City Council Chambers, 311 Vernon Street, Roseville, California

roseville.ca.us

The City of Roseville welcomes your participation.

Meeting Schedule: Regular meetings of the Design Committee are held on the third Thursday of the month at 4:30 p.m.

Public Comment: Speakers have three (3) minutes under Public Comment to address the Chair of the meeting on issues that are not listed on the agenda and are within the City's jurisdiction. Please submit a yellow speaker card to the Secretary before the item is heard if you wish to make a comment.

Brown Act: The Design Committee cannot discuss or act on items not listed on the agenda.

Agenda Items: Speakers have five (5) minutes to address items that are listed on the agenda.

Levine Act Provisions: If you've made a campaign contribution totaling more than $500 ($250 prior to January 1, 2025) to City Council Members in the last twelve (12) months, you must disclose it before addressing an item on the agenda. Please visit Levine Act – City of Roseville for updated forms and information.

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

Americans with Disabilities Act: If special assistance is required to participate in a meeting, including the need of auxiliary aids or services, please notify the City Clerk at least 72 hours in advance of the meeting.
City Clerk 311 Vernon Street cityclerkroseville@roseville.ca.us 916-774-5263 TDD: 916-774-5220

Security Measures: All meeting 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.

Clifford Haggenjos, Jr., Chair
Sandra Boyle, Committee Member
Michael Rohey, Committee Member
Lupe Nelson, Secretary
Greg Bitter, Liaison

AGENDA

Design Committee Meeting
July 17, 2025
4:30 PM
City Council Chambers
311 Vernon Street, Roseville, California

I. CALL TO ORDER

II. ROLL CALL SILENT

III. PLEDGE OF ALLEGIANCE

IV. CONSENT CALENDAR

1. Minutes of June 19, 2025

REQUEST: Approve the Minutes of June 19, 2025

CONTACT: Lupe Nelson 916-774-5281 lnelson@roseville.ca.us

V. REQUESTS/PRESENTATIONS

1. Infill Parcel 108 – Rail Town Village, 412 Sixth St, File # PL24-1103

REQUEST
The applicant requests a Design Review Permit to construct five (5) new duplex buildings and two (2) ADUs totaling twelve (12) dwelling units, and a Tree Permit to remove eight (8) native oak trees and encroach into the protected zone of nineteen (19) other native oak trees.

Applicant: Gary Orr, ORR Design Office
Owner: Everest Hill LLC

RECOMMENDATION
The Planning Division recommends the Design Committee take the following actions:

1. Adopt the Rail Town Village Initial Study Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program; and
2. Adopt the four (4) findings of fact and approve the Design Review Permit subject to sixty-nine (69) conditions of approval; and

3. Adopt the two (2) findings of fact and approve the Tree Permit subject to twenty (20) conditions of approval.

CONTACT: Eric Singer 916-774-5536 ejsinger@roseville.ca.us

VI. STAFF/COMMITTEE REPORTS

VII. PUBLIC COMMENTS

VIII. ADJOURNMENT

DRAFT MINUTES
Design Committee Meeting
June 19, 2025
4:30 PM
City Council Chambers
311 Vernon Street, Roseville, California

I. CALL TO ORDER

Chair Haggenjos called the meeting to order at 4:30 p.m.

II. ROLL CALL SILENT

Present: Clark, Haggenjos
Absent: Boyle

III. CONSENT CALENDAR

1. Minutes of September 19, 2024

Motion by Committee Member Clark, seconded by Chair Haggenjos, to approve the Consent Calendar.

The Motion passed unanimously with a voice vote.

IV. REQUESTS/PRESENTATIONS

1. North Industrial Plan Area Parcel 44 - Foothills Commerce Center Phase III, 1100 Winding Creek Road, File # PL24-0982

REQUEST

The applicant requests approval of a Design Review Permit and Lot Line Adjustment. The project includes development of approximately 360,000-square-feet of light industrial buildings, as envisioned in the 2000 Foothills Business Park Annexation EIR. Four (4) buildings would be constructed, with a 50-foot maximum height allowed and floor areas ranging in size from approximately 59,000-square-feet to approximately 152,000-square-feet, as well as landscaping, circulation improvements, parking, and utility extensions. The request also includes a Lot Line Adjustment to accommodate each building on its own parcel.

Associate Planner, Escarlet Mar, presented the staff report.

Chair Haggenjos opened the Public Hearing and invited comments from the applicant and/or the audience.

Applicant representative, Tanner Wilson, stated he had received a copy of the staff report and was in agreement with staff's recommendation.

Chair Haggenjos opened the public comment. Hearing none, Chair Haggenjos closed the public comment and Public Hearing.

Motion by Committee Member Clark, seconded by Chair Haggenjos to:

1. Consider an Addendum to the Foothills Business Park Annexation Project EIR;
2. Adopt the four (4) findings of fact and approve the Design Review Permit subject to seventy-one (71) conditions of approval; and
3. Approve the Lot Line Adjustment subject to thirteen (13) conditions of approval.

The Motion passed with a voice vote.

V. PUBLIC COMMENTS

Chair Haggenjos opened the Public Comment period.

- Development Services Director, Mike Isom, recognized and thanked Committee Member Clark for his years of service to the residents of the City of Roseville.
- Chair Haggenjos also thanked Committee Member Clark for his dedication to the City of Roseville and years of public service.

Chair Haggenjos closed the Public Comment period.

VI. ADJOURNMENT

Motion by Committee Member Clark, seconded by Committee Member Poulsen, to adjourn the meeting. The Motion passed unanimously at 4:46 p.m. with a voice vote.

Design Committee Communication

Meeting Date: 7/17/2025
Item #: V.1
Item ID: 2025-480

Title: Infill Parcel 108 – Rail Town Village, 412 Sixth St, File # PL24-1103
Contact: Eric Singer 916-774-5536 ejsinger@roseville.ca.us

REQUEST

The applicant requests a Design Review Permit to construct five (5) new duplex buildings and two (2) ADUs totaling twelve (12) dwelling units, and a Tree Permit to remove eight (8) native oak trees and encroach into the protected zone of nineteen (19) other native oak trees.

Applicant: Gary Orr, ORR Design Office
Owner: Everest Hill LLC

RECOMMENDATION

1. Adopt the Rail Town Village Initial Study Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program; and
2. Adopt the four (4) findings of fact and approve the Design Review Permit subject to sixty-nine (69) conditions of approval; and
3. Adopt the two (2) findings of fact and approve the Tree Permit subject to twenty (20) conditions of approval.

Respectfully Submitted,
Eric Singer, Associate Planner

Greg Bitter, Planning Manager

ATTACHMENTS:
1. Staff Report
2. Attachment 1 Arborist Report
3. Exhibit A IS-MND
4. Exhibit B Project Plans

REVIEWERS:
Lupe Nelson, Development Services Department Created/Initiated - 7/11/2025

ITEM 5.1: Design Review Permit and Tree Permit – 412 Sixth Street – INFILL PCL 108 - Rail Town Village – File #PL24-1103

REQUEST

The applicant requests a Design Review Permit to construct five (5) new duplex buildings and two (2) ADUs totaling twelve (12) dwelling units, and a Tree Permit to remove eight (8) native oak trees and encroach into the protected zone of nineteen (19) other native oak trees.

Applicant – Gary Orr, ORR Design Office
Owner – Everest Hill LLC

SUMMARY RECOMMENDATION

The Planning Division recommends the Design Committee take the following actions:

1. Adopt the Rail Town Village Initial Study Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program; and
2. Adopt the four (4) findings of fact and approve the Design Review Permit subject to sixty-nine (69) conditions of approval; and
3. Adopt the two (2) findings of fact and approve the Tree Permit subject to twenty (20) conditions of approval.

SUMMARY OF OUTSTANDING ISSUES

There are no outstanding issues associated with this request. The applicant has reviewed and is in agreement with all recommended conditions of approval.

BACKGROUND

The Project site is comprised of a single parcel approximately 1.1 acres in size located at 412 Sixth Street (see Figure 1). The Project site is located within the City's Infill area. The Infill area constitutes what historically has been the central core of Roseville, as well as the areas that were the focus of growth in the City until the early 1980's. The land use in the Infill area incorporates a mix of residential neighborhoods, commercial and industrial uses and amenities to serve the residents of the community. The Project site is bordered by single family dwelling units to the north and west, a church and a single-family dwelling to the east, and Sixth Street to the south. The site has a General Plan land use designation of Medium Density Residential (MDR-11.1) and a zoning designation of Multi-Family Residential (R3).

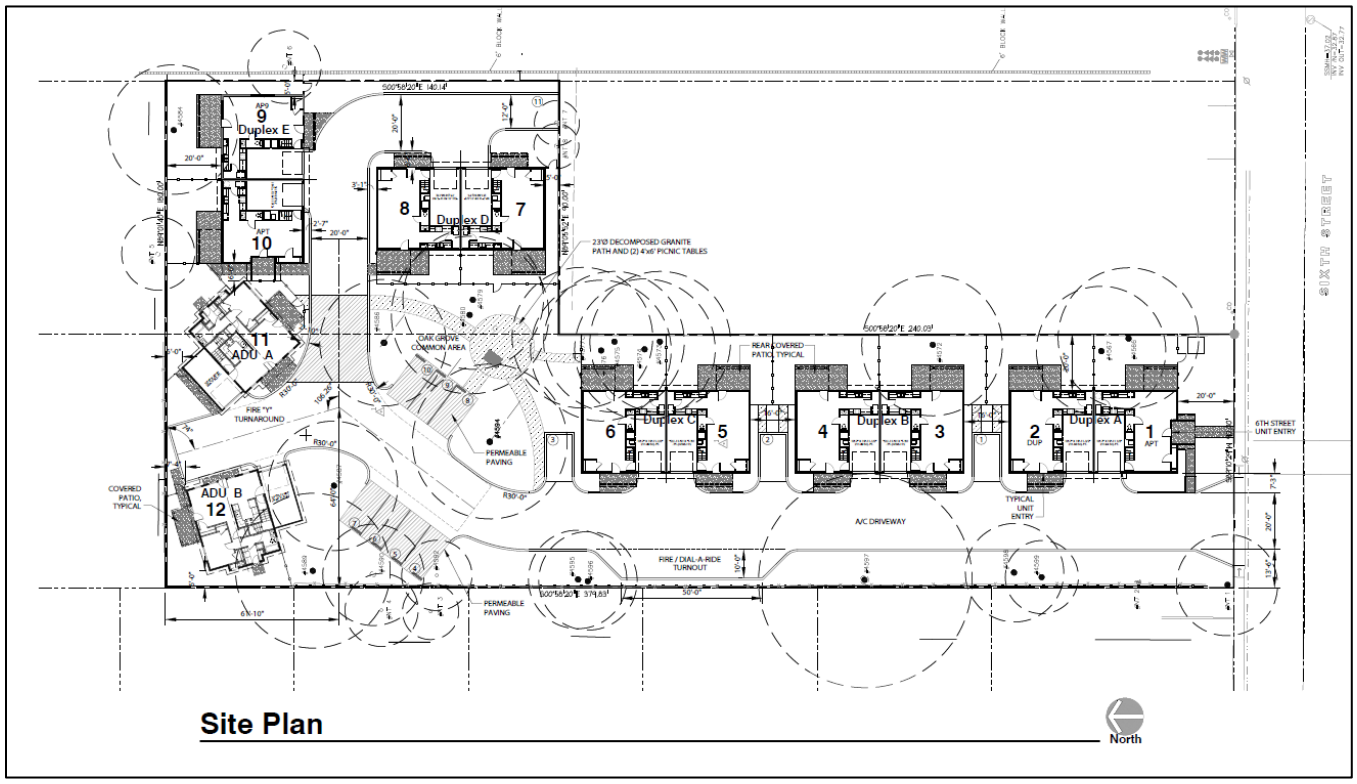
The Project site is a single polygonal lot, measuring approximately 380 feet by 180 feet and 1.1 acres. The Project site is vacant, with the entire site undeveloped. A 3-foot-wide sidewalk fronts the property along Sixth Street. The site is an infill parcel surrounded by single-family dwelling units and a church. The site contains scattered non-native trees interspersed within a valley oak overstory with an understory of annual grasses, per the arborist report dated April 7, 2025 (Attachment 1). The site is flat with the highest point of the property being the northwest corner, which is approximately 1 foot higher than the southern end of the property. The site itself is approximately 1-2 feet on average lower than the property to the east, sloping gradually from east to west.

Figure 1: Project Location

Proposed Project

The project includes the construction of five (5) new duplex buildings and two (2) ADUs totaling twelve (12) dwelling units, and a Tree Permit to remove eight (8) native oak trees and encroach into the protected zone of nineteen (19) other native oak trees on-site. The Grading and Site Plan shows the proposed access street layout and site configuration for the 12 units (see Figure 2), including a 20-foot-wide asphalt driveway that will run parallel with the western property line until it turns eastward near the northern end of the lot and will end at the northeastern property line. Eight (8) protected trees are proposed for removal to create the street, associated site improvements, and twelve (12) new housing units, with nineteen (19) protected trees proposed for retention and protection. Frontage improvements along Sixth Street include a city standard Type S driveway and relocation of existing power pole and guywire out of proposed driveway.

Figure 2: Proposed Site Plan



EVALUATION – DESIGN REVIEW PERMIT

The evaluation of the Design Review Permit has been based on the applicable development and design standards within the City's Zoning Ordinance and the City's Community Design Guidelines (CDG). Section 19.78.060(B) of the City of Roseville Zoning Ordinance requires four findings of fact be made in order to approve a Design Review Permit. The four findings for approval of the Design Review Permit are listed below in ***italicized, bold*** text and are followed by an evaluation of the project in relation to each finding.

1. ***The project as approved preserves and accentuates the natural features of the property, such as open space, topography, trees, wetlands and water courses; provides adequate drainage for the project; and allows beneficial use to be made of the site for development.***

The project site is a 1.1-acre interior lot located within the City's Infill area. The site is surrounded by existing residential lots with single-family dwellings, duplexes and multi-family dwellings in close proximity. As mentioned above, an existing church is located directly to the east. The Project site is vacant with non-native trees (including mulberry, mimosa, arbor vitae, Chinese pistache, almond, camphor, pecan, and olive) interspersed within a valley oak overstory with an understory of annual grasses. In addition, there are no wetlands or other regulated waters on the site. The site is generally leveled out and no significant grade changes occur on the site. An unpaved access currently exists from Sixth street. The project has been reviewed by the City's Engineering Division and has been designed consistent with City standards related to drainage improvements and stormwater quality facilities.

2. ***The project site design as approved provides open space; access; vehicle parking; vehicle, pedestrian and bicycle circulation; pedestrian walks and links to alternative modes of transportation; loading areas; landscaping; irrigation; and lighting which results in a safe, efficient, and harmonious development and which is consistent with the applicable goals, policies and objectives set forth in the General Plan, the Community Design Guidelines and applicable design guidelines.***

The evaluation of the Design Review Permit has been based on the applicable development and design standards within the City's Zoning Ordinance and the City's Community Design Guidelines. Staff reviewed the proposal for consistency with all applicable standards and found the project to be consistent with the pertinent requirements and guidelines. The development standards include setbacks, residential density, and height standards. The following discussions provide an evaluation with respect to the applicable design guidelines in the Zoning Ordinance and the CDG.

Site Planning and Building Siting

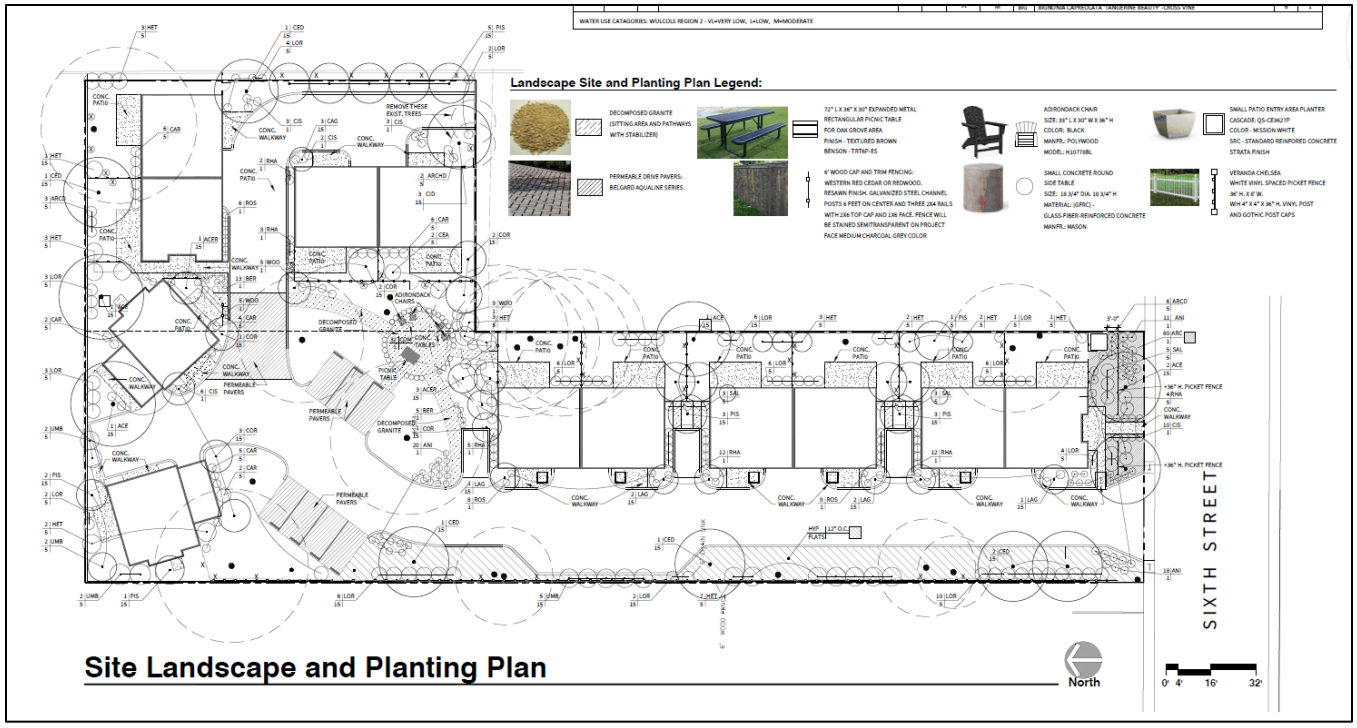
The parcel is an existing approximately 1.1 acre parcel with an attached sidewalk along the front of the property. The Project is comprised of five (5) duplex buildings, all 3,082-square-feet in size, and two Accessory Dwelling Unit buildings, both 1,200 square feet in size, for a total of twelve (12) dwelling units, with twenty-three (23) parking spaces, and landscaping improvements, which is consistent with the zoning district.

The conceptual building layout shows the duplex dwelling units and accessory dwelling units fronting the private street that is accessed to the south from Sixth Street, with pad elevations ranging from 138' to 138.5', gradually increasing in height from the south to the north. A new property line fence is proposed along the east, north, and west property lines. As proposed, the buildings are situated throughout the Project site to ensure the preservation of as many native trees as possible on site.

Landscaping

The Zoning Ordinance requires that all front yard and side yard setbacks be landscaped, irrigated and maintained with primarily low ground cover or turf. The landscape shall include grass, annuals, perennials, groundcover, shrubs, trees, or other living vegetation. The site is proposed to include a mixture of 15-gallon October glory maple, deodar California cedar, crepe myrtle, red push pistache, and California bay trees, (as seen in Figure 3).

Figure 3: Proposed Landscaping Plan



Access, Circulation, and Parking

The main entry to the project site would be from Sixth Street to the south, as shown in Figure 2 and 3. A 20-foot-wide asphalt driveway that will run parallel with the western property line until it turns eastward near the northern end of the lot and will end at the northeastern property line provides access to each duplex building and ADU. The driveway design was reviewed by the City's Engineering Division and Fire Department to ensure adequate widths for circulation and emergency response.

The Zoning Ordinance parking requirement for Single-Family and Two-Family is two (2) spaces per dwelling unit, plus one (1) guest space for every ten (10) units or portion thereof. Accessory dwelling units do not require additional parking. The project consists of ten duplex units and two accessory dwelling units, resulting in a total off-street parking requirement of twenty (22) spaces. The duplex dwelling units propose attached two-car garages, and each ADU proposes a single-car garage, with an additional eleven (11) spaces provided in parking stalls spaced throughout the site, for a total of twenty-three (23) spaces. The project was reviewed by the City Engineering and City Fire Department staff and was found to comply with refuse service standards and with emergency circulation requirements.

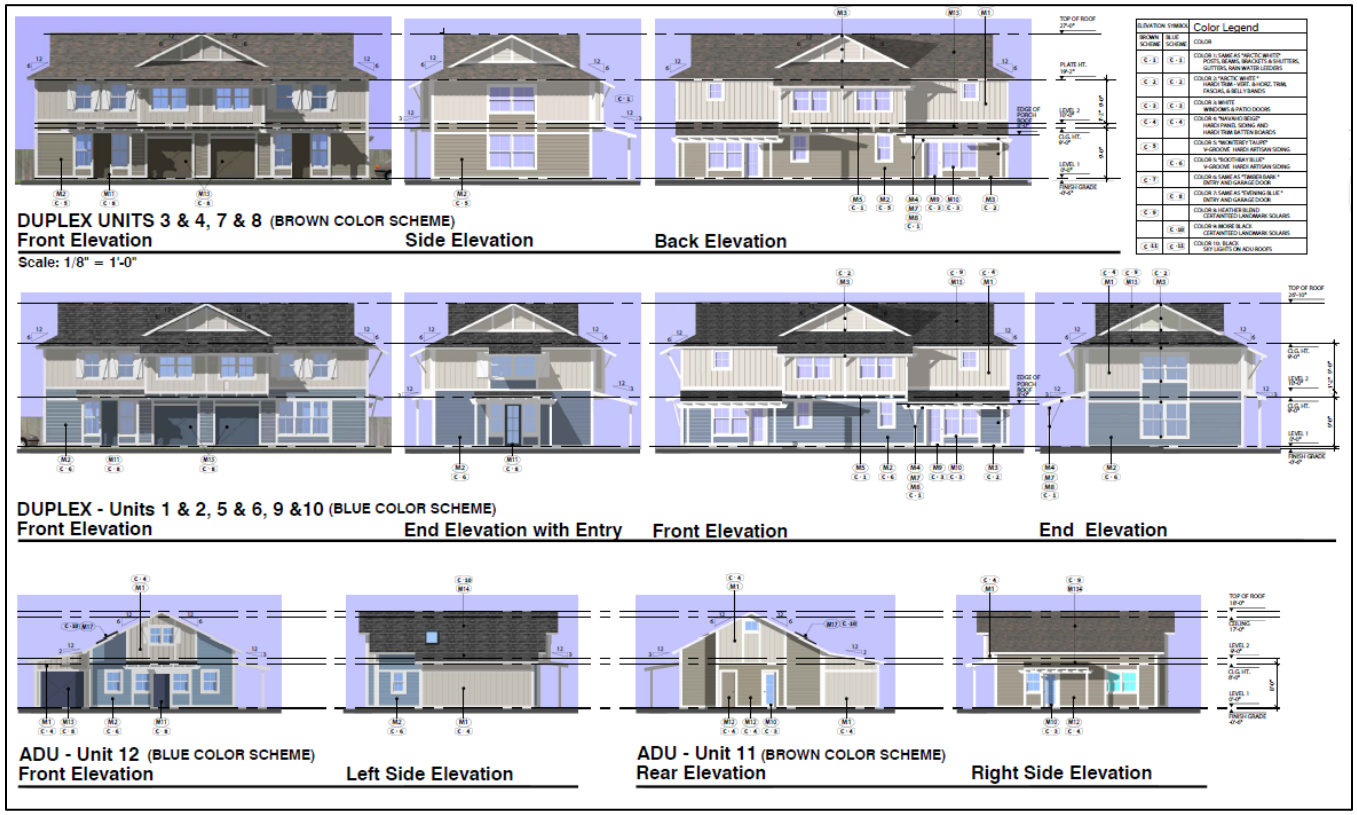
3. The building design, including the materials, colors, height, bulk, size and relief, and the arrangement of the structures on the site, as approved is harmonious with other development and buildings in the vicinity and which is consistent with the applicable goals, policies and objectives set forth in the General Plan, the Community Design Guidelines and the applicable specific plan and/or applicable design guidelines.

The five duplex buildings will be two stories with a maximum height of 27 feet, and the two accessory dwelling units will be single-story. Each duplex unit shall be 1,541-square-feet in size, and the two ADUs shall be 1,200 square feet in size. All buildings will have a cohesive design theme, which the applicant states "draws inspiration from Roseville's long history with the Southern Pacific Railroad" (see Figures 4 and 5).

Each building has gable cottage roofs with broad overhangs and a combination of horizontal and vertical board-and-batten siding. The color palette includes a blue, white, and earth tone color scheme. The blue color will be used in wainscotting on six of the twelve buildings, with white used on the trim and a variety of tans and browns used in the remaining elevations. Overall, the building design and color are compatible with the existing residential structures in the area.

Figure 4: Proposed Site Rendering

Figure 5: Proposed Elevations



4. The design of the public services, as approved, including, but not limited to, trash enclosures and service equipment are located so as not to detract from the appearance of the site, and are screened appropriately and effectively using construction materials, colors and landscaping that are harmonious with the site and the building designs.

All trash bins will be screened and located behind a seven-foot-tall residential fence. Similar to the surrounding development, all trash bins will be wheeled on and off the property at designated trash pickup day throughout the week.

EVALUATION – TREE PERMIT

Pursuant to Zoning Ordinance Section 19.66.030, a Tree Permit is required for any removal of native oak trees or for more than 20% encroachment into the dripline of a native oak tree. The proposed project will result in the removal of eight (8) native oak trees and encroachment within the protected zone of nineteen (19) native oak trees in preparation of future development of the site. The required findings to approve a Tree Permit are listed below.

1. Approval of the Tree Permit will not be detrimental to the public health, safety or welfare, and approval of the Tree Permit is consistent with the provisions of Chapter 19.66.

2. Measures have been incorporated into the project or permit to mitigate impacts to remaining trees or to provide replacement for trees removed.

An arborist report including a tree inventory summary was provided by Walter Warriner Consulting Arborist, dated April 7, 2025 (Attachment 5). A total of twenty-seven (27) protected oak trees were identified on the property after a staff site visit and request of the arborist to correct their initial assessment of twenty-six (26) trees by adding Tree #4591 to the list of removals. Of the twenty-seven (27) trees, eight (8) protected oak trees with a total aggregate diameter of approximately 139 inches are proposed for removal to facilitate development of the site, while nineteen (19) trees are proposed to be retained (see Attachment 1). One (1) of the trees proposed for removal was identified as being in critical or poor health. The arborist's recommendations include removal of those trees in the final stages of decline and/or trimming and preserving as many healthy trees with a health rating of three or greater as possible.

The applicant proposes to comply with the replanting and compensation requirements of the City's Tree Preservation Ordinance. Mitigation can be completed with a combination of on-site planting and payment into the City's in-lieu fee program. The funds in the City's in-lieu fee program are used for the replanting and preservation of trees throughout the City and are calculated at a rate of $118 per inch of tree removed when measured at the tree's DBH. The tree mitigation fee is required to be paid prior to the removal of the tree and prior to issuance of any permits.

The Tree Permit contains all of the standard conditions of approval, which includes a requirement to follow all of the recommendations of the Arborist Report (tree protection fencing, arborist on-site for any trenching through protected driplines, etc.) The removal of the trees will not be detrimental to the public health, safety, or welfare, and measures have been incorporated to mitigate impacts.

PUBLIC OUTREACH

The proposed project was distributed to all internal and external agencies and departments who have requested such notice, and all comments or recommended conditions of approval have been incorporated into the project, as appropriate. Early notification of the project was posted on the Roseville Coalition of Neighborhood Associations (RCONA)'s website.

A neighborhood meeting was held on March 6, 2025. Three residents attended the meeting. Questions from neighbors to the proposed project included topics like perimeter fencing, construction impacts, tree removals, traffic and circulation, and timeline for construction.

A notice of the public hearing was published in the Roseville Press Tribune on July 3, 2025 and a notice of the hearing was also distributed to all property owners within 300 feet of the site and posted on the RCONA website. No additional comments have been received as of publication of the staff report.

ENVIRONMENTAL DETERMINATION

As required by the California Environmental Quality Act (CEQA), the City of Roseville, acting as Lead Agency, prepared an Initial Study Mitigated Negative Declaration (IS/MND) to evaluate the environmental effects of the project. The document was released for a 30-day public comment period, which began on June 9, 2025 and ended July 9, 2025. No public comments were received. The document analyzed the potential for environmental impacts due to project implementation and determined that potentially significant impacts related to Biological Resources could be reduced to less than significant levels with mitigation. The Mitigated Negative Declaration and associated Mitigation Monitoring and Reporting Program are included as Exhibit A.

RECOMMENDATION

The Planning Division recommends the Design Committee take the following actions:

1. Adopt the Rail Town Village Initial Study Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program; and
2. Adopt the four (4) findings of fact and approve the **DESIGN REVIEW PERMIT 412 SIXTH STREET – INFILL PCL 108 - RAIL TOWN VILLAGE – FILE #PL24-1103** subject to sixty-nine (69) conditions of approval; and
3. Adopt the two (2) findings of fact and approve the **TREE PERMIT 412 SIXTH STREET – INFILL PCL 108 - RAIL TOWN VILLAGE – FILE #PL24-1103** subject to twenty (20) conditions of approval.

CONDITIONS OF APPROVAL FOR THE DESIGN REVIEW PERMIT – FILE #PL24-1103

1. This Design Review Permit approval shall be effectuated within a period of two (2) years from **July 17, 2025** and if not effectuated shall expire on **July 17, 2027**. Prior to said expiration date, the applicant may apply for an extension of time, provided this approval does not extend the expiration beyond **July 17, 2028**. (Planning)

2. The project is approved as shown in Exhibit A and as conditioned or modified below. (Planning)

3. The project shall comply with all required environmental mitigation identified in the Rail Town Village Initial Study/Mitigated Negative Declaration, and shall include all applicable mitigation measures as notes on the grading plans. (All Departments)

4. The project shall be addressed as 412 Sixth St. All projects with multi-tenants shall submit a site plan and floor plans (for all floors and all uses) upon initial Building Permit submittal for address approval or assignment. At that time addresses for buildings and apartments/suites will be assigned by city staff. They will be provided to the applicant prior to second submittal for the plans to be updated with the approved addresses. Please specify "Business Services – Addressing" on the submittal. See *City of Roseville Addressing Guidelines* at Roseville.ca.us/Addressing for more information. (Business Services)

5. The applicant shall pay City's actual costs for providing plan check, mapping, GIS, and inspection services. This may be a combination of staff costs and direct billing for contract professional services. Project billing may occur up to two (2) months after the end of warranty or the Notice of Termination date for the SWPPP, whichever occurs later. (Engineering, Environmental Utilities, Electric, Finance)

6. The design and construction of all improvements shall conform to the Design and Construction Standards of the City of Roseville, or as modified by these conditions of approval, or as directed by the City Engineer. (Engineering)

7. The applicant shall not commence with any on-site improvements or improvements within the right-of-way until such time as grading and/or improvement plans have been submitted for review and are approved with grading and/or encroachment permits issued by the Department of Development Services – Engineering Division. (Engineering)

8. The approval of this project does not constitute approval of proposed improvements as to size, design, materials, or location, unless specifically addressed in these conditions of approval. The Developer shall submit civil drawings to the Department of Development Services – Engineering Division for review and approval. (Engineering)

PRIOR TO ISSUANCE OF BUILDING PERMITS:

9. Parking lot design shall conform to the City's design standards, including the following minimum standards for parking stalls:

    a. All parking stalls shall be double-striped. Parking stalls adjacent to sidewalks, landscaped areas or light fixtures, and all Accessible stalls shall abut a 6-inch raised curb or concrete bumper. (Planning)

    b. Standard – 9 feet x 18 feet; Compact – 9 feet x 16 feet; Accessible – 14 feet x 18 feet (a 9-foot-wide parking area plus a 5-foot-wide loading area) and a minimum of one (1) parking space shall be Accessible van accessible – 17 feet x 18 feet (9-foot-wide parking area plus an 8-foot-wide loading area). (Planning)

    c. An 'exterior routes of travel' site accessibility plan incorporating slope, cross-slope, width, pedestrian ramps, curb ramps, handrails, signage, detectable warnings or speed limit signs or equivalent means shall comprise part of the site improvement plans submitted to City for review, prior to building plan check approvals. This site accessibility plan shall also include:

        i. Accessible parking stalls shall be dispersed and located closest to accessible entrances. The total number of accessible parking spaces shall be established by Table 11B-208.2 of the CBC.

        ii. Accessible Parking spaces and crosswalks shall be signed, marked and maintained as required by Chapter 11 of the CBC.

        iii. Accessible parking and exterior route of travel shall comply with CBC, Sections 11B-206 and 11B-208. (Building)

10. Signs and/or striping shall be provided on-site as required by the Planning Department to control on-site traffic movements. Parking lot striping and signage shall be maintained in a visible and legible manner. (Planning)

11. The plans submitted to the Building Division for permits shall indicate all approved revisions/alterations as approved by the Commission including all conditions of approval. (Planning)

12. The project Landscape Plans shall comply with the following:

    a. The Landscape Plan shall indicate the location of, and be designed to avoid conflicts with, all pole-mounted light fixtures and utility equipment including (but not limited to) electric transformers, switchgear, and overhead lines; backflow preventers; fire department connections; and public

water, sewer, and storm drain facilities. (Planning, Fire, Environmental Utilities, Electric, Engineering)

b. The tree plantings in the parking lot shall be designed to provide a minimum of 50% shade coverage after 15 years. (Planning)

c. At a minimum, landscaped areas not covered with live material shall be covered with a rock, (3") bark (no shredded bark) or (3") mulch covering. (Planning)

d. The landscape plan shall comply with the Landscape Guidelines outlined in the Community Design Guidelines and the City of Roseville Water Efficient Landscape Ordinance. (Planning, Environmental Utilities)

e. Landscaping adjacent to preserve areas shall consist of California native, drought-tolerant groundcover, shrubs, plants, and trees. (Open Space, Planning)

f. All landscaping in areas containing electrical service equipment shall conform to the Electric Department's Landscape Requirements and Work Clearances as outlined in Section 10.00 of the Departments "Specification for Commercial Construction." (Electric)

g. Slopes within landscape planters shall be no more than 3:1. A two-foot flat bench located at back-of-walk shall be included in the landscape area to slow or allow absorption of nuisance run-off from the planters. (Parks, Recreation, and Libraries)

h. All landscaping shall conform to the standards of crime prevention through environmental design with the intent to create natural surveillance, controlling access, and territorial reinforcement to property boundaries. (Police)

13. All mechanical and electrical equipment (including switch gear) proposed shall be shown on the building plans. The equipment shall be fully screened from public streets and the surrounding properties. (Planning)

14. At the time of building permit application and plan submittal, the project applicant shall submit a proposed plan which shows the proposed addressing for the building and dwelling unit numbers. The Building Official, or the designee, shall approve said plan prior to building permit approval. Refer to the *City of Roseville Addressing Guidelines*. (Building)

15. A separate Architectural Site Accessibility Plan which details the project's site accessibility information as required by California Title 24, Part 2 shall be submitted as part of the project Building Permit Plans. (Building)

16. For Multiple Building Complexes: As part of the required Architectural Site Accessibility Plan, the developer shall delineate the extent of the site accessibility improvements being installed as part of the initial improvements for the project, and those that are planned to be developed as part of subsequent phases (i.e. around future pad buildings). (Building)

17. Building permit plans shall comply with all applicable code requirements (California Building Code – CBC – based on the International Building Code, California Green Building Standards Code–CGBSC, California Mechanical Code – CMC – based on the Uniform Mechanical Code, California Plumbing Code – CPC – based on the Uniform Plumbing Code, California Fire Code – CFC – based on the International Fire Code – with City of Roseville Amendments – RFC, California Electrical Code – CEC – based on the National Electrical Code, and California Energy Standards – CEC T-24 Part 6), California Title 24 and the American with Disabilities Act - ADA requirements, and all State and Federally mandated requirements in effect at the time of submittal for building permits (contact the Building Division for applicable Code editions). (Building)

18. Maintenance of copy of building plans: Health and Safety Code section 19850 requires the building department of every city or county to maintain an official copy of the building plans for the life of the building. As such, each individual building shall be submitted as a separate submittal package. Building plan review, permit issuance and archiving is based on each individual building address. (Building)

19. For all work to be performed off-site, permission to enter and construct shall be obtained from the property owner, in the form of a notarized right-of-entry. Said notarized right-of-entry shall be provided to Development Services - Engineering prior to approval of any plans. (Engineering)

20. The Improvement Plans shall include a complete set of Landscape Plans. The Landscape Plans shall be approved with the Improvement Plans. (Planning, Engineering, Fire, Environmental Utilities, Electric)

21. A note shall be added to the grading plans that states:

    *"Prior to the commencement of grading operations, the contractor shall identify the site where the **excess/borrow** earthen material shall be imported/deposited. If the **borrow/deposit** site is within the City of Roseville, the contractor shall produce a report issued by a geotechnical engineer to verify that the exported materials are suitable for the intended fill, and shall show proof of all approved grading plans. Haul routes to be used shall be specified."* (Engineering)

22. The applicant shall dedicate all necessary rights-of-way or Public Utility Easement for the widening of any streets or transfer of public utilities across and over any portion of the property as required with this entitlement. A separate document shall be drafted for approval and acceptance by the City of Roseville, and recorded at the County Recorder's Office. (Engineering)

23. The applicant shall provide a 32' wide City of Roseville standard Type S driveway for entry into the project along Sixth Street. The existing power pole and guywire will need to be relocated. (Engineering)

24. Bike parking and electric vehicle parking spaces shall be provided per the California Green Building Standards. Carpool spaces shall also be provided per the City of Roseville's Transportation System Management (TSM) Ordinance, R.M.C Chapter 11.33. Bike rack/locker design and designated parking space markings and location shall be approved by Alternative Transportation. (Alternative Transportation, Building).

