship between the Parties other than that of contracting parties as set forth in this Agreement. The rights and obligations of the Parties hereunder shall be independent of one another and shall be limited to those expressly set forth herein.

(i) This Agreement is for the benefit of the Parties hereto and is not intended to be for the benefit of any third party except their respective Affiliates and Lenders of the Parties to the extent expressly set forth herein.

(j) The Parties acknowledge and agree that each Party and its counsel have read this Agreement in its entirety, fully understand it and accept its terms and conditions. This Agreement shall be considered for all purposes as prepared through the joint efforts of the Parties and shall not be construed against one Party or the other as a result of the preparation, substitution, submission or other event of negotiation, drafting or execution hereof.

(k) Upon the receipt of a written request from the other Party, each Party shall execute such additional documents, instruments and assurances and take such additional actions as may

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be reasonably requested by the other Party which are consistent with the provisions of this Agreement and which do not involve the assumptions of obligations other than those provided for in this Agreement, to give full effect to this Agreement and to carry out the intent of this Agreement.

[The next page is the signature page.]

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IN WITNESS WHEREOF, the City of Roseville, a municipal corporation, has authorized the execution of this Agreement in duplicate by its City Manager and attested to by its City Clerk under the authority of Resolution No. _____, adopted by the Council of the City of Roseville on the ___ day of _____, 2021, and the CALIFORNIA DEPARTMENT OF WATER RESOURCES represents that it has caused this Agreement to be duly executed.

CITY OF ROSEVILLE, a municipal corporation

BY: _____
DOMINICK CASEY
City Manager

CALIFORNIA DEPARTMENT OF WATER RESOURCES

BY: Ted Craddock
TED CRADDOCK
Deputy Director

ATTEST:

By: _____
SONIA OROZCO
City Clerk

APPROVED AS TO FORM:

BY: _____
MICHELLE SHEIDENBERGER
City Attorney

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

BY: Robert Hedrick
ROBERT S. HEDRICK
Attorney IV

APPROVED AS TO SUBSTANCE:

BY: _____
MICHELLE BERTOLINO
Electric Utility Director

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Exhibit A –Access Area (PRELIMINARY)

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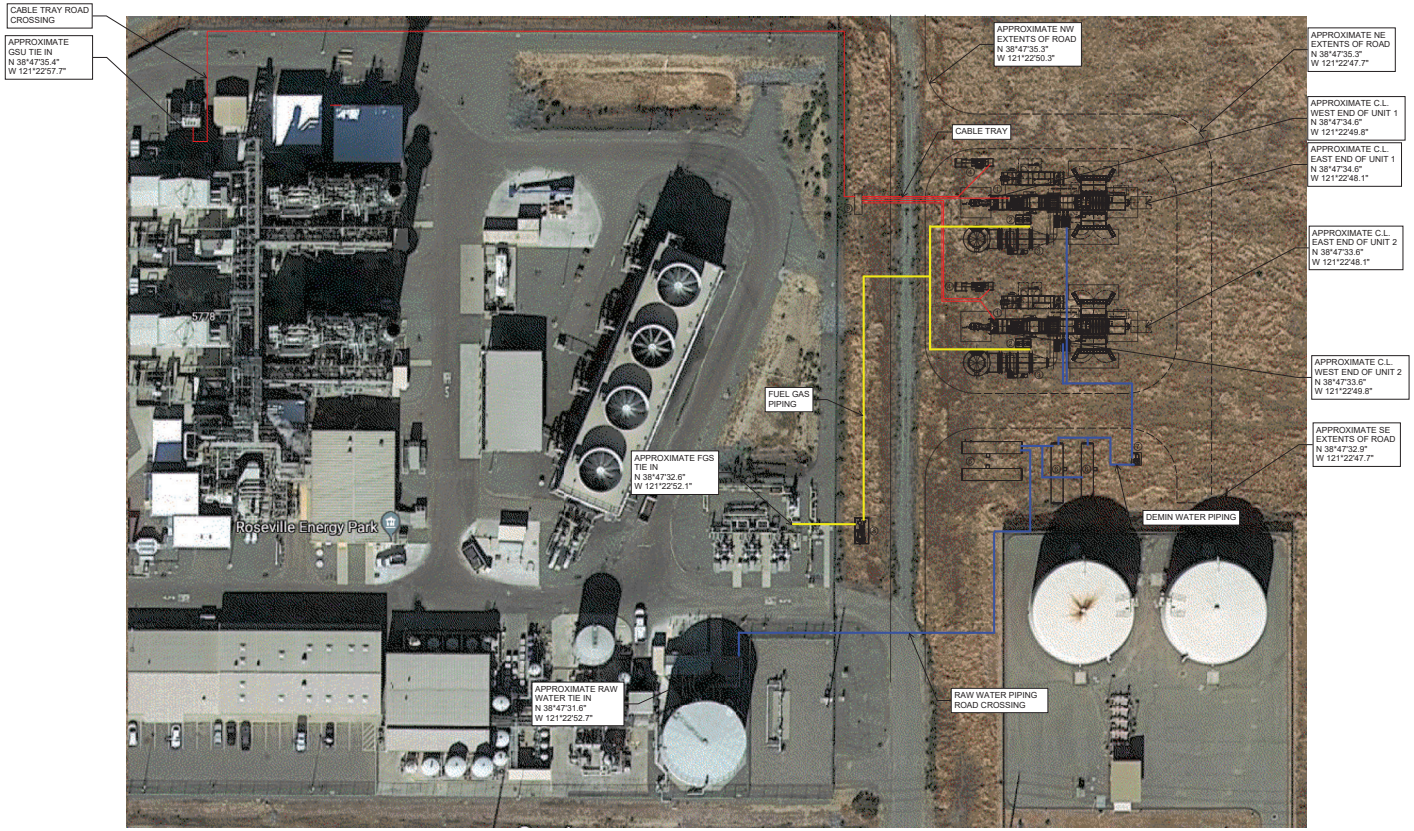

① TM2500
② COALESCING FILTER
③ SCR
④ MV/LV SKIDS
⑤ DM WATER TREATMENT MODULE
⑥ DM WATER STORAGE TANK
⑦ DM WATER FORWARDING PUMP SKID
⑧ GAS PRV SKID
⑨ MV SWITCHGEAR

FEET 0 10 20
5 15

REV	DESIGN BY	CHECKED BY	DATE
A	ISSUED FOR REVIEW		
	N. HIRT	A. KUSNIERKIEWICZ	08-19-21

ROSEVILLE
ENERGY PARK

Kiewit

MECHANICAL PLOT PLAN

ENGINEER/DESIGN ORIGINATOR	N. HIRT
LEAD ENG	N. MILLER
ENG MGR	M. WHEELER
PROJ MGR	M. WHEELER

DRAWING NUMBER
20041725-PP-301

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KEY PLAN

1. ALL DIMENSIONS ARE IN MM

REFERENCE DOCUMENTS :-

DRAWING NUMBER	TITLE

Rev.	Revision Date	Created by	Checked by	Approved by	Description

Cross Che

Replaces	Scale		Document Code
Responsible dept. -			Format A1
	Document Type		Document Status
	Title, Subtitle		Identification number ROS/00/E/001b—003/GA/102
		Rev. / Date / Lang. En / Sheet 1/1	

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Exhibit B – Unit Specifications

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GUARANTEE R1

PROJECT: DWR ROSEVILLE ELECTRIC SITE
LOCATION:ROSEVILLE, CALIFORNIA , USA

UNIT NET, KW	27058
BTU/KW-HR, LHV	9883
KJ/KW-HR, LHV	10427

EMISSIONS ARE VALID FOR T2 WITHIN 18°F TO 115°F AND A GTG LOAD DOWN TO 50% AS DEFINED IN STEADY STATE CONDITIONS FOR EMISSIONS GUARANTEE

NOX: 25 PPMVD AT 15% O2
(50 mg/Nm3, AT 15% O2)
CO: 259 PPMVD AT 15% O2
(323 mg/Nm3)

Pintea, Mihai
Performance Engineer
Date: 08/11/2021

NOT VALID WITHOUT SIGNATURE

VALID UNTIL 11/30/2021

BASIS OF GUARANTEE:	BASE LOAD, GAS FUEL NOZZLE SYSTEM NO BLEED OR EXTRACTED POWER
ENGINE:	(1) GE TM2500+G4
FUEL:	20845 BTU/LB / (48486 kJ/kg) LHV, SITE GAS FUEL
FUEL SPEC:	MID-TD-0000-1 LATEST REVISION
FUEL TEMP:	77.0°F /(25°C)
FUEL PRESS:	495 PSIG+/-20 PSIG (3413 KPAG+/-138 KPAG)
GENERATOR:	GEPC A040
GENERATOR OUTPUT	13.8 kV, 60 Hz
POWER FACTOR:	0.85
AMBIENT TEMP:	100°F / (37.8°C)
AMBIENT RH:	50.0%
INLET CONDITIONING:	NONE
ALTITUDE:	87.0 ft / (26.5 m)
INLET FILTER LOSS:	5.8 inH_2O / (147.32 mmH_2O)
EXHAUST LOSS:	6.2 inH_2O / (157.48 mmH_2O)
NOX CONTROL:	**Water**
INJECTION RATE:	14753 lb/h (6692 kg/h)
INJECTION TEMP:	100 F (37.8 ˚C)
ENGINE CONDITION:	NEW AND CLEAN ≤ 200 SITE FIRED HOURS
FIELD TEST METHODS	
PERFORMANCE:	GE GAS POWER SGTGPTM
NOX:	EPA METHOD 20
CO:	EPA METHOD 10

BASIS OF GUARANTEE IS NOT FOR DESIGN, REFER TO PROJECT DRAWINGS FOR DESIGN REQUIREMENTS.
SI VALUES ARE FOR REFERENCE PURPOSES ONLY.

THIS GUARANTEE SUPERSEDES ANY
PREVIOUS GUARANTEES PRESENTED

GE GAS POWER

GUARANTEE R1
PROJECT: DWR ROSEVILLE ELECTRIC SITE
LOCATION:ROSEVILLE, CALIFORNIA , USA

NOISE GUARANTEE IS FOR A SINGLE TM2500 GAS TURBINE PACKAGE AND EXCLUDES BOP

NEAR FIELD NOISE:
90 DB(A) ARITHMETIC AVERAGE SOUND PRESSURE LEVEL (dB REF 20 MICROPASCALS, RMS) OF LOCATIONS AROUND THE PACKAGE (VERTICAL DISTANCE OF 5FT. (1.5M) ABOVE PACKAGE BASE AT A HORIZONTAL DISTANCE OF 3FT. (1M) FROM THE EXTERIOR PLANE OF EQUIPMENT AS TESTED IN A FREE-FIELD CONDITION OVER A HARD REFLECTING GROUND PLANE, OPERATING AT BASE LOAD)

Pintea, Mihai
Performance Engineer
Date: 08/11/2021

NOT VALID WITHOUT SIGNATURE

VALID UNTIL 11/30/2021

BASIS OF GUARANTEE:	BASE LOAD, GAS FUEL NOZZLE SYSTEM NO BLEED OR EXTRACTED POWER
ENGINE:	(1) GE TM2500+G4
FUEL:	20845 BTU/LB / (48486 kJ/kg) LHV, SITE GAS FUEL
FUEL SPEC:	MID-TD-0000-1 LATEST REVISION
FUEL TEMP:	77.0°F /(25°C)
FUEL PRESS.:	495 PSIG+/-20 PSIG (3413 KPAG+/-138 KPAG)
GENERATOR:	GEPC A040
GENERATOR OUTPUT	13.8 kV, 60 Hz
POWER FACTOR:	0.85
AMBIENT TEMP:	100°F / (37.8°C)
AMBIENT RH:	50%
INLET CONDITIONING:	NONE
ALTITUDE:	87.0 ft / (26.5 m)
INLET FILTER LOSS:	5.8 inH2O / (147.32 mmH2O)
EXHAUST LOSS:	6.2 inH2O / (157.48 mmH2O)
NOX CONTROL:	Water
INJECTION RATE:	14753 lb/h (6692 kg/h)
INJECTION TEMP:	100 F (37.8 ˚C)
ENGINE CONDITION:	NEW AND CLEAN ≤ 200 SITE FIRED HOURS
FIELD TEST METHODS	
PERFORMANCE:	GE GAS POWER NOISE TEST METHOD
NOX:	EPA METHOD 20
CO:	EPA METHOD 10

BASIS OF GUARANTEE IS NOT FOR DESIGN, REFER TO PROJECT DRAWINGS FOR DESIGN REQUIREMENTS.
SI VALUES ARE FOR REFERENCE PURPOSES ONLY.

THIS GUARANTEE SUPERSEDES ANY
PREVIOUS GUARANTEES PRESENTED

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GE GAS POWER

AUXILIARY LOADS FOR EQUIPMENT SUPPLIED BY GE AS INDICATED IN PROPOSAL

Normal Operating Auxiliary Loads for 1xTM2500 50Hz on NG with WI

August 11, 2021

STANDARD LOADS		
DESCRIPTION	**QTY**	**KW**
NOX WATER INJECTION PUMP	1	44.76
TURBINE ENCLOSURE VENT FAN	1	59.7
TURBINE LUBE OIL/HYDRAULIC OIL HEAT EXCHANGER FAN	1	5.6
GENERATOR LUBE OIL HEAT EXCHANGER FAN	1	5.6
LIGHTING AND DISTRIBUTION PANEL (230/133 3PH 4W 25 CKT)	1	10
LIGHTING AND DISTRIBUTION PANEL	1	45
TOTAL STANDARD LOADS:		**171**

BOP LOADS		
DESCRIPTION	**QTY**	**KW**
BOP LOADS	0	0
TOTAL OPTIONAL LOADS:		**0**

TOTAL LOADS: 170.66

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Steady State Conditions for Emissions Guarantee

1.	Power Output (electrical)	±10.0% / Min
2.	T2 Compressor Inlet air temperature	± 2.5°F / 5.0 Min
3.	Heat Value - gaseous fuel per unit volume	±0.25% / Min
4.	Pressure - gaseous fuel as supplied to engine	± 10 PSIG / 5.0 Min

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Conditions for Near Field Noise Guarantee

1. Based on arithmetic average of sound pressure levels at locations around the package.
2. GTG auxiliary trailer must be located less than 6-ft of the main unit.
3. Intentional left blank
4. Intentional left blank
5. Intentional left blank
6. Intentional left blank
7. Intentional left blank
8. Per unit basis.
9. Start-up and Shut-down excluded.
10. GE Power & Water GTG package scope of supply only, customer supplied equipment is not included.
11. GE Power & Water GTG package scope of supply only, GE Power & Water supplied BOP equipment is not included.
12. If GE Power & Water supplies BOP equipment, then GE Power & Water is to advise best location.

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Estimated Average Engine Performance NOT FOR GUARANTEE, REFER TO PROJECT F&ID FOR DESIGN

GE Gas Power

Performance By: **Pintea, Mihai**
Project Info:

Engine: **TM2500+G4 -TM2500-G4-A-0220-L3**
Deck Info: **GE166B - 8al.scp**
Generator: **GEPC A040, 60Hz, 13.8 kV, 0.85 PF**
Fuel: **Site GAS FUEL**

Date: 11/08/2021
Time: 13:41:26

Case	**100**
Ambient Conditions	
Dry Bulb Temp., °F	100
Wet Bulb Temp., °F	83.2
Relative Humidity, %	50
Elevation a.s.l., ft	87
Barometric Press., psi	14.686
Engine Inlet	
Comp. Inlet Temp., °F	100
Comp. Inlet RH, %	50
Type	None
Chill/Heat Cap., kBTU/h	None
Pressure Losses	
Inlet Press. Loss, inH2O	5.8
Exh. Press. Loss, inH2O	6.2
GTG Load, %	**100**
Gen. Output, Gross, kW	**27229**
HR, btu/(kW*h)	**9748**
Aux Load, kW	170.66
Gen. Output, Unit Net, kW	**27058**
G-HR, Unit Net, btu/(kW*h)	**9883**
Comp. Inlet Temp., °F	100
Fuel Flow	
Fuel Number	801-3082
Fuel Name	Roseville CT2
Fuel LHV, BTU/lb	20845
Heat Input, MMBTU/h	265.40
Fuel Flow, lb/s	3.54
Vol. Fuel Flow, scfm	4756.1
Fuel Temp., °F	77
NOx Control	**Water**
Diluent Injection	
Diluent Flow, lb/h	14753
Diluent Temp., °F	100
Exhaust Parameters	
Exhaust Temp., °F	983.35
Exhaust Flow, lb/s	177.6
Energy (Ref 0R), BTU/s	67615
Emissions (ESTIMATED, NOT FOR GUARANTEE)	
NOx, Ref % O2, ppmvd	25
Aero Energy Fuel Number	801-3082
Hydrogen, %Volume	0.0818
Methane, %Volume	94.23
Ethane, %Volume	3.971
Ethylene, %Volume	0
Propane, %Volume	0.3083
Propylene, %Volume	0
Butane, %Volume	0.0923
Butylene, %Volume	0
Butadiene, %Volume	0
Pentane, %Volume	0.0177
Cyclopentane, %Volume	0
Hexane, %Volume	0.0039
Heptane, %Volume	0.005
CarbonMonoxide, %Volume	0
Carbon Dioxide, %Volume	0.56
Nitrogen, %Volume	0.73
Water Vapor, %Volume	0
Oxygen, %Volume	0
HydrogenSulfide, %Volume	0
Ammonia, %Volume	0
LHV, BTU/lb	20845
HHV, BTU/lb	23120
NOx Scalar	1.011
Specific Gravity	0.586
MWI, (Btu/SCF)/SQRT(R)	52.763
LHV, BTU/scf	937
HHV, BTU/scf	1037
Exh Wght % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)	
AR, %	1.2075
N2, %	70.8255
O2, %	14.0059
CO2, %	5.4208
H2O, %	8.5352
SO2, %	0
CO, %	0.0021
HC, %	0.0002
NOX, %	0.0029
Exh Mole % Dry (NOT FOR USE IN ENVIRONMENTAL PERMITS)	
AR, %	0.969
N2, %	81.0454
O2, %	14.0314
CO2, %	3.9486
H2O, %	0
SO2, %	0
CO, %	0.0024
HC, %	0.0004
NOX, %	0.0029
Exh Mole % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)	
AR, %	0.8412
N2, %	70.3594
O2, %	12.1814
CO2, %	3.4279
H2O, %	13.1852
SO2, %	0
CO, %	0.0021
HC, %	0.0003
NOX, %	0.0025
Exhaust Parameters	
Sp. Heat, BTU/(lb**R)	0.286
Exh Mol Wght, lb/lb-mol	27.83
Exh. Flow, ACFM	398552.6
Exh. Flow, SCFM	145267.5