25. All storm drainage, including roof drains, shall be collected on site and treated with Best Management Practices (BMP's) per the City's Stormwater Quality Design Manual, which includes trash capture requirements. All storm water shall be routed to the nearest existing storm drain system or natural drainage facility. Drain outfalls shall extend down to the receiving water and shall be constructed with adequate velocity attenuation devices. The grading/improvement plans for the site shall be accompanied with a shed map that defines that area tributary to this site and all drainage facilities shall be designed to accommodate the tributary flow. The storm drain system and proposed BMP's shall be privately owned and maintained by the property owner. Prior to the issuance of any permits, the owner shall enter into a maintenance agreement with the City for the maintenance of the proposed BMP's. (Engineering)

26. As part of the construction documents, the applicant shall provide detention calculations/details and soil infiltration analysis that shows the overall drainage system, as designed, will provide sufficient water quality and detention. (Engineering)

27. Prior to the approval of the Improvement Plans, the project proponent shall provide proof of preparation and submittal of a Storm Water Pollution Prevention Plan (SWPPP) to the Regional Water Quality Control Board (RWQCB). Proof shall be in the form of the Waste Discharge Identification Number (WDID#), provided to the applicant from RWQCB, placed on the coversheet of the

improvement plans. Upon approval of the improvement plans, a copy of the SWPPP shall be required onsite and available for viewing by City inspection staff upon request. (Engineering)

28. To ensure that the design for any necessary widening, construction, or modifications of Public Streets does not conflict with existing dry utilities generally located behind the curb and gutter, and prior to the submittal of design drawings for those frontage improvements, the project proponent shall have the existing dry utilities pot holed for verification of location and depth. (Engineering)

29. Sight distances for all driveways shall be clearly shown on the improvement plans to verify that minimum standards are achieved. It will be the responsibility of the project proponent to provide appropriate landscaping and improvement plans, and to relocate and/or modify existing facilities as needed to meet these design objectives. (Engineering)

30. The applicant shall remove and reconstruct any existing damaged curb, gutter, and sidewalk along the property frontage. During plan check of the improvement plans and/or during inspection, Public Works will designate the exact areas to be reconstructed. Any existing public facilities damaged during the course of construction shall be repaired by the property owner and at the property owner's expense, to the satisfaction of the City. (Engineering)

31. Prior to the approval of the improvement plans, it will be the project proponent's responsibility to pay the standard City Trench Cut Recovery Fee for any cuts within the City streets that are required for the installation of underground utilities. (Engineering)

32. Prior to the issuance of building permits, the property owner shall pay into the following fee programs: Citywide Drainage Fee, Citywide Traffic Mitigation Fee (TMF), Highway 65 Joint Partners Association (JPA), South Placer Regional Transportation Authority (SPRTA), and City/County Fee. (Engineering)

33. Prior to the issuance of a grading permit or approval of Improvement Plans, the grading plans shall clearly identify all existing water, sewer and recycled water utilities within the boundaries of the project (including adjoining public right of way). Existing utilities shall be identified in plan-view and in profile-view where grading activities will modify existing site elevations over top of or within 15 feet of the utility. Any utilities that could potentially be impacted by the project shall be clearly identified along with the proposed protection measures. The developer shall be responsible for taking measures and incurring costs associated with protecting the existing water, sewer and recycled water utilities to the satisfaction of the Environmental Utilities Director. (Environmental Utilities)

34. The applicant shall pay all applicable water and sewer fees. (Environmental Utilities)

35. Water and sewer infrastructure shall be designed pursuant to the adopted City of Roseville Improvement Standards and the City of Roseville Construction Standards and shall include:

    a. Utilities or permanent structures shall not be located within the area which would be disturbed by an open trench needed to expose sewer trunk mains deeper than 12 feet unless approved by Environmental Utilities in these conditions. The area needed to construct the trench is a sloped cone above the sewer main. The cone shall have 1:1 side slopes.

    b. Water, sewer and recycled mains shall not exceed a depth of 12 feet below finished grade, unless authorized in these conditions of approval.

    c. All sewer manholes shall have all-weather, 10-ton vehicle access unless otherwise authorized by these conditions of approval. (Environmental Utilities)

36. Refuse service will be provided via toters for each individual unit. Units 7-12 will be required to locate their toters for service along the north side of Unit 8/common area as shown on the entitlement exhibits. Units 1-6 shall locate their toters in front of their corresponding units on service day.

37. The design and installation of all fire protection equipment shall conform to the California Fire Code and the amendments adopted by the City of Roseville, along with all standards and policies implemented by the Roseville Fire Department. (Fire)

38. The applicable codes and standards adopted by the City shall be enforced at the time construction plans have been submitted to the City for permitting. (Fire)

39. The Electric Department requires the submittal of the following information in order to complete the final electric design for the project:

    a. one (1) set of improvement plans

    b. load calculations

    c. electrical panel one-line drawings

40. All on-site external lighting shall be installed and directed to have no off-site glare. Lighting within the parking areas and pedestrian walkways shall provide a maintained minimum of one (1) foot-candle, and 0.5 foot-candle of light, respectively. All exterior light fixtures shall be vandal resistant. (Planning, Police)

41. The parking lot shall have properly posted signs that state the use of the parking area is for the exclusive use of employees and customers of this project. (See California Vehicle Code Sections 22507.8, 22511.5, 22511.8, 22658(a), and the City of Roseville Municipal Code Section 11.20.110). The location of the signs shall be shown on the approved site plan. (Planning, Police)

42. It is the developer's responsibility to notify PG&E of any work required on PG&E facilities. (PG&E)

DURING CONSTRUCTION & PRIOR TO ISSUANCE OF OCCUPANCY PERMITS:

43. Any backflow preventers visible from the street shall be painted green to blend in with the surrounding landscaping. The backflow preventers shall be screened with landscaping and shall comply with the following criteria:

    a. There shall be a minimum clearance of four feet (4'), on all sides, from the backflow preventer to the landscaping.

    b. For maintenance purposes, the landscaping shall only be installed on three sides and the plant material shall not have thorns.

    c. The control valves and the water meter shall be physically unobstructed.

    d. The backflow preventer shall be covered with a green cover that will provide insulation. (Planning, Environmental Utilities)

44. The following easements shall be provided by separate instrument and shown on the site plan, unless otherwise provided for in these conditions:

    a. Additional internal easements will be required to cover primary electrical facilities to the project when the final electrical design is completed. (Electric)

45. Easement widths shall comply with the City's Improvement Standards and Construction Standards. Separate document easements required by the City shall be prepared in accordance with the City's "Policy for Dedication of Easements to the City of Roseville". All legal descriptions shall be prepared by a licensed land Surveyor. All existing public utility, electric, water, sewer and reclaimed water

easements shall be maintained unless otherwise authorized by these conditions of approval. (Engineering, Environmental Utilities, Electric)

46. Inspection of the potable water supply system on new commercial/industrial/office projects shall be as follows:

    a. The Environmental Utilities Inspector will inspect all potable water supply up to the downstream side of the backflow preventer.

    b. The property owner/applicant shall be responsible for that portion of the water supply system from the backflow preventer to the building. The builder/contractor shall engage a qualified inspector to approve the installation of this portion of the water supply. The Building Division will require from the builder/contractor, a written document certifying that this portion of the potable water supply has been installed per improvement plans and in accordance with the Uniform Plumbing Code. This certificate of compliance shall be submitted to the Building Division before a temporary occupancy or a building final is approved.

    c. The building inspectors will exclusively inspect all potable water supply systems for the building from the shutoff valve at the building and downstream within the building. (Building, Environmental Utilities)

47. All improvements being constructed in accordance with the approved grading and improvement plans shall be accepted as complete by the City. (Engineering)

48. The words "traffic control appurtenances" shall be included in the list of utilities allowed in public utilities easements (PUE's) located along public roadways. (Engineering)

49. Water, sewer and reclaimed water shall be constructed pursuant to the adopted City of Roseville Improvement Standards and the City of Roseville Construction Standards. (Environmental Utilities)

50. All water backflow devices shall be tested and approved by the Environmental Utilities Department. (Environmental Utilities)

51. All Electric Department facilities, including streetlights where applicable, shall be designed and built to the "City of Roseville Specifications for Commercial Construction." (Electric)

52. The City of Roseville Electric Department has electrical construction charges which are to be paid by the developer and which are explained in the City of Roseville "Specification for Residential Construction." These charges will be determined upon completion of the final electrical design. (Electric)

53. Any relocation, rearrangement, or change of existing electric facilities due to this development shall be at the developer's expense. (Electric)

54. Any facilities proposed for placement within public/electric utility easements shall be subject to review and approval by the Electric Department before any work commences in these areas. This includes, but is not limited to, landscaping, lighting, paving, signs, trees, walls, and structures of any type. (Electric)

55. All electric metering shall be directly outside accessible. This can be accomplished in any of the following ways:

    a. Locate the metered service panel on the outside of the building.

b. Locate the metered service panel in a service room with a door that opens directly to the outside. The developer will be required to provide a key to the door for placement in a lock box to be installed on the outside of the door. Any doors leading from the service room to other areas of the building shall be secured to prohibit unauthorized entry. (Electric)

56. It is the responsibility of the developer to ensure that all existing electric facilities remain free and clear of any obstruction during construction and when the project is complete. (Electric)

57. Developer will be responsible for all cost associated with installing new power pole on the southeast corner of the property.

58. Developer responsible for installing underground infrastructure to provide power to subdivision.

OTHER CONDITIONS OF APPROVAL:

59. The garages shall be maintained as the required parking spaces for the tenants of the complex. Incidental storage can be provided within the garages. However, storage shall not occur within the garages in such a fashion as to restrict a tenant's ability to park within the garage. (Planning)

60. Signs shown on the elevations are not approved as part of the Design Review Permit. A Sign Permit is required for all project signs. (Planning)

61. Following the installation of the landscaping, all landscape material shall be maintained in a healthy and weed-free condition; dead plant material shall be replaced immediately. All trees shall be maintained and pruned in accordance with the accepted practices of the International Society of Arboriculture (ISA). (Planning)

62. The required width of fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. Minimum required widths and vertical clearances established by the Fire Code shall be maintained at all times during construction. Closure of accesses for fire apparatus by gates, barricades and other devices shall be prohibited unless approved by the Fire Chief. (Fire)

63. Temporary aboveground storage tanks may be used at construction sites for diesel fuel only and shall not exceed 1,000 gallon capacity. Tanks shall comply with all provisions found within the Fire Code. A Fire Department Permit shall be obtained prior to tank installation. The permit shall expire after 90 days from the date of issuance, unless extended by the Fire Chief. (Fire)

64. If site survey or earth moving work results in the discovery of hazardous materials in containers or what appears to be hazardous wastes released into the ground, the contractor or person responsible for the building permit must notify the Roseville Fire Department immediately. A representative from the Fire Department will make a determination as to whether the incident is reportable of not and if site remediation is required. (Fire)

65. The location and design of the gas service shall be determined by PG&E. The design of the gas service for this project shall not begin until PG&E has received a full set of City approved improvement plans for the project. (PG&E)

66. The project is subject to the noise standards established in the City's Noise Ordinance. In accordance with the City's Noise Ordinance, project construction is exempt between the hours of seven a.m. and seven p.m. Monday through Friday, and between the hours of eight a.m. and eight p.m. Saturday and Sunday, provided that all construction equipment shall be fitted with factory installed muffling devices and be maintained in good working order. (Building)

67. The developer (or designated consultant) shall certify that the building foundation location has been placed according to all approved setback requirements shown on the approved site plan. The

developer shall prepare a written statement confirming building placement and provide an original copy to the City Building Division Field Inspector at the time of or prior to the foundation inspection. (Building)

68. Prior to Certificate of Occupancy, the applicant may apply for a Temporary Certificate of Occupancy (TCO) of the building. If a TCO is desired, the applicant must submit a written request to the Building Division a minimum of thirty (30) days prior to the expected temporary occupancy date and shall include a schedule for occupancy and a description of the purpose for the Temporary Certificate of Occupancy. (Building)

69. Concurrent with submittal for plan check and prior to a request for final building inspection, the applicant may request City approval of an occupancy phasing plan to allow individual or multiple building occupancies. This request shall be made in writing to the Building Division and shall include the following:

    a. A description of measures that will be undertaken to minimize conflict between residents/building occupants and construction traffic (e.g. fencing, etc.);

    b. A phasing plan showing the proposed buildings, internal roads and access routes, landscaping, trash enclosure locations, and any other improvements planned for each phase; and

    c. An estimated time frame for each phase and a specific date for the first phase. (Planning, Building)

CONDITIONS OF APPROVAL FOR THE TREE PERMIT – FILE #PL24-1103

PRIOR TO ISSUANCE OF ANY PERMITS OR ANY CONSTRUCTION ON-SITE

1. All recommendations contained in the Arborist Report (Attachment 1) are incorporated by reference into these conditions, except as modified herein. (Planning)

2. Trees listed for removal in the Arborist Report (# 4568, 4569, 4570, 4571, 4581, 4583, 4591, and 4593) are approved for removal with this tree permit. All other native oak trees shall remain in place. Trees to be removed shall be clearly marked in the field and inspected by Planning Staff prior to removal. Removal of the trees shall be performed by or under the supervision of a certified arborist. (Planning)

3. The developer shall be responsible for the replacement of the total number of inches proposed for removal prior to any tree removal. The total number of inches for this project is 139. Mitigation must be provided prior to tree removal unless otherwise approved in the tree replacement plan or in these conditions. (Planning)

4. No activity shall be permitted within the protected zone of any native oak tree beyond those identified by this report. Encroachment into the protected zone of the Trees listed in the Arborist Report (Attachment 1) and described in the staff report is permitted. (Planning)

5. A $10,000 cash deposit or bond (or other means of security provided to the satisfaction of the Planning Division) shall be posted to ensure the preservation of all remaining trees during construction. The cash deposit or bond shall be posted in a form approved by the City Attorney. Each occurrence of a violation on any condition regarding tree preservation shall result in forfeiture of all or a portion of the cash deposit or bond. (Planning)

6. A violation of any of the conditions of this Tree Permit is a violation of the Roseville Municipal Code, the Zoning Ordinance (Chapter 19.74) and the Tree Preservation Ordinance (Chapter 19.66). Penalties for violation of any of the conditions of approval may include forfeiture of the bond, suspension or revocation of the permit, payment of restitution, and criminal penalties. (Planning)

7. A fencing plan shall be shown on the approved site plan and/or improvement plans demonstrating the Protected Zone for the affected trees. A maximum of three feet beyond the edge of the walls, driveways, or walkways will be allowed for construction activity and shall be shown on the fencing plan. The fencing plan shall be reviewed and approved by the Planning Division prior to the placement of the protective fencing. (Planning)

8. The applicant shall install a minimum of a five-foot high chain link fence (or acceptable alternative) at the outermost edge of the Protected Zone of the oak tree. Where encroachment is permitted pursuant to Condition 4, above, the fencing for encroachments shall be installed at the limit of construction activity. The applicant shall install signs at two equidistant locations on the temporary fence that are clearly visible from the front of the lot and where construction activity will occur. The size of each sign shall be a minimum of two feet (2') by two feet (2') and must contain the following language: "WARNING THIS FENCE SHALL NOT BE REMOVED OR RELOCATED WITHOUT WRITTEN AUTHORIZATION FROM THE PLANNING DIVISION". (Planning)

9. Once the fencing is installed, the applicant shall schedule an appointment with the Planning Division to inspect and approve the temporary fencing before beginning any construction. (Planning)

10. The applicant shall arrange with the arborist to perform, and certify in writing, the completion of deadwooding, fertilization, and all other work recommended for completion prior to the approval of improvement plans. Pruning shall be done by an Arborist or under the direct supervision of a Certified Arborist, in conformance with International Society of Arboriculture (I.S.A.) standards. Any watering and deep root fertilization which the arborist deems necessary to protect the health of the trees as noted in the arborist report or as otherwise required by the arborist shall be completed by the applicant. (Planning)

11. A utility trenching pathway plan shall be submitted depicting all of the following systems: storm drains, sewers, water mains, and underground utilities. The trenching pathway plan shall show the proposed locations of all lateral lines. (Planning)

12. A Site Planning Meeting shall be held with the applicant, the applicant's primary contractor, the Planning Division and the Engineering Division to review this permit, the approved grading or improvement plans, and the tree fencing prior to any grading on-site. The Developer shall call the Planning Division and Engineering Division two weeks prior to the start of grading work to schedule the meeting and fencing inspection. (Planning)

13. The following information must be located on-site during construction activities: Arborist Report, approved site plan/improvement plans including fencing plan, and conditions of approval for the Tree Permit. All construction must follow the approved plans for this tree permit without exception. (Planning)

14. All preservation devices (aeration systems, oak tree wells, drains, special paving, etc.) shall be designed and installed as required by these conditions and the arborist's recommendations, and shall be shown on the improvement plans or grading plans. (Planning)

15. If any native ground surface fabric within the Protected Zone must be removed for any reason, it shall be replaced within forty-eight (48) hours. (Planning)

16. Storage or parking of materials, equipment, or vehicles is not permitted within the Protected Zone of any oak tree. Vehicles and other heavy equipment shall not be operated within the Protected Zone of any oak tree. (Planning)

17. Where recommended by the arborist, portions of the foundation shall be hand dug under the direct supervision of the project arborist. The certified arborist shall immediately treat any severed or damaged roots. Minor roots less than one (1) inch in diameter may be cut, but damaged roots shall be traced back and cleanly cut behind any split, cracked or damaged area. Major roots over one (1) inch in diameter may not be cut without approval of an arborist and any arborist recommendations shall be implemented. (Planning)

18. The temporary fencing shall remain in place throughout the entire construction period and shall not be removed without obtaining written authorization from the Planning Division. In no event shall the fencing be removed before the written authorization is received from the Planning Division. (Planning)

PRIOR TO ISSUANCE OF FINAL

19. Within 5 days of the completion of construction, a Certification Letter from a certified arborist shall be submitted to and approved by the Planning Division. The certification letter shall attest to all of the work (regulated activity) that was conducted in the protected zone of the tree, either being in conformance with this permit or of the required mitigation still needing to be performed. (Planning)

20. The approval of this Tree Permit shall expire on July 17, 2027. (Planning)

ATTACHMENTS

1. Arborist Report

EXHIBITS

A. Initial Study / Mitigated Negative Declaration and Mitigation Monitoring Reporting Program
B. Project Plans

Note to Applicant and/or Developer: Please contact Planning Division staff at (916) 774-5276 prior to the Design Committee meeting if you have any questions on any of the recommended conditions for your project. If you challenge the decision of the Design Committee in court, you may be limited to raising only those issues which you or someone else raised at the public hearing held for this project, or in written correspondence delivered to the Planning Manager at, or prior to, the public hearing.

SAF Certified Urban & Community Forester #108
ISA Certified Arborist #WE - 0407AM
ISA Qualified Tree Risk Assessor
ASCA Qualified Tree Appraiser
CA Licensed Pest Control Advisor #71479

Member
American Society of Consulting Arborists
International Society of Arboriculture
Society of American Foresters
Street Tree Seminar, Inc.

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CLIENT: Bhavnnarayana Avula
Chandana Avula
10354 Colby Avenue
Cupertino, CA. 95014

PROJECT NAME: 412 6th Street
Roseville, CA 95678

ASSIGNMENT: Evaluation of design and its impact on existing trees

PLAN EVAL DATE: March13, 2025

REPORT DATE: April 7, 2025

INTRODUCTION: This report addresses the impact of five proposed duplex buildings with garages and two Additional Dwelling Units (ADU) to be constructed on a 1.1 acre lot located at 412 6th Street in the City of Roseville. The primary design objective for the new community was to preserve as many of the existing mature trees as possible by positioning the duplexes and the ADU's in locations that will have the least impact on the existing trees and allow room for new trees. The demolition plan specifies 11 trees for removal. The site plan specifies a 20 foot wide asphalt driveway that will run parallel with the western property line until it turns eastward near the northern end of the lot and ends at the east property line. The driveways will have a permeable surface. The grading plan calls out trenching for utilities and raised building pads and a lighting plan specifies low voltage landscape lighting. The landscape plan calls for new screening plant material and new trees along the property boundaries. At the heart of the site is a common oak grove area with a decomposed granite pathway, picnic tables and chairs.

SITE OVERVIEW

EVALUATION METHODOLOGY

The health, structure and condition of the subject trees were based on recognized national standard as established by the Council of Tree and Landscape Appraisers and the International Society of Arboriculture that uses a numeric scale of 5 (highest) to 0 (dead). The table below shows the ratings used during the field inspection.

No problem(s)	Excellent	5	No problems found from a visual ground inspection. Structurally, the trees have properly spaced branches and near perfect.
No apparent problem(s)	Good	4	The tree is in good condition and there are no apparent problems that a Certified Arborist can see from a visual ground inspection. If potential structural or health problems are tended to at this stage future risk can be reduced and/or more serious health problems can be averted.
Minor problem(s)	Fair	3	The tree is in fair condition. There are some minor structural or health problems that pose no immediate danger. When the recommended actions in an arborist report are completed correctly the defect(s) can be minimized or eliminated and/or health can be improved.
Major or uncorrectable problems (2)	Poor	2	The tree has major structural issues. Retention would require additional evaluation to determine if health and structure could be improved. Risk should be assessed as it has structural conditions which indicate there is a high likelihood of some type of failure. Tree rated 2 should be removed if these additional evaluations will not be performed.
Extreme problem(s)	Hazardous	1	The problems are extreme. This rating is assigned to a tree that has structural and/or health problems that no amount of work or effort can change. The issues may or may not be considered a dangerous situation.
Dead	Dead	0	This indicates the tree has no significant sign of life.

Development impacts are based on distance relationships between the locations of the trees and the limits of grading and/or construction. Future field inspections and findings during the project at the time of grading and excavation can also change impacts to the trees on the adjacent properties as well as on site trees. Closely followed tree protection guidelines and requirements will result in a higher chance of their survival, while requirements that are overlooked will lower their chance of survival. Construction impacts are rated as follows:

Impact	**Long Term Result of Impact:**
Negligible	Tree is unlikely to show any symptoms. Chance of survival post development is excellent. Impacts to the Protected Root Zone are less than 5%.
Minor	Tree is likely to show minor symptoms. Chance of survival post development is good. Impacts to the Protected Root Zone are less than 15% and species tolerance is good.
Moderate	Tree is likely to show moderate symptoms. Chance of survival post development is fair. Impacts to the Protected Root Zone are less than 35% and species tolerance is good or moderate.
Severe	Tree is likely to show moderate symptoms annually and a pattern of decline. Chance of long-term survival post development is low. Impacts to the Protected Root Zone are up to 50% and species tolerance is moderate to poor.
Critical	Tree is likely to show moderate to severe symptoms annually and a pattern of decline. Chance of long-term survival post development is negligible. Impacts to the Protected Root Zone are up to 80%.
Total Loss	Tree is within the building footprint or grading will require removal.

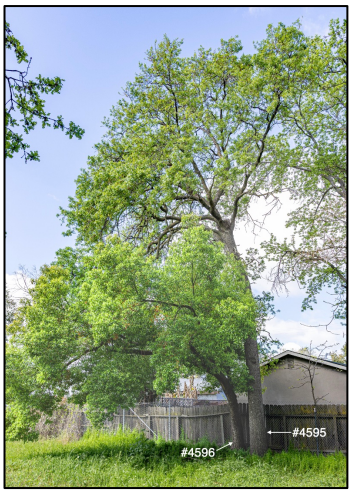
Walter Warriner
Consulting Arborist

PLAN ANALYSIS

There are 11 trees on the site that will be critically impacted by construction and should be removed during the demolition phase. There is a neighboring tree that should also be removed.

There are at least 6 trees that should be considered "shared trees" due their proximity to the property line. Trees with trunks that straddle a property line of an adjoining property typically belong to both landowners (Civil Code Section 834). In such cases there is only a limited right to cut any portion of the tree. Since the law is not entirely clear as to what right an owner on either side of a boundary has to cut any portion of a tree where the trunk straddles the property line, treatment of these trees will need to be discussed with the adjacent property owners in order to arrive at a mutually agreeable decision prior to demolition.

There are 8 trees located on adjacent properties that will need to be included with the *Tree Protection Zones* (TPZ's) and will need to be established prior to construction.



There are 2 trees next to the western property line, #4596, a camphor and #4595, a valley oak (photos at right) that are codominant where the valley oak depends on the camphor. Retaining the camphor will require specific pruning treatments for clearance. Camphor trees have a low tolerance for root damage so specialized excavation and root pruning will be required. Root pruning requirements will not be known until they are excavated. In the event the camphor will not tolerate the required root pruning removal would be the option.

The canopy of the camphor has been shading the trunk of the valley oak which is now dependent on that shade. Removal of the camphor tree will expose the trunk of the valley oak to sunscald. Sunscald occurs when bark that is usually shaded by foliage becomes fully exposed to sunlight. The excessive sunlight causes the tissue in the bark to become so hot that the cells in the cambium start to die. This results in dried out bark that flakes off creating lesions in the bark that over time open up into large wounds. The damaged area then becomes a decay pocket that is sometimes not recognized. These types of wounds can go undetected but will eventually weaken the stem of the valley oak which could lead to its failure or ultimate decline.

Walter Warriner
Consulting Arborist

Removing the camphor would also leave the remaining valley oak with a low live crown ratio. The live crown ratio (LCR) is the ratio of crown length to total tree height. The LCR is affected by species, growing conditions, pruning history, previous branch failures, and natural branch shedding. A low LCR is created when the crowns are over-pruned. In this case a low LCR would be created with the removal of the camphor. A low LCR is a condition of concern, especially when the tree is exposed to higher wind conditions that follow soil saturating rainfall. A general rule for urban trees is when the LCR is less than 30% there is an increased likelihood of whole tree failure when taking in to account site-specific factors such as construction and excavation that could contribute to tree instability.

Tree #4591 (photo below left) is located in the northwest section of the site and will likely be impacted by grading for a parking area. Retaining this tree will require careful excavation, specific root pruning and regular care during the construction phase. Retaining the tree also depends on the amount of roots that are cut at the time of grading. In the event the tree could become destabilized as a result of excessive root loss the tree will need to be removed.

All of the trees that have been identified for retention will be impacted by the project. The grading throughout the site impacts up to 50% and more of their root zones and construction of the individual duplexes will require specific pruning treatments to provide sufficient building clearance.

Mature trees that have been growing in natural conditions tend to have a low tolerance to changes in their growing environment. Without proper maintenance all of the trees are likely to show moderate symptoms of stress and a pattern of decline over the next 2 – 5 years and their chance of long-term survival post construction is low.

Long term success for this project depends on a thorough tree protection and maintenance program that begins during the design phase, continues through the life of the project and has a long rang post-construction maintenance plan.

The typical TPZ includes the root plate and anchoring roots that are under the outermost edge of the tree's canopy spread and requires the most protection and care. The industry accepted calculation for a mature tree's protection zone provides a radius of 1 foot for every 1 inch of trunk diameter when the trunk is measured at 4½ feet above grade. The City of Roseville requires an additional 1 foot beyond the dripline of the protected tree. Due to the layout of the site, standard tree protection zones that encompass the entire canopy of the trees would be impractical as it would inhibit most of the grading and much of the construction. However, establishing grow zones that are consistent with the grading requirements creates conditions that will help the trees tolerate the impact of root pruning and encourage new root growth to be generated within the boundaries of the tree protection zones.

There are 22 trees that have been carefully incorporated into the design of the individual structures and connecting driveway that will require unique TPZ's during construction. Level 2 Risk Assessments should be conducted on all 22 trees to determine final suitability for retention.

The subject trees currently pose a low level of risk because up to this point there have been very few targets within the fall zones of any of the subject trees and the consequences of any branch failures have been insignificant.

During the initial site inspection it was noted that the trees did not appear to have a pruning history with some trees having structural defects that should be corrected through pruning. The initial site visit did not include a risk assessment, but now that a proposed design has been produced the risk level of all trees that are proposed for retention should be assessed and a regular tree maintenance program should be developed.

The tree risk assessments are based on the standards and practices described within the *American National Standard Institute (ANSI) A300 (Part 9) Tree Risk Assessment; a. Tree Structure Assessment - Standard Practices*. All retained trees should be assessed through a ground-based, Level 2 Basic Assessment in conformance with this Standard.

A Level 2 inspection and assessment is conducted from various vantage points on the ground immediately adjacent to and at a distance from the subject trees. No special tools or equipment are required to conduct these assessments. The time frame applied to estimate the likelihood of failure of a tree or one of its parts would be for 36 months.

Tree and site conditions that should be inspected and assessed include but are not limited to:

- Tree Characteristics: Tree species are visually identified based on expertise. Tree diameter is measured and height is estimated based on the surrounding landscape features. Tree health is gauged through observations of foliage coloration, form and density, and general growth rates. Other tree characteristics are visually inspected and assessed using visual signs and symptoms identified in accordance with the expertise of the Arborist.

- Root Condition: The impact of root pruning for construction, or damage to the root system or root crown that would be evident through observations of the tree crown condition and the condition of roots visible on the ground surface should be inspected and evaluated.

- Trunk Defects: All retained trees should be inspected for symptoms of decay, cavities, large cracks, and other major defects that are readily visible and/or represent a symptom of structural decline that could affect tree stability.

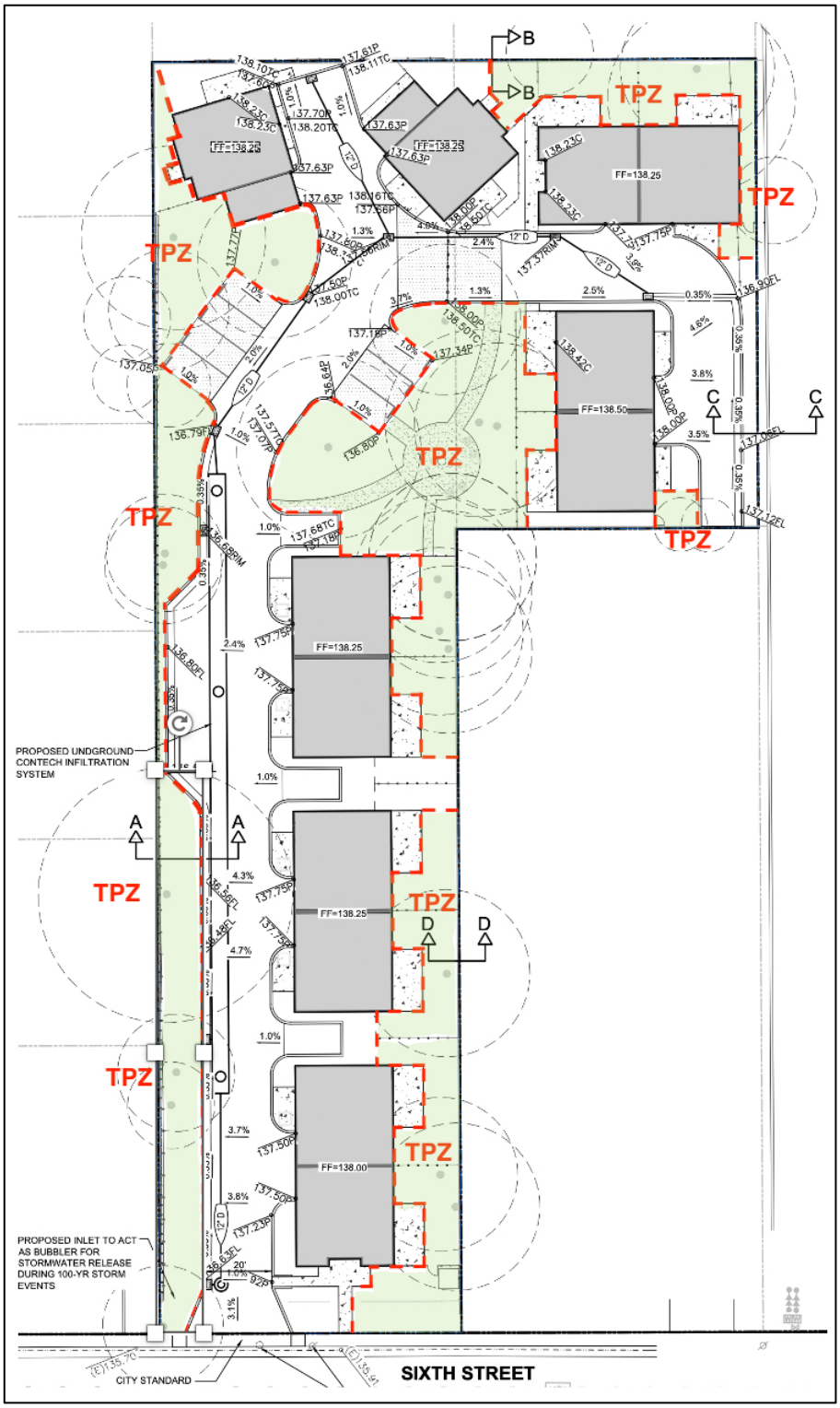
- Scaffold Branch and Crown Defects: Canopies should be inspected for large dead branches, multiple and/or weak attachments, excessive end weight, and large broken branches hanging over targets. The risk assessment should also include future pruning frequencies and specific pruning requirements for regular canopy maintenance.

- Site Factors: Signs of construction impacts that could have compromised the root zones and/or the TPZ's. Observations or evidence of construction activities that may have resulted in damaged roots, or otherwise compromised a tree's structural stability.