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Estimated Average Engine Performance NOT FOR GUARANTEE, REFER TO PROJECT F&ID FOR DESIGN

GE Gas Power

Performance By: **Pintea, Mihai**
Project Info:

Engine: **TM2500+G4 -TM2500-G4-A-0220-L3**
Deck Info: **GE166B - 8al.scp**
Generator: **GEPC A040, 60Hz, 13.8 kV, 0.85 PF**
Fuel: **Site GAS FUEL**

Date: **11/08/2021**
Time: **13:41:26**

Case	**100**
Ambient Conditions	
Dry Bulb Temp., °C	37.8
Wet Bulb Temp., °C	28.4
Relative Humidity, %	50
Elevation a.s.l., m	26.52
Barometric Press., kPa	101.23
Engine Inlet	
Comp. Inlet Temp., °C	37.8
Comp. Inlet RH, %	50
Type	None
Chill/Heat Cap., MJ/h	None
Pressure Losses	
Inlet Press. Loss, mmH2O	147.32
Exh. Press. Loss, mmH2O	157.48
GTG Load, %	**100**
Gen. Output, Gross, kW	**27229**
HR, kJ/(kW*h)	**10284.72**
Aux Load, kW	170.66
Gen. Output, Unit Net, kW	**27058**
G-HR, Plant Net, kJ/(kW*h)	**10427**
Comp. Inlet Temp., °C	37.8
Fuel Flow	
Fuel Number	801-3082
Fuel Name	Roseville CT2
Fuel LHV, kJ/kg	48485
Heat Input, MW	77.78
Fuel Flow, kg/s	1.60
Vol. Fuel Flow, Nm3/hr	8081
Fuel Temp., °C	25.0
NOx Control	**Water**
Diluent Injection	
Diluent Flow, kg/h	6692
Diluent Temp., °C	37.78
Exhaust Parameters	
Exhaust Temp., °C	529
Exhaust Flow, kg/s	80.6
Energy (Ref 0R), kW	71337.882
Emissions (ESTIMATED, NOT FOR GUARANTEE)	
NOx, Ref % O2, mg/Nm3	51.3
Aero Energy Fuel Number	801-3082
Hydrogen, %Volume	0.0818
Methane, %Volume	94.23
Ethane, %Volume	3.971
Ethylene, %Volume	0
Propane, %Volume	0.3083
Propylene, %Volume	0
Butane, %Volume	0.0923
Butylene, %Volume	0
Butadiene, %Volume	0
Pentane, %Volume	0.0177
Cyclopentane, %Volume	0
Hexane, %Volume	0.0039
Heptane, %Volume	0.005
CarbonMonoxide, %Volume	0
Carbon Dioxide, %Volume	0.56
Nitrogen, %Volume	0.73
Water Vapor, %Volume	0
Oxygen, %Volume	0
HydrogenSulfide, %Volume	0
Ammonia, %Volume	0
LHV, kJ/kg	48486
HHV, kJ/kg	53777
NOx Scalar	1.011
Specific Gravity	0.586
MWI, (kJ/Nm3)/SQRT(K)	0.999
LHV, kJ/Nm3	36907
HHV, kJ/Nm3	40834
Exh Wght % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)	
AR, %	1.2075
N2, %	70.8255
O2, %	14.0059
CO2, %	5.4208
H2O, %	8.5352
SO2, %	0
CO, %	0.0021
HC, %	0.0002
NOX, %	0.0029
Exh Mole % Dry (NOT FOR USE IN ENVIRONMENTAL PERMITS)	
AR, %	0.969
N2, %	81.0454
O2, %	14.0314
CO2, %	3.9486
H2O, %	0
SO2, %	0
CO, %	0.0024
HC, %	0.0004
NOX, %	0.0029
Exh Mole % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)	
AR, %	0.8412
N2, %	70.3594
O2, %	12.1814
CO2, %	3.4279
H2O, %	13.1852
SO2, %	0
CO, %	0.0021
HC, %	0.0003
NOX, %	0.0025
Exhaust Parameters	
Sp. Heat, kJ/(kg**K)	1.196
Exh Mol Wght, kg/kmol	27.83
Exh. Flow, ACFM	398552.6
Exh. Flow, SCFM	145267.5

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Exhibit C – Installation Plans and Specs

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WORK SCOPE

The TM2500 aeroderivative gas turbines have the following characteristics:

Manufacturer	General Electric
Net Output (MVA)	37
Net Heat Rate (Btu/kWh, LHV)	9333
Net Heat Rate (kJ/kWh, LHV)	9846
Net Efficiency (%, LHV)	36.6%
Ramp Rate (MW/minute)	20
Startup time (cold iron) (min)	5
Cooling (Gallons/min)	30
Natural Gas (lbs/hr)	20000

The general scope of work shall include, but not limited to the following:

1. The work performed will be done on a non-DWR facility, own and operated by Roseville Electric Utility (Site Owner). Contractor and its subcontractors shall respect and follow the Site Owner's policies and procedures where applicable.

2. Submit a project schedule identifying all relevant milestones including lead-time for materials and services within a week of receiving this request.

3. Submit a Pre-Work Safety Plan (PWSP) specific to the site including Personal Protective Equipment (PPE) and documentation of a stablished Injury & Illness Prevention Program (IIPP) include diagrams where applicable.

4. Under current Cal/OSHA standards, Roseville Energy Park project will be considered a multi-employer worksite. All Contractors shall have a site safety plan consisting of the following items at minimum while onsite:

    a) Contractor's Injury and Illness Prevention Program guidelines
    b) A copy of the Company's Lockout/Tagout Procedure with sign-off sheet
    c) A copy of the Company's Job Hazard Assessment sign-off sheet
    d) Permits and certification requirements related to the work that is being performed. For example: fall protection, confined space, arc flash, welding, etc.

5. Make the necessary arrangements and manage the logistics for transportation of personnel to the site and delivery of all necessary construction equipment and components and parts procured under this LOA.

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6. Provide necessary resources, technical support, tooling, and equipment for the installation and commissioning of two (2) GE TM2500 aeroderivative gas turbines and all required auxiliaries equipment.

    a) Contractor shall provide a detailed scope work document to be included as Attachment A.

7. Procure required equipment and materials necessary for the installation, including, but not limited to:

    a) Electrical cables
    b) Conduits
    c) Cable trays
    d) Pumps
    e) Switchgear
    f) Transformer
    g) Instrumentation
    h) Breakers
    i) PLC

8. The Contractor shall maintain a clean and safe area, free of any unnecessary hazards, throughout the duration of the project.

9. The Contractor shall prepare and submit a final project report documenting the work performed, including information such as summary and details of the work accomplished, engineering and design drawings used and updated to accomplish the scope of work, Quality Assurance (QA) and Quality Control (QC) documents used to track the progress of the work, and a section with recommendations for DWR to address, monitor, and maintain the equipment. The report may be submitted as a hard copy or, preferably, electronically in Adobe PDF or Microsoft Word format. All electrical and mechanical test data and photographs depicting the progress of work shall be included in the final project report.

10. Performance of the work and documentation for this project will be tracked through Engineering Submittals which shall include the final project report and engineering drawings, using DWR's electronic web-based system called LISP. DWR's comments and markups will be transmitted back to the Contractor using the same system. The following information and access to the web-based system will be provided to the Contractor once the Job Identification (ID) is created:

    - DWR's website https://lisp.water.ca.gov where submittals are to be

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uploaded
- Login name and password
- Job number and title
- Instructions for uploading submittals
- Explanation of file naming conventions to be used for electronic submittals
- Available instructional video help
- Tutorial – step by step process to access and use DWR's web-based system (same information presented in the video help file)

- The Contractor Electronic Submittal Flow Chart – overview of electronic submittal process

For all submittals, drawings, and schematics, PDF format is acceptable, but all drawings and schematics shall be sized ANSI D. In the case of As-Builts the native file shall be provided for Schematics and drawings.

While the Master Service Agreement is finalized, the following will be the primary contact for coordinating and directing work under this LOA:

Musa Aziz, Senior Hydroelectric Power Utility Engineer

You may contact Musa via either method presented below:

(916) 628-0432

Musa.Aziz@water.ca.gov

Please contact Musa as instructed for pick-ups, delivery of the equipment, and for any additional information regarding directions to the site.

The site is located at:

Roseville Energy Park
5120 Phillip Rd.
Roseville, CA 95747

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Labor, material, equipment, and other expenses will be invoiced in accordance with DWR Service Agreement No. 46000xxxx, Exhibit B, Attachment 1 and/or the proposal.

Submit two (2) copies of each invoice to the Contract Representative at the following address:

Musa Aziz
Electrical Engineering Services, Branch 2
Division of Operations and Maintenance
Department of Water Resources
Post Office Box 942836
Sacramento, CA 94236-0001

Submit one (1) additional copy of each invoice simultaneously to DWR Accounting Office at the following address in order to expedite approval and payment:

Accounting Office
Contracts Payable Section, Room 831
Division of Fiscal Services
Department of Water Resources
Post Office Box 942836
Sacramento, CA 94236-0001

Kiewit is hereby notified that:

Musa Aziz will be authorized to act as DWR's Representative on this project. Musa will be your primary point of contact for this DWR authorized work. All orders, directives, instructions, and notices regarding the project, including any changes in the work, shall be provided in writing to Musa.

If you have any question or need additional information, please contact Musa via either method provided above.

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General Electric Company

CONTRACT FOR SALE OF EQUIPMENT AND SERVICES

STATE OF CALIFORNIA, DEPARTMENT OF WATER RESOURCES

STATE POWER AUGMENTATION PROJECT – ROSEVILLE ENERGY PARK

August 11, 2021

DocuSign Envelope ID: BE04A59C-9C2F-4837-B6DB-1511CD1EAA99

THIS CONTRACT FOR SALE OF EQUIPMENT AND SERVICES (this "Contract") is entered into as of the Effective Date by and between:

GENERAL ELECTRIC COMPANY, a Delaware corporation, having a principle place of business at **1 River Rd., Schenectady, NY 12345** (the "Seller"); and

STATE OF CALIFORNIA, DEPARTMENT OF WATER RESOURCES, a having a principal place of **business at 715 P Street, Sacramento, California 95814** (the "Buyer"). The Buyer and the Seller are referred to herein, individually, as a "Party" and, collectively, as the "Parties".

RECITALS

WHEREAS, the Seller is engaged in the business of manufacturing and delivering various kinds of power plant equipment and of providing services and training in support of the installation and commissioning and use thereof.

WHEREAS, the Buyer desires to purchase, and the Seller desires to sell the Equipment, together with certain installation and commissioning support, performance testing and Training Services in connection with Buyer's Project located at Roseville, California where the Equipment will be installed and the Services performed (the "Facility" or "Site"), all subject to the terms set forth herein.

NOW, THEREFORE, in consideration of the mutual promises stated herein, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

Article 1 Definitions

(a) Definitions.

As used in this Contract, the following terms have the meanings indicated:

"Affiliate" shall mean any entity that directly or indirectly controls, is controlled by or is under common control with a Party. For the purposes of this definition, "control" means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of the controlled entity, whether through the ownership of voting securities or partnership or other ownership interests or by contract or otherwise.

"Ambient Site Conditions" shall have the meaning ascribed in Article 15 of this Contract.

"Balance of Plant" or "BOP" shall mean the equipment so identified in Sections 3 and 4 of Attachment 1 to this Contract.

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"Buyer" shall mean the entity so identified in the foreword of this Contract.

"Buyer Taxes" shall mean all taxes, duties, fees, or other charges of any nature (including, but not limited to, ad valorem, consumption, excise, franchise, gross receipts, import, license, property, sales, stamp, storage, transfer, turnover, use, or value-added taxes, and any and all items of withholding, deficiency, penalty, addition to tax, interest, or assessment related thereto), other than Seller Taxes, imposed by any governmental authority of any country on Seller or Buyer or their respective employees, Subcontractors or Suppliers due to the execution of any agreement or the performance of or payment for Work hereunder.

"Change in Control" shall mean the occurrence of one or more of the following events: (i) any entity shall become the direct or indirect beneficial owner of a majority of the equity interest in the Buyer; (ii) any entity shall obtain, by contract or otherwise, the power to direct the affairs of or elect any of the directors (or other members of the governing body) of the Buyer; or (iii) any sale, lease, exchange, or other transfer (in one transaction or a series of related transactions) of a majority of the operating assets of the Buyer to any entity.

"Change in Law" shall mean a new Law or change to an existing Law, or a change in the interpretation or application of a Law by the cognizant executive or judicial authorities occurring after the date of Seller's proposal to Buyer.

"Change Order" shall mean a written agreement to change the Equipment, Services, or any provision of this Contract, which describes the change, identifies the agreement as a Change Order, sets out adjustments, if any, in the Contract Price and any other provision of this Contract which is affected, and is signed by the Parties.

"Codes and Standards" shall have the meaning ascribed in Article 15 of this Contract.

"Confidential Information" shall have the meaning ascribed in Article 26 of this Contract.

"Contract Currency" shall mean the currency in which the Contract Price is stated.

"Contract Documents" shall have the meaning ascribed in Article 31 of this Contract.

"Contract Price" shall mean the total price as consideration for the Equipment and the Services, as set forth in Article 3 of this Contract, and as may be adjusted from time to time in accordance with this Contract.

"Customer Collaboration System" shall have the meaning ascribed in Article 16 of this Contract.

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“Customer Kickoff Meeting” shall mean a project kick-off meeting between the Seller's project execution team and the Buyer's project team.

“Day” or “Days” shall mean a calendar day, including Saturdays, Sundays, and holidays, except that in the event that an obligation is due for performance on a Saturday, Sunday or US national legal holiday and state of California legal holiday, the obligation shall be deemed due on the next business day thereafter.

“Delivery Point” shall have the meaning ascribed in Article 7 of this Contract

"Down Payment" shall mean the initial payment described in Article 5 of this Contract.

“Effective Date” shall mean the date described in Article 34 of this Contract.

“Eligible Assignee” shall have the meaning ascribed in Article 30 of this Contract.

“Equipment” shall mean all of the equipment described in the “Equipment” portion of Attachment 1 Scope of Supply.

“Facility” shall have the meaning ascribed in the Recitals of this Contract.

“Governing Law” shall have the meaning ascribed in Article 33 of this Contract.

“Indemnified Party” shall have the meaning ascribed in Article 20 of this Contract.

“Indemnifying Party” shall have the meaning ascribed in Article 20 of this Contract.

“Law” or “Laws” shall mean those laws, regulations, decrees or similar orders with mandatory effect issued by the legislative, judicial or executive branch of any relevant government, in effect as of the date of Seller’s proposal to Buyer, to the extent such laws, regulations, decrees or similar orders are applicable to the scope of this Contract.

“Local Laws” shall have the meaning ascribed in Article 15 of this Contract.

“Major Component” shall mean the turbine with its base, the generator, generator base, the air intake system components (collectively), and the main auxiliary skid containing the gas turbine lube oil reservoir and starting system.

“Minimum Performance Guarantees” shall mean at least ninety-five percent (95%) of the Performance Guarantee for output and no more than one hundred and five percent (105%) of the Performance Guarantee for heat rate.

“Must Meet Remedy” is a one-time rather than continuing obligation on the part of Seller to repair or replace the Equipment so that the Equipment meets a designated

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performance criterion (e.g., the Minimum Performance Guarantees). A Must Meet Remedy is offered in lieu of other remedies such as liquidated damages or warranty.

“National Laws” shall have the meaning ascribed in Article 15 of this Contract.

“Options” shall have the meaning ascribed in Article 4 of this Contract.

“Owner” shall mean that corporation, partnership, individual, or other entity which owns the Facility in which the Equipment will be installed.

“Party” and "Parties” shall have the meanings ascribed in the foreword to this Contract.

“Payment Schedule” shall mean the schedule of payments described in Article 5 of this Contract and Attachment 7.

“Payment Security” shall have the meaning ascribed in Article 5 of this Contract.

“Performance Guarantees” shall mean the guaranteed values identified in the signature box on the Stamped Guarantee Sheet attached hereto as Attachment 6.

“Personal Data” shall have the meaning ascribed in Article 28 of this Contract.

“Project” shall mean Buyer’s project for which the Seller is supplying Equipment and/or Services as described in this Contract.

“Scheduled Major Component RTS Dates” shall have the meaning ascribed in Article 7 of this Contract.

“Scope of Supply” shall mean the Equipment plus the Services, as set forth in Attachment 1 Scope of Supply.

“Seller” shall mean the entity so identified in the foreword to this Contract.

“Seller Taxes” shall mean corporate and individual taxes that are measured by net income or profit imposed by any governmental authority of any country on Seller, its employees, Subcontractors or Suppliers due to the execution of any agreement or the performance of or payment for Work hereunder, except for withholding tax for income on payments to Seller which are addressed in Article 14 of the Contract.

“Services” shall mean those services described in. Attachment 1 If the Scope of Supply does not contain any Services, then this term shall not be applicable in this Contract.

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"Site" shall mean the location of the Project and place where the Equipment will be installed, as indicated in the Recitals to this Contract. The Site address is 5778 Phillip Rd., Roseville, CA 95747.

"Software" means a computer program or compilation of data that is fixed in any tangible medium of expression, or any storage medium from which the program may be perceived, reproduced or otherwise communicated, either directly or with the aid of a machine or device, and shall include without limitation any of Seller's proprietary operating Software, provided for the ordinary operation of the Equipment, any optional Software to enhance the operation of the Equipment, as well as any upgrades or revisions of this material the Seller provides in fulfillment of a specific written commitment or otherwise.

"Spare Parts" shall mean those spare parts as described in Appendix 6.9 of Attachment 1 (Recommended Spare Parts.)

"State Laws" shall be those state Laws that are listed in Attachment 1 Scope of Supply and agreed to be incorporated into the design and manufacturing of the Unit(s) by Seller. If no State Laws are set forth in Attachment 1, the manufacturing process shall not incorporate any consideration of State Laws.

"Subcontractor(s)" shall mean any corporation, partnership, or individual having a contract with the Seller to provide specific services to be performed at the Site in connection with this Contract.

"Supplier(s)" shall mean any corporation, partnership, or individual having a contract with the Seller to supply material, equipment, labor, goods, or services to the Seller for inclusion in the Equipment or Services provided by Seller under this Contract, other than those specific services to be performed by Subcontractors at the Site.

"Technical Advisory Services" shall have the meaning ascribed in Attachment 1 of this Contract.

"Termination Schedule" shall mean the schedule of termination charges described in Article 23 and Attachment 7 of this Contract

"Unimpeded Access" shall mean the Buyer providing Seller with access to the Unit(s) while the Buyer ensures that the following conditions are met: (i) the necessary fuels, lubricants, operating supplies and third party interconnections are continuously available; (ii) the Buyer's trained operators are available for operation of the Unit(s); (iii) the Buyer will operate portions or all of the Facility at the times and at the loads reasonably requested by the Seller; (iv) the Seller will have unimpaired access to all Facility work areas, station cranes and similar equipment; and (v) a copy of the control room log is made available to the Seller.

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"Unit" shall mean a single gas turbine and its associated generator, together with those accessories associated with that gas turbine.

"Unit Price" shall have the meaning ascribed in Article 3 of this Contract.

"Warranty Period" shall have the meaning ascribed in Article 13 of this Contract.

"Work" shall mean the procurement, fabrication, and supply of the Equipment and the performance of the Services, and any corrective actions undertaken pursuant to Article 13.

(b) Rules of Interpretation

The following rules of interpretation shall apply in construction of this Contract. Unless otherwise required by the context in which any term appears: (i) capitalized terms used in this Contract have the meanings specified in this Article, or as otherwise defined in this Contract, (ii) the singular shall include the plural, (iii) the words "herein," "hereof" and "hereunder" shall refer to this Contract as a whole and not to any particular section or subsection of this Contract, (iv) references to this Contract shall include a reference to all appendices, annexes, schedules and exhibits hereto, as the same may be amended, modified, supplemented or replaced from time to time, (v) the words "include," "includes" and "including" are not limiting, (vi) any consent to be given by either Party hereunder shall not be unreasonably withheld, delayed or conditioned, except as explicitly stated to the contrary herein, and (vii) references to any agreement, document or instrument shall mean a reference to such agreement, document or instrument as the same may be amended, modified, supplemented or replaced from time to time.

Article 2 Scope of Supply

The Seller shall manufacture and deliver the Equipment and perform the Services as more fully described in Attachment 1 Scope of Supply, subject to the terms and conditions set forth in this Contract. The Equipment includes two (2) Units.

Article 3 Price

The Buyer shall pay to the Seller the following "Contract Price" in consideration of the Equipment and Services. The Contract Price is stated exclusive of sales, VAT or other taxes, which will be added at the time of invoicing. The Contract Price shall be adjusted as necessary to take account of (a) Change Orders, including those related to the exercise of Options (as defined in Article 4 below), or (b) other adjustments specifically provided for in this Contract. Payment shall be made in accordance with the Payment

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Schedule set forth in Attachment 7 and the payment terms set forth in Article 5. In the case of Change Orders, payment shall be made in accordance with those terms stated in the Change Order.

REF	GTG PACKAGE EQUIPMENT DESCRIPTION	Unit Price (USD)	QTY	Extended Price (USD)
1	Pre Mobilization Work	[redacted]	2	[redacted]
2	TM2500+G4 Unit Including Extended Warranty and Import Duty		2	
3	Option A - TM2500 Lifting Equipment		1	
4	Option B - TM2500 Stairs and Platforms		2	
5	Option C - Remote HMI		1	
6	Option D - Lube Oil Filtration Kit		1	
7	MV/LV SG Skid		2	
8	Gas Fuel Pressure Reduction Skid		1	
9	Gas Fuel Filter/Coalescing Skid		2	
10	Demin Water Forwarding Pump Skid		1	
11	First Fill lubricants per TM2500		2	
12	Performance Testing		1	
13	Training		1	
14	Transportation		Lot	
15	Spare Parts		Lot	
16	TA services – Field Representative Straight Time*		1286	
17	TA services – Field Representative Over Time*		1414	
18	TA services – Specialty Field Representative Straight Time*		760	
19	TA services – Specialty Field Representative Over Time*		836	
20	TA services – Site Manager Straight Time*		1110	
21	TA services – Site Manager Over Time*		999	
Total Contract Price		$		

* TA Service rates are exclusive of T&L/Per Diem

Article 4 Options

The Buyer shall have the right to exercise options to purchase additional Equipment or Services which are described in the Schedule of Options attached to this Contract as

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Attachment 2 (the "Options") within the times and at the prices therein stated. If any Option is exercised in writing prior to the option exercise deadline(s) set forth in Attachment 2, the Contract Price and Scheduled RTS Date will be automatically adjusted as set forth in the Schedule of Options and the associated adjustment to the Payment Schedule shall be set forth in a Change Order.

Article 5 Payments

(a) Payment Schedule.

Payments shall be made as set forth in Attachment 7. Wire transfer instructions shall be provided on each invoice.

(b) Effect of Changes in Contract Price.

If any adjustment results in an increase to the Contract Price, Buyer shall pay for the increase in accordance with the corresponding invoice submitted by Seller. If any adjustment results in a decrease in the Contract Price, payments previously made shall be retained by the Seller and will be applied to subsequent payments as they become due.

(c) Field Modifications and Offsets

Seller shall not be responsible for backcharges or field modifications performed by Buyer unless Seller authorizes such charges in writing prior to the incurrence thereof. Buyer specifically waives any right of set-off relating to such charges. Any claim or set-off for backcharges shall be accompanied by a copy of such written authorization. In no event shall Buyer offset any amounts due under this Contract by amounts that may be due Buyer from Seller or any of its Affiliates under this Contract or any other agreement, judgment or order.

Article 6 Buyer's Obligations

(a) Permits.

The Buyer shall be responsible for timely obtaining all environmental and use permits, all other licenses (including but not limited to export licenses, import licenses), exemptions, permits (including but not limited to foreign exchange permits and work permits), authorizations, approvals, local building and construction permits, and easements necessary for the construction and operation of the Facility, and shall be responsible for any additional costs, fees or fines arising from any delay or failure to obtain such permits, licenses, exemptions, authorizations or approvals, even though any such permits, licenses, exemptions, authorizations or approvals may be applied for by Seller.

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(b) Permitting Support.

The Seller shall provide reasonable assistance to the Buyer in its endeavors relating to the permitting of the Facility by providing information and support during the permitting process. In undertaking such assistance, the Seller shall not be obligated to incur out-of-pocket costs and expenses without reimbursement from the Buyer. Seller shall not be liable if any permit, license, exemption, authorization or approval is delayed, denied, revoked, restricted or not renewed and Buyer shall not be relieved thereby of its obligations under this Contract, including paying Seller for the Equipment and Services.

Article 7 Title Transfer, Delivery, Risk of Loss, Shipment to Storage

(a) Title.

Title to each portion of the Equipment, Services or any Spare Parts under this Contract shall, at Seller's option, transfer from the Seller to the Buyer upon:

(i) payment in full of the Contract Price applicable to the Equipment, Balance of Plant, or Spare Parts as the case may be, or

(ii) upon Seller's Delivery of the Equipment, Balance of Plant or Spare Parts.

Seller shall notify Buyer of the title transfer point at Seller's Notice of RTS.

Title to Services shall transfer to the Buyer as performed.

(b) Delivery.

Once an item is available for shipment, Seller will notify Buyer of such status in writing (such written notice, the "Notice of Readiness to Ship" or "Notice of RTS").

Transportation Services have been elected by Buyer. The Seller shall deliver the Equipment DDP (Incoterms 2020) to the Delivery Point. For the purposes of this Article, "Delivery Point" shall mean the Site (prior to unloading) except in a storage situation as described in Section 8(d) below, upon which "Delivery Point" shall mean the designated storage facility (prior to unloading).

(c) Risk of Loss.

With respect to each item of Equipment, Balance of Plant, or Spare Parts, risk of loss shall pass to the Buyer upon the earliest of:

(A) delivery in accordance with the Incoterms specified in Section 7(b) ,

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(B) delivery to storage in accordance with Section 7(d), or

(d) Shipment to Storage.

If any part of the Equipment cannot be shipped to the Buyer when ready due to any cause not attributable to the Seller, the Seller may, on Buyer's behalf, ship such Equipment to storage, such storage being in accordance with any technical specifications or other instructions provided by the Seller. Buyer shall make all reasonable efforts to inform Seller of the potential for this event to occur. If such Equipment is placed in storage, including storage at the facility where manufactured, the following conditions shall apply:

(i) risk of loss shall thereupon pass to the Buyer unless shipment to storage is the result of Seller's suspension for non-payment pursuant to Section 22(c);

(ii) any amounts otherwise payable to the Seller upon Notice of RTS or shipment shall be payable upon presentation of the Seller's invoice(s);

(iii) all expenses incurred by the Seller, such as for preparation for and placement into storage, handling, inspection, short-term preservation, storage, removal charges and any taxes shall be payable by the Buyer upon submission of the Seller's invoice(s); and

(iv) when conditions permit and upon payment of all amounts due hereunder, the Seller shall resume delivery of the Equipment, provided, however, that if any Equipment is placed in storage due to a suspension by Seller under Article 23, title to such Equipment shall not transfer to Buyer.

Notwithstanding anything to the contrary contained herein, shipment to storage, storage, and arranging for insurance once in storage is the sole and direct responsibility of the Buyer and the Seller shall not assume any liability associated therewith and Buyer shall be responsible for any damages, costs, expenses and fees. Any shipment to storage by Seller is only a service provided to the Buyer and represents no direct or indirect responsibility on the part of Seller to Buyer associated with such storage.

Article 8 Schedule

(a) Scheduled RTS Date.

An item of the Equipment will be "**Ready to Ship**" (or "**RTS**") when it is available for shipment from the manufacturer's facility or warehouse. The Seller shall provide the Notice of RTS for the Major Components for each Unit by the date(s) set forth in the Scheduled Major Component RTS Date(s) schedule attached to this Contract as

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Attachment 4 (each, a "Scheduled Major Component RTS Date"). Partial shipments will be allowed.

(b) Liquidated Damages.

If any Major Component associated with any Unit is not delivered on or before their Scheduled RTS Date(s) for reasons attributable to the Seller and not excused elsewhere in this Contract, and to the extent that the Buyer suffers actual damages as a result of such delay, the Seller shall pay as liquidated damages, and not as a penalty, a sum calculated in accordance with the table below, until actual RTS of all Major Components of such Unit:

Days	Liquidated Damages
1-15	$0, Grace Period
16-30	$5,000.00 Per Day
31-60	$10,000.00 Per Day
Over 60	$15,000.00 Per Day

Liquidated damages, if any, shall be computed based on the date of RTS of the principle portion of the Major Component and such computations shall disregard any part of or accessory to the Major Component which may be shipped separately.

(c) Limitations.

The Seller's aggregate liability hereunder for liquidated damages for delay in RTS shall not exceed five percent (5%) of the Unit Price for the Unit giving rise to such claim. Notwithstanding the foregoing, the Seller shall have no liability to the Buyer for liquidated damages for delay in RTS unless such delay s is the direct cause of an actual delay in the initial commercial operation of the Project and the Buyer suffers economic harm as a result of such delay. The liquidated damages for delay in RTS shall be the Buyer's exclusive remedy for and the Seller's sole obligations arising out of delay.

Article 9 Performance Guarantees

When tested in accordance with and subject to the conditions specified in Attachment 6 and the Seller's Site-specific performance test measurement specification to be provided during the course of project execution (see Attachment 5 for a typical specification provided as reference), the Seller guarantees that each Unit will achieve the output and heat rate Performance Guarantees and emissions levels set forth in the signature block on the Stamped Guarantee Sheet attached hereto as Attachment 6. If the performance of any Unit fails to achieve the output or heat rate Performance Guarantees after the final performance test provided for in Article 10 below, the Seller shall pay to the Buyer as liquidated damages, and not as a penalty, a sum calculated in

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accordance with the table below for each Unit that fails to achieve the output or heat rate Performance Guarantees:

Criterion	Test Measurement Point	Liquidated Damages
Output	At generator terminals	$ 500.00 for each kW below the applicable Performance Guarantee
Heat Rate	At turbine fuel meter	$1,000.00 for each Btu/kWh (LHV) above the applicable Performance Guarantee
NOx and CO Emissions	At turbine exhaust flange	Liquidated damages not applicable. In lieu of any damages, Seller has a one-time duty to adjust and repair the Unit until the Performance Guarantee for NOx and CO is met. (Must Meet Remedy).

The Seller's aggregate liability hereunder for liquidated damages for failure to achieve the output Performance Guarantee shall not exceed five percent (5%) of the Unit Price of the Unit giving rise to such claim. The Seller's aggregate liability hereunder for liquidated damages for failure to achieve the heat rate Performance Guarantee shall not exceed five percent (5%) of the Unit Price of the Unit giving rise to such claim. The liquidated damages for failure to achieve the Performance Guarantees and the corrective action to be taken by the Seller for deficiencies in performance shall be the Buyer's exclusive remedies for and the Seller's sole obligations arising out of such deficiencies.

Notwithstanding the foregoing, the Seller shall have no liability to the Buyer for liquidated damages for failure to achieve the Performance Guarantees with respect to any Unit unless the Buyer suffers economic harm as a result of the failure of such Unit to achieve the Performance Guarantees.

In addition to the Performance Guarantees for output and heat rate, when tested in accordance with the Seller's Site-specific performance test measurement specification and subject to the conditions set forth in Attachment 6, the Seller guarantees that each Unit will meet the Minimum Performance Guarantee. If when first so tested, any Unit fails to meet the minimum Performance Guarantee, in lieu of liquidated damages, the Seller shall have a one-time duty to adjust and repair the Unit until the Minimum Performance Guarantee is met ("Must Meet Remedy").

Future SCR/COR

A SCR/COR Catalyst may be included in this Contract at some point in the future via a Change Order at a price to be agreed. At that point, subject to the Best Available Control Technology still being available a SCR/COR would be capable of reducing the TM2500 Unit emissions from the as-guaranteed value for NOx and CO in Seller's

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Performance Guarantee in Attachment 6 (Performance Guarantee) down to the NOx, CO, and VOC levels indicated in the "Future SCR/COR Table" below.

The emissions values for PM10 and SOx will be based on the sulfur content in the supplied fuel, up to < 0.75 grains S/100 dscf.

Future SCR/COR Table
VOC: 2 PPM @ 15% 02
CO: 6 PPM @ 15% 02
NOx: 5 PPM @ 15% 0

Article 10 Performance Guarantee Testing

(a) Performance Tests.

The performance tests shall be arranged and conducted by the Seller or its designee at Sellers cost except as specifically otherwise stated below in paragraph (e).

(b) Performance Testing.

The tests for output and heat rate shall be performed using the Seller's Site-specific performance test measurement specification to be provided during the course of project execution (see Attachment 5 for typical specification provided as reference) and subject to conditions set forth in Attachment 6, and shall be conducted immediately following the start-up period and after the Seller has conducted final check-out of the Unit. If the output and heat rate tests are not conducted within the first 200 fired hours, degradation shall be applied in accordance with clause (f) below.

(c) Emissions Testing.

Seller or its designee shall conduct the emissions tests at the engine exhaust. Seller shall provide Buyer a copy of the initial compliance test report (which shall not be deemed Confidential Information).

(d) Cure Period.

If when first tested, any Unit does not meet the heat rate or output Performance Guarantees, the Seller shall be afforded ninety (90) Unimpeded Access Days of access to the Unit to undertake corrective action. The Unit will be re-tested when the Seller so requests, but in any event at the end of this cure period.