- Targets: After construction has been completed and the homes are occupied, the presence of people and the location of the new homes in relation to the fall zones of the trees should be evaluated to estimate the likelihood of tree failure, a potential impact and the consequences of a tree failure.

TREE PROTECTION ZONES

Specialized TPZ's (shown in the diagram below) will need to be to developed as grow zones for the retained trees. These grow zones will provide an environment that minimizes the negative impact of grading and construction and must be established prior to any construction activities.



TREE PROTECTION & LONG TERM MAINTENANCE GUIDELINES

Prior to the final design and the development of actual construction drawings and after a Level 2 Tree Risk Assessment has been completed, *Tree Protection Zones (TPZ's)* will need to be established. The TPZ's will act as grow zones for the individual trees that are to be retained. Implementation of the tree protection program must be completed prior to the commencement of any construction activities and involves the following steps:

- Survey the site to determine the specific layouts of the driveway sections, parking areas, building footprints and patios that impact the trees to develop the individual TPZ's.

    - The *Tree Protection Zone* shall be shown on all site plans including but not limited to: Demolition, Grading, Irrigation, Electrical, Landscape and Lighting, etc. Improvements or activities such as paving, utilities, trenching and other ancillary activities shall occur outside the *Tree Protection Zone,* unless otherwise specified. The protection fence shall serve as the boundary of a designated *Tree Protection Zone.*

- Prune all roots that extend into the areas that are to going to be impacted by grading for the driveway, parking areas and building footprints.

- Fence off all grow zones.

- Apply mulch nitrolized mulch throughout all grow zones.

- Establish a regular irrigation program.

- Hire a Certified Arborist to conduct weekly inspections and evaluate tree health.

- Conduct a pre-construction meeting with the general contractor, sub-contractors, construction personnel and City of staff. The purpose of the meeting will be to provide information on tree protection guidelines and to assure that everyone fully understands the tree protection measures concerning the project site, staging areas, material deliveries and maintenance.

EVALUATION OF TREES ON ADJACENT PROPERTIES

Trees listed in red have been identified for removal.

Tree ID #	Common Name (*Botanical name*)	Est. Trunk Diameter	Condition Rating	Impact of Construction	Est. TPZ radius	Height & Width	Crown Class	Comments
NT#1	Valley oak (Quercus lobata)	12"	Good	Severe	15 - 20 ft	25' - 30' h 35' - 40' w	Codominant	Possible street tree? Drain line will impact surface roots
NT #2	Mulberry (Morus alba)	multi	Poor	Critical	remove	N/A	Codominant	Extensive decay, canopy consists of epicormic growth. Remove
NT #3	Mimosa (Albizzia julibrissn)	N/A	Good	Severe	15 - 20 ft	25' - 30' h 20' - 25' w	Codominant	Establish TPZ. Roots likely impacted by construction.
NT #4	Arbor Vitae (Thuja occidentalis)	N/A	Good	Severe	25 - 30 ft	25' - 30' h 25' - 30' w	Codominant	Establish TPZ. Roots likely impacted by construction.
NT #5	Valley oak (Quercus lobata)	12"	Good	Severe	25 - 30 ft	25' - 30' h 25' - 30' w	Codominant	Establish TPZ. Roots likely impacted by construction.
NT #6	Chinese pistache (Pistacia chinensis)	N/A	Good	Severe	15 - 20 ft	25' - 30' h 25' - 30' w	Codominant	Establish TPZ. Roots likely impacted by construction.
NT #7	Almond (Prunus dulcis)	8"	Fair	Severe	15 - 20 ft	15' - 20' h 15' - 20' w	Codominant	Establish TPZ. Roots likely impacted by construction
NT #8	Almond (Prunus dulcis)	8"	Fair	Severe	15 - 20 ft	15' - 20' h 15' - 20' w	Codominant	Establish TPZ. Roots likely impacted by construction

EVALUATION OF ON-SITE TREES

Trees listed in red have been identified for removal.

Tree Tag #	Common Name (*Genus species*)	Est. Trunk Diameter	Condition Rating	Const. Impacts	Estimated TPZ Radius	Canopy Dimension	Crown Class	Comments	Mitigation Fees
4599	Valley oak (Quercus lobata)	14”	Fair	Severe	15 - 20 ft	45' - 55' h 25' - 35' w	Suppressed	Show distance between trunk exterior and edge of excavation.	$1,652
4598	Valley oak (Quercus lobata)	24”	Fair	Severe	25 - 30 ft	65' - 75' h 35' - 45' w	Dominant	Show distance between trunk exterior and edge of excavation.	$2,832
4597	Valley oak (Quercus lobata)	36”	Good	Severe	40 - 45 ft	65' - 75' h 75' - 80' w	Dominant	Show distance between trunk exterior and edge of excavation.	$4,248
4596	Camphor (Cinnamomum camphora)	13”	Fair	Severe	15 - 20 ft	25' - 35' h 35' - 45' w	Suppressed	Prune for clearance prior to grading. Will require specific root pruning.	N/A
4595	Valley oak (Quercus lobata)	20”	Good	Severe	25 - 30 ft	25' - 35' h 35' - 45' w	Dominant	Show distance between trunk exterior and edge of excavation.	$2,360
4594	Valley oak (Quercus lobata)	22”	Fair	Severe	25 - 30 ft	55' - 60' h 55' - 60' w	Codominant	Show distance between trunk exterior and edge of excavation.	$2,596
4593	Valley oak (Quercus lobata)	22”	Fair	Total loss	remove	65' - 75' h 35' - 40' w	Codominant	Tree is within path of driveway and parking. Remove.	$2,596
4592	Pecan (Carya illinoensis)	14”	Good	Severe	15 - 20 ft	35' - 45' h 25' - 30' w	Codominant	Show distance between trunk exterior and edge of excavation.	N/A
4591	Valley oak (Quercus lobata)	20”	Fair	Severe	15 - 20 ft	65' - 75' h 35' - 40' w	Codominant	Tree is subordinate to #4593. Will require specific root pruning.	$2,360
4590	Pecan (Carya illinoensis)	20”	Good	Severe	20 - 25 ft	45' - 55' h 35' - 40' w	Codominant	Show distance between trunk exterior and edge of excavation.	N/A
4589	Valley oak (Quercus lobata)	14”	Fair	Severe	15 - 20 ft	65' - 75' h 55' - 60' w	Codominant	Show distance between trunk exterior and edge of excavation.	$1,652

Walter Warriner
Consulting Arborist

Tree Tag #	Common Name (*Genus species*)	Est. Trunk Diameter	Condition Rating	Const. Impacts	Estimated TPZ Radius	Canopy Dimension	Crown Class	Comments	Mitigation Fees
4588	Olive (Olea europea)	multi	Poor	Total loss	remove	20' - 25' h 35' - 45' w	Suppressed	Tree is within building footprint of the house & patio. Remove.	N/A
4587	Valley oak (Quercus lobata)	14”	Good	Severe	15 - 20 ft	65' - 75' h 45' - 50' w	Codominant	Show distance between trunk exterior and edge of excavation.	$1,652
4586	Valley oak (Quercus lobata)	24”	Fair	Severe	25 - 30 ft	50' - 60' h 40' - 50' w	Dominant	Show distance between trunk exterior and edge of excavation.	$2,832
4585	Pecan (Carya illinoensis)	18”	Fair	Total loss	remove	65' - 75' h 50' - 60' w	Dominant	Tree is within building footprint of the house & patio. Remove.	N/A
4584	Valley oak (Quercus lobata)	18’	Good	Severe	15 - 20 ft	45' - 50' h 45' - 50' w	Codominant	Show distance between trunk exterior and edge of excavation.	$2,124
4583	Interior live oak (Quercus wislizeni)	24”	Poor	Total loss	remove	55' - 65' h 55' - 65' w	Codominant	Tree is within building footprint of the house & patio. Remove.	$2,832
4582	Almond (Prunus dulcis)	multi	Poor	Total loss	remove	20' - 25' h 35' - 45' w	Dominant	Root zone of this tree will be impacted by driveway. Remove	N/A
4581	Interior live oak (Quercus wislizeni)	14”	Fair	Total loss	remove	35' - 45' h 35' - 45' w	Dominant	Tree is within building footprint of the house & patio. Remove.	$1,652
4580	Valley oak (Quercus lobata)	18”	Good	Severe	20 - 25 ft	55' - 60' h 55' - 60' w	Codominant	Show distance between trunk exterior and edge of excavation.	$2,124
4579	Valley oak (Quercus lobata)	24”	Good	Severe	25 - 30 ft	70' - 75' h 50' - 55' w	Codominant	Show distance between trunk exterior and edge of excavation.	$2,832
4578	Almond (Prunus dulcis)	15”	Poor	Total loss	remove	30' - 35' h 25' - 30' w	Codominant	This tree is 95% dead. Remove	N/A

Tree Tag #	Common Name (*Genus species*)	Trunk Diameter	Condition Rating	Const. Impacts	Estimated TPZ Radius	Canopy Dimension	Crown Class	Comments	Mitigation Fees
4577	Valley oak (Quercus lobata)	16”	Fair	Severe	remove	60' - 65' h 50' - 55' w	Codominant	Show distance between trunk exterior and edge of excavation.	$1,888
4576	Valley oak (Quercus lobata)	16”	Fair	Severe	remove	60' - 65' h 50' - 55' w	Codominant	Show distance between trunk exterior and edge of excavation.	$1,888
4575	Valley oak (Quercus lobata)	15”	Fair	Severe	remove	60' - 65' h 50' - 55' w	Codominant	Show distance between trunk exterior and edge of excavation.	$1,770
4574	Valley oak (Quercus lobata)	15”	Fair	Severe	remove	60' - 65' h 50' - 55' w	Codominant	Show distance between trunk exterior and edge of excavation.	$1,770
4573	Valley oak (Quercus lobata)	14”	Fair	Severe	remove	60' - 65' h 50' - 55' w	Codominant	Show distance between trunk exterior and edge of excavation.	$1,652
4572	Valley oak (Quercus lobata)	24”	Good	Severe	25 - 30 ft	50' - 55' h 50' - 55' w	Dominant	Show distance between trunk exterior and edge of excavation.	$2,832
4571	Valley oak (Quercus lobata)	14”	Fair	Total loss	remove	65' - 70' h 55' - 60' w	Codominant	Tree is directly in the path of ingress & egress. Remove	$1,652
4570	Valley oak (Quercus lobata)	13”	Fair	Total loss	remove	45' - 50' h 45' - 50' w	Suppressed	Tree is directly in the path of ingress & egress. Remove	$1,534
4569	Valley oak (Quercus lobata)	16”	Fair	Total loss	remove	65' - 70' h 55' - 60' w	Codominant	Tree is directly in the path of ingress & egress. Remove	$1,888
4568	Valley oak (Quercus lobata)	16”	Fair	Total loss	remove	45' - 50' h 45' - 50' w	Codominant	Tree is directly in the path of ingress & egress. Remove	$1,888
4567	Valley oak (Quercus lobata)	10”	Fair	Severe	remove	45' - 50' h 45' - 50' w	Possible shared tree	Show distance between trunk exterior and edge of excavation.	$1,180
4566	Valley oak (Quercus lobata)	22”	Good	Severe	25 - 30 ft	60' - 65' h 50' - 55' w	Possible shared tree	Show distance between trunk exterior and edge of excavation.	$2,596

CONCLUSIONS

- There are 8 trees on adjacent properties that will need to be addressed through design with tree protection zones for those trees.
- There are at least 6 trees that should be considered shared trees. Ownership and care of these property line trees must be determined prior to construction.
- There are 26 protected trees on the site with 7 trees identified for removal. There are an additional 2 protected trees #4591 and #4595 that may require removal depending on the amount of root lass and/or the impact of loss of the adjacent tree #4596.
- There are 7 non protected trees on the site with 4 of them identified for removal. An additional tree #4596 may require removal depending on that tree's ability to tolerate the required root pruning.
- The City of Roseville regulations control the removal of and preservation of protected trees within the City and requires reforestation when protected trees are removed.
- Construction is likely to have a severe impact on all the retained trees on the site as well as the trees on the adjacent properties. It will be very important to follow maintenance protocols before, during and after the project.
- Improvements or activities such as paving, utilities, trenching and other ancillary activities should take place outside the *Tree Protection Zone,* unless otherwise specified. The protection fence shall serve as the boundary of a designated *Tree Protection Zone*..

RECOMMENDATIONS

- It is recommended that an application for a tree removal permit be submitted to the City of Roseville Planning Division.
- It is highly recommended that a Level 2 risk assessment be conducted on all trees that are to be retained.
- It is recommended that a tree protection and long term maintenance plan be developed and implemented prior to the commencement of construction.
- It is recommended that the *Tree Protection Zones* be shown on all construction drawings, specifically where ever the TPZ will be impacted by construction activities.

Respectfully submitted,

Walter Warriner Consulting Arborist
Certified Urban Forester #108 - SAF
Certified Arborist #WE-0407AM - ISA
Qualified Tree Risk Assessor - ISA
Qualified Tree & Plant Appraiser – ASCA
Licensed Pest Control Advisor – State of CA

ASSESSMENT AND REPORT LIMITATIONS

This report, its findings and opinions are submitted with the following understanding:

- Projected development impacts are based on the distance relationships between tree locations and projected grading as shown on the plans that were evaluated for this report.
- The subject trees need to be protected from the proposed construction impacts if they are to remain healthy and viable on the site. Recommendations are based on experience and species requirements to enhance tree longevity. Tree protection zones must be shown on all construction drawings, specifically where ever a tree will be impacted by construction activities.
- Tree protection will require that the grow zones of retained trees remain intact and viable despite the use of heavy equipment to install foundations, driveways, underground utilities, and landscape irrigation systems.
- The success of tree retention during construction is accomplished by closely following tree protection guidelines and maintenance requirements for a higher chance of tree survival.
- Tree protection guidelines and maintenance requirements that are overlooked or not applied, combined with a lack of tree monitoring during the life of the project will result in a dramatically lower chance of tree survival and a higher risk of whole or partial tree failure.
- That the statements of fact contained in this report are true and correct. Recommendations are limited only to this report and are based on unbiased professional analysis.
- There is no present or prospective interest in the trees that are the subject of this report and their is no personal bias with respect to any of the parties involved.
- That compensation for this report is not contingent upon the recommendations in this report or any predetermined outcome that favors the cause of any of the parties involved or any stipulated result.
- That this report has been prepared in conformity with the standards of professional reporting on arboriculture an urban forestry.
- The subject trees can be managed, but cannot be controlled. To construct the proposed project near the subject trees is to accept their degree of risk. The only way to eliminate risk from the subject trees is to remove them, but this is not recommended because of City Ordinances and it also eliminates the multitude of benefits they currently provide.
- Arborists cannot detect every condition that could possibly lead to the structural failure or decline in the health of a tree. Trees are living organisms that fail in ways that are not fully understand and cannot always be predicted. Conditions are often hidden within trees and/or below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, after construction or for a specified period of time.

Respectfully submitted,

Walter Warriner Consulting Arborist

MITIGATED NEGATIVE DECLARATION

Project Title/File Number: INFILL PCL 108 – Rail Town Village; File # PL24-1103
Project Location: 412 Sixth Street, Roseville, Placer County; 014-062-018-000
Project Applicant: Gary Orr, ORR Design Office; (916) 441-4500; 2319 K Street, Ste 200, Sacramento, CA 95816
Property Owner: Bhavannarayana Avula, Everest Hill LLC; (916) 400-0599; PO Box 2132, Sunnyvale, CA 94087

Lead Agency Contact Person: Eric Singer, Associate Planner - City of Roseville; (916) 774-5536
Date: June 4, 2025

Project Description:

The applicant requests a Design Review Permit to construct five (5) new duplex buildings and two (2) ADUs totaling twelve (12) dwelling units, and a Tree Permit to remove eight (8) native oak trees and encroach into the protected zone of nineteen (19) other native oak trees.

The project site is not identified on any list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5.

DECLARATION

The Planning Manager has determined that the above project will not have significant effects on the environment and therefore does not require preparation of an Environmental Impact Report. The determination is based on the attached initial study and the following findings:

A. The project will not have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare or threatened species, reduce the number or restrict the range of rare or endangered plants or animals or eliminate important examples of the major periods of California history or prehistory.
B. The project will not have the potential to achieve short-term, to the disadvantage of long-term, environmental goals.
C. The project will not have impacts, which are individually limited, but cumulatively considerable.
D. The project will not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly.
E. No substantial evidence exists that the project may have a significant effect on the environment.
F. The project incorporates all applicable mitigation measures identified in the attached initial study.
G. This Mitigated Negative Declaration reflects the independent judgment of the lead agency.

INITIAL STUDY & ENVIRONMENTAL CHECKLIST

Project Title/File Number:	INFILL PCL 108 – Rail Town Village / PL24-1103
Project Location:	The Project site is approximately 1.1 acres in size located at 412 Sixth Street. The Project is within the City's Infill area. The site is bordered by single family dwelling units on the north, west, and east, as well as a church to the east. The site has a General Plan land use designation of Medium Density Residential (MDR-11.1) and a zoning designation of Multi-Family Residential (R3).
Project Description:	The applicant requests a Design Review Permit to construct five (5) new duplex buildings and two (2) ADUs totaling twelve (12) dwelling units, and a Tree Permit to remove eight (8) native oak trees and encroach into the protected zone of nineteen (19) other native oak trees. The project site is not identified on any list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5.
Project Applicant:	Gary Orr, ORR Design Office
Property Owner:	Bhavannarayana Avula, Everest Hill LLC
Lead Agency Contact:	Eric Singer, Associate Planner, (916) 774-5536

This initial study has been prepared to identify and assess the anticipated environmental impacts of the above-described project application. The document relies on previous environmental documents (see Attachments) and site-specific studies prepared to address in detail the effects or impacts associated with the project. Where documents were submitted by consultants working for the applicant, City staff reviewed such documents in order to determine whether, based on their own professional judgment and expertise, staff found such documents to be credible and persuasive. Staff has only relied on documents that reflect their independent judgment and has not accepted at face value representations made by consultants for the applicant.

This document has been prepared to satisfy the California Environmental Quality Act (CEQA), (Public Resources Code, Section 21000 et seq.) and the State CEQA Guidelines (14 CCR 15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects.

The initial study is a public document used by the decision-making lead agency to determine whether a project may have a significant effect on the environment. If the lead agency finds substantial evidence that any aspect of the project, either individually or cumulatively, may have a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial, the lead agency is required to prepare an EIR. If the agency finds no substantial evidence that the project or any of its aspects may cause a significant effect on the environment, a negative declaration shall be prepared. If in the course of analysis, the agency recognizes that the project may have a significant impact on the environment, but that by incorporating specific mitigation measures to which the applicant agrees, the impact will be reduced to a less than significant effect, a mitigated negative declaration shall be prepared.

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PROJECT DESCRIPTION

Project Location

The Project site is comprised of a single parcel approximately 1.1 acres in size located at 412 Sixth Street (see Figure 1). The Project site is located within the City's Infill area. The Infill area constitutes what historically has been the central core of Roseville, as well as the areas that were the focus of growth in the City until the early 1980's. The land use in the Infill area incorporates a mix of residential neighborhoods, commercial and industrial uses and amenities to serve the residents of the community. The Project site is bordered by single family dwelling units to the north and west, a church and a single-family dwelling to the east, and Sixth Street to the south. The site has a General Plan land use designation of Medium Density Residential (MDR-11.1) and a zoning designation of Multi-Family Residential (R3).

Figure 1: Project Location

Background and Environmental Setting

The Project site is a single polygonal lot, measuring approximately 380 feet by 180 feet and 1.1 acres. The Project site is vacant, with the entire site undeveloped. A 3-foot-wide sidewalk fronts the property along Sixth Street. The site is an infill parcel surrounded by single-family dwelling units and a church. The site contains scattered non-native trees (including mulberry, mimosa, arbor vitae, Chinese pistache, almond, camphor, pecan, and olive) interspersed within a valley oak overstory with an understory of annual grasses, per the arborist report dated April 7, 2025 (Attachment 5). The site is flat with the highest point of the property being the northwest corner, which is approximately 1 foot higher than the southern end of the property. The site itself is approximately 1-2 feet on average lower than the property to the east, sloping gradually from east to west.

Location	Zoning	General Plan Land Use	Actual Use of Property
Site	R3	MDR-11.1	Vacant
North	R3	MDR-11.1	Single-family dwelling units
South	R1	LDR-4.7	Single-family dwelling units
East	R3	MDR-11.1	Church / single-family dwelling unit
West	R3	MDR-11.1	Single-family dwelling units

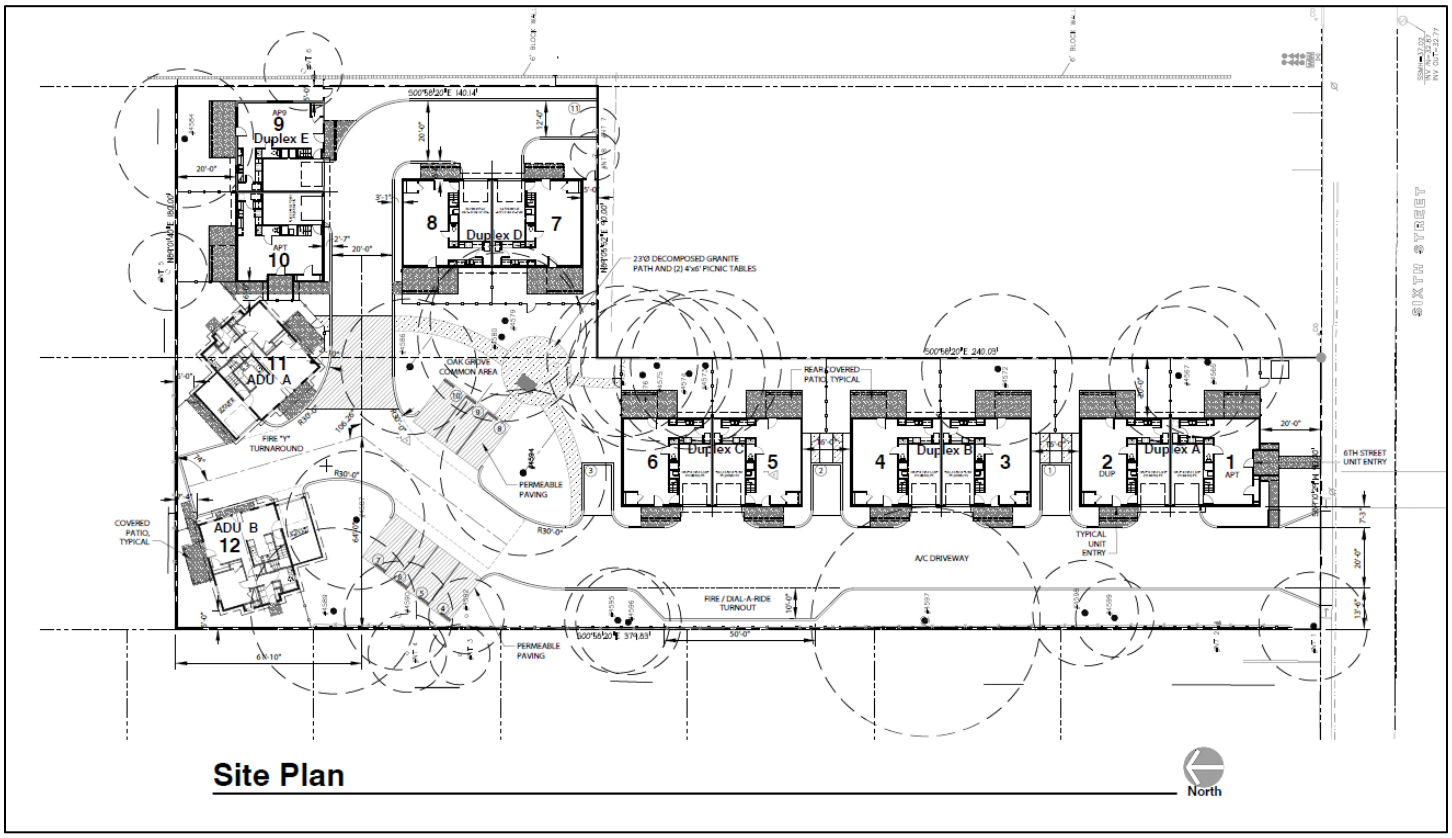
Proposed Project

The project includes the construction of five (5) new duplex buildings and two (2) ADUs totaling twelve (12) dwelling units, and a Tree Permit to remove eight (8) native oak trees and encroach into the protected zone of nineteen (19) other native oak trees on-site. The Grading and Site Plan shows the proposed access street layout and site configuration for the 12 units (see Figure 2 below), including a 20-foot-wide asphalt driveway that will run parallel with the western property line until it turns eastward near the northern end of the lot and will end at the northeastern property line. The conceptual building layout shows the duplex dwelling units and accessory dwelling units fronting the private street that is accessed to the south from Sixth Street, with pad elevations ranging from 138’ to 138.5’, gradually increasing in height from the south to the north. A new property line fence is proposed along the east, north, and west property lines. Eight (8) protected trees are proposed for removal to create the street, associated site improvements, and twelve (12) new housing units, with nineteen (19) protected trees proposed for retention and protection. Frontage improvements along Sixth Street include a city standard Type S driveway and relocation of existing power pole and guywire out of proposed driveway.

The list of entitlements is below:

1. Design Review Permit (DRP)
2. Tree Permit (TP)

Figure 2: Proposed Site Plan



CITY OF ROSEVILLE MITIGATION ORDINANCES, GUIDELINES, AND STANDARDS

For projects that are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified, CEQA Guidelines section 15183(f) allows a lead agency to rely on previously adopted development policies or standards as mitigation for the environmental effects, when the standards have been adopted by the City, with findings based on substantial evidence, that the policies or standards will substantially mitigate environmental effects, unless substantial new information shows otherwise (CEQA Guidelines §15183(f)). The City of Roseville adopted CEQA Implementing Procedures (Implementing Procedures) which are consistent with this CEQA Guidelines section. The current version of the Implementing Procedures were adopted in April 2008 (Resolution 08-172), along with Findings of Fact, and were updated in January 2021 (Resolution 21-018). The below regulations and ordinances were found to provide uniform mitigating policies and standards, and are applicable to development projects. The City's Mitigating Policies and Standards are referenced, where applicable, in the Initial Study Checklist.

- Noise Regulation (RMC Ch.9.24)
- Flood Damage Prevention Ordinance (RMC Ch.9.80)
- Traffic Mitigation Fee (RMC Ch.4.44)
- Drainage Fees (Dry Creek [RMC Ch.4.49] and Pleasant Grove Creek [RMC Ch.4.48])
- City of Roseville Improvement Standards (Resolution 02-37 and as further amended)
- City of Roseville Design and Construction Standards (Resolution 01-208 and as further amended)
- Tree Preservation Ordinance (RMC Ch.19.66)

- Internal Guidance for Management of Tribal Cultural Resources and Consultation (Tribal Consultation Policy) (Resolution 20-294)
- Subdivision Ordinance (RMC Title 18)
- Community Design Guidelines
- Specific Plan Design Guidelines:
    - Development Guidelines Del Webb Specific Plan
    - Landscape Design Guidelines for North Central Roseville Specific Plan
    - North Roseville Specific Plan and Design Guidelines
    - Northeast Roseville Specific Plan (Olympus Pointe) Signage Guidelines
    - North Roseville Area Design Guidelines
    - Northeast Roseville Specific Plan Landscape Design Guidelines
    - Southeast Roseville Specific Plan Landscape Design Guidelines
    - Stoneridge Specific Plan and Design Guidelines
    - Highland Reserve North Specific Plan and Design Guidelines
    - West Roseville Specific Plan and Design Guidelines
    - Sierra Vista Specific Plan and Design Guidelines
    - Creekview Specific Plan and Design Guidelines
    - Amoruso Ranch Specific Plan and Design Guidelines
- City of Roseville 2035 General Plan

OTHER ENVIRONMENTAL DOCUMENTS RELIED UPON

- 2035 General Plan Update Final Environmental Impact Report, certified August 5, 2020. The 2035 General Plan EIR is available for review on the City's website at https://www.roseville.ca.us/cms/one.aspx?portalId=7964922&pageId=8774544
- 2021 Housing Element Addendum (HE Addendum). The HE Addendum is available for review on the City's website at https://www.roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=16922203

Pursuant to CEQA Guidelines Section 15183, any project which is consistent with the development densities established by zoning, a Community Plan, or a General Plan for which an EIR was certified shall not require additional environmental review, except as may be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. The 2035 General Plan Update EIR (General Plan EIR) updated all Citywide analyses, including for vehicle miles traveled, greenhouse gas emissions, water supply, water treatment, wastewater treatment, and waste disposal. The proposed project is consistent with the adopted land use designations examined within the environmental documents listed above, and thus this Initial Study focuses on effects particular to the specific project site, impacts which were not analyzed within the EIR, and impacts which may require revisiting due to substantial new information. When applicable, the topical sections within the Initial Study summarize the findings within the environmental documents listed above. The analysis, supporting technical materials, and findings of the environmental document are incorporated by reference, and are available for review at the Civic Center, 311 Vernon Street, Roseville, CA.

EXPLANATION OF INITIAL STUDY CHECKLIST

The California Environmental Quality Act (CEQA) Guidelines recommend that lead agencies use an Initial Study Checklist to determine potential impacts of the proposed project on the physical environment. The Initial Study Checklist provides a list of questions concerning a comprehensive array of environmental issue areas potentially affected by this project. This section of the Initial Study incorporates a portion of Appendix G Environmental Checklist Form, contained in the CEQA Guidelines. Within each topical section (e.g. Air Quality) a description of the setting is provided, followed by the checklist responses, thresholds used, and finally a discussion of each checklist answer.

There are four (4) possible answers to the Environmental Impacts Checklist on the following pages. Each possible answer is explained below:

1) A "Potentially Significant Impact" is appropriate if there is enough relevant information and reasonable inferences from the information that a fair argument based on substantial evidence can be made to support a conclusion that a substantial, or potentially substantial, adverse change may occur to any of the physical conditions within the area affected by the project. When one or more "Potentially significant Impact" entries are made, an EIR is required.

2) A "Less Than Significant With Mitigation" answer is appropriate when the lead agency incorporates mitigation measures to reduce an impact from "Potentially Significant" to "Less than Significant." For example, floodwater impacts could be reduced from a potentially-significant level to a less-than-significant level by relocating a building to an area outside of the floodway. The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level. Mitigation measures are identified as MM followed by a number.

3) A "Less Than significant Impact" answer is appropriate if there is evidence that one or more environmental impacts may occur, but the impacts are determined to be less than significant, or the application of development policies and standards to the project will reduce the impact(s) to a less-than-significant level. For instance, the application of the City's Improvement Standards reduces potential erosion impacts to a less-than-significant level.

4) A "No Impact" answer is appropriate where it can be demonstrated that the impact does not have the potential to adversely affect the environment. For instance, a project in the center of an urbanized area with no agricultural lands on or adjacent to the project area clearly would not have an adverse effect on agricultural resources or operations. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources cited in the Initial Study. Where a "No Impact" answer is adequately supported by the information sources cited in the Initial Study, further narrative explanation is not required. A "No Impact" answer is explained when it is based on project-specific factors as well as generous standards.

All answers must take account of the whole action involved, including off- and on-site, indirect, direct, construction, and operation impacts, except as provided for under State CEQA Guidelines.

INITIAL STUDY CHECKLIST

I. Aesthetics

The site is currently vacant, with native oak and non-native trees scattered throughout the site with an understory of annual grasses. The site is located in an infill area of the City and existing single-family dwelling units and a church surround the Project site.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) In non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?			X	

Thresholds of Significance and Regulatory Setting:

The significance of an environmental impact cannot always be determined through the use of a specific, quantifiable threshold. CEQA Guidelines Section 15064(b) affirms this by the statement “an ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting.” This is particularly true of aesthetic impacts. As an example, a proposed parking lot in a dense urban center would have markedly different visual effects than a parking lot in an open space area. For the purpose of this study, the significance thresholds are as stated in CEQA Guidelines Appendix G, as shown in a–d of the checklist

below. The Findings of the Implementing Procedures indicate that compliance with the Zoning Ordinance (e.g. building height, setbacks, etc), Subdivision Ordinance (RMC Ch. 18), Community Design Guidelines (Resolution 95-347), and applicable Specific Plan Policies and/or Specific Plan Design Guidelines will prevent significant impacts in urban settings as it relates to items a, b, and c, below.

Discussion of Checklist Answers:

a–b) There are no designated or eligible scenic vistas or scenic highways within or adjacent to the City of Roseville.

c) The project site is in an urban setting, and as a result lacks any prominent or high-quality natural features which could be negatively impacted by development. The City of Roseville has adopted Community Design Guidelines (CDG) for the purpose of creating building and community designs which are a visual asset to the community. The CDG includes guidelines for building design, site design and landscape design, which will result in a project that enhances the existing urban visual environment. The project does not conflict with applicable zoning and other regulations governing scenic quality. Accordingly, the aesthetic impacts of the project are less than significant.

d) The project involves nighttime lighting to provide for the security and safety of project users. However, the project is already located within an urbanized setting with many existing lighting sources. Lighting is conditioned to comply with City standards (i.e. CDG) to limit the height of light standards and to require cut-off lenses and glare shields to minimize light and glare impacts. The project will not create a new source of substantial light. None of the project elements are highly reflective, and thus the project will not contribute to an increased source of glare.

II. Agricultural & Forestry Resources

The State Department of Conservation oversees the Farmland Mapping and Monitoring Program, which was established to document the location, quality, and quantity of agricultural lands, and the conversion of those lands over time. The primary land use classifications on the maps generated through this program are: Urban and Built Up Land, Grazing Land, Farmland of Local Importance, Unique Farmland, Farmland of Statewide Importance, and Prime Farmland. According to the current California Department of Conservation Placer County Important Farmland Map (2020), the majority of the City of Roseville is designated as Urban and Built Up Land and most of the open space areas of the City are designated as Grazing Land. There are a few areas designated as Farmland of Local Importance and one small areas designated as Unique Farmland located on the western side of the City along Baseline Road. The current Williamson Act Enrollment Finder produced by the Department of Conservation (https://maps.conservation.ca.gov/dlrp/WilliamsonAct/App/index.html), which is a GIS application showing the current contract data, shows that there are no Williamson Act contracts within the City. None of the land within the City is considered forest land by the California Board of Forestry and Fire Protection.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

Thresholds of Significance and Regulatory Setting:

Unique Farmland, Farmland of Statewide Importance, and Prime Farmland are called out as protected farmland categories within CEQA Guidelines Appendix G. Neither the City nor the State has adopted quantified significance thresholds related to impacts to protected farmland categories or to agricultural and forestry resources. For the purpose of this study, the significance thresholds are as stated in CEQA Guidelines Appendix G, as shown in a–e of the checklist above.

Discussion of Checklist Answers:

a–e) The project site is not used for agricultural purposes, does not include agricultural zoning, is not within or adjacent to one of the areas of the City designated as a protected farmland category on the Placer County Important Farmland map, is not within or adjacent to land within a Williamson Act Contract, and is not considered forest land. Given the foregoing, the proposed project will have no impact on agricultural resources.

III. Air Quality

The City of Roseville, along with the south Placer County area, is located in the Sacramento Valley Air Basin (SVAB). The SVAB is within the Sacramento Federal Ozone Non-Attainment Area. Under the Clean Air Act, Placer County has been designated a "severe non-attainment" area for the federal 8-hour ozone standard, “serious non-attainment” for the state ozone standard, “nonattainment” for the state PM_{10} standard (particulate matter less than 10 microns in diameter) and a "moderate non-attainment" area for the federal $PM_{2.5}$ standard (particulate matter less than 2.5 microns in diameter). Within Placer County, the Placer County Air Pollution Control District (PCAPCD) is responsible for ensuring that emission standards are not violated. Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Result in a cumulatively considerable net increase of any criteria for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

Thresholds of Significance and Regulatory Setting:

In responding to checklist items a–c, project-related air emissions would have a significant effect if they would result in concentrations that either violate an ambient air quality standard or contribute to an existing air quality violation. To assist in making this determination, the PCAPCD adopted thresholds of significance, which were developed by considering both the health-based ambient air quality standards and the attainment strategies outlined in the State Implementation Plan. The PCAPCD-recommended significance threshold for reactive organic gases (ROG) and nitrogen oxides (NO_x) is 82 pounds daily during construction and 55 pounds daily during operation, and for particulate matter (PM) is 82 pounds per day during both construction and operation. For all other constituents, significance is determined based on the concentration-based limits in the Federal and State Ambient Air Quality Standards. Toxic Air Contaminants (TAC) are also of public health concern, but no

thresholds or standards are provided because they are considered to have no safe level of exposure. Analysis of TAC is based on the *Air Quality and Land Use Handbook – A Community Health Perspective (*April 2005, California Air Resources Board), which lists TAC sources and recommended buffer distances from sensitive uses. For checklist item c, the PCAPCD's *CEQA Air Quality Handbook* (*Handbook*) recommends that the same thresholds used for the project analysis be used for the cumulative impact analysis.

With regard to checklist item d, there are no quantified significance thresholds for exposure to objectionable odors or other emissions. Significance is determined after taking into account multiple factors, including screening distances from odor sources (as found in the PCAPCD CEQA Handbook), the direction and frequency of prevailing winds, the time of day when emissions are detectable/present, and the nature and intensity of the emission source.

Discussion of Checklist Answers:

a–c) Analyses are not included for sulfur dioxide, lead, and other constituents because there are no mass emission thresholds; these are concentration-based limits in the Federal and State Ambient Air Quality Standards which require substantial, point-source emissions (e.g. refineries, concrete plants, etc) before exceedance will occur, and the SVAB is in attainment for these constituents. Likewise, carbon monoxide is not analyzed because the SVAB is in attainment for this constituent, and it requires high localized concentrations (called carbon monoxide "hot spots") before the ambient air quality standard would be exceeded. "Hot spots" are typically associated with heavy traffic congestion occurring at high-volume roadway intersections. The General Plan EIR analysis of Citywide traffic indicated that more than 70% of signalized intersections would operate at level of service C or better—that is, they will not experience heavy traffic congestion. It further indicated that analyses of existing CO concentrations at the most congested intersections in Roseville show that CO levels are well below federal and state ambient air quality standards. The discussions below focus on emissions of ROG**,** NO_x, or PM**.** A project-level analysis has been prepared to determine whether the project will, on a singular level, exceed the established thresholds.

The Project involves the construction of 12 dwelling units on a 1.1-acre project area. The California Emissions Estimator Model (CalEEMod) Version 2022.1 was used to model the construction emissions of the Project (see Attachment 4). According to the model results, the project will result in maximum daily emissions of 14.1 lb/day of ROG and 14.1 lb/day of NOx during construction; these emissions fall well below the 82-lb/day thresholds for these constituents. Therefore, construction air quality impacts are less than significant.

The PCAPCD maintains screening thresholds to determine when modeling is required to evaluate impacts resulting from project operation. The screening thresholds indicates a single-family project must involve more than 617 units before the PCAPCD significance thresholds for criteria pollutants are likely to be exceeded. The proposed Project includes 12 units, which is well below the screening thresholds; therefore, the project will not result in operational emissions which exceed established thresholds.

The proposed project would not exceed the applicable thresholds of significance for air pollutant emissions during construction or operation. As such, the project would not conflict with or obstruct implementation of the *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (which is the SIP) or contribute substantially to the PCAPCD's nonattainment status for ozone. In addition, because the proposed project would not produce substantial emissions of criteria air pollutants, CO, or TACs, adjacent residents would not be exposed to significant levels of pollutant concentrations during construction or operation. Therefore, implementation of the proposed project would result in less than significant impacts, and consistent with the analysis methodology outlined in the Significance Thresholds and Regulatory Setting section, cumulative impacts are less than significant.

With regard to TAC, there are hundreds of constituents which are considered toxic, but they are typically generated by stationary sources like gas stations, facilities using solvents, and heavy industrial operations. The proposed project is not a TAC-generating use, nor is it within the specified buffer area of a TAC-generating use,

as established in the *Air Quality and Land Use Handbook – A Community Health Perspective*. Impacts due to substantial pollutant concentrations are less than significant.

e) Diesel fumes from construction equipment and delivery trucks are often found to be objectionable; however, construction is temporary and diesel emissions are minimal and regulated. Typical urban projects such as residences and retail businesses generally do not result in substantial objectionable odors when operated in compliance with City Ordinances (e.g. proper trash disposal and storage). The Project is a typical urban development that lacks any characteristics that would cause the generation of substantial unpleasant odors. Thus, construction and operation of the proposed project would not result in the creation of objectionable odors affecting a substantial number of people. A review of the project surroundings indicates that there are no substantial odor-generating uses near the project site; the project location meets the recommended screening distances from odor-generators provided by the PCAPCD. Impacts related to odors are less than significant.

IV. Biological Resources

As described in the Project description, the site is vacant. There are twenty-seven oak (27) trees and fourteen (14) non-native trees dispersed throughout the site. Eight (8) protected trees are proposed for removal.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) 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 Game or U.S. Fish and Wildlife Service?			X	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Thresholds of Significance and Regulatory Setting:

There is no ironclad definition of significance as it relates to biological resources. Thus, the significance of impacts to biological resources is defined by the use of expert judgment supported by facts, and relies on the policies, codes, and regulations adopted by the City and by regulatory agencies which relate to biological resources (as cited and described in the Discussion of Checklist Answers section). Thresholds for assessing the significance of environmental impacts are based on the CEQA Guidelines checklist items a–f, above. Consistent with CEQA Guidelines Section 15065, a project may have a significant effect on the environment if:

> The project has the potential to substantially degrade the quality of the environment*;* substantially reduce the habitat of a fish or wildlife species*;* cause a fish or wildlife population to drop below self-sustaining levels*;* threaten to eliminate a plant or animal community; [or] substantially reduce the number or restrict the range of an endangered, rare or threatened species . . .

Various agencies regulate impacts to the habitats and animals addressed by the CEQA Guidelines checklist. These include the United States Fish and Wildlife Service, National Oceanic and Atmospheric Administration–Fisheries, United States Army Corps of Engineers, Central Valley Regional Water Quality Control Board, and California Department of Fish and Wildlife. The primary regulations affecting biological resources are described in the sections below.

Checklist item a addresses impacts to special status species. A “special status” species is one which has been identified as having relative scarcity and/or declining populations. Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for federal listing, and those classified as species of special concern. Also included are those species considered to be “fully protected” by the California Department of Fish and Wildlife (California Fish and Wildlife), those granted “special animal” status for tracking and monitoring purposes, and those plant species considered to be rare, threatened, or endangered in California by the California Native Plant Society (CNPS). The primary regulatory protections for special status species are within the Federal Endangered Species Act, California Endangered Species Act, California Fish and Game Code, and the Federal Migratory Bird Treaty Act.

Checklist item b addresses all “sensitive natural communities” and riparian (creekside) habitat that may be affected by local, state, or federal regulations/policies while checklist item c focuses specifically on one type of such a community: protected wetlands. Focusing first on wetlands, the 1987 Army Corps Wetlands Delineation Manual is used to determine whether an area meets the technical criteria for a wetland. A delineation verification by the Army Corps verifies the size and condition of the wetlands and other waters in question, and determines

the extent of government jurisdiction as it relates to Section 404 of the Federal Clean Water Act and Section 401 of the State Clean Water Act.

The Clean Water Act protects all "navigable waters", which are defined as traditional navigable waters that are or were used for commerce, or may be used for interstate commerce; tributaries of covered waters; and wetlands adjacent to covered waters, including tributaries. Non-navigable waters are called isolated wetlands, and are not subject to either the Federal or State Clean Water Act. Thus, isolated wetlands are not subject to federal wetland protection regulations. However, in addition to the Clean Water Act, the State also has jurisdiction over impacts to surface waters through the Porter-Cologne Water Quality Control Act (Porter-Cologne), which does not require that waters be "navigable". For this reason, isolated wetlands are regulated by the State of California pursuant to Porter-Cologne. The City of Roseville General Plan also provides protection for wetlands, including isolated wetlands, pursuant to the General Plan Open Space and Conservation Element. Federal, State and City regulations/policies all seek to achieve no net loss of wetland acreage, values, or function.

Aside from wetlands, checklist item b also addresses other "sensitive natural communities" and riparian habitat, which includes any habitats protected by local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. The City of Roseville General Plan Open Space and Conservation Element includes policies for the protection of riparian areas and floodplain areas; these are Vegetation and Wildlife section Policies 2 and 3. Policy 4 also directs preservation of additional area around stream corridors and floodplain if there is sensitive woodland, grassland, or other habitat which could be made part of a contiguous open space area. Other than wetlands, which were already discussed, US Fish and Wildlife and California Department of Fish and Wildlife habitat protections generally result from species protections, and are thus addressed via checklist item a.

For checklist item d, there are no regulations specific to the protection of migratory corridors. This item is addressed by an analysis of the habitats present in the vicinity and analyzing the probable effects on access to those habitats which will result from a project.

The City of Roseville Tree Preservation ordinance (RMC Ch.19.66) requires protection of native oak trees, and compensation for oak tree removal. The Findings of the Implementing Procedures indicate that compliance with the City of Roseville Tree Preservation ordinance (RMC Ch.19.66) will prevent significant impacts related to loss of native oak trees, referenced by item e, above.

Regarding checklist item f, there are no adopted Habitat Conservation Plans within the City of Roseville.

Discussion of Checklist Answers:

a) The project will require the removal of several oak trees, which could potentially provide habitat for nesting birds. Construction activities could also have the potential to disrupt offsite nesting species. A pre-construction nesting survey, **Mitigation Measure BIO-1**, is required in order to ensure that nesting birds are not harmed during construction. The mitigation requires that either ground-disturbing activities do not occur during the active nesting season or, if it is necessary to conduct such activities during the nesting season, pre-construction surveys and mitigation as described in **Mitigation Measure BIO-1**, would be required. Compliance with **Mitigation Measure BIO-1** will ensure that potential impacts to nesting birds are less than significant.

b–c) As discussed in the Environmental Setting, the project site is located in an infill area of the City. The site is adjacent to paved roadways and is adjacent to existing single-family dwelling units and a church. The property does not contain sensitive natural communities which are protected by federal, state or local policies, nor does it contain any wetlands; thus, the project will have no impact with regard to this criterion.

d) The City includes an interconnected network of open space corridors and preserves located throughout the City, to ensure that the movement of wildlife is not substantially impeded as the City develops. The development of the project site will not negatively impact these existing and planned open space corridors, nor is the project site located in an area that has been designated by the City, United States Fish and Wildlife, or California Department of Fish and Wildlife as vital or important for the movement of wildlife or the use of native wildlife nursery sites.

e) As defined by the City of Roseville Zoning Ordinance (Chapter 19.66, Tree Preservation), native oak trees greater than six (6") diameter at breast height are defined as protected. A Tree Permit is required for the removal of any protected tree, and for any regulated activity within the protected zone of a protected tree where the encroachment exceeds 20 percent. An arborist report including a tree inventory summary was provided by Walter Warriner Consulting Arborist, dated April 7, 2025 (Attachment 5). A total of twenty-seven (27) protected oak trees were identified on the property after a staff site visit and request of the arborist to correct their initial assessment of twenty-six (26) trees by adding Tree #4591 to the list of removals. Of the twenty-seven (27) trees, eight (8) protected oak trees with a total aggregate diameter of approximately 139 inches are proposed for removal to facilitate development of the site, while nineteen (19) trees are proposed to be retained (see Attachment 5). One (1) of the trees proposed for removal was identified as being in critical or poor health. The arborist's recommendations include removal of those trees in the final stages of decline and/or trimming and preserving as many healthy trees with a health rating of three or greater as possible. The Tree Permit will contain conditions of approval to include tree protection measures such as construction fencing and staging guidelines, and mitigation measures that include payment of in-lieu mitigation fees to compensate for oak tree removal. Any deviation from the approved permit would require a Tree Permit Modification, which would require approval by the City.

The 2035 General Plan EIR (General Plan EIR) anticipated that the buildout of the General Plan would involve conversion of habitat to developed use that will require oak tree removal, which would be subject to the City's ordinances and policies regarding oak tree preservation and mitigation. The City of Roseville Tree Preservation Ordinance requires a permit and mitigation for all oak trees removed. The General Plan EIR found that implementation of the City's Tree Preservation Ordinance would result in less than significant impacts. The proposed project will comply with the City of Roseville Zoning Ordinance, and thus does not result in new or previously undisclosed impacts to native oak tree resources. The General Plan EIR required future projects comply with the City's Tree Ordinance; this project includes a Tree Permit, consistent with the City's Tree Ordinance. Consistency with the requirements of the Tree Permit for this project will ensure that impacts are less than significant.

f) There are no Habitat Conservation Plans; Natural Community Conservation Plans; or other approved local, regional, or state habitat conservation plans that apply to the project site.

V. Cultural Resources

As described within the Open Space and Conservation Element of the City of Roseville General Plan, the Roseville region was within the territory of the Nisenan (also Southern Maidu or Valley Maidu). Two large permanent Nisenan habitation sites have been identified and protected within the City's open space (in Maidu Park). Numerous smaller cultural resources, such as midden deposits and bedrock mortars, have also been recorded in the City. The gold rush which began in 1848 marked another settlement period, and evidence of Roseville's ranching and mining past are still found today. Historic features include rock walls, ditches, low terraces, and other remnants of settlement and activity. A majority of documented sites within the City are located in areas designated for open space uses.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of an historic resource pursuant to in Section 15064.5?			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?			X	
c) Disturb any human remains, including those interred outside of dedicated cemeteries?			X	

Thresholds of Significance and Regulatory Setting:

The significance of impacts to cultural resources is based directly on the CEQA Guidelines checklist items a–e listed above. The Archaeological, Historic, and Cultural Resources section of the City of Roseville General Plan also directs the proper evaluation of and, when feasible, protection of significant resources (Policies 1 and 2). There are also various federal and State regulations regarding the treatment and protection of cultural resources, including the National Historic Preservation Act and the Antiquities Act (which regulate items of significance in history), Section 7050.5 of the California Health and Safety Code, Section 5097.9 of the California Public Resources Code (which regulates the treatment of human remains) and Section 21073 et seq. of the California Public Resources Code (regarding Tribal Cultural Resources). The CEQA Guidelines also contains specific sections, other than the checklist items, related to the treatment of effects on historic resources.

Pursuant to the CEQA Guidelines, if it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2 (a), (b), and (c)). A *historical resource* is a resource listed, or determined to be eligible for listing, in the California Register of Historical Resources (CRHR) (Section 21084.1); a resource included in a local register of historical resources (Section 15064.5(a)(2)); or any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant (Section 15064.5 (a)(3)). Public Resources Code Section 5024.1 requires evaluation of historical resources to determine their eligibility for listing on the CRHR.

Discussion of Checklist Answers:

a–b and d) No cultural resources are known to exist on the project site per the General Plan EIR; however, standard mitigation measures apply which are designed to reduce impacts to cultural resources, should any be found on-site. The measure requires an immediate cessation of work and contact with the appropriate agencies to address the resource before work can resume. The project will not result in any new impacts beyond those already discussed and disclosed in the General Plan EIR; project-specific impacts are less than significant.

c) No paleontological resources are known to exist on the project site per the General Plan EIR; however, standard mitigation measures apply which are designed to reduce impacts to such resources, should any be found on-site. The measure requires an immediate cessation of work, and contact with the appropriate agencies to address the resource before work can resume. The project will not result in any new impacts beyond those already discussed and disclosed in the General Plan EIR; project-specific impacts are less than significant.

VI. Energy

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy inefficiency?			X	

Thresholds of Significance and Regulatory Setting:

Established in 2002, California's Renewable Portfolio Standard (RPS) currently requires that 60 percent of electricity retail sales by served by renewable energy resources by 2030. The City published a Renewables Portfolio Standard Procurement Plan in June 2018, and continues to comply with the RPS reporting and requirements and standards. There are no numeric significance thresholds to define "wasteful, inefficient, or unnecessary" energy consumption, and therefore significance is based on CEQA Guidelines checklist items a and b, above, and by the use of expert judgment supported by facts, relying on the policies, codes, and regulations adopted by the City and by regulatory agencies which relate to energy. The analysis considers compliance with regulations and standards, project design as it relates to energy use (including transportation energy), whether the project will result in a substantial unplanned demand on the City's energy resources, and whether the project will impede the ability of the City to meet the RPS standards.

Discussion of Checklist Answers:

a & b) According to the CalEEMod results, the total kilowatt hour (kWh) use for the site is approximately 60,864 kWh. The project would consume energy both during project construction and during project operation.

During construction, fossil fuels, electricity, and natural gas would be used by construction vehicles and equipment. However, the energy consumed during construction would be temporary, and would not represent a significant demand on available resources. There are no unusual project characteristics that would necessitate the use of construction equipment or methods that would be less energy-efficient or which would be wasteful.

The completed project would consume energy related to building operation, exterior lighting, landscape irrigation and maintenance, and vehicle trips to and from the use. In accordance with California Energy Code Title 24, the project would be required to meet the Building Energy Efficiency Standards. This includes standards for water and space heating and cooling equipment; insulation for doors, pipes, walls, and ceilings; and appliances, to name a few. The project would also be eligible for rebates and other financial incentives from both the electric

and gas providers for the purchase of energy-efficient appliances and systems, which would further reduce the operational energy demand of the project. The project was distributed to both PG&E and Roseville Electric for comments and was found to conform to the standards of both providers; energy supplies are available to serve the project.

The project is consistent with the existing land use designation in the General Plan EIR. The General Plan EIR included an assessment of energy impacts for the entire plan area. The analysis included consideration of transportation energy, and evaluated walkability, alternative transportation modes, and the degree to which the mix and location of uses would reduce vehicle miles traveled in the plan area. The EIR also included a citywide assessment of energy demand based on the existing and proposed land uses within the City and Specific Plan. Impacts related to energy consumption were found to be less than significant. The project is consistent with the existing land use designation, and therefore is consistent with the current citywide assessment of energy demand, and will not result in substantial unplanned, inefficient, wasteful, or unnecessary consumption of energy; impacts are less than significant.

VII. Geology and Soils

As described in the Safety Element of the City of Roseville General Plan, there are three inactive faults (Volcano Hill, Linda Creek, and an unnamed fault) in the vicinity, but there are no known active seismic faults within Placer County. The last seismic event recorded in the South Placer area occurred in 1908 and is estimated to have been at least a 4.0 on the Richter Scale. Due to the geographic location and soil characteristics within the City, the General Plan indicates that soil liquefaction, landslides, and subsidence are not a significant risk in the area.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			X	
i) Ruptures of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located in a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?			X	

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to geology and soils is based directly on the CEQA Guidelines checklist items a–f listed above. Regulations applicable to this topic include the Alquist-Priolo Act, which addresses earthquake safety in building permits, and the Seismic Hazards Mapping Act, which requires the state to gather and publish data on the location and risk of seismic faults. The Archaeological, Historic, and Cultural Resources section of the City of Roseville General Plan also directs the proper evaluation of and, when feasible, protection of significant archeological resources, which for this evaluation will include paleontological resources (Policies 1 and 2). Section 50987.5 of the California Public Code Section is only applicable to public land; this section prohibits the excavation, removal, destruction, or defacement/injury to any vertebrate paleontological site, including fossilized footprints or other paleontological feature.

The Findings of the Implementing Procedures indicate that compliance with the Flood Damage Prevention Ordinance (RMC Ch.9.80) and Design/Construction Standards (Resolution 07-107) will prevent significant impacts related to checklist item b. The Ordinance and standards include permit requirements for construction and development in erosion-prone areas and ensure that grading activities will not result in significant soil erosion

or loss of topsoil. The use of septic tanks or alternative waste systems is not permitted in the City of Roseville, and therefore no analysis of criterion e is necessary.

Discussion of Checklist Answers:

a) The project will not expose people or structures to potential substantial adverse effects involving seismic shaking, ground failure or landslides.

i–iii) According to United States Geological Service mapping and literature, active faults are largely considered to be those which have had movement within the last 10,000 years (within the Holocene or Historic time periods)[1] and there are no major active faults in Placer County. The California Geological Survey has prepared a map of the state which shows the earthquake shaking potential of areas throughout California based primarily on an area's distance from known active faults. The map shows that the City lies in a relatively low-intensity ground-shaking zone. Commercial, institutional, and residential buildings as well as all related infrastructure are required, in conformance with Chapter 16, *Structural Design Requirements*, Division IV, *Earthquake Design* of the California Building Code, to lessen the exposure to potentially damaging vibrations through seismic-resistant design. In compliance with the Code, all structures in the Project area would be well-built to withstand ground shaking from possible earthquakes in the region; impacts are less than significant.

iv) Landslides typically occur where soils on steep slopes become saturated or where natural or manmade conditions have taken away supporting structures and vegetation. The existing and proposed slopes of the project site are not steep enough to present a hazard during development or upon completion of the project. In addition, measures would be incorporated during construction to shore minor slopes and prevent potential earth movement. Therefore, impacts associated with landslides are less than significant.

b) Grading activities will result in the disruption, displacement, compaction and over-covering of soils associated with site preparation (grading and trenching for utilities). Grading activities for the project will be limited to the project site. Grading activities require a grading permit from the Engineering Division. The grading permit is reviewed for compliance with the City's Improvement Standards, including the provision of proper drainage, appropriate dust control, and erosion control measures. Grading and erosion control measures will be incorporated into the required grading plans and improvement plans. Therefore, the impacts associated with disruption, displacement, and compaction of soils associated with the project are less than significant.

c, d) A review of the Natural Resources Conservation Service Soil Survey for Placer County, accessed via the Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/), indicates that the soils on the site are Cometa-Fiddyment complex, which are not listed as geologically unstable or sensitive.

f) No paleontological resources are known to exist on the project site per the General Plan EIR; however, standard mitigation measures apply which are designed to reduce impacts to such resources, should any be found on-site. The measure requires an immediate cessation of work and contact with the appropriate agencies to address the resource before work can resume. The project will not result in any new impacts beyond those already discussed and disclosed in the General Plan EIR; project-specific impacts are less than significant.

VIII. Greenhouse Gases

Greenhouse gases trap heat in the earth's atmosphere. The principal greenhouse gases (GHGs) that enter the atmosphere because of human activities are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. As explained by the United States Environmental Protection Agency[2], global average temperature has increased by more than 1.5 degrees Fahrenheit since the late 1800s, and most of the warming

[1] United States Geological Survey, http://earthquake.usgs.gov/learn/glossary/?term=active%20fault, Accessed January 2016
[2] http://www3.epa.gov/climatechange/science/overview.html, Accessed January 2016

of the past half century has been caused by human emissions. The City has taken proactive steps to reduce greenhouse gas emissions, which include the introduction of General Plan policies to reduce emissions, changes to City operations, and climate action initiatives.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Thresholds of Significance and Regulatory Setting:

In Assembly Bill 32 (the California Global Warming Solutions Act), signed by Governor Schwarzenegger of California in September 2006, the legislature found that climate change resulting from global warming was a threat to California, and directed that "the State Air Resources Board design emissions reduction measures to meet the statewide emissions limits for greenhouse gases . . .". The target established in AB 32 was to reduce emissions to 1990 levels by the year 2020. CARB subsequently prepared the *Climate Change Scoping Plan* (Scoping Plan) for California, which was approved in 2008. The Scoping Plan provides the outline for actions to reduce California's GHG emissions and is periodically updated.

The current 2022 Scoping Plan updated the target year to 2045, with an interim goal of reducing emissions to 85% below 1990 levels by 2030 and carbon neutrality by 2045. According to the 2022 Scoping Plan the statewide 2030 target is 226 million metric tons.

The Placer County Air Pollution Control District (PCAPCD) recommends that thresholds of significance for GHG be related to statewide reduction goals and has adopted thresholds of significance which take into account the 2030 reduction target. The thresholds include a de minimis and a bright-line maximum threshold, as well as residential and non-residential efficiency thresholds. However, the City developed its own thresholds as part of the 2035 General Plan Update project approved in July 2020. The justification for the City's thresholds is contained within the General Plan EIR. The thresholds were developed based on statewide emissions data adjusted for relevant local conditions and land uses. The significance thresholds are shown in Table 1 below.

Table 1: GHG Significance Thresholds

	2020	2030	2035	2050
Per Capita Emissions Efficiency Targets (MT CO_2e/capita/yr)	**7.21**	**4.00**	**3.22**	**1.19**
Per Service Population Emissions Efficiency Targets (MT CO_2e/SP/yr)	**5.07**	**2.79**	**2.25**	**0.83**
Projects which use these thresholds for environmental analysis should include a brief justification of the type of efficiency target and the target year selected. Per capita is most applicable to projects which only include residential uses, or in cases where reliable data to generate a service population estimate is unavailable. Projects should generally use the 2035 target year. Note that future projects consistent with the General Plan will not require further analysis, per the tiering provisions of CEQA. Note: MMT CO_2e = million metric tons of carbon dioxide equivalent; Service Population (SP) = population + employment				

Discussion of Checklist Answers:

a–b) Greenhouse gases are primarily emitted as a result of vehicle operation associated with trips to and from a project, and energy consumption from operation of the buildings. Greenhouse gases from vehicles is assessed based on the vehicle miles traveled (VMT) resulting from the project, on a Citywide basis. Residential projects, destination centers (such as a regional mall), and major employers tend to increase VMT in a study area, either by adding new residents traveling in an area, or by encouraging longer trip lengths and drawing in trips from a broader regional area. However, non-residential projects and neighborhood-serving uses (e.g. neighborhood parks) tend to lower VMT in a study area because they do not generate new trips within the study area, they divert existing trips. These trips are diverted because the new use location is closer to home, on their way to another destination (e.g. work), or is otherwise more convenient.

The General Plan EIR used CalEEMod to estimate GHG emissions which would result from construction and operation of completed land uses consistent with General Plan buildout. The construction emissions were summed and then amortized over a 30-year operational lifetime and added to the operational emissions associated with buildout. Thresholds of significance were developed for the General Plan EIR based on statewide demographics and data adjusted for land uses relevant in the City of Roseville. The General Plan EIR evaluation found existing conditions emissions of 5.13 MT CO2e per service population (a combination of residents and employees) and that this would be reduced slightly to 5.12 MT CO2e per service population in cumulative buildout conditions. This value exceeds the significance thresholds for the years 2020, 2035, and 2050 (5.07, 2.25, and 0.83 MT CO2e per service population, respectively). The evaluation further found that mobile emissions from transportation sources account for approximately 67% of citywide emissions and that emissions resulting from the operation of buildings (energy) were the next-largest sector, at approximately 19% of citywide emissions.

The HE Addendum evaluated the impact of changing the location and density of uses, which can have an effect on operational emissions related to transportation. An updated analysis of vehicle miles traveled (VMT) was prepared for the Housing Element; the details and findings of this VMT analysis are discussed in greater detail in the Transportation section of this Initial Study. However, to summarize, the updated analysis found the Housing Element has a beneficial effect on VMT generation. The updated analysis found existing conditions (2020) have an average citywide VMT of 15.7 VMT/resident and cumulative conditions (2035) have an average citywide VMT of 14.7 VMT/resident. This is an increase of baseline (existing conditions) VMT, which the General Plan EIR found to be 15.1 VMT/resident, but is a decrease of cumulative conditions VMT, which the General Plan EIR found to be 15.5 VMT/resident (with transportation facilities constrained) or 14.9 VMT/resident (with transportation facilities unconstrained). Given that the Housing Element was found to reduce cumulative citywide VMT, it was also found to reduce transportation sector GHG emissions. The Project is located within the area of

the City found to have low per-person VMT rate, where growth in the City would have the least impacts due to transportation-related GHG. In addition, the Project would meet Title 24 energy efficiency requirements, including providing solar. The project is consistent with the General Plan and Housing Element analyses and therefore per the tiering provisions of CEQA does not require further quantified analysis. While not required, an analysis of the project emissions compared to the PCAPCD's thresholds is also provided below.

As detailed in Attachment 4, CalEEMod was used to model the project's construction related and operations related GHG emissions (CO2e). Construction-related GHG emissions occur at one point in time and are therefore not typically expected to significantly contribute to climate change. Climate change is a cumulative effect that occurs over time, as emissions increase on a year-to-year basis due to increases in developed area and other factors; construction emissions are a one-time emission source, which end once the project is built. The CalEEMod results indicate the project would result in annual construction emissions of 128 CO2e in the most active construction year, which is well below the PCAPCD de minimis threshold of 1,100 MT CO2e/yr. Thus, the construction-generated GHG emissions would not conflict with, and are consistent with, the State goals listed in AB32 and other policies and regulations adopted by the California Air Resources Board pursuant to AB32. This impact is considered less than significant.

The PCAPCD's CEQA Air Quality Handbook contains a screening table used to determine if a residential project will exceed the long-term operational GHG emissions significance threshold (Table 2-6: Corresponding Size of a Project for De Minimis Level of 1,100 MT CO2e/yr). According to the screening table, projects that consist of 71 single-family homes or less are considered to have a less-than-significant impact related to long-term operational GHG emissions. The project proposes the construction of 12 new units, which is well below the published threshold of significance. Thus, project generated GHG emissions would not conflict with, and are consistent with, the State goals listed in AB32 and policies and regulation adopted by the California Air Resources Board pursuant to AB32. This impact is considered less than significant.

IX. Hazards and Hazardous Materials

No hazardous sites or potential for hazardous materials have been identified within 1000 feet of the project site, as indicated by a search of the State of California's Envirostor database (http://www.envirostor.dtsc.ca.gov/public/) and California State Water Resources Control Board Geotracker website (http://geotracker.waterboards.ca.gov/) on June 2, 2025.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment though reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?			X	

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to hazardous materials is based directly on the CEQA Guidelines checklist items a–g listed above. A material is defined as hazardous if it appears on a list of hazardous materials prepared by a federal, state or local regulatory agency, or if it has characteristics defined as hazardous by such an agency. The determination of significance based on the above criteria depends on the probable frequency and severity of consequences to people who might be exposed to the health hazard, and the degree to which Project design or existing regulations would reduce the frequency of or severity of exposure. As an example, products commonly used for household cleaning are classified as hazardous when transported in large quantities, but one would not conclude that the presence of small quantities of household cleaners at a home would pose a risk to a school located within ¼-mile.

Many federal and State agencies regulate hazards and hazardous substances, including the United States Environmental Protection Agency (US EPA), California Department of Toxic Substances Control (DTSC), Central Valley Regional Water Quality Control Board (Regional Water Board), and the California Occupational Safety and Health Administration (CalOSHA). The state has been granted primacy (primary responsibility for oversight) by the US EPA to administer and enforce hazardous waste management programs. State regulations also have detailed planning and management requirements to ensure that hazardous materials are handled, stored, and disposed of properly to reduce human health risks. California regulations pertaining to hazardous waste management are published in the California Code of Regulations (see 8 CCR, 22 CCR, and 23 CCR).

The project is not within an airport land use plan or within two miles of a public or private use airport. Therefore, no further discussion is provided for item e.

Discussion of Checklist Answers:

a, b) Standard construction activities would require the use of hazardous materials such as fuels, oils, lubricants, glues, paints and paint thinners, soaps, bleach, and solvents. These are common household and commercial materials routinely used by both businesses and average members of the public. The materials only pose a hazard if they are improperly used, stored, or transported either through upset conditions (e.g. a vehicle accident) or mishandling. In addition to construction use, the operational project would result in the use of common hazardous materials as well, including bleach, solvents, and herbicides. Regulations pertaining to the transport of materials are codified in 49 Code of Federal Regulations 171–180, and transport regulations are enforced and monitored by the California Department of Transportation and by the California Highway Patrol. Specifications for storage on a construction site are contained in various regulations and codes, including the California Code of Regulations, the Uniform Fire Code, and the California Health and Safety Code. These same codes require that all hazardous materials be used and stored in the manner specified on the material packaging. Existing regulations and programs are sufficient to ensure that potential impacts as a result of the use or storage of hazardous materials are reduced to less than significant levels.

c) See response to Items (a) and (b) above. While development of the site will result in the use, handling, and transport of materials deemed to be hazardous, the materials in question are commonly used in both residential and commercial applications, and include materials such as bleach and herbicides. The project will not result in the use of any acutely hazardous materials, substances, or waste.

d) The project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5[3]; therefore, no impact will occur.

e) This project is located within an area currently receiving City emergency services and development of the site has been anticipated and incorporated into emergency response plans. As such, the project will cause a less than significant impact to the City's Emergency Response or Management Plans. Furthermore, the project will be required to comply with all local, State and federal requirements for the handling of hazardous materials, which will ensure less-than-significant impacts.

g) The California Department of Forestry and Fire Protection (CAL FIRE) is the state agency responsible for wildland fire protection and management. As part of that task, CAL FIRE maintains maps designating Wildland Fire Hazard Severity zones. The project site is not located within a Very High Fire Hazard Severity Zone, and is not in a CAL FIRE responsibility area; fire suppression is entirely within local responsibility. The project site is also not located within a mapped local responsibility area fire hazard severity zone. The project site is in an urban area, and therefore would not expose people to any risk from wildland fire. There would be no impact with regard to this criterion.

[3] http://www.calepa.ca.gov/SiteCleanup/CorteseList/SectionA.htm

X. Hydrology and Water Quality

As described in the Open Space and Conservation Element of the City of Roseville General Plan, the City is located within the Pleasant Grove Creek Basin and the Dry Creek Basin. Pleasant Grove Creek and its tributaries drain most of the western and central areas of the City and Dry Creek and its tributaries drain the remainder of the City. Most major stream areas in the City are located within designated open space.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			X	
i) result in substantial erosion or siltation on or off-site;			X	
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;			X	
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater systems or provide substantial additional sources of polluted runoff; or			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
iv) impede or redirect flood flows?			X	
d) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	
e) In flood hazard, tsunami, or seiches zones, risk release of pollutants due to project innundation?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to hydrology and water quality is based directly on the CEQA Guidelines checklist items a–e listed above. For checklist item a, c (i), d, and e, the Findings of the Implementing Procedures indicate that compliance with the City of Roseville Design/Construction Standards (Resolution 07-107), Urban Stormwater Quality Management and Discharge Control Ordinance (RMC Ch. 14.20), and Stormwater Quality Design Manual (Resolution 16-152) will prevent significant impacts related to water quality or erosion. The standards require preparation of an erosion and sediment control plan for construction activities and includes designs to control pollutants within post-construction urban water runoff. Likewise, it is indicated that the Drainage Fees for the Dry Creek and Pleasant Grove Watersheds (RMC Ch.4.48) and City of Roseville Design/Construction Standards (Resolution 07-107) will prevent significant impacts related to checklist items c (ii) and c (iii). The ordinance and standards require the collection of drainage fees to fund improvements that mitigate potential flooding impacts, and require the design of a water drainage system that will adequately convey anticipated stormwater flows without increasing the rate or amount of surface runoff. These same ordinances and standards prevent impacts related to groundwater (items a and d), because developers are required to treat and detain all stormwater onsite using stormwater swales and other methods which slow flows and preserve infiltration. Finally, it is indicated that compliance with the Flood Damage Prevention Ordinance (RMC Ch. 9.80) will prevent significant impacts related to items c (iv) and e. The Ordinance includes standard requirements for all new construction, including regulation of development with the potential to impede or redirect flood flows, and prohibits development within flood hazard areas. Impacts from tsunamis and seiches were screened out of the analysis (item e) because the project is not located near a water body or other feature that would pose a risk of such an event.