(e) Cost of Tests and Re-Tests.

The Seller shall perform the initial performance tests at its cost. The Buyer shall be notified of, and shall be represented at, all such tests. If a re-test is required and to the extent the Seller was the cause of such re-test, the actual cost of the retest will be borne by the Seller. The actual cost of the re-test shall mean (i) cost of special test personnel

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or special operating personnel provided by the Buyer, (ii) cost of special instrumentation and equipment (including rental cost) and including required calibration of the instrumentation, and (iii) the Seller's personnel cost, but in no event whatsoever will the Seller be responsible for the cost of fuel or other consumables, normal operating personnel, or any other such cost typically borne by the Buyer.

(f) Degradation.

In conducting the initial performance test or re-tests, the performance of the Unit shall not be adjusted for degradation until such Unit has operated in excess of two hundred (200) hours. The Seller's degradation curve shall be used to determine the adjustment for Unit output and Unit heat rate.

(g) Performance Credits.

In the event the Seller is liable to the Buyer for liquidated damages in accordance with the provisions herein for the failure to meet any output or heat rate Performance Guarantee, the calculation of such liquidated damages shall include a credit when the actual performance of any Unit is demonstrated to have been better than the output or heat rate Performance Guarantees. Any credit shall be calculated using the same dollar values by which the liquidated damages are calculated. The Seller's credit or liability shall be the net calculation.

(h) Delayed Tests.

If for reasons not attributable to the Seller, the performance tests are not started within sixty (60) Days of the Seller's written notice to Buyer that the Unit is ready for use by Buyer, the tests shall be deemed waived and each Unit shall be deemed to have achieved the Performance Guarantees. In the event the Equipment is not installed at the Site and/or the performance tests are not completed within one (1) year after expiry of the Warranty Period, the Performance Guarantees will be void and Seller shall have no obligations under this Article 10.

Article 11 Aggregate limitation on Liquidated Damages

The Seller's overall aggregate liability hereunder for all forms of liquidated damages provided for in this Contract shall not exceed ten percent (10%) of the Unit Price of the Unit giving rise to such claims. The Parties agree that the amount of liquidated damages set forth above are reasonable in light of the anticipated harm caused by the breach of duty related thereto and the difficulties of proof of loss and inconvenience or non-feasibility of obtaining any adequate remedy and the Parties are estopped from contesting the validity or enforceability of such liquidated damages.

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Article 12 Observation, Inspection and Factory Testing

(a) Observation at the Site.

The Seller shall be afforded access during normal business hours to observe the work in progress at the Site. The Seller may visit the Site at any time or times, or may maintain representatives to observe Buyer's or Buyer's contractors work, provided such activity and inspections do not interfere with the Work.

(b) Inspections and Tests at Site.

Buyer shall be able to inspect the Units once delivered at Site. The Seller shall not be required to delay manufacturing or other activities to accommodate Buyer's inspection.

(c) Inspection Not Acceptance.

The Buyer's inspection of the Equipment or its failure to inspect does not relieve the Seller of its obligation to fulfill the requirements of this Contract, nor is it to be construed as acceptance by the Buyer.

Article 13 Warranty

(a) Warranty Period.

The Seller shall warrant the Equipment and the associated Services on the terms set forth in this Article for twenty four (24) months following the date fuel is first combusted in the Unit at the Site or thirty six (36) months following the date of Seller's Notice of RTS, whichever period shall first expire (the "Warranty Period"), provided, however, that the warranty applicable to the Training Services shall be solely as set forth in **Attachment 9**.

(b) Warranty.

The Seller warrants to the Buyer that during the Warranty Period

(i) the Equipment to be delivered hereunder shall be

(A) designed and fit for the purpose of generating electric power when operated in accordance with the Seller's specific written operation instructions or, in the absence thereof, in accordance with generally accepted operation practices of the electric power producing industry, and

(B) free from defects in material, workmanship and title; and

(ii) the Services shall be performed in a competent, diligent manner.

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(c) Remedy.

If the Equipment delivered or Services performed hereunder do not meet the above warranties during the Warranty Period, the Buyer shall promptly notify the Seller in writing and make the Equipment available for correction. The Seller shall thereafter, as soon as is practicable, correct any warranty defect, at its option and expense,

(i) by re-performing the defective Services,

(ii) repairing the defective part of the Equipment, or

(iii) making available necessary replacement parts at Seller's factory.

Buyer shall, at Seller's option, return any defective part that is replaced by Seller at Seller's expense to Seller's facility within thirty (30) Days from the date of written instruction by Seller. The Seller shall provide technical advisory Services reasonably necessary for any such repair of the Equipment, but the Seller shall not be responsible for

(iv) removal or replacement of structures or other parts of the Facility and

(v) Site labor or transportation of parts or components.

The Buyer shall be responsible for the installation of any repaired or replacement part and for payment of any customs duties or similar levies, which may be assessed as a result of the shipment of any such replacement parts. If a defect in the Equipment or part thereof cannot be corrected by the Seller's reasonable efforts, the Parties will negotiate an equitable adjustment in price with respect to such Equipment or part thereof.

(d) Warranty on Remedial Work.

Any re-performed Service or repaired or replacement part furnished under this warranty shall carry warranties on the same terms as set forth above, except that the applicable warranty period for the repair/replacement part or re-performed Service shall be for the longer of

(i) the remainder of the original Warranty Period or

(ii) six (6) months from the date of such re-performance, repair or replacement.

In any event the repair/replacement warranty period and the Seller's responsibilities set forth herein for such repaired or replacement part or re-performed Service shall end no later than six (6) months after expiration of the original Warranty Period.

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(e) Exclusions.

The Seller does not warrant the Equipment or any repaired or replacement parts against normal wear and tear, including that due to environment or operation, type of fuel, detrimental air inlet conditions or erosion, corrosion or material deposits from fluids. The warranties and remedies set forth herein are further conditioned upon

(i) the proper storage, installation, operation, and maintenance of the Equipment in conformance with the operation instruction manuals (including revisions thereto) provided by the Seller and/or its Subcontractors or Suppliers, as applicable (including any required warranty preservation services in the event of long term storage) and

(ii) repair or modification pursuant to the Seller's instructions or approval.

The Buyer shall keep proper records of operation and maintenance during the Warranty Period. These records shall be kept in the form of log sheets and copies shall be submitted to the Seller upon its request.

(f) Exclusive Remedies and Warranties.

THE PRECEDING PARAGRAPHS OF THIS ARTICLE 13, ARTICLE 9 AND ARTICLE 20 SET FORTH THE SOLE AND EXCLUSIVE REMEDIES FOR ALL CLAIMS BASED ON FAILURE OF OR DEFECT IN THE EQUIPMENT AND SERVICES PROVIDED UNDER THIS CONTRACT, WHETHER THE FAILURE OR DEFECT ARISES BEFORE OR DURING THE WARRANTY PERIOD AND WHETHER A CLAIM, HOWEVER INSTITUTED, IS BASED ON CONTRACT, INDEMNITY, WARRANTY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE. THE FOREGOING WARRANTIES ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES AND GUARANTEES WHETHER WRITTEN, ORAL, IMPLIED OR STATUTORY. NO IMPLIED STATUTORY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL APPLY.

Article 14 Taxes

(a) Seller Taxes.

Unless otherwise specified in this Contract, the Seller shall be responsible for, and shall pay directly, Seller Taxes. If Buyer deducts or withholds Seller Taxes, the Buyer shall furnish within thirty (30) Days of the Seller's request official receipts from the appropriate governmental authority for each deducted or withheld Seller Tax.

(b) Buyer Taxes.

The Buyer shall be responsible for, and shall, where required or allowed by Law, pay directly when due and payable, any and all Buyer Taxes, and all payments due and payable by the Buyer to the Seller hereunder shall be made in the full amount of the Contract Price, free and clear of all deductions and withholding, for Buyer Taxes. If the Buyer deducts or withholds Buyer Taxes from Seller payments, the Buyer shall pay

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additional amounts to the Seller to cause the amounts actually received by the Seller, net of deducted or withheld Buyer Taxes, to equal the full amount of the Contract Price, and shall provide to the Seller within thirty (30) Days of Seller's request, accurate official receipts from the appropriate governmental authority for deducted or withheld Buyer Taxes. If the Seller is required by Law to collect and remit or to pay Buyer Taxes, the Buyer shall, promptly upon presentation of the Seller's invoice for such Buyer Taxes, pay to the Seller an amount equal to the U.S. dollar value of such Buyer Taxes.

TAXES: Unless otherwise required by law, the State of California is exempt from Federal excise taxes.

(c) Invoices.

The Seller shall issue an official invoice itemizing the appropriate taxes.

Article 15 Compliance with Laws, Codes and Standards

The Contract Price is based on the engineering and manufacture of the Equipment in accordance with the Seller's design criteria, manufacturing processes and procedures and quality assurance programs, so as to comply with:

(i) those portions of the codes and standards identified in Attachment 1 which the Seller has deemed applicable to the Equipment ("Codes and Standards"),

(ii) the applicable national Laws of the country where the relevant Equipment is manufactured ("National Laws"),

(iii) the Site Conditions (including temperature, humidity, elevation and any seismic or wind-loading requirements) identified by Buyer prior to Effective Date and set forth in Attachment 1 ("Site Conditions"),

(iv) those local Laws which have been identified in Attachment 1 ("Local Laws"), and

(v) those state Laws which have been identified in Attachment 1 ("State Laws").

If no Local or State Laws are set forth in Attachment 1 and agreed to by Seller, the manufacturing process shall not incorporate any consideration of such Local or State Laws.

Article 16 Project Management

(a) Original Equipment Definition.

The original Equipment definition is established in Attachment 1 Scope of Supply.

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(b) Customer Kickoff Meeting.

Unless otherwise agreed, the Seller will schedule a Customer Kickoff Meeting within forty-five (45) Days of the Effective Date.

(c) Project Manager.

No later than the date of the Customer Kickoff Meeting, the Buyer will appoint an individual person as its Project Manager and will authorize that person to act on its behalf in matters connected with this Contract or the Project.

(d) Global Sourcing.

The Seller reserves the right in its discretion to obtain, source, subcontract, manufacture, fabricate and assemble the Equipment and any of its components and systems from non-domestic concerns; it being understood that the quality standards and warranties of the Seller under this Contract shall be adhered to in all cases irrespective of source. Seller shall be responsible for those direct costs associated with its global sourcing and manufacturing activities that occur prior to title transfer to Buyer.

(e) Electronic Communication.

The Parties agree to use the Seller's Customer Collaboration System as the primary medium for the storage and transmittal of drawings, specifications and project reports. The current Customer Collaboration System is Documentum.

Article 17 Changes

(a) Changes Resulting from Changes in Codes and Changes in Law.

If any change to the Codes and Standards, Ambient Site Conditions, Site Requirements or any Change in Law requires a change to the Equipment, the Seller shall be entitled to a Change Order that includes equitable adjustments to the Contract Price and to the Scheduled RTS Date(s) and other provisions of this Contract that are impacted. If the Seller is entitled to a Change Order pursuant to the provisions of this paragraph, the Seller shall submit to the Buyer a draft Change Order.

(b) Changes and Improvements Beyond Scope.

The Seller has the right to make changes in its product design and add improvements to products or services at any time without incurring any obligations to install the same on or in connection with the Equipment and Services provided hereunder. In addition, during the manufacturing process at its discretion, the Seller may make minor changes to the Equipment without entering into a Change Order, provided that such minor changes do not alter the Contract Price, Performance Guarantees, Buyer interface points with the Equipment or Scheduled RTS Date(s).

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(c) Buyer-Initiated Changes.

The Buyer shall have the right to request that the Seller consider changes to the Equipment or the Services, including modifications, alterations or additions. If the Buyer wishes to request such a change, the Buyer shall notify the Seller in writing. Within fifteen (15) Days after receipt of such notice (unless otherwise extended by mutual agreement), the Seller shall advise the Buyer of the feasibility of the requested change and shall submit to the Buyer a draft Change Order, unless the matter requires further investigation and research in which case Seller will provide an estimate of the time frame in which Seller will be able to submit a detailed response to Buyer.

(d) Seller-Initiated Changes.

If the Seller wishes to propose a change, or if the Seller is entitled to a Change Order pursuant to the provisions of this Contract, the Seller shall submit to the Buyer a draft Change Order.

(e) Contents of Draft Change Order

The draft Change Order shall include:

(i) a technical description of the proposed change in such detail as the Buyer may reasonably require,

(ii) a lump sum firm price adjustment (increase or decrease) in the Contract Price, if any, caused by the proposed change,

(iii) all potential effect(s), if any, on the Scheduled RTS Date(s), or any other schedule or date for performance by the Seller hereunder caused by the proposed change, and

(iv) all potential effect(s), if any, on the Seller's ability to comply with any of its obligations hereunder, including the Seller's warranties and Performance Guarantees caused by the proposed change.

(f) Process for Concluding Change Order.

The Buyer shall, within ten (10) Days from the date of receipt of such information, either approve or disapprove the draft Change Order in writing or request additional time to consider the draft Change Order. If the Buyer approves the Change Order, the Buyer and the Seller shall then sign the Change Order that shall operate as an amendment to this Contract.

(g) Agreement Required.

Except for Change Orders to which the Seller is expressly entitled pursuant to this Contract, all changes under this Contract shall be subject to mutual agreement, and no Change Order will be effective until signed by both Parties.

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(h) Changes to Equipment Not Practicable.

If the Seller determines that any change to the Equipment contemplated in the immediately preceding paragraphs is not practicable, the Seller will so notify the Buyer and the Buyer may at its option terminate this Contract in accordance with Article 23.

Article 18 Excusable Delays

(a) Excusable Delays.

The Seller shall not have any liability or be considered to be in breach or default of its obligations under this Contract to the extent that performance of such obligations is delayed or prevented, directly or indirectly, due to, but not limited to, the following ("Excusable Delay"):

(i) causes beyond its reasonable control; or

(ii) acts of God, acts (or failures to act) of governmental authorities, fires, severe weather conditions, earthquakes, strikes or other labor disturbances, floods, war (declared or undeclared), terrorism, epidemics, civil unrest, riots, delays or accidents in transportation or car or transporter shortages; or

(iii) delays in the prerequisite work of the Buyer, Buyer's other contractors or suppliers, or other acts (or omissions) of the Buyer, including but not limited to failure to promptly: (A) provide the Seller with information and approvals necessary to permit the Seller to proceed with work immediately and without interruption, or (B) comply with the terms of payment; or

(iv) shipment to storage in accordance with Article 7 of this Contract.

The Seller shall notify the Buyer of any such delay. The Scheduled RTS Date(s) or date of performance shall be extended for a period of time necessary to overcome the effect of such Excusable Delay. The Seller shall also be entitled to an equitable price adjustment.

(b) Termination for Extended Delay.

If any Excusable Delay extends for more than one hundred eighty (180) Days and the Parties have not agreed upon a revised basis for continuing the Work at the end of the Excusable Delay, including adjustment of the Contract Price, then either Party (except where Excusable Delay is caused by the Buyer, in which event only the Seller), upon thirty (30) Days written notice, may terminate this Contract with respect to the portion of Equipment to which title has not yet passed, whereupon the Buyer shall promptly pay the Seller termination charges as set forth in the Termination Schedule.

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Article 19 Patents

(a) Indemnity.

The Seller shall indemnify the Buyer against any damages, costs and expenses arising out of any suit, claim, or proceeding (a "Claim") alleging that the Work infringes a patent in effect in the U.S., Canada, an EU member state or the country of installation (provided there is a corresponding patent issued by the U.S. or an EU member state or the country of installation) if:

(i) the Buyer promptly notifies the Seller in writing of the Claim;

(ii) the Buyer makes no admission of liability and gives Seller sole authority, at the Seller's expense, to direct and control the defense and any settlement and compromise negotiations; and

(iii) the Buyer provides the Seller with full disclosure and assistance that may be reasonably required to defend any such Claim.

(b) Exclusions.

The Seller shall have no obligation or liability with respect to any Claim based upon:

(i) any Work that has been altered by any Party other than the Seller;

(ii) the combination or use of the Work with other products not supplied by the Seller when the combination is part of any alleged infringement;

(iii) failure of the Buyer to implement any update provided by the Seller that would have prevented the Claim;

(iv) unauthorized use of the Work, whether or not in breach of the provisions of this Contract; or

(v) Buyer's specifications.

a. Seller certifies that it has appropriate systems and controls in place to ensure that state funds will not be used in the performance of this Contract for the acquisition, operation or maintenance of computer software in violation of copyright laws.
b. The foregoing states the entire liability of the Seller to the Buyer with respect to infringement of patents, copyrights or trade secrets.

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(c) Remedies.

If the Work or any portion thereof becomes the subject of a Claim, the Seller may at its option, either

(i) settle or defend the claim or any suit or proceeding and pay all damages and costs awarded in it against the Buyer, or

(ii) procure for the Buyer the right to continue using the Equipment, or

(iii) modify the Equipment so that it becomes non-infringing, or

(iv) replace the Equipment with non-infringing Equipment; or

(v) remove the infringing Equipment or part thereof and refund the price of the infringing Equipment or part thereof.

If, in any suit arising from such a claim, the continued use of the Equipment for the purpose intended is forbidden by any court of competent jurisdiction, the Seller shall at its option take one or more of the actions under (ii), (iii); (iv) or (v) above.

(d) Sole Liability.