Discussion of Checklist Answers:

a,c (i),d, e) The project will involve the disturbance of on-site soils and the construction of impervious surfaces, such as asphalt paving and buildings. Disturbing the soil can allow sediment to be mobilized by rain or wind, and cause displacement into waterways. To address this and other issues, the developer is required to receive approval of a grading permit and/or improvement plants prior to the start of construction. The permit or plans are required to incorporate mitigation measures for dust and erosion control. In addition, the City has a National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit issued by the Central Valley Regional Water Quality Control Board which requires the City to reduce pollutants in stormwater to the maximum extent practicable. The City does this, in part, by means of the City's Design and Construction Standards, which require preparation and implementation of a Stormwater Pollution Prevention Plan. All permanent stormwater quality control measures must be designed to comply with the City's Manual for Stormwater Quality Control Standards for New Development, the City's Design and Construction Standards, Urban Stormwater Quality

Management and Discharge Control Ordinance, and Stormwater Quality Design Manual. For these reasons, impacts related to water quality are less than significant.

b, d) The project does not involve the installation of groundwater wells. The City maintains wells to supplement surface water supplies during multiple dry years, but the effect of groundwater extraction on the aquifer was addressed in the City's Urban Water Master Plan and evaluated in the General Plan EIR. The proposed project is consistent with the General Plan land use designation, and is thus consistent with the citywide evaluation of water supply. Project impacts related to groundwater extraction are less than significant. Furthermore, all permanent stormwater quality control measures must be designed to comply with the Stormwater Quality Design Manual, which requires the use of bioswales and other onsite detention and infiltration methods. These standards ensure that stormwater will continue to infiltrate into the groundwater aquifer.

c (ii and iii)) The project has been reviewed by City Engineering staff for conformance with City ordinances and standards. The project includes adequate and appropriate facilities to ensure no net increase in the amount or rate of stormwater runoff from the site, and which will adequately convey stormwater flows.

c (iv) and e) The project has been reviewed by City Engineering staff for conformance with City ordinances and standards. The project is not located within either the Federal Emergency Management Agency floodplain or the City's Regulatory Floodplain (defined as the floodplain which will result from full buildout of the City). Therefore, the project will not impede or redirect flood flows, nor will it be inundated. The proposed project is located within an area of flat topography and is not near a waterbody or other feature which could cause a seiche or tsunami. There would be no impact with regard to these criterion.

XI. Land Use and Planning

The Project site is located within the City's Infill area. The site has a General Plan land use designation of Medium Density Residential 11.1 units per acre (MDR-11.1) and a zoning designation of Multi-Family Residential (R3). Based on the land use designation, a total of 12 units can be accommodated at the site. The Project site is bordered by single family dwelling units on the north, west, and east, as well as a church to the east, and Sixth Street on the south.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation of an agency adopted for the purpose of avoiding or mitigating an environmental effect?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to land use is based directly on the CEQA Guidelines checklist items a and b listed above. Consistency with applicable City General Plan policies, Improvement Standards, and design standards is already required and part of the City's processing of permits and plans, so these requirements do not appear as mitigation measures.

Discussion of Checklist Answers:

a) The project area has been master planned for development, including adequate roads, pedestrian paths, and bicycle paths to provide connections within the community. The project will not physically divide an established community.

b) Consistent with the General Plan designation, the proposed project will create 12 new multi-family units. The Project site is consistent with the land use designation and therefore, no further environmental analysis is required.

XII. Mineral Resources

The Surface Mining and Reclamation Act (SMARA) of 1975 requires the State Geologist to classify land into Mineral Resource Zones (MRZ's) based on the known or inferred mineral resource potential of that land. The California Division of Mines and Geology (CDMG) was historically responsible for the classification and designation of areas containing—or potentially containing—significant mineral resources, though that responsibility now lies with the California Geological Survey (CGS). CDMG published Open File Report 95-10, which provides the mineral classification map for Placer County. A detailed evaluation of mineral resources has not been conducted within the City limits, but MRZ's have been identified. There are four broad MRZ categories (MRZ-1 through MRZ-4), and only MRZ-2 represents an area of known significant mineral resources. The City of Roseville General Plan EIR included Exhibit 4.1-3, depicting the location of MRZ's in the City limits. There is only one small MRZ-2 designation area, located at the far eastern edge of the City.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to mineral resources is based directly on the CEQA Guidelines checklist items a and b listed above.

Discussion of Checklist Answers:

a–b) The project site is not in the area of the City known to include any mineral resources that would be of local, regional, or statewide importance; therefore, the project has no impacts on mineral resources.

XIII. Noise

The Project is bounded by single-family dwelling units on the north, west and east, as well as a church to the east, and Sixth Street to the south.

Would the project result in:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Generation 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?			X	
b) Generation of excessive ground borne vibration of ground borne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

Thresholds of Significance and Regulatory Setting:

Standards for transportation noise and non-transportation noise affecting existing or proposed land uses are established within the City of Roseville General Plan Noise Element, and these standards are used as the thresholds to determine the significance of impacts related to items a and c. The significance of other noise impacts is based directly on the CEQA Guidelines checklist items b and c listed above. The Findings of the Implementing Procedures indicate that compliance with the City Noise Regulation (RMC Ch. 9.24) will prevent significant non-transportation noise as it relates to items a and b. The Ordinance establishes noise exposure standards that protect noise-sensitive receptors from a variety of noise sources, including non-transportation/fixed noise, amplified sound, industrial noise, and events on public property. The project is not within an airport land use plan, within two miles of a public or public use airport and there are also no private airstrips in the vicinity of the project area. Therefore, item c has been ruled out from further analysis.

Discussion of Checklist Answers:

a) A slight increase in project related traffic will cause a slight increase in traffic related noise. However, the project will not create an excessive amount of traffic beyond that anticipated with the existing MDR-11.1 land

use designation. No permanent noise increase from a different mix of uses will occur as the project will retain the MDR-11.1 land use designation and will be developed with duplex dwelling units.

b) Surrounding uses may experience short-term increases in groundborne vibration, groundborne noise, and airborne noise levels during construction. However, these increases would only occur for a short period of time. When conducted during daytime hours, construction activities are exempt from Noise Ordinance standards, but the standards do apply to construction occurring during nighttime hours. While the noise generated may be a minor nuisance, the City Noise Regulation standards are designed to ensure that impacts are not unduly intrusive. Based on this, the impact is less than significant.

XIV. Population and Housing

The project site is located within the Infill area of the City and has a land use designation of Medium Density Residential 11.1 units per acre (MDR-11.1). The City of Roseville General Plan Table II-4 identifies the total number of residential units and population anticipated as a result of buildout of the City, and the Specific Plan likewise includes unit allocations and population projections for the Plan Area. Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, though extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to population and housing is based directly on the CEQA Guidelines checklist items a and b listed above.

Discussion of Checklist Answers:

a) The CEQA Guidelines identify several ways in which a project could have growth-inducing impacts (Public Resources Code Section 15126.2), either directly or indirectly. Growth-inducement may be the result of fostering economic growth, fostering population growth, providing new housing, or removing barriers to growth. Growth inducement may be detrimental, beneficial, or of no impact or significance under CEQA. An impact is only deemed to occur when it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be shown that the growth will significantly affect the environment in some other way. The project is consistent with the land use designation of the site. Therefore, while the project in question will induce some level of growth, this growth was already identified and its effects disclosed and mitigated within the General Plan EIR. Therefore, the impact of the project is less than significant.

b) The project site is currently vacant. There would be no impact with respect to these criteria.

XV. Public Services

Fire protection, police protection, park services, and library services are provided by the City. The project is located within the Roseville Elementary School District. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?			X	
d) Parks?			X	
e) Other public facilities?			X	

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to public services is based directly on the CEQA Guidelines checklist items a–e listed above. The EIR for the Specific Plan addressed the level of public services which would need to be provided in order to serve planned growth in the community. Development Agreements and other conditions have been adopted in all proposed growth areas of the City which identify the physical facilities needed to serve growth, and the funding needed to provide for the construction and operation of those facilities and services; the project is consistent with the Specific Plan. In addition, the project has been routed to the various public service agencies, both internal and external, to ensure that the project meets the agencies' design standards (where applicable) and to provide an opportunity to recommend appropriate conditions of approval.

Discussion of Checklist Answers:

a) Existing City codes and regulations require adequate water pressure in the water lines, and construction must comply with the Uniform Fire and Building Codes used by the City of Roseville. Additionally, the applicant is required to pay a fire service construction tax, which is used for purchasing capital facilities for the Fire Department. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

b) Pursuant to the Development Agreement for the project area, the developer is required to pay fees into a Community Facilities District, which provides funding for police services. Sales taxes and property taxes resulting from the development will add revenue to the General Fund, which also serves to fund police services. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

c) The applicant for this project is required to pay school impact fees at a rate determined by the local school districts. School fees will be collected prior to the issuance of building permits, consistent with City requirements. School sites have already been designated within this area of the City. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

d) The project will be required to pay neighborhood and citywide park fees which will sufficiently mitigate the impact of the additional residents from the project. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

e) The developer will be required to pay fees into a Community Facilities District, which provides funding for the library system and other such facilities and services. In addition, the City charges fees to end-users for other services, such as garbage and greenwaste collection, in order to fund those services. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

XVI. Recreation

The Project proposes a small on-site recreational area within the center of the development; Mark White Park is also located less than 200 feet from the Project site.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would occur or be accelerated?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to recreation services is based directly on the CEQA Guidelines checklist items a–b listed above.

Discussion of Checklist Answers:

a) The EIR for the General Plan addressed the level of park services—including new construction, maintenance, and operations—which would need to be provided in order to serve planned growth in the community. Given that the project is consistent with the General Plan, the project would not cause any unforeseen or new impacts related to the use of existing or proposed parks and recreational facilities. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

b) Park sites and other recreational facilities were identified within the General Plan, and the plan-level impacts of developing those facilities were addressed within the Final EIR for the General Plan. The project will not cause any unforeseen or new impacts related to the construction or expansion of recreational facilities.

XVII. Transportation

The Project has approximately 89 linear feet of frontage on Sixth Street, which is a two-lane collector roadway. Primary access will be provided by a new private street that is accessed via Sixth Street. Parking for each of the units will include a minimum single car garage and one uncovered space per duplex unit, one garage parking space per accessory dwelling unit, plus an additional guest space for a total of 23 parking spaces.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?			X	
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature(s) (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

Thresholds of Significance and Regulatory Setting:

The City has adopted the following plans, ordinances, or policies applicable to checklist item a: Pedestrian Master Plan, Bicycle Master Plan, Short-Range Transit Plan, and General Plan Circulation Element. The project is evaluated for consistency with these plans and the policies contained within them. For checklist item b, the CEQA Guidelines Section 15064.3 establishes a detailed process for evaluating the significance of transportation impacts. In accordance with this section, the analysis must focus on the generation of vehicle miles traveled (VMT); effects on automobile delay cannot be considered a significant impact. The City developed analysis guidance and thresholds as part of the 2035 General Plan Update project approved in July 2020. The detailed evaluation and justification is contained within the General Plan EIR.

Future projects consistent with the General Plan will not require further VMT analysis, pursuant to the tiering provisions of CEQA. For projects which are inconsistent, CEQA Guidelines Section 15064.3(b) allows lead agencies discretion to determine, in the context of a particular project, whether to rely on a qualitative analysis or performance-based standards. CEQA Guidelines Section 15064.7(b) allows lead agencies the discretion to select their own thresholds and allow for differences in thresholds based on context.

Quantitative analysis would not be required if it can be demonstrated that the project would generate VMT which is equivalent to or less than what was assumed in the General Plan EIR. Examples of such projects include:

- Local-serving retail and other local-serving development, which generally reduces existing trip distances by providing services in closer proximity to residential areas, and therefore reduce VMT.
- Multi-family residences, which generally have fewer trips per household than single-family residences, and therefore also produce less VMT per unit.
- Infill projects in developed areas generally have shorter trips, reduced vehicle trips, and therefore less VMT.
- Pedestrian, bicycle, transit, and electric vehicle transportation projects.
- Residential projects in low per-capita household VMT areas and office projects in low per-worker VMT areas (85 percent or less than the regional average) as shown on maps maintained by SACOG or within low VMT areas as shown within Table 4.3-8 of the General Plan EIR.

When quantitative analysis is required, the threshold of 12.8 VMT/capita may be used for projects not within the scope of the General Plan EIR, provided the cumulative context of the 2035 General Plan has not changed substantially. Since approval of the 2035 General Plan, the City has not annexed new land, substantially changed roadway network assumptions, or made any other changes to the 2035 assumptions which would require an update to the City's VMT thresholds contained within the General Plan EIR. Therefore, the threshold of 12.8 VMT/capita remains appropriate.

The development is both consistent with the General Plan land use designation and is an infill project in a developed area, and therefore as previously described, does not require any further analysis.

Impacts with regard to items c and d are assessed based on the expert judgment of the City Engineer and City Fire Department, as based upon facts and consistency with the City's Design and Construction Standards.

Discussion of Checklist Answers:

a) The City of Roseville has adopted a Pedestrian Master Plan, Bicycle Master Plan, and Short-Range Transit Plan. The project was reviewed for consistency with these documents. The project was reviewed for consistency with these documents.

b) No quantitative VMT analysis was completed for the proposed Project because it is consistent with the existing land use designation and therefore does not contribute more traffic to the roadway system than was anticipated in citywide analyses. Therefore, impacts are considered less than significant.

c, d) The project has been reviewed by the City Engineering and City Fire Department staff and has been found to be consistent with the City's Design Standards. Furthermore, standard conditions of approval added to all City project require compliance with Fire Codes and other design standards. Compliance with existing regulations ensure that impacts are less than significant.

XVIII. Tribal Cultural Resources

As described within the Open Space and Conservation Element of the City of Roseville General Plan, the Roseville region was within the territory of the Nisenan (also Southern Maidu or Valley Maidu). Two large permanent Nisenan habitation sites have been identified and protected within the City's open space (in Maidu

Park). Numerous smaller tribal cultural resources, such as midden deposits and bedrock mortars, have also been recorded in the City. A majority of documented sites within the City are located in areas designated for open space uses. The United Auburn Indian Community (UAIC) is a federally recognized Tribe comprised of both Miwok and Maidu (Nisenan) Tribal members who are traditionally and culturally affiliated with the project area. The UAIC has indicated that "the Tribe has deep spiritual, cultural, and physical ties to their ancestral land and are contemporary stewards of their culture and landscapes. The Tribal community represents a continuity and endurance of their ancestors by maintaining their connection to their history and culture. It is the Tribe's goal to ensure the preservation and continuance of their cultural heritage for current and future generations."

Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Public Resources Code Section 21074 as either a site, feature, place, 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:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) 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)?			X	
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1 the lead agency shall consider the significance of the resource to a California Native American tribe.			X	

Thresholds of Significance and Regulatory Setting:

Tribal cultural resources are defined in Public Resources Code Section 21074, as either 1) a site, feature, place, geographically-defined cultural landscape, sacred place, or object with cultural value to a California Native American Tribe, that is listed or eligible for listing on the California Register of Historical Resources, or on a local register of historical resources or as 2) a resource determined by the lead agency, supported by substantial evidence, to be significant according to the historical register criteria in Public Resources Code section 5024.1(c), and considering the significance of the resource to a California Native American Tribe.

Discussion of Checklist Answers:

a) The General Plan EIR included historic and cultural resources study, which included research on whether any listed or eligible sites had been documented in the project area. No such sites were found. However, standard mitigation measures apply which are designed to reduce impacts to any previously undiscovered resources, should any be found on-site. The measure requires an immediate cessation of work, and contact with the appropriate agencies to address the resource before work can resume. The project will not result in any new impacts beyond those already discussed and disclosed in the General Plan EIR; project-specific impacts are less than significant.

b) Notice of the proposed project was mailed to tribes which had requested such notice pursuant to AB 52. A request for consultation was not received. As discussed in item a, above, no resources are known to occur in the area. However, standard mitigation measures apply which are designed to reduce impacts to resources, should any be found on-site. The measure requires an immediate cessation of work and contact with the appropriate agencies to address the resource before work can resume. The project will not result in any new impacts beyond those already discussed and disclosed in the General Plan EIR; project-specific impacts are less than significant.

XIX. Utilities and Service Systems

Water and sewer services are provided by the City of Roseville. Solid waste will be collected by the City of Roseville's Waste Services Division. The City of Roseville will provide electric service to the site, while natural gas will be provided by PG&E. The project has been reviewed by the City's Engineering Division, Environmental Utilities, Roseville Electric, and PG&E, who have determined that adequate services are available for the project.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
c) Result in a determination by the wastewater treatment provider which serves the project that it has adequate capacity to serve the project's projected demand in addition of the provider's existing commitments?			X	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to utilities and service systems is based directly on the CEQA Guidelines checklist items a–e listed above.

Discussion of Checklist Answers:

a) The project is consistent with the General Plan and will be required to construct any utilities infrastructure necessary to serve the project, as well as pay fees which fund the operation of the facilities and the construction of major infrastructure. The construction impacts related to building the major infrastructure were disclosed in the EIR for the General Plan, and appropriate mitigation was adopted. Minor additional infrastructure will be constructed within the project site to tie the project into the major systems, but these facilities will be constructed in locations where site development is already occurring as part of the overall project; there are no additional substantial impacts specific or particular to the minor infrastructure improvements.

b) The City of Roseville 2020 Urban Water Management Plan (UWMP), adopted June 2021, estimates water demand and supply for the City through the year 2045, based on existing land use designations and population projections. In addition, the General Plan EIR estimates water demand and supply for ultimate General Plan buildout. The project is consistent with existing land use designations, and is therefore consistent with the assumptions of the UWMP and General Plan EIR. The UWMP indicates that existing water supply sources are sufficient to meet all normal years, and during single-dry and in certain multiple-dry years, water supply deficit may occur. The UWMP estimates a near-term (2025) demand of 51,585 acre-feet per year (AFY), and a long-term, buildout (2045) demand of 62,547 AFY. In normal years, supply exceeds demand by approximately 13,000 AFY in the near-term and by approximately 8,000 AFY at buildout. The UWMP establishes some water supply deficit during dry year scenarios, ranging from approximately 1,500 AFY to 5,000 AFY depending on the scenario, but establishes that mandatory water conservation measures and the use of

groundwater to offset reductions in surface water supplies are sufficient to offset the deficit. The project, which is consistent with existing land use designations, would not require new or expanded water supply entitlements.

c) The proposed project would be served by the Dry Creek Wastewater Treatment Plant (DCWWTP). The Central Valley Regional Water Quality Control Board (RWQCB) regulates water quality and quantity of effluent discharged from the City's wastewater treatment facilities. The DCWWTP has the capacity to treat 18 million gallons per day (mgd) and is currently treating 8.9 mgd. The project is consistent with existing land use designations, which is how infrastructure capacity is planned. Therefore, the volume of wastewater generated by the proposed project could be accommodated by the facility; the proposed project will not contribute to an exceedance of applicable wastewater treatment requirements. The impact would be less than significant.

d, e) The Western Placer Waste Management Authority is the regional agency handling recycling and waste disposal for Roseville and surrounding areas. The regional waste facilities include a Material Recovery Facility (MRF) and the Western Regional Sanitary Landfill (WRSL). Currently, the WRSL is permitted to accept up to 1,900 tons of municipal solid waste per day. According to the solid waste analysis of the General Plan EIR, under current projected development conditions the WRSL has a projected lifespan extending through 2058. There is sufficient existing capacity to serve the proposed project. Though the project will contribute incrementally to an eventual need to find other means of waste disposal, this impact of City buildout has already been disclosed and mitigation applied as part of each Specific Plan the City has approved. All residences and business in the City pay fees for solid waste collection, a portion of which is collected to fund eventual solid waste disposal expansion. The project will not result in any new impacts associated with major infrastructure. Environmental Utilities staff has reviewed the project for consistency with policies, codes, and regulations related to waste disposal and waste reduction regulations and policies and has found that the project design is in compliance.

XX. Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				X

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to wildfire is based directly on the CEQA Guidelines checklist items a–d listed above. The California Department of Forestry and Fire Protection (CAL FIRE) is the state agency responsible for wildland fire protection and management. As part of that task, CAL FIRE maintains maps designating Wildland Fire Hazard Severity zones. The project site is not located within a Very High Fire Hazard Severity Zone, and is not in a CAL FIRE responsibility area; fire suppression is entirely within local responsibility.

Discussion of Checklist Answers:

a–d) Checklist questions a–d above do not apply, because the project site is not within a Very High Fire Hazard Severity Zone and is not in a CAL FIRE responsibility area.

XXI. Mandatory Findings of Significance

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
endangered, threatened or rare species, or eliminate important examples of the major periods of California history or prehistory?				
b) Does the project have impacts which are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

Significance Criteria and Regulatory Setting:

The significance of impacts related to mandatory findings of significance is based directly on the CEQA Guidelines checklist items a–c listed above.

Discussion of Checklist Answers:

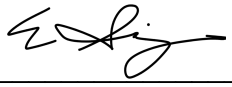
a–c) Long term environmental goals are not impacted by the proposed project. The cumulative impacts do not deviate beyond what was contemplated in the General Plan EIR, and mitigation measures have already been incorporated via the General Plan EIR. With implementation of the City's Mitigating Ordinances, Guidelines, and Standards and best management practices, mitigation measures described in this chapter, and permit conditions, the proposed project will not have a significant impact on the habitat of any plant or animal species. Based on the foregoing, the proposed project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of any wildlife species, or create adverse effects on human beings.

ENVIRONMENTAL DETERMINATION:

In reviewing the site specific information provided for this project and acting as Lead Agency, the City of Roseville, Development Services Department, Planning Division has analyzed the potential environmental impacts created by this project and determined that with mitigation the impacts are less than significant. As demonstrated in the initial study checklist, there are no "project specific significant effects which are peculiar to the project or site" that cannot be reduced to less than significant effects through mitigation (CEQA Section 15183) and therefore an EIR ***is not*** *required. Therefore,* ***on the basis of the foregoing initial study:***

[**X**] I find that the proposed project COULD, but with mitigation agreed to by the applicant, clearly will not have a significant effect on the environment and a *MITIGATED NEGATIVE DECLARATION* has been prepared.

Initial Study Prepared by:



Eric Singer, Associate Planner
City of Roseville, Development Services – Planning Division

Attachments:

1. The 2035 General Plan Update Final Environmental Impact Report, certified August 5, 2020, is available for review on the City's website at https://www.roseville.ca.us/cms/one.aspx?portalId=7964922&pageId=8774544
2. The 2021 Housing Element Addendum is available for review on the City's website at https://www.roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=16922203
3. Mitigation Monitoring & Reporting Program
4. CalEEMod Results
5. Arborist Report & Tree Inventory

CITY OF ROSEVILLE CALIFORNIA

DEVELOPMENT SERVICES DEPARTMENT – PLANNING DIVISION
311 Vernon Street, Roseville, CA 95678 (916) 774-5276

MITIGATION MONITORING AND REPORTING PROGRAM

Project Title/File Number:	INFILL PCL 108 – Rail Town Village / PL24-1103
Project Location:	412 Sixth Street
Project Description:	The applicant requests a Design Review Permit to construct five (5) new duplex buildings and two (2) ADUs totaling twelve (12) dwelling units, and a Tree Permit to remove eight (8) native oak trees and encroach into the protected zone of nineteen (19) other native oak trees.
Environmental Document	Mitigated Negative Declaration
Project Applicant:	Gary Orr, ORR Design Office
Property Owner:	Bhavannarayana Avula, Everest Hill LLC
Lead Agency Contact Person:	Eric Singer, Associate Planner, (916) 774-5536

Section 21081.6 of the California Public Resources Code requires public agencies to "adopt a reporting and monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." This Mitigation Monitoring and Reporting Program has been adopted for the purpose of avoiding environmental impacts

MONITORING PROCESS: Existing monitoring mechanisms are in place that assist the City of Roseville in meeting the intent of CEQA. These existing monitoring mechanisms eliminate the need to develop new monitoring processes for each mitigation measure. These mechanisms include grading plan review and approval, improvement/building plan review and approval and on-site inspections by City Departments. Given that these monitoring processes are requirements of the project, they are not included in the mitigation monitoring program.

It shall be the responsibility of the project applicant/owner to provide written notification to the City using the Mitigation Verification Cover Sheet and Forms, in a timely manner, of the completion of each Mitigation Measure as identified on the following pages. The City will verify that the project is in compliance with the adopted Mitigation Monitoring and Reporting Program. Any non-compliance will be reported by the City to the applicant/owner, and it shall be the project applicant's/owner's responsibility to rectify the situation by bringing the project into compliance. The purpose of this program is to ensure diligent and good faith compliance with the Mitigation Measures which have been adopted as part of the project.

TABLE OF MITIGATION MEASURES

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to City	Staff Use Only
BIO-1: Avoid nesting sites To ensure that fully protected bird and raptor species are not injured or disturbed by construction in the vicinity of nesting habitat, the project applicant shall implement the following measures: (a) When feasible, all tree removal shall occur between August 30 and February 15 to avoid the breeding season of any raptor species that could be using the area, and to discourage hawks from nesting in the vicinity of an upcoming construction area. This period may be modified with the authorization of the DFG; or (b) Prior to the beginning of mass grading, including grading for major infrastructure improvements, during the period between February 15 and August 30, all trees and potential burrowing owl habitat within 350 feet of any grading or earthmoving activity shall be surveyed for active raptor nests or burrows by a qualified biologist no more than 30 days prior to disturbance. If active raptor nests or burrows are found, and the site is within 350 feet of potential construction activity, a fence shall be erected around the tree or burrow(s) at a distance of up to 350 feet, depending on the species, from the edge of the canopy to prevent construction disturbance and intrusions on the nest area. The appropriate buffer shall be determined by the City in consultation with CDFG. (c) No construction vehicles shall be permitted within restricted areas (i.e., raptor protection zones), unless directly related to the management or protection of the legally protected species. (d) In the event that a nest is abandoned, despite efforts to minimize disturbance, and if the nestlings are still alive, the developer shall contact CDFG and, subject to CDFG approval, fund the recovery and hacking (controlled release of captive reared young) of the nestling(s). (e) If a legally protected species nest is located in a tree designated for removal, the removal shall be deferred until after August 30th, or until the adults and young of the year are no longer dependent on the nest site as determined by a qualified biologist. (f) The project applicant, in consultation with the CDFG, shall conduct a pre-construction survey within the phases of the project site that are scheduled for construction activities. The survey shall be conducted by a qualified biologist to determine if burrowing owls are occupying the project site. The survey shall be conducted no more than three weeks prior to grading of the project site. If the above survey does not identify burrowing owls on the project site, then no further mitigation would be required. However, should burrowing owls be found on the project site, the following measures shall be required: (g) The applicant shall avoid all potential burrowing owl burrows that may be disturbed by project construction during the breeding season between February 15 and August 30 (the period when nest burrows are typically occupied by adults with eggs or young). Avoidance shall include the establishment of a 350-foot diameter non-disturbance buffer zone around any occupied burrows. The buffer zone shall be delineated by highly visible temporary construction fencing. Disturbance of any occupied burrows shall only occur outside of the breeding season (August 30 through February 15). Based on approval by the CDFG, preconstruction and nonbreeding season exclusion measures may be implemented to preclude burrowing owl occupation of the project site prior to project-related disturbance (such as grading). Burrowing owls may be passively excluded from burrows in the construction area by placing one-way doors in the burrows according to current CDFG protocol. The one-way doors must be in place for a minimum of three days. All burrows that may be occupied by burrowing owls, regardless of whether they exhibit signs of occupation, must be cleared. Burrows that have been cleared through the use of the one-way doors shall then be closed or backfilled to prevent owls from entering the burrow. The oneway doors shall not be used more than two weeks before construction to ensure that owls do not recolonize the area of construction.	Results of preconstruction surveys shall be submitted prior to the issuance of a grading permit or Improvement Plans. Applicable construction restrictions shall be reflected within plans. The applicants shall prepare annual reports on the status and success of mitigation and shall submit these reports to U.S. Fish and Wildlife Service (USFWS) and CDFG. The applicants shall coordinate with USFWS and CDFG to modify as necessary any mitigation plans in an effort to attain mitigation success.	Pre-Construction and Construction: Surveys required prior to construction. If surveys are positive for birds, then remainder of mitigation steps are required prior to construction. Add as note on Improvement Plans.	Engineering	Nesting bird surveys	

CITY OF ROSEVILLE CALIFORNIA

DEVELOPMENT SERVICES DEPARTMENT
311 Vernon Street, Roseville, CA 95678 (916) 774-5276

MITIGATION VERIFICATION SUBMITTAL COVER SHEET

Project Title/Planning File # _____

Project Address _____

Property Owner _____

Planning Division Contact _____

SUMMARY OF VERIFICATION MATERIALS INCLUDED IN THIS SUBMITTAL

Mitigation Measure	Supporting Attachments Included	Date Complete

I HAVE ATTACHED THE FOLLOWING REQUIRED ITEMS:

☐ Table of Applicable Mitigation Measures

☐ Mitigation Verification Form(s)

☐ Specific supporting documentation required by measure(s), if applicable (e.g. biologist's report)

I hereby certify under penalty of perjury under the laws of the State of California that I am the property owner or an agent of the property owner and am authorized to submit this Mitigation Verification Form. I also certify that the above-listed mitigation measures have been completed in the manner required, and that all of the information in this submittal is true and correct, to the best of my knowledge:

_____ _____ _____

Signature and Date | Print Name | Contact Number

MITIGATION VERIFICATION FORM

Mitigation Measure

Description of Monitoring and Verification Work Performed. The following information is a required part of the description: dates, personnel names or titles, and the stage/phase of construction work. Additional notes sheets may be attached, if necessary, or the below may simply reference a separate attachment that provides the required information.

INSTRUCTIONS

COVER SHEET:

A Cover Sheet for the project/development is prepared by City staff, with the top portion filled out. Each time Mitigation Verification Forms(s) are being submitted, a Cover Sheet completed by the Developer, Contractor, or Designee is required. An example of a completed summary table is provided below. The signature on the Cover Sheet must be *original wet ink*.

EXAMPLE MITIGATION VERIFICATION SUBMITTAL COVER SHEET

Project Title/Planning File #	New Coffee Shop, PL15-0000
Project Address	10 Justashort Street
Property Owner	Jane Owner
Planning Division Contact	Joe Planner, Associate Planner, (916) 774-####

SUMMARY OF VERIFICATION MATERIALS INCLUDED IN THIS SUBMITTAL

Mitigation Measure	Supporting Attachments Included	Date Complete
MM-3	Copy of survey report signed by biologist	5/10/2016
MM-4	All information included in Mitigation Verification Form	5/12/2016
MM-5	E-mail from Air District approving Dust Control Plan	5/05/2016

MITIGATION VERIFICATION FORM:

A Mitigation Verification Form is provided by City staff, along with the Cover Sheet and Table of Applicable Mitigation Measures. A form is filled in and submitted for each mitigation measure by the Developer, Contractor, or Designee. The form needs only the mitigation number to be filled in, along with the Description of Monitoring and Verification Work Performed. Multiple forms may be submitted simultaneously, under one cover sheet. It is also permissible to submit a form for each part of a measure, on separate dates. For instance, in the example measure MM-4 in the table above, the actual mitigation requires informing construction workers *and* retaining a qualified archeologist if resources are uncovered. Thus, a developer may submit a form in May certifying that construction workers have been informed, and also submit a second copy of the form in July because resources were discovered and additional actions had to be undertaken.

Each mitigation measure specifies the type of supporting documentation required; this must be submitted in order for the City to accept the mitigation as complete. An example of a completed Mitigation Verification Form is provided below.

EXAMPLE
MITIGATION VERIFICATION FORM

Mitigation Measure MM3

Description of Monitoring and Verification Work Performed. The following information is a required part of the description: dates, personnel names or titles, and the stage/phase of construction work. Additional notes sheets may be attached, if necessary, or the below may simply reference a separate attachment that provides the required information.

The mitigation measure text is included on the Improvement Plans General Notes page (Improvement Plan EN15-0001). On May 4, 2016, prior to any ground-disturbing activities (the pre-construction phase), a site meeting was held. At this meeting, workers on the site were informed of the potential to unearth remains, and were instructed to cease work and notify their supervisor immediately if any resources were observed.

Rail Town Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Rail Town
Construction Start Date	9/1/2025
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	0.60
Location	412 6th St, Roseville, CA 95678, USA
County	Placer-Sacramento
City	Roseville
Air District	Placer County APCD
Air Basin	Sacramento Valley
TAZ	440
EDFZ	15
Electric Utility	Roseville Electric
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Condo/Townhouse	12.0	Dwelling Unit	1.10	17,810	7,000	0.00	31.0	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.1	14.1	13.9	15.1	0.02	0.57	6.26	6.83	0.52	3.00	3.52	—	2,494	2,494	0.10	0.02	0.40	2,502
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.80	1.51	14.1	14.5	0.02	0.64	7.08	7.73	0.59	3.42	4.02	—	2,455	2,455	0.10	0.02	0.01	2,463
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.88	0.80	3.48	4.17	0.01	0.12	0.13	0.22	0.11	0.06	0.15	—	772	772	0.03	0.01	0.07	776
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.16	0.15	0.63	0.76	< 0.005	0.02	0.02	0.04	0.02	0.01	0.03	—	128	128	< 0.005	< 0.005	0.01	128

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.75	1.47	13.9	15.1	0.02	0.57	6.26	6.83	0.52	3.00	3.52	—	2,494	2,494	0.10	0.02	0.00	2,502

2026	14.1	14.1	8.63	10.4	0.02	0.29	0.10	0.39	0.27	0.02	0.29	—	1,931	1,931	0.07	0.02	0.40	1,940
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.80	1.51	14.1	14.5	0.02	0.64	7.08	7.73	0.59	3.42	4.02	—	2,455	2,455	0.10	0.02	0.01	2,463
2026	1.25	1.04	8.64	10.3	0.02	0.29	0.10	0.39	0.27	0.02	0.29	—	1,920	1,920	0.08	0.02	0.01	1,929
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.34	0.28	2.47	2.76	< 0.005	0.10	0.13	0.22	0.09	0.06	0.15	—	491	491	0.02	0.01	0.03	493
2026	0.88	0.80	3.48	4.17	0.01	0.12	0.04	0.16	0.11	0.01	0.12	—	772	772	0.03	0.01	0.07	776
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.06	0.05	0.45	0.50	< 0.005	0.02	0.02	0.04	0.02	0.01	0.03	—	81.3	81.3	< 0.005	< 0.005	0.01	81.7
2026	0.16	0.15	0.63	0.76	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	128	128	< 0.005	< 0.005	0.01	128

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.99	0.95	0.48	4.81	0.01	0.01	0.78	0.80	0.01	0.20	0.21	5.49	1,137	1,142	0.60	0.04	3.35	1,173
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.87	0.83	0.55	3.44	0.01	0.01	0.78	0.80	0.01	0.20	0.21	5.49	1,051	1,057	0.60	0.05	0.21	1,086
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.86	0.82	0.47	3.40	0.01	0.01	0.70	0.71	0.01	0.18	0.19	5.49	975	981	0.59	0.04	1.37	1,009
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.16	0.15	0.09	0.62	< 0.005	< 0.005	0.13	0.13	< 0.005	0.03	0.03	0.91	161	162	0.10	0.01	0.23	167

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.50	0.46	0.42	4.10	0.01	0.01	0.78	0.79	0.01	0.20	0.21	—	969	969	0.03	0.04	3.23	984
Area	0.48	0.48	0.01	0.68	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	1.82	1.82	< 0.005	< 0.005	—	1.83
Energy	0.01	< 0.005	0.06	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	164	164	0.01	< 0.005	—	165
Water	—	—	—	—	—	—	—	—	—	—	—	0.76	2.02	2.77	0.08	< 0.005	—	5.27
Waste	—	—	—	—	—	—	—	—	—	—	—	4.73	0.00	4.73	0.47	0.00	—	16.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	0.99	0.95	0.48	4.81	0.01	0.01	0.78	0.80	0.01	0.20	0.21	5.49	1,137	1,142	0.60	0.04	3.35	1,173
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.45	0.41	0.49	3.42	0.01	0.01	0.78	0.79	0.01	0.20	0.21	—	885	885	0.04	0.04	0.08	899
Area	0.42	0.42	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.01	< 0.005	0.06	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	164	164	0.01	< 0.005	—	165
Water	—	—	—	—	—	—	—	—	—	—	—	0.76	2.02	2.77	0.08	< 0.005	—	5.27
Waste	—	—	—	—	—	—	—	—	—	—	—	4.73	0.00	4.73	0.47	0.00	—	16.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	0.87	0.83	0.55	3.44	0.01	0.01	0.78	0.80	0.01	0.20	0.21	5.49	1,051	1,057	0.60	0.05	0.21	1,086
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.40	0.37	0.41	3.04	0.01	0.01	0.70	0.71	0.01	0.18	0.19	—	808	808	0.03	0.04	1.25	821
Area	0.45	0.45	< 0.005	0.34	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.90	0.90	< 0.005	< 0.005	—	0.90
Energy	0.01	< 0.005	0.06	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	164	164	0.01	< 0.005	—	165
Water	—	—	—	—	—	—	—	—	—	—	—	0.76	2.02	2.77	0.08	< 0.005	—	5.27
Waste	—	—	—	—	—	—	—	—	—	—	—	4.73	0.00	4.73	0.47	0.00	—	16.6

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	0.86	0.82	0.47	3.40	0.01	0.01	0.70	0.71	0.01	0.18	0.19	5.49	975	981	0.59	0.04	1.37	1,009
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.07	0.07	0.07	0.56	< 0.005	< 0.005	0.13	0.13	< 0.005	0.03	0.03	—	134	134	0.01	0.01	0.21	136
Area	0.08	0.08	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.15	0.15	< 0.005	< 0.005	—	0.15
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.1	27.1	< 0.005	< 0.005	—	27.2
Water	—	—	—	—	—	—	—	—	—	—	—	0.13	0.33	0.46	0.01	< 0.005	—	0.87
Waste	—	—	—	—	—	—	—	—	—	—	—	0.78	0.00	0.78	0.08	0.00	—	2.74
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	0.16	0.15	0.09	0.62	< 0.005	< 0.005	0.13	0.13	< 0.005	0.03	0.03	0.91	161	162	0.10	0.01	0.23	167

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.75	1.47	13.9	15.1	0.02	0.57	—	0.57	0.52	—	0.52	—	2,494	2,494	0.10	0.02	—	2,502
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.76	0.83	< 0.005	0.03	—	0.03	0.03	—	0.03	—	137	137	0.01	< 0.005	—	137
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.14	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.7
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.31	12.1	12.1	0.02	0.56	—	0.56	0.52	—	0.52	—	2,065	2,065	0.08	0.02	—	2,072
Dust From Material Movement	—	—	—	—	—	—	6.26	6.26	—	3.00	3.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.31	12.1	12.1	0.02	0.56	—	0.56	0.52	—	0.52	—	2,065	2,065	0.08	0.02	—	2,072
Dust From Material Movement	—	—	—	—	—	—	6.26	6.26	—	3.00	3.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	—	11.4
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.87	1.87	< 0.005	< 0.005	—	1.88
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.80	1.51	14.1	14.5	0.02	0.64	—	0.64	0.59	—	0.59	—	2,455	2,455	0.10	0.02	—	2,463
Dust From Material Movement	—	—	—	—	—	—	7.08	7.08	—	3.42	3.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.02	0.02	0.15	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.9	26.9	< 0.005	< 0.005	—	27.0
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.45	4.45	< 0.005	< 0.005	—	4.47
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	8.95	10.0	0.02	0.33	—	0.33	0.30	—	0.30	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.18	1.47	1.65	< 0.005	0.05	—	0.05	0.05	—	0.05	—	296	296	0.01	< 0.005	—	297
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.27	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	49.0	49.0	< 0.005	< 0.005	—	49.2

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.33	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	85.1	85.1	< 0.005	< 0.005	0.01	86.2
Vendor	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.6	36.6	< 0.005	0.01	< 0.005	38.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.4	14.4	< 0.005	< 0.005	0.02	14.6
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.01	6.01	< 0.005	< 0.005	0.01	6.28
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.38	2.38	< 0.005	< 0.005	< 0.005	2.41
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.99	0.99	< 0.005	< 0.005	< 0.005	1.04
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.22	1.01	8.57	9.96	0.02	0.29	—	0.29	0.27	—	0.27	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.01	8.57	9.96	0.02	0.29	—	0.29	0.27	—	0.27	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47	0.39	3.30	3.84	0.01	0.11	—	0.11	0.10	—	0.10	—	694	694	0.03	0.01	—	697
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.60	0.70	< 0.005	0.02	—	0.02	0.02	—	0.02	—	115	115	< 0.005	< 0.005	—	115
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.42	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	94.5	94.5	< 0.005	< 0.005	0.31	95.0
Vendor	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.9	35.9	< 0.005	0.01	0.09	37.6

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.31	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	83.4	83.4	< 0.005	< 0.005	0.01	84.5
Vendor	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.9	35.9	< 0.005	0.01	< 0.005	37.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.1	33.1	< 0.005	< 0.005	0.05	33.5
Vendor	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.8	13.8	< 0.005	< 0.005	0.01	14.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.47	5.47	< 0.005	< 0.005	0.01	5.55
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.29	2.29	< 0.005	< 0.005	< 0.005	2.40
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.47	4.41	6.48	0.01	0.18	—	0.18	0.17	—	0.17	—	991	991	0.04	0.01	—	995
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.18	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	27.2	27.2	< 0.005	< 0.005	—	27.3
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.50	4.50	< 0.005	< 0.005	—	4.51
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	13.9	13.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.66	3.66	< 0.005	< 0.005	—	3.67

Architectural Coating	0.38	0.38	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	0.07	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	18.9	18.9	< 0.005	< 0.005	0.06	19.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.50	0.46	0.42	4.10	0.01	0.01	0.78	0.79	0.01	0.20	0.21	—	969	969	0.03	0.04	3.23	984
Total	0.50	0.46	0.42	4.10	0.01	0.01	0.78	0.79	0.01	0.20	0.21	—	969	969	0.03	0.04	3.23	984
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.45	0.41	0.49	3.42	0.01	0.01	0.78	0.79	0.01	0.20	0.21	—	885	885	0.04	0.04	0.08	899
Total	0.45	0.41	0.49	3.42	0.01	0.01	0.78	0.79	0.01	0.20	0.21	—	885	885	0.04	0.04	0.08	899
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.07	0.07	0.07	0.56	< 0.005	< 0.005	0.13	0.13	< 0.005	0.03	0.03	—	134	134	0.01	0.01	0.21	136
Total	0.07	0.07	0.07	0.56	< 0.005	< 0.005	0.13	0.13	< 0.005	0.03	0.03	—	134	134	0.01	0.01	0.21	136

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	88.1	88.1	0.01	< 0.005	—	88.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	88.1	88.1	0.01	< 0.005	—	88.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	88.1	88.1	0.01	< 0.005	—	88.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	88.1	88.1	0.01	< 0.005	—	88.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	14.6	14.6	< 0.005	< 0.005	—	14.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	14.6	14.6	< 0.005	< 0.005	—	14.6

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.01	< 0.005	0.06	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	75.8	75.8	0.01	< 0.005	—	76.0

Total	0.01	< 0.005	0.06	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	75.8	75.8	0.01	< 0.005	—	76.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	0.01	< 0.005	0.06	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	75.8	75.8	0.01	< 0.005	—	76.0
Total	0.01	< 0.005	0.06	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	75.8	75.8	0.01	< 0.005	—	76.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.6	12.6	< 0.005	< 0.005	—	12.6
Total	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.6	12.6	< 0.005	< 0.005	—	12.6

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	0.38	0.38	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.06	0.01	0.68	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.82	1.82	< 0.005	< 0.005	—	1.83

Total	0.48	0.48	0.01	0.68	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	1.82	1.82	< 0.005	< 0.005	—	1.83
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	0.38	0.38	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.42	0.42	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	0.07	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	—	0.15
Total	0.08	0.08	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.15	0.15	< 0.005	< 0.005	—	0.15

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	0.76	2.02	2.77	0.08	< 0.005	—	5.27
Total	—	—	—	—	—	—	—	—	—	—	—	0.76	2.02	2.77	0.08	< 0.005	—	5.27
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	0.76	2.02	2.77	0.08	< 0.005	—	5.27
Total	—	—	—	—	—	—	—	—	—	—	—	0.76	2.02	2.77	0.08	< 0.005	—	5.27
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	0.13	0.33	0.46	0.01	< 0.005	—	0.87
Total	—	—	—	—	—	—	—	—	—	—	—	0.13	0.33	0.46	0.01	< 0.005	—	0.87

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	4.73	0.00	4.73	0.47	0.00	—	16.6

Total	—	—	—	—	—	—	—	—	—	—	—	4.73	0.00	4.73	0.47	0.00	—	16.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	4.73	0.00	4.73	0.47	0.00	—	16.6
Total	—	—	—	—	—	—	—	—	—	—	—	4.73	0.00	4.73	0.47	0.00	—	16.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	0.78	0.00	0.78	0.08	0.00	—	2.74
Total	—	—	—	—	—	—	—	—	—	—	—	0.78	0.00	0.78	0.08	0.00	—	2.74

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	9/1/2025	9/29/2025	5.00	20.0	—
Site Preparation	Site Preparation	9/30/2025	10/2/2025	5.00	2.00	—
Grading	Grading	10/3/2025	10/8/2025	5.00	4.00	—
Building Construction	Building Construction	10/9/2025	7/16/2026	5.00	200	—
Paving	Paving	7/17/2026	7/31/2026	5.00	10.0	—
Architectural Coating	Architectural Coating	8/1/2026	8/15/2026	5.00	10.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	7.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41

Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Cranes	Diesel	Average	1.00	6.00	367	0.29
Building Construction	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	14.3	LDA,LDT1,LDT2
Demolition	Vendor	—	8.80	HHDT,MHDT
Demolition	Hauling	0.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	0.00	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT

Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	8.64	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	1.28	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	0.00	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	1.73	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	36,065	12,022	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	—	—
Site Preparation	—	—	1.88	0.00	—
Grading	—	—	4.00	0.00	—
Paving	0.00	0.00	0.00	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Condo/Townhouse	—	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	528	0.03	< 0.005
2026	0.00	528	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Condo/Townhouse	87.8	97.7	75.4	31,924	991	1,102	850	360,206

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Condo/Townhouse	—
Wood Fireplaces	0
Gas Fireplaces	4
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	8
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
36065.25	12,022	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value

Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Condo/Townhouse	60,864	528	0.0330	0.0040	236,636

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Condo/Townhouse	394,397	98,434

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Condo/Townhouse	8.78	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	26.4	annual days of extreme heat
Extreme Precipitation	6.25	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	2	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	2	1	1	3
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	64.7
AQ-PM	17.9
AQ-DPM	88.7
Drinking Water	0.54
Lead Risk Housing	92.5
Pesticides	0.00
Toxic Releases	16.1
Traffic	34.4
Effect Indicators	—
CleanUp Sites	87.6
Groundwater	93.6
Haz Waste Facilities/Generators	73.5
Impaired Water Bodies	12.5
Solid Waste	89.8
Sensitive Population	—
Asthma	44.9
Cardio-vascular	82.4
Low Birth Weights	1.39
Socioeconomic Factor Indicators	—

Education	56.2
Housing	74.8
Linguistic	28.8
Poverty	84.2
Unemployment	69.1

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	26.67778776
Employed	12.60105223
Median HI	17.70819967
Education	—
Bachelor's or higher	28.6154241
High school enrollment	24.3295265
Preschool enrollment	1.873476197
Transportation	—
Auto Access	15.29577826
Active commuting	85.21750289
Social	—
2-parent households	28.76940844
Voting	65.2252021
Neighborhood	—
Alcohol availability	26.13884255
Park access	81.35506224
Retail density	66.08494803
Supermarket access	13.47363018

Tree canopy	92.58308739
Housing	—
Homeownership	29.61632234
Housing habitability	35.73720005
Low-inc homeowner severe housing cost burden	34.51815732
Low-inc renter severe housing cost burden	22.89233928
Uncrowded housing	41.84524573
Health Outcomes	—
Insured adults	16.52765302
Arthritis	19.5
Asthma ER Admissions	44.0
High Blood Pressure	32.4
Cancer (excluding skin)	40.8
Asthma	16.4
Coronary Heart Disease	15.5
Chronic Obstructive Pulmonary Disease	10.5
Diagnosed Diabetes	41.8
Life Expectancy at Birth	15.0
Cognitively Disabled	26.7
Physically Disabled	50.9
Heart Attack ER Admissions	32.5
Mental Health Not Good	20.5
Chronic Kidney Disease	27.1
Obesity	23.0
Pedestrian Injuries	97.9
Physical Health Not Good	23.8
Stroke	22.5
Health Risk Behaviors	—

Binge Drinking	24.0
Current Smoker	11.4
No Leisure Time for Physical Activity	31.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	62.5
Elderly	58.6
English Speaking	59.8
Foreign-born	23.2
Outdoor Workers	27.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	50.2
Traffic Density	31.6
Traffic Access	50.0
Other Indices	—
Hardship	72.3
Other Decision Support	—
2016 Voting	53.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0
Healthy Places Index Score for Project Location (b)	21.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	N/A

SAF Certified Urban & Community Forester #108
ISA Certified Arborist #WE - 0407AM
ISA Qualified Tree Risk Assessor
ASCA Qualified Tree Appraiser
CA Licensed Pest Control Advisor #71479

Member
American Society of Consulting Arborists
International Society of Arboriculture
Society of American Foresters
Street Tree Seminar, Inc.

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PROJECT NAME: 412 6th Street
Roseville, CA 95678

ASSIGNMENT: Evaluation of design and its impact on existing trees

PLAN EVAL DATE: March13, 2025

REPORT DATE: April 7, 2025

INTRODUCTION: This report addresses the impact of five proposed duplex buildings with garages and two Additional Dwelling Units (ADU) to be constructed on a 1.1 acre lot located at 412 6th Street in the City of Roseville. The primary design objective for the new community was to preserve as many of the existing mature trees as possible by positioning the duplexes and the ADU's in locations that will have the least impact on the existing trees and allow room for new trees. The demolition plan specifies 11 trees for removal. The site plan specifies a 20 foot wide asphalt driveway that will run parallel with the western property line until it turns eastward near the northern end of the lot and ends at the east property line. The driveways will have a permeable surface. The grading plan calls out trenching for utilities and raised building pads and a lighting plan specifies low voltage landscape lighting. The landscape plan calls for new screening plant material and new trees along the property boundaries. At the heart of the site is a common oak grove area with a decomposed granite pathway, picnic tables and chairs.

SITE OVERVIEW

EVALUATION METHODOLOGY

The health, structure and condition of the subject trees were based on recognized national standard as established by the Council of Tree and Landscape Appraisers and the International Society of Arboriculture that uses a numeric scale of 5 (highest) to 0 (dead). The table below shows the ratings used during the field inspection.

No problem(s)	Excellent	5	No problems found from a visual ground inspection. Structurally, the trees have properly spaced branches and near perfect.
No apparent problem(s)	Good	4	The tree is in good condition and there are no apparent problems that a Certified Arborist can see from a visual ground inspection. If potential structural or health problems are tended to at this stage future risk can be reduced and/or more serious health problems can be averted.
Minor problem(s)	Fair	3	The tree is in fair condition. There are some minor structural or health problems that pose no immediate danger. When the recommended actions in an arborist report are completed correctly the defect(s) can be minimized or eliminated and/or health can be improved.
Major or uncorrectable problems (2)	Poor	2	The tree has major structural issues. Retention would require additional evaluation to determine if health and structure could be improved. Risk should be assessed as it has structural conditions which indicate there is a high likelihood of some type of failure. Tree rated 2 should be removed if these additional evaluations will not be performed.
Extreme problem(s)	Hazardous	1	The problems are extreme. This rating is assigned to a tree that has structural and/or health problems that no amount of work or effort can change. The issues may or may not be considered a dangerous situation.
Dead	Dead	0	This indicates the tree has no significant sign of life.

Development impacts are based on distance relationships between the locations of the trees and the limits of grading and/or construction. Future field inspections and findings during the project at the time of grading and excavation can also change impacts to the trees on the adjacent properties as well as on site trees. Closely followed tree protection guidelines and requirements will result in a higher chance of their survival, while requirements that are overlooked will lower their chance of survival. Construction impacts are rated as follows:

Impact	**Long Term Result of Impact:**
Negligible	Tree is unlikely to show any symptoms. Chance of survival post development is excellent. Impacts to the Protected Root Zone are less than 5%.
Minor	Tree is likely to show minor symptoms. Chance of survival post development is good. Impacts to the Protected Root Zone are less than 15% and species tolerance is good.
Moderate	Tree is likely to show moderate symptoms. Chance of survival post development is fair. Impacts to the Protected Root Zone are less than 35% and species tolerance is good or moderate.
Severe	Tree is likely to show moderate symptoms annually and a pattern of decline. Chance of long-term survival post development is low. Impacts to the Protected Root Zone are up to 50% and species tolerance is moderate to poor.
Critical	Tree is likely to show moderate to severe symptoms annually and a pattern of decline. Chance of long-term survival post development is negligible. Impacts to the Protected Root Zone are up to 80%.
Total Loss	Tree is within the building footprint or grading will require removal.

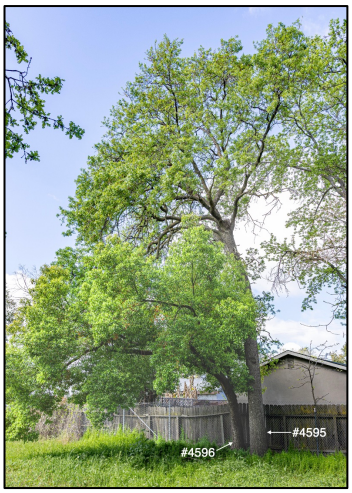
Walter Warriner
Consulting Arborist

PLAN ANALYSIS

There are 11 trees on the site that will be critically impacted by construction and should be removed during the demolition phase. There is a neighboring tree that should also be removed.

There are at least 6 trees that should be considered "shared trees" due their proximity to the property line. Trees with trunks that straddle a property line of an adjoining property typically belong to both landowners (Civil Code Section 834). In such cases there is only a limited right to cut any portion of the tree. Since the law is not entirely clear as to what right an owner on either side of a boundary has to cut any portion of a tree where the trunk straddles the property line, treatment of these trees will need to be discussed with the adjacent property owners in order to arrive at a mutually agreeable decision prior to demolition.

There are 8 trees located on adjacent properties that will need to be included with the *Tree Protection Zones* (TPZ's) and will need to be established prior to construction.



There are 2 trees next to the western property line, #4596, a camphor and #4595, a valley oak (photos at right) that are codominant where the valley oak depends on the camphor. Retaining the camphor will require specific pruning treatments for clearance. Camphor trees have a low tolerance for root damage so specialized excavation and root pruning will be required. Root pruning requirements will not be known until they are excavated. In the event the camphor will not tolerate the required root pruning removal would be the option.

The canopy of the camphor has been shading the trunk of the valley oak which is now dependent on that shade. Removal of the camphor tree will expose the trunk of the valley oak to sunscald. Sunscald occurs when bark that is usually shaded by foliage becomes fully exposed to sunlight. The excessive sunlight causes the tissue in the bark to become so hot that the cells in the cambium start to die. This results in dried out bark that flakes off creating lesions in the bark that over time open up into large wounds. The damaged area then becomes a decay pocket that is sometimes not recognized. These types of wounds can go undetected but will eventually weaken the stem of the valley oak which could lead to its failure or ultimate decline.

Walter Warriner
Consulting Arborist

Removing the camphor would also leave the remaining valley oak with a low live crown ratio. The live crown ratio (LCR) is the ratio of crown length to total tree height. The LCR is affected by species, growing conditions, pruning history, previous branch failures, and natural branch shedding. A low LCR is created when the crowns are over-pruned. In this case a low LCR would be created with the removal of the camphor. A low LCR is a condition of concern, especially when the tree is exposed to higher wind conditions that follow soil saturating rainfall. A general rule for urban trees is when the LCR is less than 30% there is an increased likelihood of whole tree failure when taking in to account site-specific factors such as construction and excavation that could contribute to tree instability.

Tree #4591 (photo below left) is located in the northwest section of the site and will likely be impacted by grading for a parking area. Retaining this tree will require careful excavation, specific root pruning and regular care during the construction phase. Retaining the tree also depends on the amount of roots that are cut at the time of grading. In the event the tree could become destabilized as a result of excessive root loss the tree will need to be removed.

All of the trees that have been identified for retention will be impacted by the project. The grading throughout the site impacts up to 50% and more of their root zones and construction of the individual duplexes will require specific pruning treatments to provide sufficient building clearance.

Mature trees that have been growing in natural conditions tend to have a low tolerance to changes in their growing environment. Without proper maintenance all of the trees are likely to show moderate symptoms of stress and a pattern of decline over the next 2 – 5 years and their chance of long-term survival post construction is low.

Long term success for this project depends on a thorough tree protection and maintenance program that begins during the design phase, continues through the life of the project and has a long rang post-construction maintenance plan.

The typical TPZ includes the root plate and anchoring roots that are under the outermost edge of the tree's canopy spread and requires the most protection and care. The industry accepted calculation for a mature tree's protection zone provides a radius of 1 foot for every 1 inch of trunk diameter when the trunk is measured at 4½ feet above grade. The City of Roseville requires an additional 1 foot beyond the dripline of the protected tree. Due to the layout of the site, standard tree protection zones that encompass the entire canopy of the trees would be impractical as it would inhibit most of the grading and much of the construction. However, establishing grow zones that are consistent with the grading requirements creates conditions that will help the trees tolerate the impact of root pruning and encourage new root growth to be generated within the boundaries of the tree protection zones.

There are 22 trees that have been carefully incorporated into the design of the individual structures and connecting driveway that will require unique TPZ's during construction. Level 2 Risk Assessments should be conducted on all 22 trees to determine final suitability for retention.

The subject trees currently pose a low level of risk because up to this point there have been very few targets within the fall zones of any of the subject trees and the consequences of any branch failures have been insignificant.

During the initial site inspection it was noted that the trees did not appear to have a pruning history with some trees having structural defects that should be corrected through pruning. The initial site visit did not include a risk assessment, but now that a proposed design has been produced the risk level of all trees that are proposed for retention should be assessed and a regular tree maintenance program should be developed.

The tree risk assessments are based on the standards and practices described within the *American National Standard Institute (ANSI) A300 (Part 9) Tree Risk Assessment; a. Tree Structure Assessment - Standard Practices*. All retained trees should be assessed through a ground-based, Level 2 Basic Assessment in conformance with this Standard.

A Level 2 inspection and assessment is conducted from various vantage points on the ground immediately adjacent to and at a distance from the subject trees. No special tools or equipment are required to conduct these assessments. The time frame applied to estimate the likelihood of failure of a tree or one of its parts would be for 36 months.

Tree and site conditions that should be inspected and assessed include but are not limited to:

- Tree Characteristics: Tree species are visually identified based on expertise. Tree diameter is measured and height is estimated based on the surrounding landscape features. Tree health is gauged through observations of foliage coloration, form and density, and general growth rates. Other tree characteristics are visually inspected and assessed using visual signs and symptoms identified in accordance with the expertise of the Arborist.

- Root Condition: The impact of root pruning for construction, or damage to the root system or root crown that would be evident through observations of the tree crown condition and the condition of roots visible on the ground surface should be inspected and evaluated.

- Trunk Defects: All retained trees should be inspected for symptoms of decay, cavities, large cracks, and other major defects that are readily visible and/or represent a symptom of structural decline that could affect tree stability.

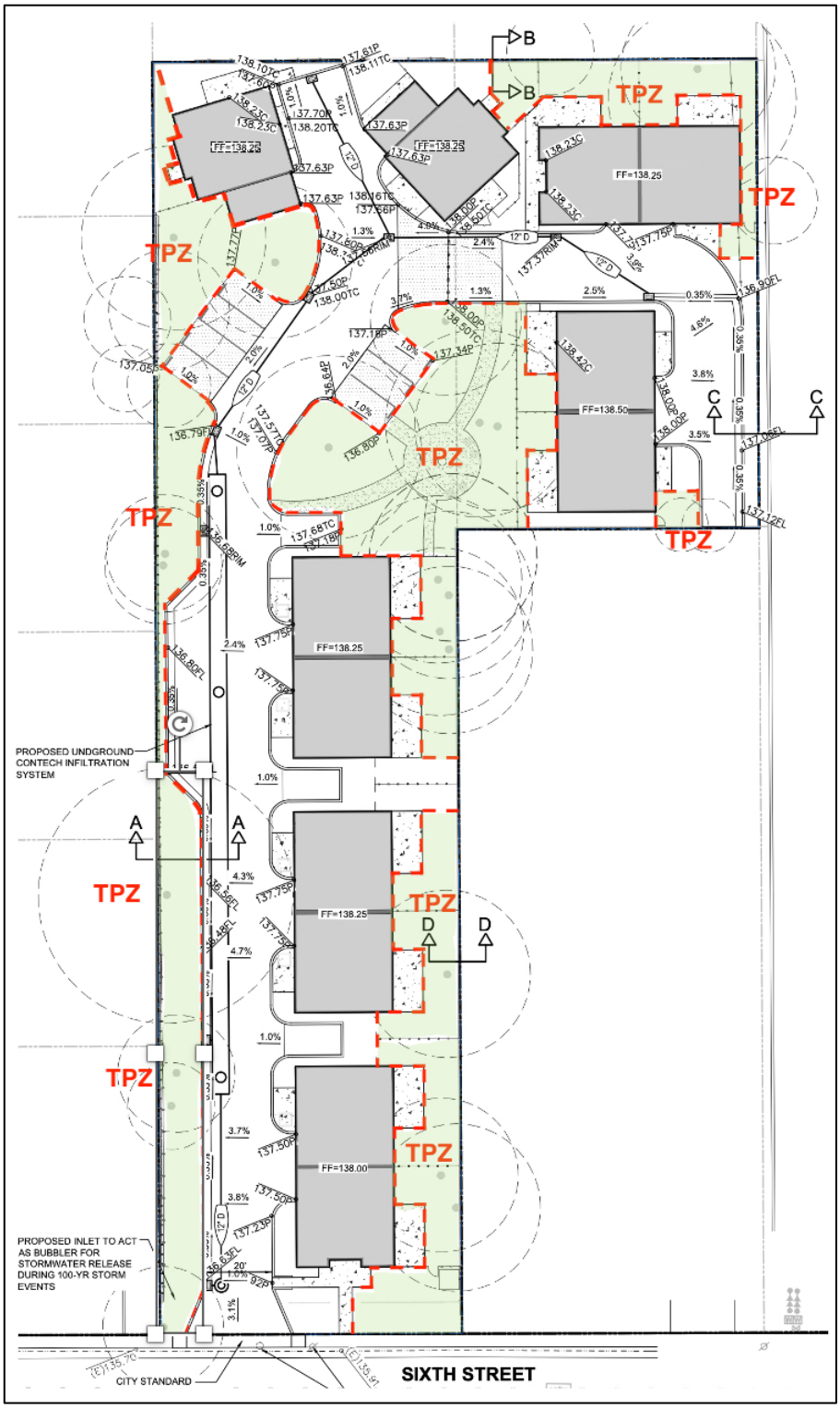
- Scaffold Branch and Crown Defects: Canopies should be inspected for large dead branches, multiple and/or weak attachments, excessive end weight, and large broken branches hanging over targets. The risk assessment should also include future pruning frequencies and specific pruning requirements for regular canopy maintenance.

- Site Factors: Signs of construction impacts that could have compromised the root zones and/or the TPZ's. Observations or evidence of construction activities that may have resulted in damaged roots, or otherwise compromised a tree's structural stability.

- Targets: After construction has been completed and the homes are occupied, the presence of people and the location of the new homes in relation to the fall zones of the trees should be evaluated to estimate the likelihood of tree failure, a potential impact and the consequences of a tree failure.

TREE PROTECTION ZONES

Specialized TPZ's (shown in the diagram below) will need to be to developed as grow zones for the retained trees. These grow zones will provide an environment that minimizes the negative impact of grading and construction and must be established prior to any construction activities.



TREE PROTECTION & LONG TERM MAINTENANCE GUIDELINES

Prior to the final design and the development of actual construction drawings and after a Level 2 Tree Risk Assessment has been completed, *Tree Protection Zones (TPZ's)* will need to be established. The TPZ's will act as grow zones for the individual trees that are to be retained. Implementation of the tree protection program must be completed prior to the commencement of any construction activities and involves the following steps:

- Survey the site to determine the specific layouts of the driveway sections, parking areas, building footprints and patios that impact the trees to develop the individual TPZ's.

    - The *Tree Protection Zone* shall be shown on all site plans including but not limited to: Demolition, Grading, Irrigation, Electrical, Landscape and Lighting, etc. Improvements or activities such as paving, utilities, trenching and other ancillary activities shall occur outside the *Tree Protection Zone,* unless otherwise specified. The protection fence shall serve as the boundary of a designated *Tree Protection Zone.*

- Prune all roots that extend into the areas that are to going to be impacted by grading for the driveway, parking areas and building footprints.

- Fence off all grow zones.

- Apply mulch nitrolized mulch throughout all grow zones.

- Establish a regular irrigation program.

- Hire a Certified Arborist to conduct weekly inspections and evaluate tree health.

- Conduct a pre-construction meeting with the general contractor, sub-contractors, construction personnel and City of staff. The purpose of the meeting will be to provide information on tree protection guidelines and to assure that everyone fully understands the tree protection measures concerning the project site, staging areas, material deliveries and maintenance.

EVALUATION OF TREES ON ADJACENT PROPERTIES

Trees listed in red have been identified for removal.

Tree ID #	Common Name (*Botanical name*)	Est. Trunk Diameter	Condition Rating	Impact of Construction	Est. TPZ radius	Height & Width	Crown Class	Comments
NT#1	Valley oak (Quercus lobata)	12"	Good	Severe	15 - 20 ft	25' - 30' h 35' - 40' w	Codominant	Possible street tree? Drain line will impact surface roots
NT #2	Mulberry (Morus alba)	multi	Poor	Critical	remove	N/A	Codominant	Extensive decay, canopy consists of epicormic growth. Remove
NT #3	Mimosa (Albizzia julibrissn)	N/A	Good	Severe	15 - 20 ft	25' - 30' h 20' - 25' w	Codominant	Establish TPZ. Roots likely impacted by construction.
NT #4	Arbor Vitae (Thuja occidentalis)	N/A	Good	Severe	25 - 30 ft	25' - 30' h 25' - 30' w	Codominant	Establish TPZ. Roots likely impacted by construction.
NT #5	Valley oak (Quercus lobata)	12"	Good	Severe	25 - 30 ft	25' - 30' h 25' - 30' w	Codominant	Establish TPZ. Roots likely impacted by construction.
NT #6	Chinese pistache (Pistacia chinensis)	N/A	Good	Severe	15 - 20 ft	25' - 30' h 25' - 30' w	Codominant	Establish TPZ. Roots likely impacted by construction.
NT #7	Almond (Prunus dulcis)	8"	Fair	Severe	15 - 20 ft	15' - 20' h 15' - 20' w	Codominant	Establish TPZ. Roots likely impacted by construction
NT #8	Almond (Prunus dulcis)	8"	Fair	Severe	15 - 20 ft	15' - 20' h 15' - 20' w	Codominant	Establish TPZ. Roots likely impacted by construction

Walter Warriner
Consulting Arborist

EVALUATION OF ON-SITE TREES

Trees listed in red have been identified for removal.