The above states the Seller's entire liability for indemnification for patent, trademark, copyright, and trade secret infringement for the Work.

(e) Exclusion.

Notwithstanding this, with respect to the Work or any portions thereof that are not manufactured or developed by the Seller, only the indemnity of the manufacturer or developer, if any, applies.

Article 20 General Indemnity

(a) General Indemnity.

Seller shall be liable to and indemnify the Buyer , its officers, employees, agents and subcontractors for bodily injury to third parties or damage to tangible third party property, and, at its expense, shall defend against and hold the Buyer harmless from any such claims raised by a third party arising in connection with this Contract, to the extent they are caused by the negligence of the Seller or its officers, employees, agents or subcontractors and to the extent the Seller is liable to the third party under applicable law.

(b) Concurrent Negligence.

If damage or injury is caused by the joint or concurrent negligence of the Parties, their officers, employees, agents, or subcontractors, the Parties shall bear the loss in

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proportion to their or their officers', employees', agents' or subcontractors' percentage of negligence.

(c) Notice.

The indemnities provided in this Article shall apply only if the Party seeking indemnity gives the Indemnifying Party prompt notice of any claim and provides the Indemnifying Party all necessary information and assistance so that the Indemnifying Party may, at its option, defend or settle the claim.

(d) "Third Parties" Defined.

"Third parties" under this Article do not include the Parties, the owner of the Site, their affiliates, agents, successors or assigns, any operation or maintenance contractor of the Parties or the owner of the Site, or any entity

(i) with an equity or security interest in any Party or the owner of the Site, or their assets or property,

(ii) that seeks to claim any rights, power or privileges of one of the Parties or the owner of the Site, or

(iii) that seeks to claim as a third party beneficiary of this Contract or one of the Parties or the owner of the Site.

No portion of the Equipment, the Facility, electricity, fuel or hydrocarbons is "third party property" for the purposes of this Article.

(e) Waiver.

The Buyer hereby waives rights of recovery against the Seller, whether as breach of Contract, warranty, indemnity, tort or other extra-contractual liability (including negligence or strict liability) or otherwise, for loss or damage to the Buyer or Owner's property. If Buyer is not the Owner of both the Facility and the Site, the Buyer will obtain from the Owner a similar waiver in respect of the Owner's interest in the Facility and/or the Site. If the Buyer fails to obtain such a waiver, or if the waiver is determined to be void or unenforceable, the Buyer, to the extent allowed by law, will indemnify the Seller for any liability that might arise out of damage to the Owner's property.

Article 21 Insurance

Insurance for Injuries to Workers.

During the term of this Contract, Seller shall maintain:

(i) Worker's compensation insurance for work-related injuries or disease of their own employees in such forms and amounts as may be required by Laws that are applicable to each Party and its employees and

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(ii) employer's liability insurance for work-related injuries or disease of their own employees with a limit of not less than U.S. $1,000,000 per occurrence or, if higher, the limit required by applicable Law.

(a) General Liability and Automobile Insurance

During the term of this Contract, the Seller shall maintain the following insurance coverage at its own expense to protect its own interests:

(i) Commercial General Liability or Public Liability insurance, in broad form, either per occurrence or if claims made, effective for at least three years after the expiration of this Contract, that includes coverage for contractual liability, bodily injury and third party property damage, with a combined single limit of not less than U.S. $5,000,000 per occurrence and U.S. $5,000,000 in the aggregate annually, for primary and excess policies combined; and

(ii) automobile liability insurance covering all owned, non-owned, and hired automobiles used by it in connection with the Work, if any, with a combined single limit of not less than U.S. $5,000,000 per occurrence, but in no event less than required by applicable Law, for primary and excess policies combined.

Each of the foregoing insurance policies shall not be cancelled or materially changed without thirty (30) Days' advance written notice to the other Party or, in the case of non-payment, ten (10) Days' advance written notice. Upon request, each Party shall deliver to the other Party certificates of insurance showing that the foregoing insurance is in full force and effect.

(b) All Risk Property Insurance.

The Buyer or Owner shall maintain or cause to be maintained through the end of the Warranty Period, as it might be extended, "All Risk" Property Insurance on existing property/Facility/plant/Site and including Equipment taken over during the term of the Contract. The policy shall cover "all risks" of physical loss or damage including coverage for boiler and machinery (electrical and mechanical breakdown), in an amount equal to the replacement value of the relevant property. Buyer or Owner and its insurers, for these property insurances, including any business interruption coverage, shall waive right of recovery or subrogation against the Seller, its Affiliates, Suppliers and Subcontractors. The policy shall not be canceled or materially changed without thirty (30) Days' advance written notice to the Seller, or, in the case of non-payment, ten (10) Days' advance written notice.

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(c) All Risk Builders Risk/Construction All Risk Insurance.

The Buyer shall provide and maintain in effect or cause to be maintained, to protect the interests of the Buyer and the Seller, either Construction All Risk (CAR) Insurance or All Risk Builder's Risk Insurance (ARBR). In the event of a loss or damage to the facility before completion, the Seller shall be responsible for the lesser of:

(i) the actual cost to repair or replace;

(ii) the actual CAR/ARBR policy deductible; or

(iii) $50,000 per occurrence to the extent the loss or damage is the fault of the Seller.

Provided, however, Seller's responsibility shall not exceed Seller's limitation of liability as outlined in Article 25. Except as provided in the preceding sentences, the Seller shall not be responsible for any insurance exclusions or deductibles or any uninsured or uninsurable loss or damage to the facility or other loss or damage to the facility under construction. The CAR/ARBR policy shall at a minimum meet the following requirements:

(iv) the Buyer shall provide the Seller a copy of the policy prior to the scheduled start of any on Site work;

(v) the policy shall be in effect from the planned start of any on-Site activity through the completion of the facility and the end of the Seller's obligations and be non-cancelable by the Buyer and by the insurer;

(vi) the policy shall include extended maintenance coverage through the end of the Warranty Period, as required;

(vii) the policy shall be provided by responsible insurers properly authorized to provide insurance in the jurisdiction(s) where the Work will be performed;

(viii) the policy shall include as named insureds the Buyer, the Seller, any additional parties to the Contract and, any Affiliate of any Party to the Contract that is performing work in connection with the Contract, and as additional insureds, all subcontractors (regardless of tier) and assignees of any party to the Contract; and the policy shall also include a waiver of subrogation in favor of all insureds;

(ix) the policy shall cover all risks of physical loss or damage to the Facility, including mechanical and electrical breakdown, in the course of construction, start-up, testing and commissioning, including materials, equipment and

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furnishings, up to the value of the Facility at full completion, except for customary exclusions;

(x) the Seller shall be permitted to examine the original insurance policies or summaries with respect to Insurance for Works which shall include sums insured, loss limits, deductible details of cover, exclusions or conditions, and a list of security (each insurance companies' participation in the insurance policy required for this Project only);

(xi) the Seller's approval of, or non-objection to Buyer's insurance certificates or policies shall neither relieve Buyer nor impose on Seller any obligation or liability under the Contract;

(xii) the minimum design/defects coverage shall equal LEG 2 or DE 4;

(xiii) the insurers shall be reasonably acceptable to the Seller, rated at least A-VII by the AM Best Insurance Report or rated at similar levels by other internationally recognized insurance rating experts; and

(xiv) the Seller shall have the right to submit claims directly to the insurers and receive payment directly from the insurers for any amounts that are Seller's responsibility under the Contract

(d) Failure to Maintain Insurance.

If at any time the Buyer fails to maintain or cause to be maintained in full force and effect, insurance complying with the requirements of this Article,

(i) the Buyer shall be responsible for any resulting losses or costs sustained by the Buyer or the Seller and shall hold the Seller harmless from actions brought against the Seller as the result of the absence of the Buyer's required insurance, and

(ii) the Seller shall not be required to but may elect to do any or all of the following:

a. immediately suspend all or a portion of the Work and be entitled to an equitable adjustment in the Contract Price, Scheduled Major Component RTS Date(s) and other terms of this Contract for the impact of the suspension,

b. pay the premiums or procure alternate insurance at Buyer's expense, or

c. pursue such other remedies as may be allowed by Law, equity, or this Contract.

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(e) Buyer's Risks.

In no event shall the Seller be responsible for losses or damages due to

(i) war, hostilities, terrorism, rebellion, revolution, civil disturbances, nuclear radiation or similar occurrence,

(ii) acts or omissions of the Buyer,

(iii) natural perils (such as flood or earthquake) or other perils to the extent that peril is excluded from the ARBR/CAR policy coverage

(iv) deductibles from any insurance policy under Buyer's responsibility including ARBR/CAR deductibles or

(v) loss in excess of the policy limits.

Article 22 Suspension

(a) Suspension by Buyer of Work at Site.

The Buyer shall have the right, at any time, to suspend Work at the Site upon written notice to the Seller. Any cost incurred by the Seller in accordance with any such suspension (including storage costs) shall be payable by the Buyer upon submission of the Seller's invoice(s). Performance of the Seller's obligations shall be extended for a period of time reasonably necessary to overcome the effects of such suspension.

(b) Suspension by Buyer of Manufacturing.

It is expressly agreed that the Buyer shall have no right to suspend manufacture of the Equipment.

(c) Suspension by Seller.

The Seller shall have the right to suspend all Work, including the delivery of any Equipment, upon the failure of the Buyer to make any payment when due. Without limiting the foregoing, the Seller shall have the right to suspend any shipment of the Equipment and may, but shall not be obligated to, ship such Equipment to storage in accordance with Article 8 if all payments due prior to the applicable Scheduled RTS Date have not been made. Any cost incurred by the Seller in accordance with any such suspension (including storage costs) shall be payable by the Buyer upon submission of the Seller's invoice(s). Performance of the Seller's obligations shall be extended for a period of time reasonably necessary to overcome the effects of such suspension, except that Seller's suspension shall not be deemed to extend the Warranty Period hereunder.

Article 23 Termination by Buyer for Convenience

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The Buyer shall have the right to terminate this Contract for convenience with respect to any Equipment until title to such Equipment has passed to the Buyer or such Equipment has been delivered to the Buyer in accordance with Article 7, whichever shall first occur. Such termination shall be effective upon the later of receipt by the Seller of written notice of termination or receipt by the Seller of termination charges in accordance with the Termination Schedule in Attachment 7.

If this Contract is terminated for convenience by the Buyer pursuant to this Article 23, the Seller shall retain title to terminated Equipment. Title to each item of Equipment comprising the non-terminated Units, if applicable, shall pass to the Buyer upon the later of (i) payment to the Seller of 100% of the Unit Price of each non-terminated Unit and of the termination charges calculated in accordance with this Attachment 7, and (ii) when title to such item of Equipment would otherwise have passed pursuant to Article 7.

Seller shall have the right to suspend performance upon receipt of Buyer's termination notice and await the payment of termination charges without liability to Seller.

Article 24 Termination for Cause

(a) *Grounds for Termination by Buyer.*

The Buyer shall have the right to terminate this Contract for cause in the event that the Seller:

(i) becomes insolvent, makes an assignment for the benefit of its creditors, has a receiver or trustee appointed for the benefit of its creditors, or files for protection from creditors under any bankruptcy or insolvency laws; or

(ii) substantially breaches and fails to comply with or perform its material obligations hereunder (but only with respect to a material obligation for which this Contract does not provide exclusive remedies), provided that:

(A) the Buyer shall first have provided the Seller with written notice of the nature of such breach and of the Buyer's intention to terminate this Contract as a result of such breach, and

(B) either:

(1) with respect to a breach that can be cured within thirty (30) days, the Seller shall have failed to cure such breach within thirty (30) Days after receipt of such notice (or such extended period as is considered reasonable by the Parties); or

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(2) with respect to a breach that cannot be cured within thirty (30) days, Seller, upon its receipt of such notice, either

(x) failed to commence to cure such breach and diligently thereafter to pursue such cure, or

(y) failed to provide to Buyer reasonable evidence that no such breach has occurred.

(b) Remedy in the Event of Termination of Buyer.

If the Buyer terminates this Contract as provided above, the Buyer shall pay the Seller for that portion of the Contract Price allocable to the Equipment title transferred or Services performed prior to the termination. If the payments received by the Seller as of the date of such termination are in excess of such portion of the Contract Price, the Seller shall return the excess of such payments to the Buyer. In addition, the Seller shall pay to Buyer an amount equal to the difference between that portion of the Contract Price allocable to the terminated Work and such actual and reasonable amount paid by the Buyer to complete the Work or to another vendor for equipment comparable to the Equipment terminated.

(c) Grounds for Termination by Seller.

The Seller shall have the right to terminate this Contract for cause in the event that the Buyer:

(i) suspends Work at the Site pursuant to the Article 22 of this Contract for a single period of twelve (12) months or for a cumulative total of one hundred and eighty (180) Days;

(ii) becomes insolvent, makes an assignment for the benefit of its creditors, has a receiver or trustee appointed for the benefit of its creditors, or files for protection from creditors under any bankruptcy or insolvency laws; or

(iii) substantially breaches and fails to comply with or perform its material obligations hereunder, including failure to comply with Article 30 of this Contract, or fails to make any payment when due or to fulfill any payment conditions, including providing any payment security, as set forth in this Contract, provided:

(A) that the Seller shall first have provided the Buyer with written notice of the nature of such failure and of the Seller's intention to terminate this Contract as a result of such failure, and

(B) that the Buyer shall have failed within thirty (30) Days after receipt of such notice to correct such failure.

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(d) Remedy in the Event of Termination of Seller.

If the Seller terminates this Contract as provided above, the Buyer shall pay to the Seller the charges set forth in Attachment 7.

Article 25 Limitation of Liability

(A) LIMITATION.

THE TOTAL LIABILITY OF THE SELLER FOR ALL CLAIMS ARISING OUT OF OR RELATING TO THE PERFORMANCE OR BREACH OF THIS CONTRACT OR USE OF ANY EQUIPMENT SHALL NOT EXCEED THE PORTION OF THE CONTRACT PRICE ALLOCABLE TO THE EQUIPMENT GIVING RISE TO THE CLAIM. THE SELLER'S LIABILITY SHALL TERMINATE TWELVE (12) MONTHS FOLLOWING THE END OF THE WARRANTY PERIOD FOR THE EQUIPMENT GIVING RISE TO THE CLAIM. THE BUYER MAY ENFORCE A CLAIM THAT ACCRUED BEFORE THAT DATE BY COMMENCING AN ACTION, UNDER ARTICLE 32, BEFORE THE EXPIRATION OF THE APPLICABLE STATUTE OF LIMITATIONS OR REPOSE AS APPLICABLE, BUT NOT LATER THAN TWELVE (12) MONTHS AFTER THE EXPIRY OF THE WARRANTY PERIOD.

(B) CONSEQUENTIAL DAMAGES.

THE SELLER SHALL NOT BE LIABLE FOR LOSS OF PROFIT OR REVENUES, LOSS OF PRODUCT, LOSS OF USE OF THE WORK OR ANY ASSOCIATED EQUIPMENT, INTERRUPTION OF BUSINESS, COST OF CAPITAL, COST OF REPLACEMENT EQUIPMENT OR POWER, DOWNTIME COSTS, INCREASED OPERATING COSTS, CLAIMS OF THE BUYER'S CUSTOMERS FOR SUCH DAMAGES, OR FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, INDIRECT, PUNITIVE OR EXEMPLARY DAMAGES.

(C) SALE, TRANSFER, ASSIGNMENT TO THIRD PARTY.

IF THE BUYER IS SUPPLYING, TRANSFERRING OR ASSIGNING THE WORK TO A THIRD PARTY, THE BUYER SHALL REQUIRE THE THIRD PARTY TO AGREE TO BE BOUND BY THIS ARTICLE.

(D) GRATUITOUS ADVICE.

THE SELLER SHALL NOT BE LIABLE FOR ANY ADVICE OR ASSISTANCE THAT IS NOT REQUIRED UNDER THIS CONTRACT.

(E) BUYER'S PROPERTY.

EXCEPT TO THE EXTENT SELLER HAS RESPONSIBILITY UNDER ARTICLE 13 (WARRANTY), BUYER WAIVES RIGHTS OF RECOVERY AGAINST SELLER, FOR LOSS OR DAMAGE TO PROPERTY OF BUYER.

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(F) "SELLER" DEFINED.

FOR THE PURPOSES OF THIS ARTICLE, THE TERM "SELLER" SHALL MEAN THE SELLER, ITS AFFILIATES, SUBCONTRACTORS AND SUPPLIERS OF ANY TIER, AND THEIR RESPECTIVE AGENTS AND EMPLOYEES, INDIVIDUALLY OR COLLECTIVELY.

(G) LIMITATIONS TO PREVAIL.

THE LIMITATIONS AND EXCLUSIONS IN THIS ARTICLE SHALL APPLY WHETHER A CLAIM IS BASED IN CONTRACT (INCLUDING WARRANTY OR INDEMNITY), TORT (INCLUDING NEGLIGENCE OR STRICT LIABILITY), STATUTE, EQUITY OR ANY OTHER EXTRA-CONTRACTUAL THEORY.

(H) LIMITATION OF REMEDIES; OVERRIDING EFFECT.

THE BUYER'S AND THE SELLER'S RIGHTS, OBLIGATIONS AND REMEDIES ARISING OUT OF OR RELATING TO THE WORK ARE LIMITED TO THOSE RIGHTS, OBLIGATIONS AND REMEDIES DESCRIBED IN THIS CONTRACT. THIS ARTICLE SHALL PREVAIL OVER ANY CONFLICTING OR INCONSISTENT TERMS IN THIS CONTRACT, UNLESS THOSE TERMS FURTHER RESTRICT THE SELLER'S LIABILITY.