Tree Tag #	Common Name (*Genus species*)	Est. Trunk Diameter	Condition Rating	Const. Impacts	Estimated TPZ Radius	Canopy Dimension	Crown Class	Comments	Mitigation Fees
4599	Valley oak (Quercus lobata)	14”	Fair	Severe	15 - 20 ft	45' - 55' h 25' - 35' w	Suppressed	Show distance between trunk exterior and edge of excavation.	$1,652
4598	Valley oak (Quercus lobata)	24”	Fair	Severe	25 - 30 ft	65' - 75' h 35' - 45' w	Dominant	Show distance between trunk exterior and edge of excavation.	$2,832
4597	Valley oak (Quercus lobata)	36”	Good	Severe	40 - 45 ft	65' - 75' h 75' - 80' w	Dominant	Show distance between trunk exterior and edge of excavation.	$4,248
4596	Camphor (Cinnamomum camphora)	13”	Fair	Severe	15 - 20 ft	25' - 35' h 35' - 45' w	Suppressed	Prune for clearance prior to grading. Will require specific root pruning.	N/A
4595	Valley oak (Quercus lobata)	20”	Good	Severe	25 - 30 ft	25' - 35' h 35' - 45' w	Dominant	Show distance between trunk exterior and edge of excavation.	$2,360
4594	Valley oak (Quercus lobata)	22”	Fair	Severe	25 - 30 ft	55' - 60' h 55' - 60' w	Codominant	Show distance between trunk exterior and edge of excavation.	$2,596
4593	Valley oak (Quercus lobata)	22”	Fair	Total loss	remove	65' - 75' h 35' - 40' w	Codominant	Tree is within path of driveway and parking. Remove.	$2,596
4592	Pecan (Carya illinoensis)	14”	Good	Severe	15 - 20 ft	35' - 45' h 25' - 30' w	Codominant	Show distance between trunk exterior and edge of excavation.	N/A
4591	Valley oak (Quercus lobata)	20”	Fair	Severe	15 - 20 ft	65' - 75' h 35' - 40' w	Codominant	Tree is subordinate to #4593. Will require specific root pruning.	$2,360
4590	Pecan (Carya illinoensis)	20”	Good	Severe	20 - 25 ft	45' - 55' h 35' - 40' w	Codominant	Show distance between trunk exterior and edge of excavation.	N/A
4589	Valley oak (Quercus lobata)	14”	Fair	Severe	15 - 20 ft	65' - 75' h 55' - 60' w	Codominant	Show distance between trunk exterior and edge of excavation.	$1,652

Walter Warriner
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Tree Tag #	Common Name (*Genus species*)	Est. Trunk Diameter	Condition Rating	Const. Impacts	Estimated TPZ Radius	Canopy Dimension	Crown Class	Comments	Mitigation Fees
4588	Olive (Olea europea)	multi	Poor	Total loss	remove	20' - 25' h 35' - 45' w	Suppressed	Tree is within building footprint of the house & patio. Remove.	N/A
4587	Valley oak (Quercus lobata)	14”	Good	Severe	15 - 20 ft	65' - 75' h 45' - 50' w	Codominant	Show distance between trunk exterior and edge of excavation.	$1,652
4586	Valley oak (Quercus lobata)	24”	Fair	Severe	25 - 30 ft	50' - 60' h 40' - 50' w	Dominant	Show distance between trunk exterior and edge of excavation.	$2,832
4585	Pecan (Carya illinoensis)	18”	Fair	Total loss	remove	65' - 75' h 50' - 60' w	Dominant	Tree is within building footprint of the house & patio. Remove.	N/A
4584	Valley oak (Quercus lobata)	18’	Good	Severe	15 - 20 ft	45' - 50' h 45' - 50' w	Codominant	Show distance between trunk exterior and edge of excavation.	$2,124
4583	Interior live oak (Quercus wislizeni)	24”	Poor	Total loss	remove	55' - 65' h 55' - 65' w	Codominant	Tree is within building footprint of the house & patio. Remove.	$2,832
4582	Almond (Prunus dulcis)	multi	Poor	Total loss	remove	20' - 25' h 35' - 45' w	Dominant	Root zone of this tree will be impacted by driveway. Remove	N/A
4581	Interior live oak (Quercus wislizeni)	14”	Fair	Total loss	remove	35' - 45' h 35' - 45' w	Dominant	Tree is within building footprint of the house & patio. Remove.	$1,652
4580	Valley oak (Quercus lobata)	18”	Good	Severe	20 - 25 ft	55' - 60' h 55' - 60' w	Codominant	Show distance between trunk exterior and edge of excavation.	$2,124
4579	Valley oak (Quercus lobata)	24”	Good	Severe	25 - 30 ft	70' - 75' h 50' - 55' w	Codominant	Show distance between trunk exterior and edge of excavation.	$2,832
4578	Almond (Prunus dulcis)	15”	Poor	Total loss	remove	30' - 35' h 25' - 30' w	Codominant	This tree is 95% dead. Remove	N/A

Tree Tag #	Common Name (*Genus species*)	Trunk Diameter	Condition Rating	Const. Impacts	Estimated TPZ Radius	Canopy Dimension	Crown Class	Comments	Mitigation Fees
4577	Valley oak (Quercus lobata)	16”	Fair	Severe	remove	60' - 65' h 50' - 55' w	Codominant	Show distance between trunk exterior and edge of excavation.	$1,888
4576	Valley oak (Quercus lobata)	16”	Fair	Severe	remove	60' - 65' h 50' - 55' w	Codominant	Show distance between trunk exterior and edge of excavation.	$1,888
4575	Valley oak (Quercus lobata)	15”	Fair	Severe	remove	60' - 65' h 50' - 55' w	Codominant	Show distance between trunk exterior and edge of excavation.	$1,770
4574	Valley oak (Quercus lobata)	15”	Fair	Severe	remove	60' - 65' h 50' - 55' w	Codominant	Show distance between trunk exterior and edge of excavation.	$1,770
4573	Valley oak (Quercus lobata)	14”	Fair	Severe	remove	60' - 65' h 50' - 55' w	Codominant	Show distance between trunk exterior and edge of excavation.	$1,652
4572	Valley oak (Quercus lobata)	24”	Good	Severe	25 - 30 ft	50' - 55' h 50' - 55' w	Dominant	Show distance between trunk exterior and edge of excavation.	$2,832
4571	Valley oak (Quercus lobata)	14”	Fair	Total loss	remove	65' - 70' h 55' - 60' w	Codominant	Tree is directly in the path of ingress & egress. Remove	$1,652
4570	Valley oak (Quercus lobata)	13”	Fair	Total loss	remove	45' - 50' h 45' - 50' w	Suppressed	Tree is directly in the path of ingress & egress. Remove	$1,534
4569	Valley oak (Quercus lobata)	16”	Fair	Total loss	remove	65' - 70' h 55' - 60' w	Codominant	Tree is directly in the path of ingress & egress. Remove	$1,888
4568	Valley oak (Quercus lobata)	16”	Fair	Total loss	remove	45' - 50' h 45' - 50' w	Codominant	Tree is directly in the path of ingress & egress. Remove	$1,888
4567	Valley oak (Quercus lobata)	10”	Fair	Severe	remove	45' - 50' h 45' - 50' w	Possible shared tree	Show distance between trunk exterior and edge of excavation.	$1,180
4566	Valley oak (Quercus lobata)	22”	Good	Severe	25 - 30 ft	60' - 65' h 50' - 55' w	Possible shared tree	Show distance between trunk exterior and edge of excavation.	$2,596

CONCLUSIONS

- There are 8 trees on adjacent properties that will need to be addressed through design with tree protection zones for those trees.
- There are at least 6 trees that should be considered shared trees. Ownership and care of these property line trees must be determined prior to construction.
- There are 26 protected trees on the site with 7 trees identified for removal. There are an additional 2 protected trees #4591 and #4595 that may require removal depending on the amount of root lass and/or the impact of loss of the adjacent tree #4596.
- There are 7 non protected trees on the site with 4 of them identified for removal. An additional tree #4596 may require removal depending on that tree's ability to tolerate the required root pruning.
- The City of Roseville regulations control the removal of and preservation of protected trees within the City and requires reforestation when protected trees are removed.
- Construction is likely to have a severe impact on all the retained trees on the site as well as the trees on the adjacent properties. It will be very important to follow maintenance protocols before, during and after the project.
- Improvements or activities such as paving, utilities, trenching and other ancillary activities should take place outside the *Tree Protection Zone,* unless otherwise specified. The protection fence shall serve as the boundary of a designated *Tree Protection Zone*..

RECOMMENDATIONS

- It is recommended that an application for a tree removal permit be submitted to the City of Roseville Planning Division.
- It is highly recommended that a Level 2 risk assessment be conducted on all trees that are to be retained.
- It is recommended that a tree protection and long term maintenance plan be developed and implemented prior to the commencement of construction.
- It is recommended that the *Tree Protection Zones* be shown on all construction drawings, specifically where ever the TPZ will be impacted by construction activities.

Respectfully submitted,

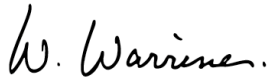
Walter Warriner Consulting Arborist
Certified Urban Forester #108 - SAF
Certified Arborist #WE-0407AM - ISA
Qualified Tree Risk Assessor - ISA
Qualified Tree & Plant Appraiser – ASCA
Licensed Pest Control Advisor – State of CA

ASSESSMENT AND REPORT LIMITATIONS

This report, its findings and opinions are submitted with the following understanding:

- Projected development impacts are based on the distance relationships between tree locations and projected grading as shown on the plans that were evaluated for this report.
- The subject trees need to be protected from the proposed construction impacts if they are to remain healthy and viable on the site. Recommendations are based on experience and species requirements to enhance tree longevity. Tree protection zones must be shown on all construction drawings, specifically where ever a tree will be impacted by construction activities.
- Tree protection will require that the grow zones of retained trees remain intact and viable despite the use of heavy equipment to install foundations, driveways, underground utilities, and landscape irrigation systems.
- The success of tree retention during construction is accomplished by closely following tree protection guidelines and maintenance requirements for a higher chance of tree survival.
- Tree protection guidelines and maintenance requirements that are overlooked or not applied, combined with a lack of tree monitoring during the life of the project will result in a dramatically lower chance of tree survival and a higher risk of whole or partial tree failure.
- That the statements of fact contained in this report are true and correct. Recommendations are limited only to this report and are based on unbiased professional analysis.
- There is no present or prospective interest in the trees that are the subject of this report and their is no personal bias with respect to any of the parties involved.
- That compensation for this report is not contingent upon the recommendations in this report or any predetermined outcome that favors the cause of any of the parties involved or any stipulated result.
- That this report has been prepared in conformity with the standards of professional reporting on arboriculture an urban forestry.
- The subject trees can be managed, but cannot be controlled. To construct the proposed project near the subject trees is to accept their degree of risk. The only way to eliminate risk from the subject trees is to remove them, but this is not recommended because of City Ordinances and it also eliminates the multitude of benefits they currently provide.
- Arborists cannot detect every condition that could possibly lead to the structural failure or decline in the health of a tree. Trees are living organisms that fail in ways that are not fully understand and cannot always be predicted. Conditions are often hidden within trees and/or below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, after construction or for a specified period of time.

Respectfully submitted,



Walter Warriner Consulting Arborist

Rail Town

Multi-Family Village

412 6th Street, Roseville

Design Concept Narrative

Rail Town Bungalow Village Design Overview

The Rail Town infill bungalow village draws inspiration from Roseville's rich heritage, shaped by its long history with the Southern Pacific Railroad and the vibrant community of workers who supported it. Reflecting the modest architectural character of the surrounding historic neighborhood—dominated by Ranch, Cottage, and Bungalow-style homes—this project pays homage to the past while creating a vibrant, cohesive design for modern living.

The design takes cues from the Southern Pacific Railroad's distinctive "railroad depot style" standards, as seen in the iconic Roseville Depot. This influence is evident in the gable cottage roofs with broad overhangs, **exposed support braces, and smaller-scale exposed beams and trim boards, all of which complement the V-groove horizontal siding and board-and-**batten vertical siding. White double-hung windows and doors reinforce the connection to the depot's architectural language, creating simple yet historically vibrant homes.

To break up the massing and add visual interest, the buildings feature two exterior color variations, randomly distributed throughout the site. This approach emphasizes the intimate, small-scale character of the village. At its heart lies a mature oak grove and a community picnic area, fostering a shared outdoor space that enhances the sense of community. Each unit o.ers fenced backyards, small covered patios, and enclosed single-vehicle garages, with additional parking thoughtfully integrated around the site.

Design Challenges and Solutions

This 1.1-acre infill site in Old Roseville presented unique design challenges, particularly in preserving the mature native oak trees that define the property. The site layout carefully clusters the duplex homes and community features to maximize tree retention and ensure that the development blends harmoniously with the surrounding neighborhood.

The village driveway is designed with generous setbacks, ensuring privacy and minimizing visual impact on adjacent properties. Two ADU structures are discreetly positioned in the northwest corner of the site, where their low profiles maintain minimal visibility for neighbors. Additionally, extensive **new landscaping includes taller screening shrubs and large trees along the** property boundaries, seamlessly integrating the project into its surroundings while providing natural privacy.

Lighting design prioritizes subtlety, with shielded fixtures and minimized wall-mounted lights at entries and patios to reduce light spill and preserve the serene character of the neighborhood.

Filling a Critical Housing Need

This project addresses a key gap in residential development: the lack of high-quality, small-scale family rental housing. Unlike denser apartment complexes or for-sale townhomes, Rail Town Bungalow Village is designed to encourage long-term residency and a strong sense of community. Its thoughtful layout, heritage-inspired design, and family-friendly features make it a valuable addition to Old Roseville, honoring the area's history while meeting contemporary housing needs.

Project Team

Architect / Landscape Architect / Site Planner

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Civil Engineer

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Consulting Arborist

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Geotechnical Engineer

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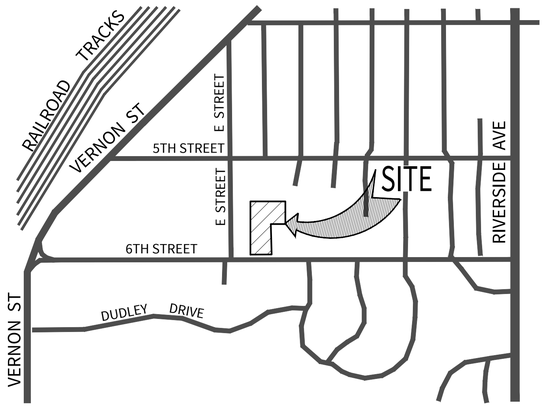
Address: **1050 Melody Lane, Suite 160**
City, State, ZIP **Roseville, CA 95678**
Contact Person: **Curtis "Ed" Hendrick, PE, GE, RG, CEG**
E-mail: **ehendrick@allerionconsulting.com**
Tel: **(530) 885-5107**

Land Surveyor

Company: **Giuliani & Kull-Auburn, Inc.**
Address: **PO Box 786**
City, State, ZIP **Auburn, CA 95604**
Contact Person: **Patrick R. Druding, PLS**
E-mail: **~**
Tel: **(530) 885-5107**

Vicinity Map



Project Density

Medium Density Residential Neighborhood Infill

City of Roseville

General Plan allows: 11.1 units per acre
+ 2 additional ADU units.

Total Units Allowed: 11 + 2 ADU units =13 Total Units

Buildings Proposed:
(5) Duplex Buildings- (10-units 1541 SF, 1- vehicle garage)
(2) ADU Buildings - (2-units 1200 SF, 1-vehicle garage)
Total Units Proposed: DUP (10) + ADU (2) = 12 Units Total

Code Compliance

The 2022 CBC is the basis of design for both the Architectural and Structural portions of this project.

All work for this project shall conform to the following codes as amended by the State of California and as adopted by the the local governing authorities:

2022 California Building Code [CBC]
2022 California Residential Building Code
2022 California Electrical Code [CEC]
2022 California Plumbing Code [CPC]
2022 California Mechanical Code [CMC]
2022 California Energy Code [CENC]
2022 California Green Building [CALGreen Code]
2022 California Reference Standards Code
Current City of Sacramento Codes & Ordinances

Project Data

ZONING: MDR-R3 - MEDIUM DENSITY RESIDENTIAL-NEIGHBORHOOD INFILL
LOT AREA: 46,609 SF / 1.1 Acres

APN: 014-062-018

CONST. TYPE: V-B

SETBACKS: (Building projections 2' max. allowed)
Front: 6th Street, 20'
Sides: 6th Street, 20'
Sides: Interior, 5'
Rear: Interior, 20'
ADU: All Sides, 4'
PATIO COVERS & TRELLIS (allowed in set-back areas)

BUILDING HEIGHT: 35' Duplex Allowed, Actual Ht: ±27'-6"
18' ADU Allowed, Actual Ht: ±18'-0"
TENANT PARKING:

1 space per ADU, 1 in each garage = 2 ADU spaces
2 spaces per (2-Bdrm) Duplex,
(1 in garage & 1 on site) = 20 Duplex spaces

GUEST PARKING: 1 on site (HC accessible)
= 1 per 10 required spaces

TOTAL PARKING: 23 Parking Spaces total

EV PARKING:
(40% of Garages to have EV chargers,
10% of Garages to be EV Ready)

DRIVEWAY: 20' width (red curbs-no parking)

TRASH: Individual Roller Bins in Each units Garage

Sheet Index

Attachments

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415•842•8988
800•647•4782

PROJECT
Rail-Town Multi Family Village

Title Sheet
Project Data

ADDRESS
412 6th Street
Roseville, CA 95678

OWNER Bhavnnarayana & Chandana Avula

APN
014-062-018

DATE
02-27-2025

REVISIONS

SCALE

DRAWING NUMBER
SA-1

Rail Town
Multi-Family Village
412 6th Street, Roseville

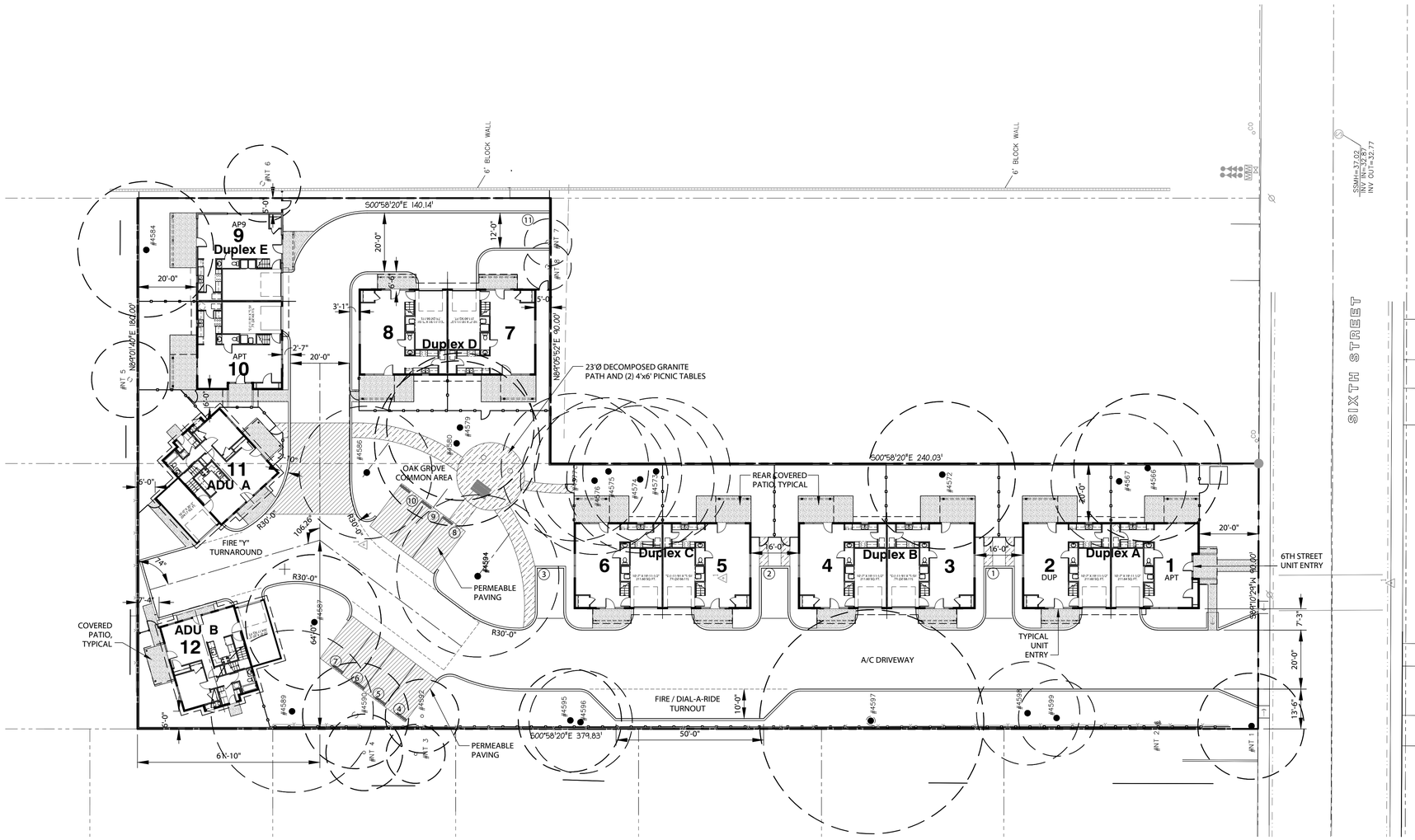
Symbols Legend

● (E) OAK TREE (TYPICAL)

Tree Removals

Number	Condition	Specie
#4593	FAIR	OAK
#4588	POOR	OLIVE
#4585	POOR	PECAN
#4581	FAIR	OAK
#4571	FAIR	OAK
#4570	FAIR	OAK
#4569	FAIR	OAK
#4568	FAIR	OAK
#4582	POOR	ALMOND
#4578	POOR	ALMOND
#4591	FAIR	OAK
#4583	POOR	OAK

NOTE:: TREES TO BE REMOVED ARE MARKED ON SHEET D1.



Site Plan

North

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415•842•8988
800•647•4782

PROJECT NAME:
Rail Town
Multi-Family Village

SHEET NAME:
Site Plan

PROJECT ADDRESS:
412 6th Street
Roseville, CA 95678

OWNER NAME:
Owner: Bhavnnarayana
& Chandana Avula

PARCEL NUMBER:
APN: 014-062-018

SUBMITTAL SET DATE:

SHEET PRINT DATE:
05-07-2025

Scale: 1" = 20'
0' 5' 20' 40'

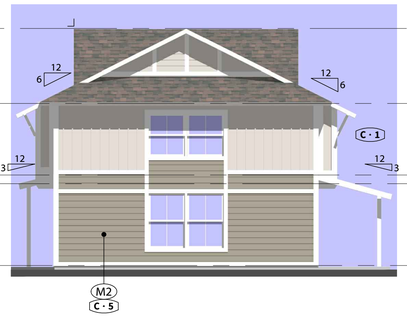
SHEET NO.:
SA-2

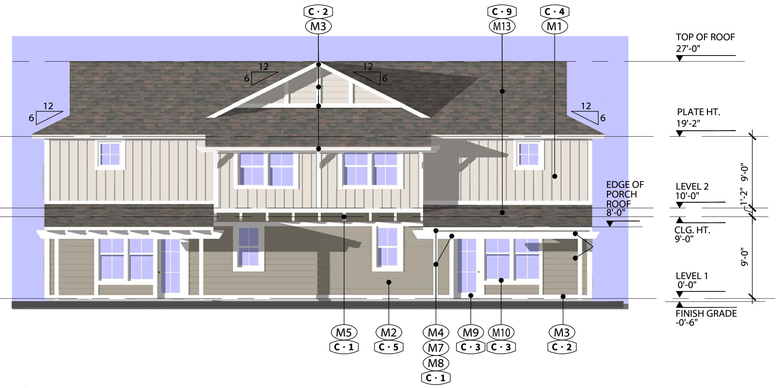
Rail Town

Multi-Family Village

412 6th Street, Roseville

ELEVATION SYMBOL	Material Legend		
M1	HARDI PANELS AND HARDI BATTEN BOARDS	M10	VINYL PATIO DOORS
M2	V-GROOVE HARDI ARTISAN SIDING	M11	ENTRY DOOR
M3	HARDI TRIM & FASCIA	M12	HVAC ACCESS DOOR
M4	4X4 ROOF RAFTERS & 6X8 BRACKETS	M13	OVER HEAD GARAGE DOOR
M5	6X8 BRACKETS WITH SHAPED ENDS	M14	COMPOSITION ROOF SHINGLES
M6	4 X 12 BEAMS WITH SHAPED ENDS	M15	GUTTERS (NOT SHOWN)
M7	4X4 OR 6X6 POSTS	M16	RAIN WATER LEEDERS (NOT SHOWN)
M8	4X8, 6X8 OR 6X12 BEAMS WITH SHAPED ENDS	M17	SKY LIGHTS
M9	VINYL WINDOWS	M18	EXTERIOR LIGHT FIXTURE



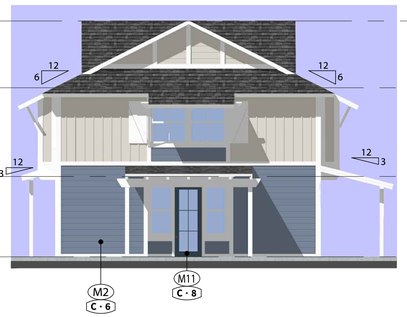


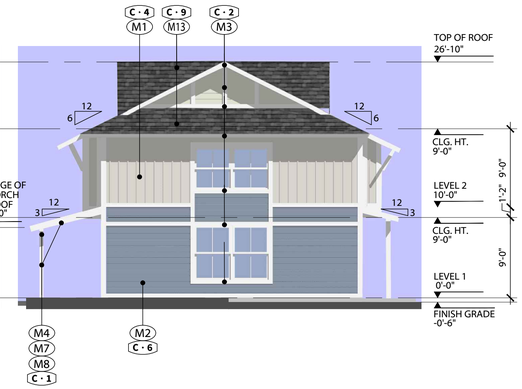
ELEVATION SYMBOL		Color Legend
BROWN SCHEME	BLUE SCHEME	COLOR
C · 1	C · 1	COLOR 1: SAME AS "ARCTIC WHITE" POSTS, BEAMS, BRACKETS & SHUTTERS, GUTTERS, RAIN WATER LEEDERS
C · 2	C · 2	COLOR 2: "ARCTIC WHITE " HARDI TRIM - VERT. & HORZ. TRIM, FASCIAS, & BELLY BANDS
C · 3	C · 3	COLOR 3: WHITE WINDOWS & PATIO DOORS
C · 4	C · 4	COLOR 4: "NAVAHO BEIGE" HARDI PANEL SIDING AND HARDI TRIM BATTEN BOARDS
C · 5		COLOR 5: "MONTEREY TAUPE" V-GROOVE HARDI ARTISAN SIDING
	C · 6	COLOR 5: "BOOTHBAY BLUE" V-GROOVE HARDI ARTISAN SIDING
C · 7		COLOR 6: SAME AS "TIMBER BARK " ENTRY AND GARAGE DOOR
	C · 8	COLOR 7: SAME AS "EVENING BLUE " ENTRY AND GARAGE DOOR
C · 9		COLOR 8: HEATHER BLEND CERTAINTEED LANDMARK SOLARIS
	C · 10	COLOR 9: MOIRE BLACK CERTAINTEED LANDMARK SOLARIS
C · 11	C · 11	COLOR 10: BLACK SKY LIGHTS ON ADU ROOFS

DUPLEX UNITS 3 & 4, 7 & 8 (BROWN COLOR SCHEME)

Front Elevation **Side Elevation** **Back Elevation**

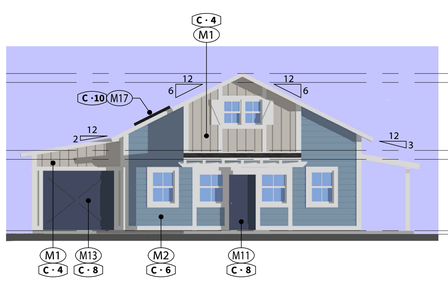
Scale: 1/8" = 1'-0"

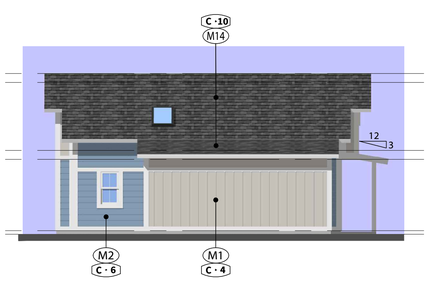


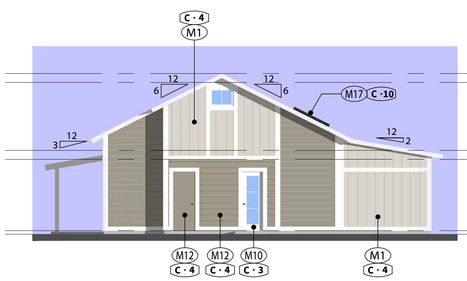


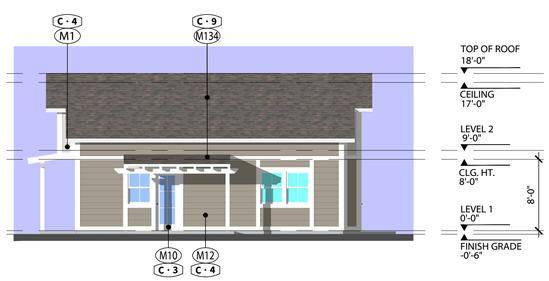
DUPLEX - Units 1 & 2, 5 & 6, 9 &10 (BLUE COLOR SCHEME)

Front Elevation **End Elevation with Entry** **Front Elevation** **End Elevation**









ADU - Unit 12 (BLUE COLOR SCHEME)

Front Elevation **Left Side Elevation**

ADU - Unit 11 (BROWN COLOR SCHEME)

Rear Elevation **Right Side Elevation**

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PROJECT NAME:
Rail Town
Multi-Family Village

SHEET NAME:
Schematic Elevations

PROJECT ADDRESS:
412 6th Street
Roseville, CA 95678

OWNER NAME:
Owner: Bhavnnarayana & Chandana Avula

PARCEL NUMBER:
APN: 014-062-018

SUBMITTAL SET DATE:

SHEET PRINT DATE:
02-27-2025

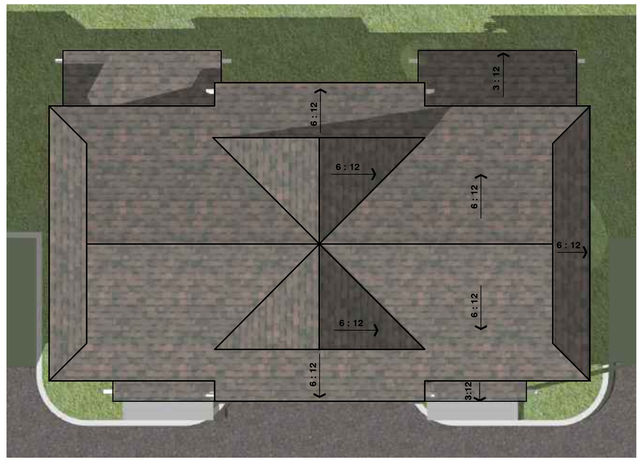
Scale: 1/8" = 1'-0"

SHEET NO.:
SA-3

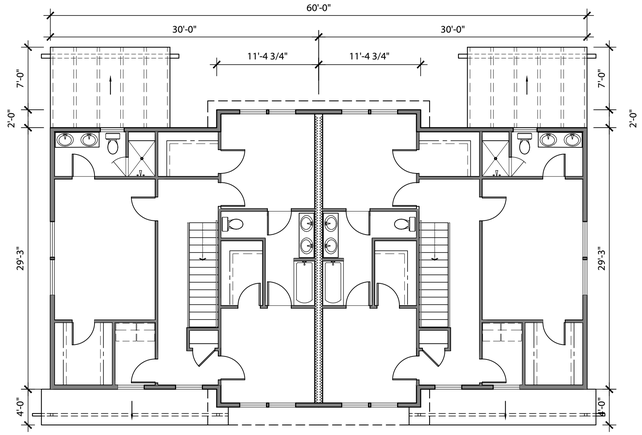
Rail Town

Multi-Family Village

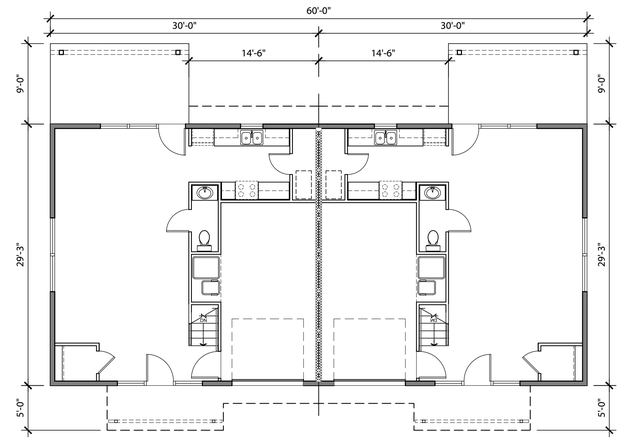
412 6th Street, Roseville



DUP Roof Plan

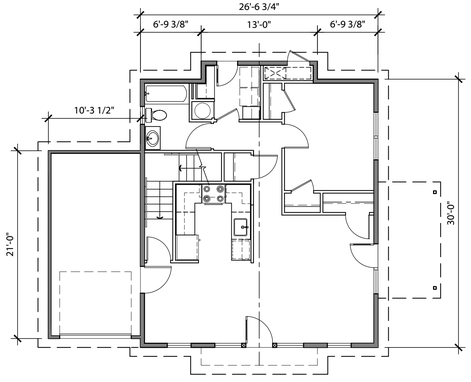


DUP 2nd Floor

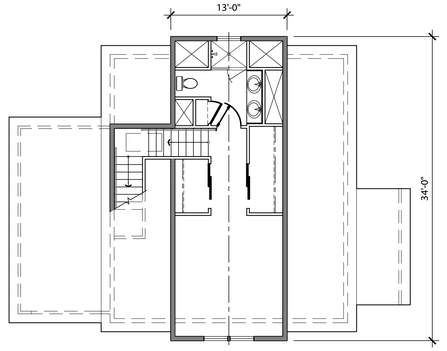


DUP 1st Floor

ADU Roof Plan



ADU 1st Floor



ADU 2nd Floor

Scale: 1/8" = 1'-0"

0' 2' 8' 16'

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800•647•4782

PROJECT

Rail-Town Multi Family Village

Unit Floor Plans & Roof Plans

ADDRESS

412 6th Street
Roseville, CA 95678

OWNER Bhavnnarayana & Chandana Avula

APN

014-062-018

DATE

02-27-2025

REVISIONS

SCALE

DRAWING NUMBER

SA-4

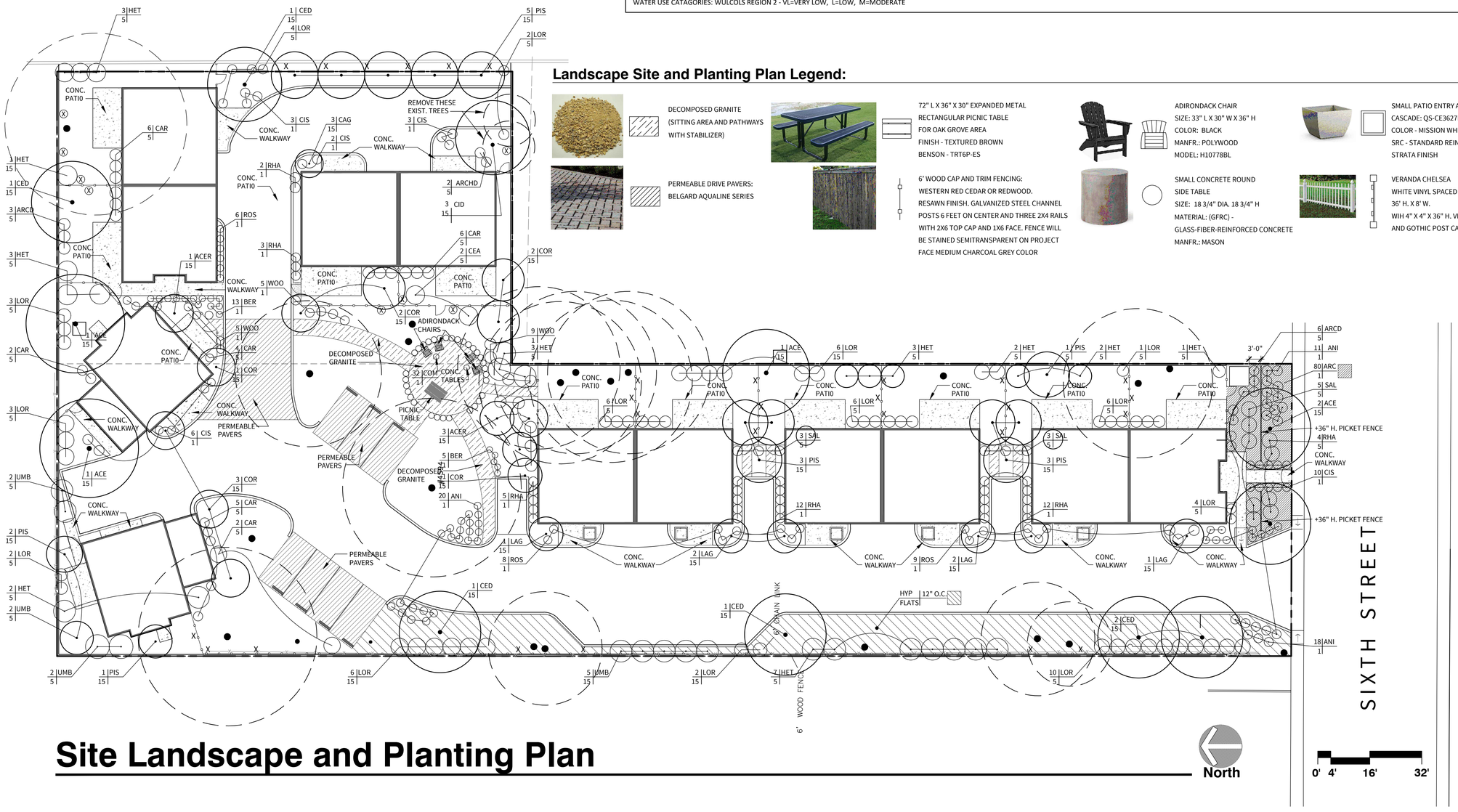
Rail Town
Multi-Family Village
412 6th Street, Roseville