Article 26 Proprietary Information

(a) Information Subject to Restriction.

In connection with this Contract, the Seller and the Buyer (both as to information disclosed, a "Disclosing Party") may each provide the other (both as to information received, a "Receiving Party") with "Confidential Information." "Confidential Information" means

(i) all draft documents related to pricing and terms of this Contract,

(ii) all information that is designated in writing as "confidential" or "proprietary" by the Disclosing Party at the time of written disclosure, and (iv) all information that is orally designated as "confidential" or "proprietary" by the Disclosing Party at the time of oral disclosure and is confirmed to be "confidential" or "proprietary" in writing within ten (10) Days after oral disclosure.

(iii) CONFIDENTIALITY OF DATA: All financial, statistical, personal, technical and other data and information relating to the Buyer operation which are designated confidential by the Buyer and made available to the Seller in order to carry out this Contract, or which become available to the Seller in carrying out this Contract, shall be protected by the Seller from unauthorized use and disclosure through the observance of the same or more effective

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procedural requirements as are applicable to the Buyer. The Seller shall not be required under the provisions of this paragraph to keep confidential any data or information which is or becomes publicly available, is already rightfully in the Seller's possession, is independently developed by the Seller outside the scope of this Contract, or is rightfully obtained from third parties.

(iv) **NEWS RELEASES:** Unless otherwise exempted, news releases pertaining to this Contract shall not be made without prior written approval of the Director or designee of the Department of Water Resources.

The obligations of this Article shall not apply as to any portion of the Confidential Information that:

(v) is or becomes generally available to the public other than from disclosure by the Receiving Party, its representatives or its Affiliates;

(vi) is or becomes available to the Receiving Party or its representatives or Affiliates on a non-confidential basis from a source other than the Disclosing Party when the source is not, to the best of the Receiving Party's knowledge, subject to a confidentiality obligation to the Disclosing Party;

(vii) is independently developed by the Receiving Party, its representatives or Affiliates, without reference to Confidential Information;

(viii) is required to be disclosed by law, a valid legal process or a government agency; or

(ix) is approved for disclosure in writing by an authorized representative of the Disclosing Party.

(b) Obligations of Receiving Party.

The Receiving Party agrees:

(i) to use the Confidential Information only in connection with this Contract and permitted use(s) and maintenance of the Work,

(ii) to take reasonable measures to prevent disclosure of the Confidential Information, except to its employees, agents or financing parties who have a need to know for the Receiving Party to perform its obligations under this Contract or to use and maintain the Work, and

(iii) not to disclose the Confidential Information to a competitor of the Disclosing Party.

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The Receiving Party shall obtain a written commitment from any recipient of Confidential Information to comply with the terms of this Article. Confidential Information shall not be reproduced without the Disclosing Party's written consent, and the Receiving Party shall return all copies of Confidential Information to the Disclosing Party upon request except to the extent that this Contract entitles the Receiving Party to retain the Confidential Information. The Seller may also retain one copy of the Buyer's Confidential Information until all of Seller's potential liability under this Contract terminates.

(c) Disclosure Pursuant to Legal Process.

If either Party or any of its Affiliates or representatives is required by law, legal process or a government agency to disclose any Confidential Information, that Party agrees to provide the Disclosing Party with prompt written notice to permit the Disclosing Party to seek an appropriate protective order or agency decision or to waive compliance by the Receiving Party with the provisions of this Article. If efforts to secure confidential treatment are unsuccessful, the Disclosing Party may lawfully revise the Confidential Information to make it nonproprietary or to minimize the loss of its proprietary value.

(d) Intellectual Property.

Nothing in this Article grants the Receiving Party any license under any invention, patent, trademark or copyright now or later owned or controlled by the Disclosing Party.

(e) Disclosure by Buyer.

The Buyer shall not disclose Confidential Information to the Seller unless it is required to do so to enable the Seller to perform Work under this Contract. If the Buyer does disclose Confidential Information, the Buyer warrants that it has the right to disclose the information, and the Buyer shall indemnify and hold the Seller harmless against any claims or damages resulting from the Buyer's improper disclosure.

(f) Term.

As to any individual item of Confidential Information, unless otherwise agreed by the Parties, the restrictions of this Article shall expire ten (10) years after the date of disclosure of the Confidential Information.

(g) Priority.

This Article does not supersede any separate confidentiality or nondisclosure agreement signed by the Parties.

Article 27 Software License

(a) Grant of License.

Only to the extent necessary to operate and use the Equipment supplied by the Seller, for the purposes for which such Equipment is supplied, the Seller grants to the Buyer a non-exclusive right to use Software, firmware, programs, Confidential Information and

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any other technology necessary to operate and use the Equipment delivered to the Buyer by Seller. This right shall be non-assignable and non-transferable by the Buyer (except for sub-licenses to any subsequent purchaser of the Equipment) and shall apply and be irrevocable with respect to the Equipment purchased under this Contract and paid for in full by the Buyer.

(b) Limitations.

Unless otherwise agreed to by the Seller, the Buyer has only the right to install and use a single copy of the Software for each Unit of associated Equipment. The Buyer may make one copy of the Software for backup purposes only, in machine-readable form. The Buyer has no right to

(i) disassemble, decompile, reverse engineer, or otherwise attempt to reconstruct or discover the source code of the Software or third-party Software;

(ii) remove any product identification, copyright, trademark, or other notice from the Software;

(iii) modify, adapt or translate the Software.

(c) Third-Party Software.

Certain Software the Seller provides to the Buyer may contain third-party Software which may be provided with a separate end-user agreement. Use of such third-party Software and its source code shall be governed by this Contract and such end-user license agreements. To the extent there is any conflict between the terms of this Contract and the applicable end-user license agreement, the end-user license agreement shall prevail. If requested by the Seller at any time, the Buyer shall execute a copy of the applicable end-user license agreement.

Article 28 Personal Data Protection

"Personal Data" is any information relating to an identified or identifiable natural person ("Data Subject"). The Buyer and the Seller each agree that any Personal Data obtained from the other Party will be deemed "Confidential Information" of the other Party as defined in this Contract whether or not the Personal Data is publicly available. The Buyer and the Seller shall provide security for the Personal Data they receive from each other and limit its disclosure and use. The Buyer and the Seller each represent that in providing Personal Data to one another they will comply with all applicable Laws and regulations, including but not limited to providing notices to or obtaining consents from the Data Subjects when required.

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Article 29 Export Control

(a) Export Controls.

All sales hereunder of U.S.-origin goods and related technical data (including Software) shall at all times be subject to the export control laws and regulations of the U.S. Government and any amendments thereof. The Buyer hereby agrees that it shall not, except as said laws and regulations may expressly permit, make any disposition by way of transshipment, re-export, diversion or otherwise, of U.S. origin goods and technical data (including computer Software), or the direct product thereof, supplied by the Seller hereunder. The obligations of the Parties to comply with all applicable export control laws and regulations shall survive any termination, or discharge of any other Contract obligations.

(b) Buyer to Keep Informed.

The Buyer undertakes to keep itself fully informed of, and to comply with, the export control laws and regulations of the respective governmental authorities and any amendments thereof.

(c) Weapons

The Buyer hereby certifies that the Work, technical data, Software or other information or assistance furnished by the Seller or its Affiliates under this Contract will not be used in the design, development, production, stockpiling or use of chemical, biological, or nuclear weapons either by the Buyer or by any entity acting on the Buyer's behalf.

Article 30 Assignment and Change in Control

(a) Eligible Assignees.

An Eligible Assignee is either:

(i) an Affiliate of the Buyer, or

(ii) an engineering or construction contractor under contract with the Buyer for the installation of the Equipment,

that in each case both:

(iii) offers the Seller satisfactory evidence of its ability (both financial and otherwise) to fulfill the obligations of Buyer hereunder and

(iv) assignment to such Eligible Assignee by the Buyer would not cause the Seller to be penalized or become subject to additional requirements under any Law as a result of entering into contract with such person.

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(b) Buyer's Right to Assign to Eligible Assignees.

The Buyer may once assign its rights and delegate its obligations under this Contract to an Eligible Assignee, provided:

(i) that the Buyer shall notify the Seller of its intent to assign no less than ten (10) Days prior to the execution of any such assignment;

(ii) that Buyer shall either

a. guarantee the obligations of the assignee by executing a guaranty in a form acceptable to Seller or

b. retain its obligations under any payment, indemnity and bonus provisions of this Contract;

(iii) that the first Eligible Assignee may not further assign or delegate any rights or obligations hereunder except to the original Buyer; and

(iv) that the Buyer shall in no event assign to its engineering or construction contractor the right to receive liquidated damages under this Contract.

(c) Collateral Assignment.

The Buyer may also assign a collateral interest in this Contract to a lender who is not an Eligible Assignee as collateral security for a loan for the acquisition of the Equipment, provided however, that Buyer and Lender agree that any future assignment to the Lender shall occur only as the result of the exercise by Lender of its remedies under the loan agreements relative to a bankruptcy or liquidation of Buyer. Under no circumstances, however, shall a collateral assignment require Seller to deliver Equipment to Buyer or an assignee if Seller has not been fully paid for such Equipment.

(d) All Other Assignments and Transfers by Buyer.

All other assignments or transfers by Buyer of any or all of its duties or rights under this Contract (by operation of law or otherwise) are subject to Seller's prior written consent. Further, Buyer agrees that, until Buyer receives title to the Equipment as set forth herein, Buyer shall not, directly or indirectly sell, offer to sell or otherwise broker the Equipment.

(e) Seller's Right to Assign.

The Seller may assign its rights and delegate its obligations under this Contract to any Affiliate. Buyer consents to Seller assigning its accounts receivables under this Contract to any party. Seller may assign its rights and obligations to other parties with the prior written consent of Buyer. In the event of such assignment, the Seller's assignee will be responsible for the assigned Work

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and will invoice directly to and collect payments directly from the Buyer. This Contract is not assignable by the Seller, either in whole or in part, without the consent of the Buyer in the form of a formal written amendment.

(f) Conditions.

Any assignment shall be subject to all limitations and exclusions of liability contained in this Contract. The Buyer may not assign this Contract except in accordance with this Article. Any purported assignment not in accordance with this Article shall be void and without effect.

Article 31 Contract Documents

The following documents shall comprise and shall together be referred to as the "Contract":

(a) Main Contract body (Recitals, Article 1 through Article 36)
(b) Attachment 1,
(c) Attachment 7,
(d) Attachment 4,
(e) Attachment 6,
(f) Attachment 8,
(g) Attachment 9,
(h) Attachment 2,
(i) Attachment 5, and
(j) Attachment 3.

In the event of any conflict between the terms of this Contract, the provisions of the document first listed above shall prevail.

Article 32 Dispute Resolution

(a) The parties shall deal in good faith and attempt to resolve potential disputes informally. If the dispute persists, Seller shall submit to the Department Director or designee a written demand for a final decision regarding the disposition of any dispute between the parties arising under, related to or involving this Contract, unless the Buyer, on its own initiative, has already rendered such a final decision. Seller's written demand shall be fully supported by factual information, and if such demand involves a cost adjustment to the Contract, Seller shall include with the demand a written statement signed by an authorized person indicating that the demand is made in good faith, that the supporting data are accurate and complete and that the amount requested accurately reflects the Contract adjustment for which Seller believes the Buyer is liable. If the Seller is not satisfied with the decision of the Department Director or

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designee, the Seller may appeal the decision to the Department of General Services, Deputy Director, Procurement Division. In the event that this Contract is for information technology goods and/or services, the decision may be appealed to an Executive Committee of Buyer and Seller personnel.

(b) Pending the final resolution of any dispute arising under, related to or involving this Contract, Parties agree to diligently proceed with the performance of this Contract, including the delivery of goods or providing of services in accordance with the Buyer's instructions. Seller's failure to diligently proceed in accordance with the Buyer's instructions shall be considered a material breach of this Contract.

(c) Any final decision of the Buyer shall be expressly identified as such, shall be in writing, and shall be signed by the Department Director or designee or Deputy Director, Procurement Division if an appeal was made. If the Buyer fails to render a final decision within 90 days after receipt of Seller's demand, it shall be deemed a final decision adverse to Seller's contentions. The Buyer's final decision shall be conclusive and binding regarding the dispute unless Seller commences an action in a court of competent jurisdiction to contest such decision within 90 days following the date of the final decision or one (1) year following the accrual of the cause of action, whichever is later.

(d) *Venue.*

Any legal action or proceeding with respect to this Contract shall be brought in the United States District Court for the Eastern district of California, or, if such court lacks jurisdiction, in the Superior Court of the State of California in Sacramento County. Each of the Parties hereby accepts and consents to, generally and unconditionally, the jurisdiction of the aforesaid courts and applicable appellate courts for any appeal thereof. Each Party irrevocably consents to the service of process out of any of the aforementioned courts in any such action or proceeding by the mailing of copies thereof by registered or certified mail, postage prepaid, to such Party at the address first set forth in this Contract.

Article 33 Governing Law

This Contract, including but not limited to, the validity, performance and all matters relating to the interpretation and effect of this Contract and all further documents executed pursuant to it, shall be construed and interpreted in accordance with the laws of the State of California.

Article 34 Effective Date

This Contract shall become effective when it is signed by both Parties (the “Effective Date”), however, the Seller shall not be required to commence any Work associated

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with, connected to, or arising from, directly or indirectly, the Equipment, Balance of Plant, or Services, until the Seller receives the Buyer's Purchase Order (the "Full Notice to Proceed" or "FNTP.")

Article 35 Entire Agreement

This Contract together with the Buyer's Purchase Order represent the entire agreement between the Parties and supersedes in its entirety all prior agreements concerning the subject matter hereof, and no modification, amendment, revision, waiver, or other change shall be binding on either Party unless consented to in writing by the Party's authorized representative. Any oral or written representation, warranty, course of dealing, or trade usage not contained or referenced herein shall not be binding on either Party. Each Party agrees that it has not relied on, or been induced by, any representations of the other Party not contained in this Contract.

Article 36 Miscellaneous Provisions

(a) Third-Party Beneficiaries.

Except as provided in the Article 25 "Limitation of Liability", this Contract and its provisions are for the benefit of the Parties hereto and not for any other third party.

(b) Survival.

All provisions or obligations contained in this Contract which by their nature or effect are required or intended to be observed, kept or performed after termination or expiration of this Contract shall survive and remain binding upon and for the benefit of the Parties, including, without limitation, the Articles with the following titles, which shall survive expiration or termination of this Contract: Taxes, Warranty, Patents, General Indemnity, Limitation of Liability, Proprietary Information, Dispute Resolution, Governing Law, Software License, Personal Data Protection, Export Control, Contract Documents, Entire Agreement and Miscellaneous Provisions.

(c) Non-Waiver.

Waiver by either Party of any right under this Contract shall not be deemed a waiver by such Party of any other right hereunder.

(d) Invalidity.

The invalidity in whole or in part of any part of this Contract shall not affect the validity of the remainder of this Contract.

(e) No Nuclear Use.

The Equipment and Services sold hereunder are not intended for application (and shall not be used) in connection with any nuclear installation or activity and Buyer warrants that it shall not use the Equipment and Services for such purposes, or permit others to use the Equipment or Services for any such purposes. If, in breach of the foregoing, any

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such use occurs, Seller shall have no liability for any nuclear or other damage, injury or contamination, and Buyer shall indemnify Seller, its Affiliates, Subcontractors and Suppliers of every type and tier against any such liability, whether arising as a result of breach of contract, warranty, indemnity, tort (including negligence), strict liability or otherwise.

(f) Counterparts and DocuSign.

This Contract may be signed in DocuSign and/or in any number of counterparts, each of which shall constitute one and the same instrument.

(g) Remote Diagnostic Services

Buyer will provide on-site support, if requested by Seller, as required for installation and operation of Seller's remote diagnostic system and services during the installation, commissioning, and warranty period. The Buyer will permit Seller to operate a data retrieval system on the Buyer's Equipment to collect, transmit, diagnose, and store plant operating data, and will permit Seller to remotely access and conduct troubleshooting and adjustment of Unit control systems. The purpose of these remote services is to enable additional support to the Buyer's Equipment during commercial operation. Upon completion of the Equipment Warranty Period, remote diagnostic services may be terminated or continued under other contractual agreements as desired by Buyer and Seller.

(h) EXAMINATION AND AUDIT: In accordance with Cal. Gov. Code § 8546.7, notwithstanding any other provision of law, Seller agrees that the California State Auditor ("Auditor") shall have the right to examine and audit any records and supporting documentation pertaining to the performance of this Contract, at the request of the public entity or as part of any audit of the public entity, for a period of three years after final payment under the Contract. Seller further agrees to maintain such records and supporting documentation for possible audit for a minimum of three (3) years after final payment, unless a longer period of records and supporting documentation retention is stipulated. Seller agrees to allow the Auditor(s) access to such records during normal business hours and to allow interviews of any Seller employees, in the presence of Contractor Management or equivalent GE employee, or others who might reasonably have information related to such records.

(i) COVENANT AGAINST GRATUITIES:

General Electric Co. ("GE") is a diversified services, technology, and manufacturing company with more than 200,000 employees operating in more than 100 countries worldwide. GE's corporate headquarters are in Boston, Massachusetts. GE is comprised of various business units that enter into prime and lower-tier government contracts for defense, energy, healthcare and other highly regulated areas. Gas Power, doing business as General Electric Company, is a business unit of GE that provides goods and services in the energy sector and operates in the highly regulated industry of power generation.

Seller warrants, to the best of its knowledge and belief, that no gratuities (in the

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form of entertainment, gifts, or otherwise) were offered or given by the Seller, or any agent or representative of the Seller, to any officer or employee of the Buyer with a view toward securing the Contract or securing favorable treatment with respect to any determinations concerning the performance of the Contract. For breach or violation of this warranty, the Buyer shall have the right to terminate the Contract, either in whole or in part, and any loss or damage sustained by the Buyer in procuring on the open market any items which Seller agreed to supply shall be borne and paid for by the Seller. The rights and remedies of the Buyer provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or in equity.

(j) *NONDISCRIMINATION CLAUSE:*

During the performance of this Contract, Seller and its subcontractors shall not unlawfully discriminate, harass or allow harassment, against any employee or applicant for employment because of sex, sexual orientation, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, and denial of family care leave. Seller and subcontractors shall insure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment. Seller and subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12990 et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code Section 12990 (a f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations are incorporated into this Contract by reference and made a part hereof as if set forth in full. Seller and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

a. The Seller shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform Services under the Contract.

(k) ***NATIONAL LABOR RELATIONS BOARD CERTIFICATION:***

General Electric Co. ("GE") is a diversified services, technology, and manufacturing company with more than 200,000 employees operating in more than 100 countries worldwide. GE's corporate headquarters are in Boston, Massachusetts. GE is comprised of various business units that enter into prime and lower-tier government contracts for defense, energy, healthcare and other highly regulated areas. Gas Power, doing business as General Electric Company, is a business unit of GE that provides goods and services in the energy sector and operates in the highly regulated industry of power generation.

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In the ordinary course of business, GE and its divisions are routinely audited or inspected for compliance with regulatory and contractual requirements. We believe none of these actions are material to this proposed transaction.
To the best of its knowledge and belief, Seller swears, to the best of its knowledge and belief under penalty of perjury that no more than one final, unappealable finding of contempt of court by a federal court has been issued against the Seller within the immediately preceding two-year period because of Seller's failure to comply with an order of the National Labor Relations Board. This provision is required by, and shall be construed in accordance with, PCC Section 10296.

(l) ***DRUG FREE WORKPLACE CERTIFICATION:***

General Electric Co. ("GE") is a diversified services, technology, and manufacturing company with more than 200,000 employees operating in more than 100 countries worldwide. GE's corporate headquarters are in Boston, Massachusetts. GE is comprised of various business units that enter into prime and lower-tier government contracts for defense, energy, healthcare and other highly regulated areas. Gas Power, doing business as General Electric Company, is a business unit of GE that provides goods and services in the energy sector and operates in the highly regulated industry of power generation.
Seller certifies under penalty of perjury under the laws of the Buyer of California that the Seller will comply with the requirements in sections a. and c. of the Drug Free Workplace Act of 1990 (Government Code Section 8350 et seq.) and will provide a drug free workplace by taking the following actions:

(a) Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations, as required by Government Code Section 8355(a).

(b) Not Used:

(c) Provide, as required by Government Code Section 8355(c), that every employee who works on the proposed or resulting Contract:

(i.) will receive a copy of the company's drug free policy statement; and,
(ii.) will agree to abide by the terms of the company's statement as a condition of employment on the Contract.

(m) FOUR-DIGIT DATE COMPLIANCE: Seller warrants that it will provide only Four-Digit Date Compliant (as defined below) Deliverables and/or services to the Buyer. "Four Digit Date Compliant" Deliverables and services can accurately process, calculate, compare, and sequence date data, including without limitation date data arising out of or relating to leap years and changes in centuries. This warranty and representation is subject to the warranty terms and conditions of this

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Contract and does not limit the generality of warranty obligations set forth elsewhere herein.

(n) Human Rights: Seller shall require subcontractors and suppliers (i) To respect human rights of Seller's employees and others in Seller's business operations; (ii) not employ workers younger than sixteen (16) years of age or below the applicable minimum age, whichever is higher; (iii) not use forced, prison or indentured labor, or workers subject to any form of physical, sexual or psychological compulsion, exploitation or coercion, or to engage in or abet trafficking in persons.

(o) **CHILD SUPPORT COMPLIANCE ACT:** For any Contract in excess of $100,000, the Seller acknowledges in accordance with PCC Section 7110, that:

(A) The Seller recognizes the importance of child and family support obligations and shall fully comply with all applicable state and federal laws relating to child and family support enforcement, including, but not limited to, disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with Section 5200) of Part 5 of Division 9 of the Family Code; and

(B) The Seller, the best of its knowledge, is fully complying with the earnings assignment orders of all employees and is providing the names of all new employees to the New Hire Registry maintained by the California Employment Development Department.

(p) AMERICANS WITH DISABILITIES ACT: Seller assures the Buyer that Seller complies with the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq).

(q) **USE TAX COLLECTION:** General Electric Co. ("GE") is a diversified services, technology, and manufacturing company with more than 200,000 employees operating in more than 100 countries worldwide. GE's corporate headquarters are in Boston, Massachusetts. GE is comprised of various business units that enter into prime and lower-tier government contracts for defense, energy, healthcare and other highly regulated areas. Gas Power, doing business as General Electric Company, is a business unit of GE that provides goods and services in the energy sector and operates in the highly regulated industry of power generation.

In accordance with Public Contract Code (PCC) Section 10295.1, Seller certifies, to the best of its knowledge and belief, that it complies with the requirements of Section 7101 of the Revenue and Taxation Code. Seller further certifies that it will immediately advise Buyer of any change in its

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retailer's seller's permit or certification of registration or applicable affiliate's seller's permit or certificate of registration as described in subdivision (a) of PCC Section 10295.1.

(r) **EXPATRIATE CORPORATIONS:** General Electric Co. ("GE") is a diversified services, technology, and manufacturing company with more than 200,000 employees operating in more than 100 countries worldwide. GE's corporate headquarters are in Boston, Massachusetts. GE is comprised of various business units that enter into prime and lower-tier government contracts for defense, energy, healthcare and other highly regulated areas. Gas Power, doing business as General Electric Company, is a business unit of GE that provides goods and services in the energy sector and operates in the highly regulated industry of power generation.
Seller hereby declares, to the best of its knowledge and belief, that it is not an expatriate corporation or subsidiary of an expatriate corporation within the meaning of PCC Section 10286 and 10286.1, and is eligible to contract with the Buyer.

(s) LOSS LEADER: It is unlawful for any person engaged in business within this state to sell or use any article or product as a "loss leader" as defined in Section 17030 of the Business and Professions Code. (PCC 10302(b).).

(t) GENDER IDENTITY: General Electric Co. ("GE") is a diversified services, technology, and manufacturing company with more than 200,000 employees operating in more than 100 countries worldwide. GE's corporate headquarters are in Boston, Massachusetts. GE is comprised of various business units that enter into prime and lower-tier government contracts for defense, energy, healthcare and other highly regulated areas. Gas Power, doing business as General Electric Company, is a business unit of GE that provides goods and services in the energy sector and operates in the highly regulated industry of power generation.
For contracts of $100,000 or more, Seller certifies, to the best of its knowledge and belief, that Seller is in compliance with Public Contract Code section 10295.35.

(u) The following laws apply to persons or entities doing business with the State of California.

1. CONFLICT OF INTEREST: Seller shall be aware of the following provisions regarding current or former state employees. In the event Seller has any questions on the status of any person rendering services or involved with the Agreement, Seller must contact the awarding

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agency immediately for clarification.

2. Current State Employees (Pub. Contract Code §10410):

(i) No officer or employee shall engage in any employment, activity or enterprise from which the officer or employee receives compensation or has a financial interest and which is sponsored or funded by any state agency, unless the employment, activity or enterprise is required as a condition of regular state employment.
(ii) No officer or employee shall contract on his or her own behalf as an independent contractor with any state agency to provide goods or services.

3. Former State Employees (Pub. Contract Code §10411):

(i) For the two-year period from the date he or she left state employment, no former state officer or employee may enter into a contract in which he or she engaged in any of the negotiations, transactions, planning, arrangements or any part of the decision-making process relevant to the contract while employed in any capacity by any state agency.
(ii) For the twelve-month period from the date he or she left state employment, no former state officer or employee may enter into a contract with any state agency if he or she was employed by that state agency in a policy-making position in the same general subject area as the proposed contract within the 12-month period prior to his or her leaving state service.

If Seller violates any provisions of above paragraphs in Article 36, Section (u) 3 (i) and (ii), such action by Seller shall render this Agreement void. (Pub. Contract Code §10420)

Members of boards and commissions are exempt from this section if they do not receive payment other than payment of each meeting of the board or commission, payment for preparatory time and payment for per diem. (Pub. Contract Code §10430 (e.))

(v) SELLER NAME CHANGE: A Change Order is required to change the Seller's name as listed on this Contract. Upon receipt of legal documentation of the name change the Buyer will process the Change Order. Payment of invoices presented with a new name cannot be paid prior to approval of said Change Order.

(w) CORPORATE QUALIFICATIONS TO DO BUSINESS IN CALIFORNIA:
i. When agreements are to be performed in the state by corporations, the contracting agencies will be verifying that the Seller is currently qualified to do

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business in California in order to ensure that all obligations due to the state are fulfilled.

ii. "Doing business" is defined in Revenue and Taxation Code (R&TC) Section 23101 as actively engaging in any transaction for the purpose of financial or pecuniary gain or profit. Although there are some statutory exceptions to taxation, rarely will a corporate contractor performing within the state not be subject to the franchise tax.

iii. Both domestic and foreign corporations (those incorporated outside of California) must be in good standing in order to be qualified to do business in California. Agencies will determine whether a corporation is in good standing by calling the Office of the Secretary of State.

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EXHIBIT D

INSURANCE

1. At all times during the Term of this Agreement, each Party shall maintain, at its own expense, with responsible insurers who maintain a financial strength rating of "A-" or higher and a financial size category of VIII or higher with AM Best, or through an applicable public agency insurance risk pool or other self-insurance, the insurance described below with coverages no less than the minimums indicated. If either Party fails to comply with the provisions of this Exhibit D, it shall hold harmless and indemnify the other Party from any direct or indirect losses and liability, including attorney's fees and costs of litigation, resulting from the injury or death of any person or damage to any property, to the extent the indemnified Party would have been protected had the indemnifying Party complied with the requirements of this Exhibit D.

   (a) General Liability. Each Party shall maintain general liability on an occurrence form with limits not less than one million dollars ($1,000,000) per occurrence for bodily injury and property damage liability and an annual policy aggregate of three million dollars ($3,000,000). The policy shall include coverage for liabilities arising out of premises, operations, independent contractors, products, completed operations, personal & advertising injury, and liability assumed under an insured contract. This insurance shall apply separately to each insured against whom claim is made or suit is brought subject to each Party's limit of liability. The policy shall be endorsed to include the other Party, its officers, agents, and employees as additional insureds, but only with respect to work performed under the Agreement and the indemnity obligations hereunder.

   (b) Automobile Liability. Each Party shall maintain motor vehicle liability with limits not less than one million dollars ($1,000,000) combined single limit per accident. Such insurance shall cover liability arising out of a motor vehicle including owned, hired and non-owned motor vehicles. The policy shall be endorsed to include the other Party, its officers, agents, and employees as additional insureds, but only with respect to work performed under the Agreement and the indemnity obligations hereunder.

   (c) Worker's Compensation and Employer's Liability. Each Party shall maintain statutory worker's compensation and employer's liability coverage for all its employees, or employees of its Affiliate, who will be engaged in the performance of the Agreement. Employer's liability insurance shall not be less than one million dollars ($1,000,000) for injury or death occurring as a result of each accident.

   (d) Excess/Umbrella Liability Insurance. Excess/umbrella liability insurance covering claims in excess of the underlying insurance described in Sections 1(a) through 1(c) with a combined single limit and annual aggregate limit of twenty-five million dollars ($25,000,000). The policy shall be endorsed to include the other Party, its officers, agents, and employees as additional insureds, but only with respect to work performed under the Agreement and the indemnity obligations hereunder.

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(e) Pollution Liability. Each Party shall maintain pollution liability coverage with limits not less than five million dollars ($5,000,000) per incident and ten million dollars ($10,000,000) in the annual aggregate covering liability for bodily injury, property damage, and environmental damage resulting from pollution and related cleanup costs incurred, all arising under this Agreement. Coverage shall be provided for both work performed on site and during transportation as well as proper disposal of hazardous materials. Proof of Pollution Liability coverage during transportation can also be provided by endorsement to the Auto Liability policy.

(f) Professional Liability. As applicable, CDWR shall require any Contractor performing construction related services to maintain errors and omissions/ professional liability coverage with limits not less than one million dollars ($5,000,000) each occurrence and in the annual aggregate.

(g) Property Insurance. Each Party shall obtain and maintain in full force and effect during the term of this Agreement, all-risk property insurance in an amount equal to the full replacement cost value with respect to any equipment, parts, materials or other property owned by each Party with sub-limits as appropriate for facilities similar to this Site. Each Party shall be liable for all deductible amounts under any such all-risk property coverage. The policy shall waive all rights of subrogation against the other Party.

(h) Builder's Risk Insurance. As applicable, CDWR shall provide, or have its Contractor provide, builder's risk property insurance during the period of construction, including testing and commissioning, in an amount equal to the full replacement cost value with respect to any equipment, parts, materials or other property owned and with sublimits as appropriate for facilities similar to this Site. CDWR shall be responsible for any deductibles under such builder's risk policy. The policy shall name Owner as an additional insured, and insurers shall agree to provide a waiver of subrogation in favor of Owner under the policy.

2. If any policy is written on a claims-made basis, provide the following:

(a) The Retroactive Date must be shown and must be before the date of the Agreement or the beginning of work performed under the Agreement.

(b) Insurance must be maintained and evidence of insurance must be provided for at least three (3) years after completion of the Agreement.

(c) If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the Execution date, the Seller must purchase "extended reporting" coverage for a minimum of three (3) years after completion of the Agreement.

3. Coverage Term. Coverage shall remain in force for the complete term of the Agreement. If insurance expires during the term of the Agreement, a new certificate must be provided to the other Party as soon as practicable but no later than 15 days following the expiration of the insurance.

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4. Deductible. Each Party is responsible for any deductible or self-insured retention contained within their insurance program.

5. Primary Clause. Any required insurance contained in this Agreement shall be primary, and not excess or contributory, to any other insurance carried by the other Party.

6. Inadequate Insurance. Inadequate or lack of insurance does not negate Each Party's obligations under the Agreement.

7. Should either party elect to self-insure for any required insurance, that Party shall be liable to O&M Contractor for the full equivalent of insurance coverage which would have been available to O&M Contractor the applicable insurance policies had been obtained by the Party from a third party insurer, in full compliance with the provisions under this Exhibit D, and shall pay on behalf of or indemnify O&M Contractor for all amounts which would have been payable by the third party insurer. In addition, CDWR shall act with the same promptness and be subject to the same standards of good faith as would apply to a third-party insurance company.

8. Waiver of Subrogation. All insurance or self-insurance required by this Exhibit D shall waive any right of recovery the insurer (or CDWR in the case of self-insurance) may have against the other Party because of payments the insurer or CDWR makes for injury or damage in connection with this Agreement.

9. Certificate(s). Certificate(s) shall include at least the following information: (i) the name of the insurance company, policy number and expiration date; (ii) the coverage and limits per required coverage, including the amounts of deductibles.

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Exhibit E – Notices and Payments

Notice to DWR

Ted Craddock
Office of the Director
California Department of Water Resources
P.O. Box 899
Sacramento, CA 94236-0001
Email: Ted.Craddock@water.ca.gov

Robert Hedrick
Office of General Counsel
California Department of Water Resources
P.O. Box 899
Sacramento, CA 94236-0001
Email: Robert.Hedrick@water.ca.gov

Notice to Owner

City of Roseville
Attn: City Clerk
311 Vernon Street
Roseville, CA 95678

Roseville Electric
Attn: Electric Utility Director
2090 Hilltop Circle
Roseville, CA 95747

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EXHIBIT F

Option Agreement

OPTION AGREEMENT

This OPTION AGREEMENT (**"Option Agreement"**) is made and entered as of _____ , ___ (the "Effective Date") by and between the CITY OF ROSEVILLE, CALIFORNIA, ("**Roseville**" or "**Purchaser**") and the CALIFORNIA DEPARTMENT OF WATER RESOURCES ("**CDWR**" OR "**Seller**"). Purchaser and Seller are referred to individually as a "Party" and collectively as the "Parties".

WHEREAS, Purchaser and Seller have entered into that certain Site Use and Installation Agreement ("Site Agreement") whereby Purchaser granted Seller licenses to use a site, as specified in that agreement, through the end of 2023;

WHEREAS, the licenses contemplated in the Site Agreement are intended for the siting, installation, and use of two General Electric LM2500 combustion turbine generators (the "**Units**") through the end of 2023;

WHEREAS, The Units could be used to provide some of the additional energy supplies required by the State of California during this period;

WHEREAS, Seller desires to grant to Purchaser an exclusive option to purchase one hundred percent (100%) of either or both of the Units and all appurtenances, subject to the terms and conditions set forth in this Option Agreement.

NOW, THEREFORE, in consideration of the promises and the covenants and conditions contained herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Purchaser and Seller, intending to be legally bound, hereby agree as follows:

SECTION 1. DEFINITIONS. Capitalized terms used herein but not otherwise defined shall have the meaning ascribed to them in the Site Agreement. In addition to the terms defined in the preamble and the recitals to this Option Agreement, the following terms shall have meanings assigned to them below:

"Asset Purchase Option" shall have the meaning set forth in Section 2.

"Closing" shall have the meaning set forth in Section 2(b).

"Effective Date" shall be date set forth in the preamble.

"Exercise Notice" shall have the meaning set forth in Section 2(a).

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"Exercise Period" shall be the period beginning from the first day after completion of the First Contract Year until the end of the Term of the Site Agreement, during which Purchaser may exercise the option to purchase either or both of the Units.

"Governmental Approval" means all authorizations, consents, approvals, waivers, exceptions, variances, filings, permits, orders, licenses, exemptions and declarations of or with any Governmental Authority and shall include those siting and operating permits and licenses, and any of the foregoing under any applicable environmental law, that are required for the installation, use, and operation of the Units.

"Ground Lease" shall mean such other agreement allowing Seller the right to occupy the real estate comprising the Site for the duration of the Delivery Term under the PPA or this Option Agreement.

"Plant Assets" shall mean the Units, selective catalytic reduction systems, mounting structures, wiring, control systems, inverters, transformers, fencing, improvements to the premises, computer systems and other tangible assets integral to and necessary for the ongoing production of electrical energy by the Units, but shall specifically exclude:

i) all monetary assets of Seller, including but not limited to, cash and cash equivalents, accounts receivable, loans or notes receivable, prepaid expenses, deferred charges, related party debts, insurance proceeds receivable, beneficial interests in any ongoing legal proceedings of which Seller is or may become a party to; and

ii) all other assets of Seller, whether recorded on the then current balance sheet of Seller or otherwise, whether tangible or intangible, which are not integral to or necessary for the ongoing production of electrical energy by the Units.

"Proceeding" shall have the meaning set forth in Section 5(c).

"Purchase Price" shall have the meaning set forth in Section 3.

In this Option Agreement, unless otherwise indicated, the singular includes the plural and plural the singular, and the words "including," "includes" and "include" shall be deemed to be followed in each instance by the words "without limitation." References to Sections shall be deemed to be to Sections of this Option Agreement unless otherwise indicated; references to agreements and other contractual instruments shall be deemed to include all subsequent amendments, extensions and other modifications to such instruments (without, however, limiting any prohibition on any such amendments, extensions and other modifications by the terms of this Option Agreement).

SECTION 2. PURCHASE OPTION. Seller grants Purchaser the exclusive option, but not the obligation, to purchase a one hundred percent (100%) interest in the Plant Assets of either or both of the Units during the Exercise Period ("Asset Purchase Option").

(a) At any time during the Exercise Period, Purchaser shall have the right, but not the obligation, to exercise the Asset Purchase Option by delivering written notice of exercise ("Exercise Notice") to Seller. The Purchaser shall specify whether Purchaser intends to purchase one or both of the Units. If electing to purchase one Unit, Purchaser shall have the right in its sole discretion to select which Unit it elects to purchase. Upon receipt of Exercise

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Notice, Seller shall be obligated to sell to Purchaser one hundred percent (100%) of the then-owned Plant Assets, for the Unit or Units described in the Exercise Notice. If the Purchaser exercises the Asset Purchase Option as to only one of the Units, the Purchase shall retain the right, but not the obligation, to exercise a second Asset Purchase Option for the second Unit, so long as such Asset Purchase Option is exercised during the Exercise Period. The rights and obligations of the Parties shall apply as set forth in this Option Agreement as to the second Asset Purchase Option, in the same manner as they apply for the first Asset Purchase Option.

(b) Upon receipt of Exercise Notice by Seller, Seller and Purchaser shall use commercially reasonable efforts to close and consummate the sale and purchase transaction ("Closing") within six (6) months of such receipt.

(c) The Asset Purchase Option shall terminate if any of the following events occur:

(i) Purchaser provides written notice to Seller, at any time prior to the expiry of the Exercise Period, stating Purchaser declines its Asset Purchase Option;

(ii) The Asset Purchase Option is not exercised prior to expiry of the Exercise Period;

(iii) The Site Agreement terminates prior to exercise of the Asset Purchase Option by Purchaser.

SECTION 3. PURCHASE PRICE. If Purchaser exercises the Asset Purchase Option, the "Purchase Price" for the Plant Assets, shall be calculated as follows:

The purchase price to be paid by Purchaser for the Units is ten million dollars ($10,000,000.00) for the first Unit and eleven million dollars ($11,000,000.00) for the second Unit, computed as the price equal to seventy percent (70%) of the estimated equipment value of approximately twenty million dollars ($20,000,000.00) per Unit, minus three million dollars ($3,000,000.00) per unit for avoided decommissioning costs, and minus an additional one million dollars ($1,000,000.00) of avoided decommissioning administration costs.

SECTION 4. SELLER REPRESENTATIONS, WARRANTIES AND COVENANTS.
Throughout the effectiveness of this Option Agreement, Seller represents, warrants and covenants as follows:

(a) Except as permitted under the Site Agreement, Seller shall not sell or otherwise transfer the Plant Assets associated with the Units for which Purchaser has specified in its Exercise Notice to any third party other than Purchaser. For the avoidance of doubt, any sale or transfer of an affiliated entity which has an ownership interest in the Plant Assets to any third party other than Purchaser is expressly prohibited. Purchaser shall have all remedies available to it at law and in equity to enforce its exclusive purchase right hereunder, including injunctive relief.

SECTION 5. CLOSING CONDITIONS. The Parties agree that any sale of the Plant Assets by Seller, as the case may be, to Purchaser under this Option Agreement shall be made pursuant to a purchase agreement in a form to be mutually agreed upon between the Parties ("Purchase Agreement"). Such Purchase Agreement shall incorporate the relevant terms of this Option Agreement, plus contain conditions, covenants, representations, warranties, remedies and other

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provisions which are typical in the industry. In addition, the following conditions must be satisfied before or at Closing:

(a) Default. Seller shall not be in default under the Site Agreement.

(b) Resolutions; Incumbency Certificates. Purchaser shall have received copies of all requisite resolutions and incumbency certificates of Seller and any other documents evidencing all actions taken by Seller, as applicable to authorize the consummation of the transactions contemplated by the Closing, such resolutions to be certified as of the closing date by an authorized representative of Seller.

(c) Litigation. No action, order, writ, judgment or decree outstanding, audit, hearing, investigation, claim, litigation, or suit (whether civil, criminal, regulatory, administrative, investigative, or informal) commenced, brought, conducted, or heard by or before, or otherwise involving, any Person ("Proceeding") shall have been instituted by any Governmental Authority or by any other Person and, at what would otherwise have been the Closing date, remain pending to delay, restrain or prohibit any part of the transactions contemplated by this Option Agreement or to seek any divestiture or to revoke or suspend any Governmental Approval by reason of any or all of the transactions contemplated by this Option Agreement; nor shall any Governmental Authority have notified either Party or any of their respective Affiliates that consummation of any part of the transactions contemplated by this Option Agreement would constitute a violation of any requirements of law or any jurisdiction or that it intends to commence a Proceeding to restrain or prohibit any part of the transactions contemplated by this Option Agreement or to require such divestiture, revocation or suspension; unless, in any such case, such Governmental Authority or other Person shall have withdrawn such notice and abandoned such Proceeding to the satisfaction of Purchaser.

(d) Assets and Property. From the date hereof to the Closing date, there must not have been material, damage to or destruction or loss of, the machinery or equipment in the Plant Assets, whether or not covered by insurance, reasonable wear and tear excluded.

(e) No Liens or Encumbrances. Seller shall convey to Purchaser the Plant Assets specified in the Exercise Notice free and clear of liens, encumbrances, mortgages, leases, obligations, security interests, irregularities, pledges or defects.

(f) No Material Adverse Effect. Seller shall have confirmed, in its reasonable determination, that to its knowledge, it is not aware of facts or circumstances exist that do or could reasonably be expected to have, and no action shall have been taken or omitted and no event shall have occurred or be threatened which has had or could reasonably be expected to result in, a material adverse effect on the value, the remaining useful life or the utility of the Plant Assets specified in the Exercise Notice.

(g) Title. Seller shall convey all titles, deeds, interests and rights to the Plant Assets specified in the Exercise Notice, good and marketable to Purchaser, and shall cooperate with Purchaser to record, as applicable, all titles, deeds, interests and rights to Plant Assets with appropriate Governmental Authorities.

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(h) Governmental Approvals. If applicable, Seller shall have validly assigned to Purchaser at Closing all Governmental Approvals necessary for Purchaser's ownership and operation of the Plant Assets.

(i) Deliveries. Each of the following documents must have been delivered to Purchaser:

(i) A certificate, in form and substance satisfactory to Purchaser, executed by an officer of Seller certifying that each of the conditions specified in this Section 5 have been satisfied;

(ii) If applicable, all titles, deeds, interests and rights to the Plant Assets subject to the Exercise Notice;

(iii) If applicable, a bill of sale, dated the Closing date;

(iv) If applicable, transfer documents for the Plant Assets subject to the Exercise Notice, as applicable dated the Closing date; and

(v) Such other documents as Purchaser may reasonably request for the purpose of (a) evidencing the accuracy of any Seller's representations and warranties, (B) evidencing the performance by Seller of, or the compliance by Seller with, any covenant or obligation required to be performed or complied with by Seller, or (C) evidencing the satisfaction of any condition referred to in this Section 5.

SECTION 6. ADDITIONAL CLOSING REQUIREMENTS. If Purchaser decides to proceed to Closing, then at Closing, Seller and Purchaser shall deliver the Purchase Agreement duly executed by an authorized officer of Seller and Purchaser. In addition, at Closing:

(a) Purchaser shall pay the Purchase Price to Seller in lawful currency of the United States of America.

(b) Seller and Purchaser shall each bear their own costs and expenses incurred in connection with such purchase and sale, and shall equally share any mutually applicable Closing costs.

(c) Seller shall be responsible for payment of any sales and transfer taxes customarily payable by a seller following the sale of the Plant Assets, as applicable, to Purchaser, and Purchaser shall be responsible for payment of any sales and transfer taxes customarily payable by a buyer following the purchase of the Plant Assets, as applicable, by Purchaser, to the extent Purchaser is otherwise required by federal or state law to pay such taxes.

(d) Seller shall deliver to Purchaser all consents and approvals required for sale and transfer to Purchaser of the Plant Assets, as applicable.

(e) Seller shall provide to Purchaser a training program in which Purchaser employees are trained in Plant Assets operation and maintenance.

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(f) Seller shall deliver to Purchaser all relevant Plant Asset documents and drawings in its possession, including but not limited to an as-built survey of the Site, Unit as-built drawings and Unit manuals and recommended operating and maintenance procedures, but not including any proprietary or confidential information, except that for any confidential information that is necessary for Purchaser to safely and reliability own and operate the Units in conformance with applicable Law and mandatory reliability standards issued by the NERC and/or WECC, the Seller shall deliver such documents and drawings to Purchaser, and the Parties shall negotiate commercially reasonable terms to protect such documents and drawings, consistent with applicable Law, and NERC and WECC reliability standards.

SECTION 7. DESIGNEES, SUCCESSORS AND ASSIGNS.

(a) Subject to Section 4(a), this Option Agreement shall be binding on and enforceable against Seller (or any successor entity thereof which owns and operates the Plant Assets), including any creditors of Seller to the extent they acquire possession of, or the right to sell, lease, assign, gift, hypothecate, transfer or otherwise dispose of (including as a result of any operation of law, voluntarily or involuntarily) all or any portion of Plant Assets as result of exercising any remedies against Seller.

(b) This Option Agreement and the rights and options granted in it shall inure to the benefit of Purchaser and its permitted designees, successors and assigns.

SECTION 8. AMENDMENT; WAIVER.

(a) This Option Agreement may not be amended or otherwise modified except by a written instrument signed by the Parties to this Option Agreement.

(b) Purchaser may at any time waive any of its rights under this Option Agreement, but only by a written instrument signed by Purchaser; and any such waiver shall be effective only in the specific instance and for the specific purpose stated in such written instrument. No waiver other than as set forth in the preceding sentence shall be effective.

SECTION 9. NOTICES.

(a) Any notice or other written communication under this Option Agreement must be in writing and will be deemed to have been duly given only if delivered personally or by facsimile transmission (with printed confirmation) or by overnight courier to the parties at the following addresses or facsimile numbers:

If to Seller:

Ted Craddock
Office of the Director
California Department of Water Resources
P.O. Box 899
Sacramento, CA 94236-0001

If to Purchaser:

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City of Roseville
Attn: City Clerk
311 Vernon Street
Roseville, CA 95678

(b) All notices and other communications to be given under this Option Agreement will (i) if delivered personally to the address provided in Section 9(a) above, be deemed given upon delivery and (ii) if delivered by overnight courier to the address as provided in Section 9(a) above, be deemed given upon receipt.

(c) Any Party from time to time may change its address, facsimile number or other information for the purpose of notices to that Party by giving written notice specifying such change to the other Parties to this Option Agreement.

SECTION 10. DISPUTE RESOLUTION.

(a) Dispute of Claim. Any action, claim or dispute with which either Party may have against the other arising out of or relating to this Option Agreement or the transactions contemplated hereunder, or the breach, termination or validity thereof ("Dispute") which any Party may have against the other shall be submitted in writing to the other Party. The written submission of any Dispute shall include a concise statement of the question or issue in dispute together with a statement listing the relevant facts and documentation that support the claim.

(b) Good Faith Resolution. The Parties agree to cooperate in good faith to expedite the resolution of any Dispute. Pending resolution of a Dispute, the Parties shall proceed diligently with the performance of their obligation under this Option Agreement.

(c) Informal Negotiation. The Parties shall first attempt in good faith to resolve any Dispute through informal negotiations by the senior management of each Party.

(d) Litigation Rights. In the event the Parties are unable to satisfactorily resolve the Dispute within ninety (90) days from the receipt of notice of the Dispute, subject to any extensions of time as may be mutually agreed upon in writing, either Party may initiate litigation in a court of law with jurisdiction located in Sacramento County, California, which shall be the exclusive venue to litigate disputes.

(e) Recovery Costs. In the event any action is brought at law or in equity in court to enforce any provision of this Option Agreement, or for damages by reason of any alleged breach of this Option Agreement, then the prevailing Party will be entitled to recover from the other Party all costs of the suit, including, court costs and the prevailing Party's reasonable attorney's fees and related costs and expenses of litigation.

SECTION 11. MISCELLANEOUS.

(a) The headings used in this Option Agreement have been inserted for convenience of reference only and do not define, limit, interpret or constitute a part of this Option Agreement.

(b) Any provision of this Option Agreement which is held to be illegal, invalid or unenforceable in any jurisdiction under any present or future law shall, as to such jurisdiction, be

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ineffective to the extent of such illegality, invalidity or unenforceability without invalidating the remaining provisions of this Option Agreement.

(c) This Option Agreement shall be governed and construed in accordance with the laws of the state of California.

(d) Any Party to this Option Agreement shall be entitled to pursue any and all remedies available at law or in equity (including specific performance and injunctive relief) for any failure to comply with any material terms of this Option Agreement.

(e) This Option Agreement may be executed in any number of counterparts, each of which, when executed and delivered to the other Parties, will be deemed an original, but all of which together will constitute one and the same instrument.

* * *

IN WITNESS WHEREOF, each Party to this Option Agreement has caused this Option Agreement to be executed by its duly authorized officer as of the date first above written.

CALIFORNIA DEPARTMENT OF WATER RESOURCES	**CITY OF ROSEVILLE, CALIFORNIA**
By:_____	By:_____
Name:_____	Name:_____
Title:_____	Title:_____

COUNCIL COMMUNICATION

CC #: 1691
File #: 0300

Title: The American Rescue Plan Act of 2021 - Update
Contact: Dennis Kauffman 916-774-5313 dkauffman@roseville.ca.us

Meeting Date: 9/1/2021
Item #: 9.1.

RECOMMENDATION TO COUNCIL

Staff recommends that the City Council receive an update on the Coronavirus State and Local Fiscal Recovery Funds included in the American Rescue Plan Act of 2021.

BACKGROUND

On March 11, 2021 President Biden signed the American Rescue Plan Act of 2021 into law. The $1.9 trillion law is intended to combat the COVID-19 pandemic, including the public health and economic impacts. This presentation will provide an update on the Coronavirus State and Local Recovery Funds provided in the Act and the City's preliminary spending plan.

FISCAL IMPACT

Not applicable.

ENVIRONMENTAL REVIEW

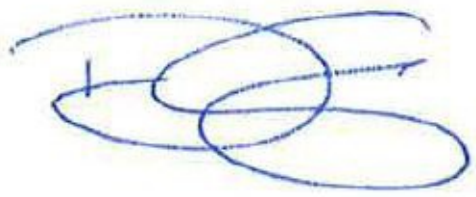
The California Environmental Quality Act (CEQA) does not apply to activities that will not result in a direct or reasonably foreseeable indirect physical change in the environment, or is otherwise not considered a project as defined by CEQA Statute §21065 and CEQA State Guidelines §15060(c)(3) and §15378. A presentation on the American Rescue Act meets the above criteria and is not subject to CEQA. No additional environmental review is required.

CITY COUNCIL STRATEGIC PLAN/OVERARCHING GOALS

Goal A - Remain fiscally responsible in a changing world

Respectfully Submitted,

Dennis Kauffman, Assistant City Manager/Chief Financial Officer



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Dominick Casey, City Manager