Planting Legend

Plan Sym.	Water Usage	Key	Botanical - Common Name	Qty.	Size
			Trees (Large)		
	M	ACE	ACER X FREEMANII (RUBRUM) 'OCTOBER GLORY' - OCTOBER GLORY MAPLE	5	15
	L	CED	CEDRUS DEODARA - DEODAR CALIFORNIA CEDAR	7	15
			Trees (Medium)	6	15
	L	LAG	LAGERSTROEMIA INDICA 'NATCHEZ WHITE' - WHITE SEMI-DWARF CREPE MYRTLE	7	15
	L	PIS	PISTACIA X 'RED PUSH' - RED PUSH PISTACHE	15	15
	M	UMB	UMBELLULARIA CALIFORNICA - CALIFORNIA BAY	9	15
			Trees (Small)		
	M	ACER	ACER PALMATUM 'BLOODGOOD' - BLOODGOOD JAPANESE MAPLE	4	15
	M	COR	CORNUS NUTTALLII - PACIFIC WHITE DOGWOOD	9	15
			Ground Covers / Low Shrubs	12	15
	L	ARC	ARCTOSTAPYLOS 'EMERALD CARPET' - DWARF MANZANITA	80	1
	L	BER	BERBERUS AQUIFORLUM COMPACTA - DWARF OREGON GRAPE	18	1
	L	HYP	HYPERICUM X MOSERIANUM - ST. JOHN'S WART	FLATS	12" O.C.
	L	ROSA	ROSA CALIFORNICA - CALIFORNIA WILD ROSE	23	1
	M	WOO	WOODWARDIA FRIMBRIATA - GIANT CHAIN FERN	19	1

Plan Sym.	Water Usage	Key	Botanical - Common Name	Qty.	Size
			Shrubs (Med / Large)		
	L	ARCD	ARCTOSTAPHYLOS DENSIFLORA - 'HOWARD MCMINN' MCMINN MANZANITA	11	5
	L	CAR	CARPENTERIA CALIFORNICA 'ELIZABETH' - WHITE FLOW BUSH ANEMONE	41	5
	L	CEA	CEANOTHUS 'CONCHA' - CONCHA CALIFORNIA LILAC	4	5
	L	CIS	CISTUS LADANIFERUS MACULATUS - CRIMSON-SPOT ROCKROSE	24	1
	VL	HET	HETERMOMELES ARBUTAFOLIA - CALIFORNIA TOYON	24	5
				1	15
	M	LOR	LOROPETALUM - CHINESE FRINGE FLOWER	42	5
	M	RHA	RHAPHILOLEPIS INDICA 'BALLERINA' - BALLERINA INDIAN HAWTHORN	34	1
				4	5
	L	SAL	SALVIA LEUCANTHA - MEXICAN SAGE	11	1
			Grasses / Narrow Blade Leaves		
	L	ANI	ANIGOZANTHOS 'BIG RED' - RED KANGAROO PAW	49	1
	L	COM	COMANDRA LONGIFOLIA 'BREEZE' - DWARF MAT RUSH	32	1
			Vines		
X	M	CLE	CLECLEMATIS - HYBRID 'RAPSODY' - BLUE CLEMATIS	25	1
X	M	BIG	BIGNONIA CAPREOLATA 'TANGERINE BEAUTY' -CROSS VINE	6	1

WATER USE CATAGORIES: WULCOLS REGION 2 - VL=VERY LOW, L=LOW, M=MODERATE



Site Landscape and Planting Plan

North

0' 4' 16' 32'

Landscape Site and Planting Plan Legend:

DECOMPOSED GRANITE
(SITTING AREA AND PATHWAYS WITH STABILIZER)

PERMEABLE DRIVE PAVERS:
BELGARD AQUALINE SERIES

72" L X 36" X 30" EXPANDED METAL RECTANGULAR PICNIC TABLE FOR OAK GROVE AREA
FINISH - TEXTURED BROWN
BENSON - TRT6P-ES

6' WOOD CAP AND TRIM FENCING:
WESTERN RED CEDAR OR REDWOOD.
RESAWN FINISH. GALVANIZED STEEL CHANNEL POSTS 6 FEET ON CENTER AND THREE 2X4 RAILS WITH 2X6 TOP CAP AND 1X6 FACE. FENCE WILL BE STAINED SEMITRANSPARENT ON PROJECT FACE MEDIUM CHARCOAL GREY COLOR

ADIRONDACK CHAIR
SIZE: 33" L X 30" W X 36" H
COLOR: BLACK
MANFR.: POLYWOOD
MODEL: H10778BL

SMALL CONCRETE ROUND SIDE TABLE
SIZE: 18 3/4" DIA. 18 3/4" H
MATERIAL: (GFRC) - GLASS-FIBER-REINFORCED CONCRETE
MANFR.: MASON

SMALL PATIO ENTRY AREA PLANTER
CASCADE: QS-CE3627P
COLOR - MISSION WHITE
SRC - STANDARD REINFORCED CONCRETE
STRATA FINISH

VERANDA CHELSEA
WHITE VINYL SPACED PICKET FENCE
36' H. X 8' W.
WIH 4" X 4" X 36" H. VINYL POST AND GOTHIC POST CAPS

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PROJECT
Rail-Town Multi Family Village

Site Landscape and Planting Plan

ADDRESS
412 6th Street
Roseville, CA 95678

OWNER Bhavnnarayana & Chandana Avula

APN
014-062-018

DATE
02-27-2025

REVISIONS

SCALE
1/16" = 1'-0"

DRAWING NUMBER
SA-5

Rail Town

Multi-Family Village

412 6th Street, Roseville

Colors

ARCTIC WHITE | NAVAHO BEIGE | MONTEREY TAUPE | TIMBR BARK | BOOTHBAY BLUE | EVENING BLUE

Materials

ELEVATION SYMBOL	Material Legend		
M1	HARDI PANELS AND HARDI BATTEN BOARDS	M10	VINYL PATIO DOORS
M2	V-GROOVE HARDI ARTISAN SIDING	M11	ENTRY DOOR
M3	HARDI TRIM & FASCIA	M12	HVAC ACCESS DOOR
M4	4X4 ROOF RAFTERS & 6X8 BRACKETS	M13	OVER HEAD GARAGE DOOR
M5	6X8 BRACKETS WITH SHAPED ENDS	M14	COMPOSITION ROOF SHINGLES
M6	4 X 12 BEAMS WITH SHAPED ENDS	M15	GUTTERS (NOT SHOWN)
M7	4X4 OR 6X6 POSTS	M16	RAIN WATER LEEDERS (NOT SHOWN)
M8	4X8, 6X8 OR 6X12 BEAMS WITH SHAPED ENDS	M17	SKY LIGHTS
M9	VINYL WINDOWS	M18	EXTERIOR LIGHTING

ELEVATION SYMBOL		Color Legend			
BROWN SCHEME	BLUE SCHEME	COLOR			COLOR 5: "MONTEREY TAUPE" V-GROOVE HARDI ARTISAN SIDING
C-1	C-1	COLOR 1: SAME AS "ARCTIC WHITE" POSTS, BEAMS, BRACKETS & SHUTTERS, GUTTERS, RAIN WATER LEEDERS		C-6	COLOR 5: "BOOTHBAY BLUE" V-GROOVE HARDI ARTISAN SIDING
C-2	C-2	COLOR 2: "ARCTIC WHITE " HARDI TRIM - VERT. & HORZ. TRIM, FASCIAS, & BELLY BANDS	C-7		COLOR 6: SAME AS "TIMBER BARK " ENTRY AND GARAGE DOOR
C-3	C-3	COLOR 3: WHITE WINDOWS & PATIO DOORS		C-8	COLOR 7: SAME AS "EVENING BLUE " ENTRY AND GARAGE DOOR
C-4	C-4	COLOR 4: "NAVAHO BEIGE" HARDI PANEL SIDING AND HARDI TRIM BATTEN BOARDS	C-9		COLOR 8: HEATHER BLEND CERTAINTEED LANDMARK SOLARIS
				C-10	COLOR 9: MOIRE BLACK CERTAINTEED LANDMARK SOLARIS
			C-11	C-11	COLOR 10: BLACK SKY LIGHTS ON ADU ROOFS

M1 **SIDING:**
HARDI PANEL WITH
HARDI TRIM BATTEN BOARDS

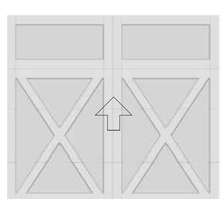
M2 **SIDING:**
HARDI PANEL
V-GROOVE ARTISAN BOARD

M3 **TRIM & FASCIA**
HARDI TRIM
V-GROOVE ARTISAN BOARD

M9 **WINDIOWS**
MILGARD V250 SERIES
WHITE VINYL

M10 **PATIO DOORS**
MMI DOOR - 36 IN X 96 IN
6 - LITE WHITE VINYL

M11 **ENTRY DOORS**
JELD-WEN 36 IN X 96 IN
2-PANEL CRAFTSMAN

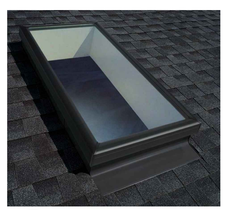


M13 **GARAGE DRS.**
CLOPAY 8 FT X 8 FT
O.H. GARAGE DOOR

M14 **ROOFING**
CERTANTEED
LANDMARK PRO SOLARIS
MAX DEF MOIRE BLACK

M14 **ROOFING**
CERTANTEED
LANDMARK PRO SOLARIS
MAX DEF RESAWN SHAKE

M15 **GUTTERS**
OG ALUMINUN SHEET
METAL GUTTER - WHITE



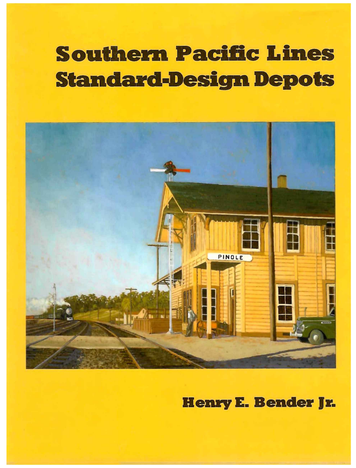
M17 **SKYLIGHTS**
VELLUX 22 IN. X 45 3/4 IN.
FIXED SKYLIGHT D06
ON ADU ROOFS - BLACK

M18 **LIGHTING**
MERIDIAN 10-INCH OUTDOOR
WALL LIGHT
OIL RUBBED BRONZE

Project Design Criteria

ROSEVILLE SOUTHERN PACIFIC TRAIN STATION
AS DESCRIBED IN "SOUTHERN PACIFIC LINES STANDARD-DESIGN DEPOTS"

ROSEVILLE SOUTHERN PACIFIC TRAIN STATION
EXTERIOR WAITING AREA



NORTH UNITS

DRIVEWAY VIEW - WEST

DRIVEWAY VIEW - NORTH EAST

ADU AND DUPLEX - NORTH WEST CORNEROF PROPERTY

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925•587•4200
916•441•4500
415•842•8988
800•647•4782

PROJECT NAME:
Rail Town
Multi-Family Village

SHEET NAME:
Color & Material Sample Board

PROJECT ADDRESS:
412 6th Street
Roseville, CA 95678

OWNER NAME:
Owner: Bhavnnarayana & Chandana Avula

PARCEL NUMBER:
APN: 014-062-018

SUBMITTAL SET DATE:
12-19-2024

SHEET PRINT DATE:
02-27-2025

SHEET NO.:
SA-6

Rail Town

Multi-Family Village

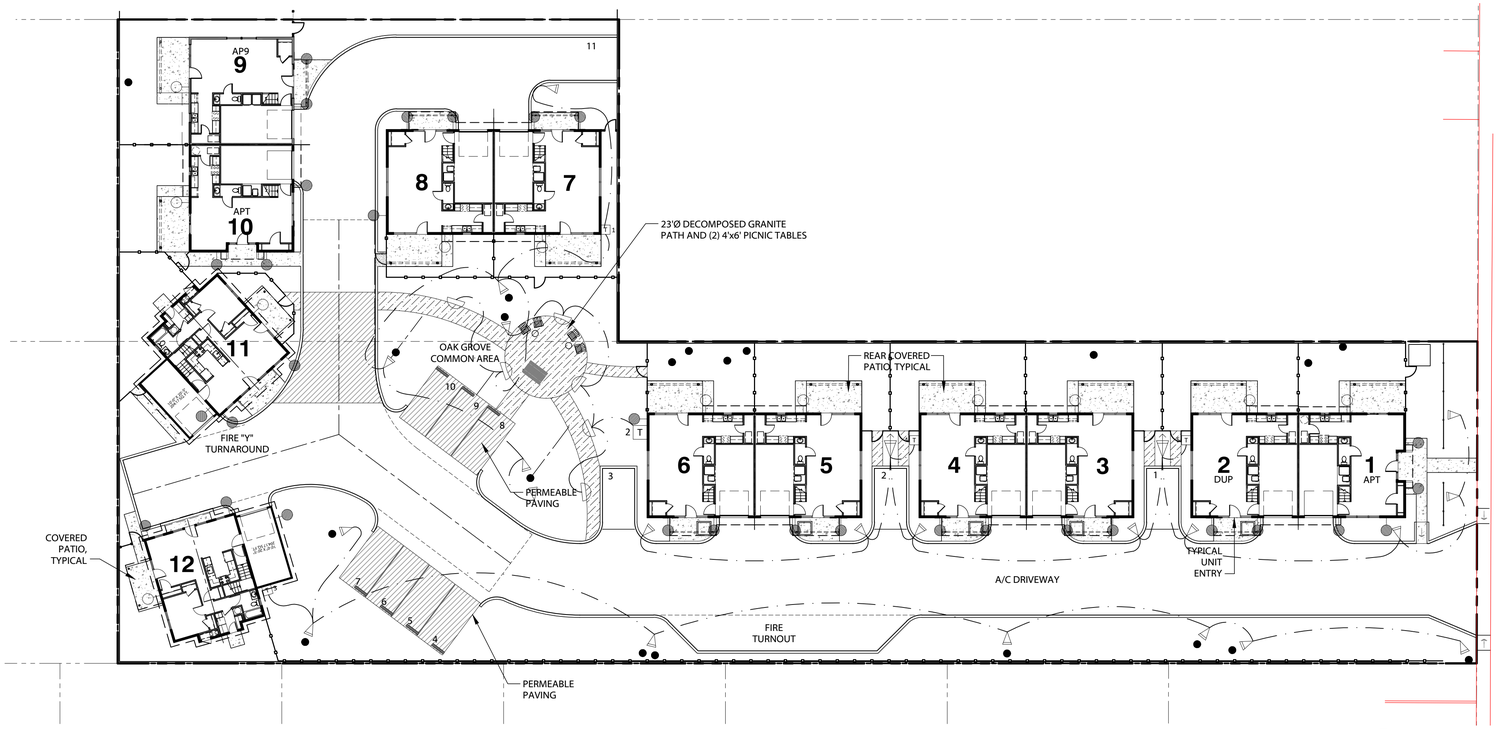
412 6th Street, Roseville

Landscape Lighting Fixture Schedule

SYMBOL	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	FIXTURE FINISH	LAMP TYPE	LAMP WATTS	BEAM SPREAD	INCAND. LAMP COMPARISON	LUMENS	LAMP COLOR	ACCESSORY & MOUNTING NOTES
	WALL MOUNTED AREA LIGHT	MERIDIAN	PRODUCT: P2358632 MODEL: M500180RB	OIL RUBBED BRONZE	MERIDIAN	-	-	60 WATTS	-	-	(PHOTOCELL) INCANDESCENT EQUIVALENT
	WALL MOUNTED AREA LIGHT	MERIDIAN	PRODUCT: P2358632 MODEL: M500180RB	OIL RUBBED BRONZE	MERIDIAN	-	-	60 WATTS	-	-	(SWITCHED) INCANDESCENT EQUIVALENT
	COMPACT SPOT UPLIGHT	VOLT	VAL -2007 -BBZ SPARK NARROW SPOTLIGHT	AGED BRASS PATINA	2 -WATT LED MR -8	2 WATTS	38 DEGREES	15 WATT	175	2700 K	
	MEDIUM FLOOD UPLIGHT	VOLT	VAL -3000 -BBZ INFINITI 30 G4 SPOTLIGHT	AGED BRASS PATINA	INTEGRATED LED	6 WATTS	60 DEGREES	30 WATT	350	2700 K	WHERE LOCATED ON TOP OF ENTRY COVER ROOF, MOUNT ON CROSS BEAM TOP -AIM TOWARD BUILDING. MOUNT -BBZ BASE -SM1 WITH VOLT VAC
	PATH DOWN SIDELIGHT	VOLT	VPL -1043 -4 -BBZ MODERNELLE PATH	AGED BRASS PATINA	LED G4 BI-PIN	2 WATTS	LOW WIDE CUT-OFF	15 WATT	200	2700 K	MOUNT WITH LAMP L EDGE EVEN WITH EDGE OF PAVING
T	TRANSFORMERS 1, 2, 3, 4, 5.	VOLT	300-WATT CLAMP-CONNECT MULTI-TAP TRANSFORMER								VOLT VTR-300 WITH VAC - PTIMER3 PHOTOCELL AND TIMER WITH PHOTOCELL EXTENSION KIT VAC PCCELLXT3 TIMER AND TRANSFORMER MOUNTED INSIDE BUILDING
	WIRE	VOLT									WIRE SIZE #14, #12 & #10 PER PLAN

ALL STANDARD DIRECT BURIAL WIRE IS #12 U.N.O.

ALL FIXTURES WHERE APPLICABLE TO USE VOLT 13" HAMMER STAKE VOLT VAC -STK -13



0' 5' 20' 40'

Lighting Plan

Low Voltage Light Notes

1. This plan is intended for landscape lighting purposes only. Installation Contractor shall be LITE Certified. All lighting fixtures and transformers shall be installed per manufacturer specifications. It is contractor's responsibility to maintain compliance with the National Electrical Code (current edition) and all local building safety codes and ordinances.
2. Fixtures are shown in approximate locations. Contractor shall field verify actual placement of each fixture upon completion of landscape installation.
3. All path lights to be installed at a minimum of 18" from any sidewalk or structure,
4. All hubs shall be labeled and installed primarily in planter areas 2" above finish grade; or in readily accessible areas that do not obstruct pathways, drainage swales or common areas.
5. All "Home Run" wire shall be labeled and installed at a minimum depth of 8", All fixture lead wires shall be installed at a minimum depth of 8".
6. In order to minimize future disturbance, all wire runs shall be installed parallel and adjacent to hardscape surfaces such as sidewalks, driveways and walls.
7. Installing contractor shall be responsible for installing sleeves under hardscape surfaces, using a minimum 1-1/2" PVC pipe.
8. Contractor shall not cut the wire leads from the fixtures. Leave excess wire at the fixture with a minimum of 2' at each hub.
9. All underground splices shall be installed in approved in-ground hubs with water-tight connections.
10. All exterior 120-Volt electrical outlets shall be GFI protected per the National Electrical Code.
11. All transformers plugged into a water resistant receptacle shall have an "in use" cover. Contractor shall install Taymac type covers at all outlets.
12. All plug-in transformers shall have a "Drip Loop" in the power cord.
13. All exposed conduits shall be painted to match surroundings.
14. All wire shall conform to ASTM B-49 and B-115 standards: 99% pure PVC plastic mixed with the latest in UV inhibitors, 99.5% pure copper.
15. All exposed wires shall be protected and painted.
16. Installing contractor shall be responsible for adjusting fixtures at night to help eliminate glare and to ensure optimum lighting effect.
17. Upon completion of installation Contractor shall verify all fixtures are properly volted per manufacturer standards,
18. Upon completion of installation Contractor shall verify all transformers are within the maximum allowable amperage load per manufacturer standards.

ORR DESIGN OFFICE

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Walnut Creek, CA 94596
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800•647•4782

PROJECT
Rail-Town Multi Family Village

Lighting Plan

ADDRESS
412 6th Street
Roseville, CA 95678

OWNER Bhavnnarayana & Chandana Avula

APN
014-062-018

DATE
02-27-2025

REVISIONS

SCALE
1" = 20'

DRAWING NUMBER
SA-7

P:\24015-SHERRIFF\B24015TO.BY(XREFS)

TOPOGRAPHY NOTES:

1. TOPOGRAPHY PREPARED BY GIULIANI AND KULL-AUBURN, INC., FIELD SURVEY CONDUCTED MAY 30, 2024
2. PROPERTY LINES SHOWN ON THESE DRAWINGS ARE COMPILED FROM RECORD DATA. PURSUANT TO THE CLIENTS DIRECTION, A BOUNDARY SURVEY WAS NOT PERFORMED AT THIS TIME WHICH MAY HAVE DETERMINED THE ACTUAL PROPERTY LINES. THE PROPERTY LINES SHOWN HEREON ARE THE BEST GRAPHICAL FIT BETWEEN RECORD INFORMATION AND THE TOPOGRAPHICAL FEATURES SURVEYED AND ARE FOR REFERENCE ONLY, AND SHOULD NOT BE RELIED UPON OR USED FOR ANY OTHER PURPOSES.
3. SURVEY DATUM:

HORIZONTAL STATE PLANE COORDINATE 0402 CALIFORNIA
VERTICAL NAVD88

BY STATIC OBSERVATION

4. THE EXISTENCE, LOCATION AND ELEVATION OF ALL EXISTING UNDER AND ABOVE GROUND UTILITIES ARE SHOWN IN A GENERAL WAY AND MAY NOT BE A COMPLETE INVENTORY OF ALL EXISTING UTILITIES EFFECTED THIS SITE.
5. ALL TREE DRIP LINES SHOWN ARE APPROXIMATE.

GRAPHIC SCALE
20 0 10 20 40
1 INCH = 20 FEET

PROPERTY INFORMATION

OWNER/APPLICANT:
BHAVNNARAYANA AVULA
CHANDANA AVULA
10354 COLBY AVENUE
CUPERTINO, CALIFORNIA 95014

LAND SURVEYOR:
PATRICK R. DRUDING, PLS
GIULIANI & KULL-AUBURN, INC.
PO BOX 786
AUBURN, CA 95604
(530) 885-5107

SITE ADDRESS:
412 6TH STREET
ROSEVILLE, CALIFORNIA 95678

ASSESSOR'S PARCEL #:
014-062-018-000

LEGEND

LINE/SYMBOL	DESCRIPTION/ABBREVIATION
	PROPERTY LINE
	ADJACENT PROPERTY LINE
	EASEMENT (AS NOTED)
	CENTERLINE (CL)
1000	MAJOR ELEVATION CONTOUR
998	MINOR ELEVATION CONTOUR
	FOUND MONUMENT (AS NOTED)
	EDGE OF PAVEMENT
	EDGE OF CONCRETE PAVEMENT
	GUTTER / CURB / SIDEWALK
X X	FENCE LINE
	BUILDING FACE/LINE
IR	IRRIGATION LINE
	RETAINING WALL
	ROCK / ROCK WALL
	CONCRETE PAVEMENT (CONC)
DI	STORM DRAIN INLET
	LIGHT POLE
WV	WATER VALVE
WM	WATER METER
FH	FIRE HYDRANT
EL	UTILITY - ELECTRIC METER/BOX
TC	UTILITY - TELECOMM
IR	IRRIGATION VALVE(S)
	TREE
20" Oak	TREE DESCRIPTOR: DRIPLINE RADIUS (FEET) / TREE TYPE / TRUNK DIAMETER (INCHES)

	SCALE	DRAWN BY	DESIGNED BY	CHECKED BY
	1"=20'	PD	PD	PD

REVISIONS | DATE

Giuliani & Kull Auburn, Inc.
Engineers • Planners • Surveyors
Post Box 786, Auburn, CA 95604
(530) 885-5107 Fax (530) 885-5157
Auburn • San Jose • Oakdale • Sacramento

LANDS OF BHAVNNARAYANA
412 6TH STREET
ROSEVILLE
PLACER COUNTY
CALIFORNIA

BASE TOPOGRAPHY

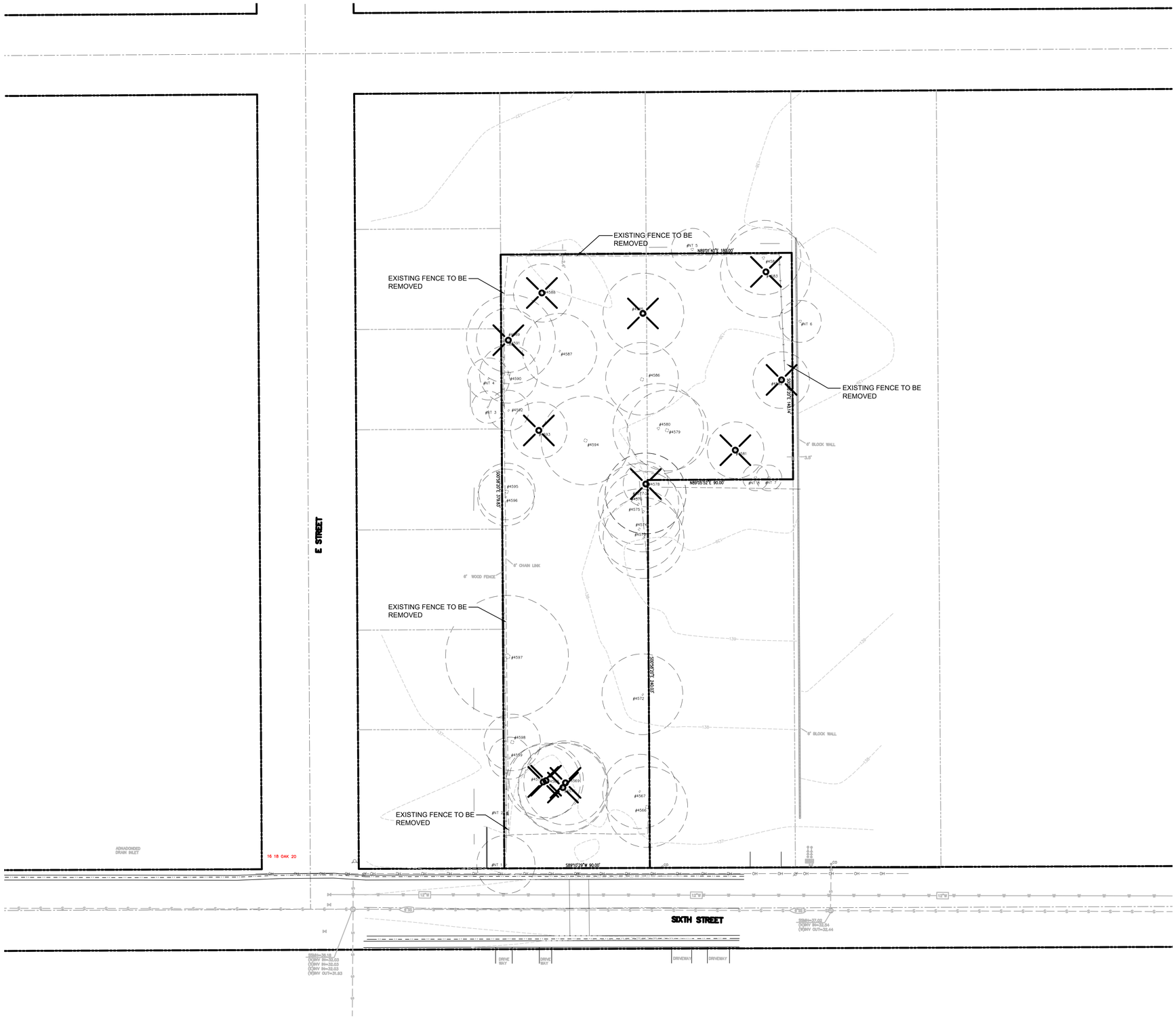
LICENSED LAND SURVEYOR
PATRICK R. DRUDING
NO. LS 8933
STATE OF CALIFORNIA

SHEET
SV-1

OF 1 SHEETS

DATE
JULY 29, 2024

JOB NO.
24015



BAR SCALE

0 15 30 60

(IN FEET)
1 inch = 30 feet

PRELIMINARY DEMOLITION PLAN

SCALE: 1'= 30'

LEGEND:

- 12" D — NEW DRAIN INLET ON NEW DRAIN LINE
- 26.62(E) — EXISTING PAVEMENT GRADE
- 26.62P — PROPOSED PAVEMENT GRADE
- REMOVE EXISTING TREE

PEABODY TSUMURA ENGINEERING

REGISTERED PROFESSIONAL ENGINEER R. C51080 Exp. 9-30-25 CIVIL STATE OF CALIFORNIA

CLIENT
BHAVA AVULA

P.O. BOX 2132

PROJECT TITLE
6th Street Multi Family Complex

412 6th Street
ROSEVILLE
CALIFORNIA

SHEET TITLE
PRELIMINARY DEMOLITION PLAN

DELTA	REVISION	DATE:

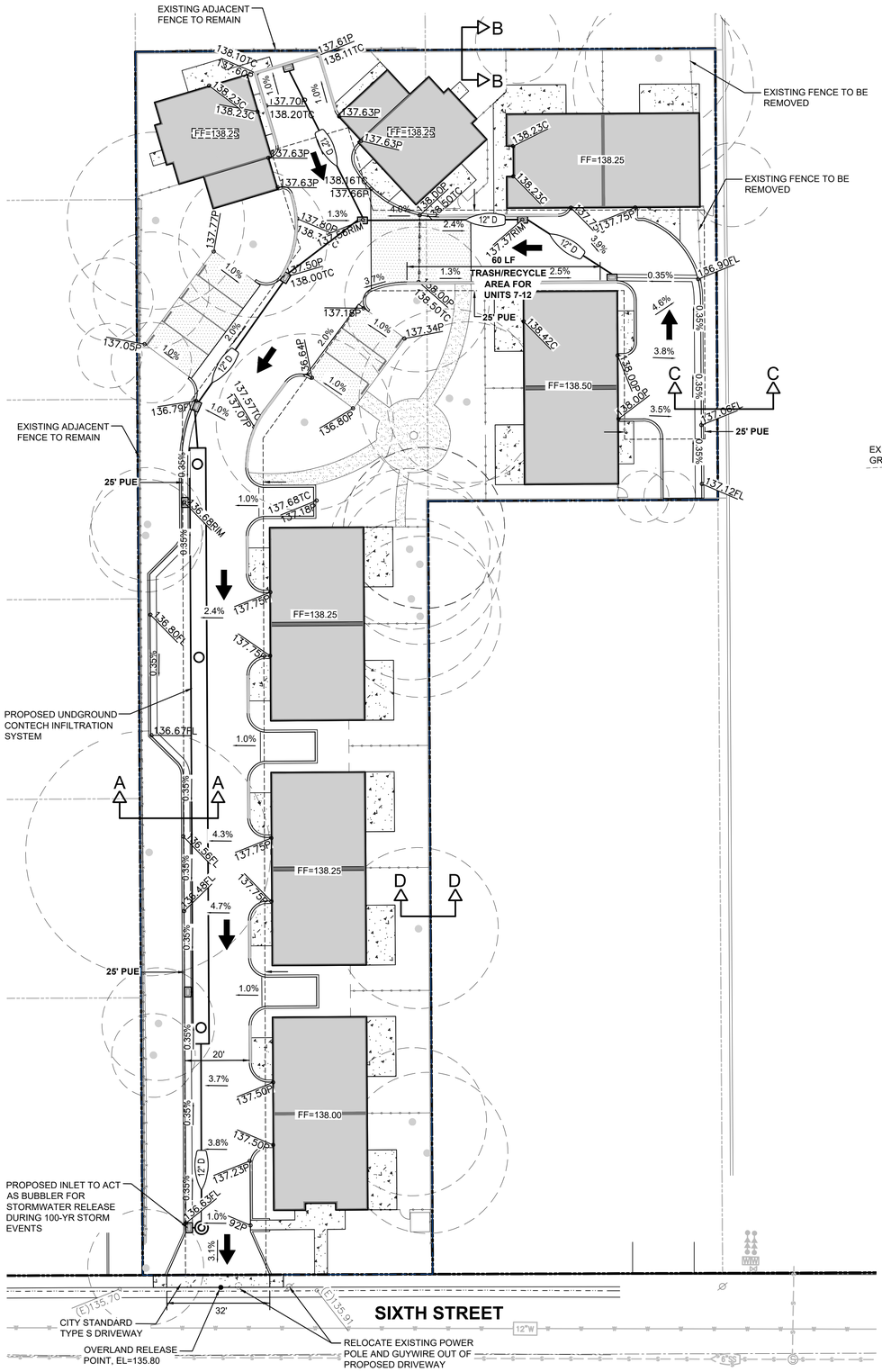
DRAWN/CHK BY: MTH / RP

DATE: 4/7/2025

JOB NO.: 1509.001

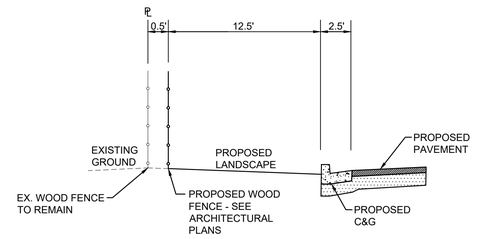
SHEET NUMBER

D.1

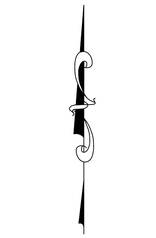


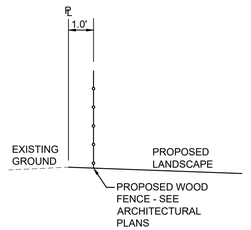
PRELIMINARY GRADING & DRAINAGE PLAN

SCALE: 1'= 20'

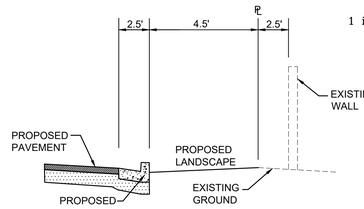


SECTION A-A
N.T.S.

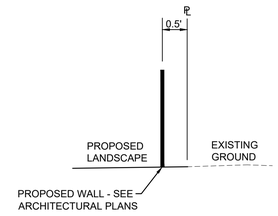




SECTION B-B
N.T.S.



SECTION C-C
N.T.S.



SECTION D-D
N.T.S.

PROJECT STORAGE VOLUMES:
PRE-PROJECT VOLUME = 5,227 CF
POST- PROJECT VOLUME = 10,018 CF
REQUIRED STORAGE VOLUME = 10,018 CF - 5,227 CF
= 4,791 CF

CONTECH INFILTRATION
SYSTEM VOLUME PROVIDED = 4,797 CF

AREA BREAKDOWN (1 TOTAL SHED):
EXISTING PERVIOUS: 1.0 AC.
EXISTING IMPERVIOUS: 0 AC.
PROPOSED PERVIOUS: 0.43
PROPOSED IMPERVIOUS: 0.57

ASPHALT PAVEMENT AND PERMEABLE PAVEMENT SECTIONS SHALL BE DESIGNED PER GEOTECHNICAL REPORT PREPARED BY ALLERION CONSULTING GROUP, PROJECT NO. 05-24063GP.

PER FEMA FLOOD INSURANCE STUDY 06061C1031H, THIS PROJECT SITE IS WITHIN FLOOD ZONE X.

ALL GRADES SHOWN ON THIS PLAN ARE ON NAVD 88 DATUM.

NOTE: EMERGENCY VEHICLE ACCESS SHALL BE DESIGNED PER CITY OF ROSEVILLE FIRE DEPARTMENT FIRE & LIFE SAFETY STANDARDS.

LEGEND:

12" D	NEW DRAIN INLET ON NEW DRAIN LINE
26.62(E)	EXISTING PAVEMENT GRADE
26.62P	PROPOSED PAVEMENT GRADE
26.62FL	PROPOSED GUTTER FLOWLINE GRADE
26.62TC	PROPOSED TOP OF CURB GRADE
26.62RIM	PROPOSED DRAIN INLET RIM GRADE
	PROPOSED CONCRETE WALK
	PROPOSED PERMEABLE PAVEMENT
	PROPOSED DG WALKWAY
	PROPOSED POURED IN PLACE CURB
	PROPOSED CURB & GUTTER
	CURB PAINTED RED WITH WHITE LETTERING "NO PARKING - FIRE LANE"

PEABODY TSUMURA ENGINEERING

REGISTERED PROFESSIONAL ENGINEER
R. C51080
Exp. 9-30-25
CIVIL
STATE OF CALIFORNIA

CLIENT
BHAVA AVULA

P.O. BOX 2132

PROJECT TITLE
6th Street Multi
Family Complex

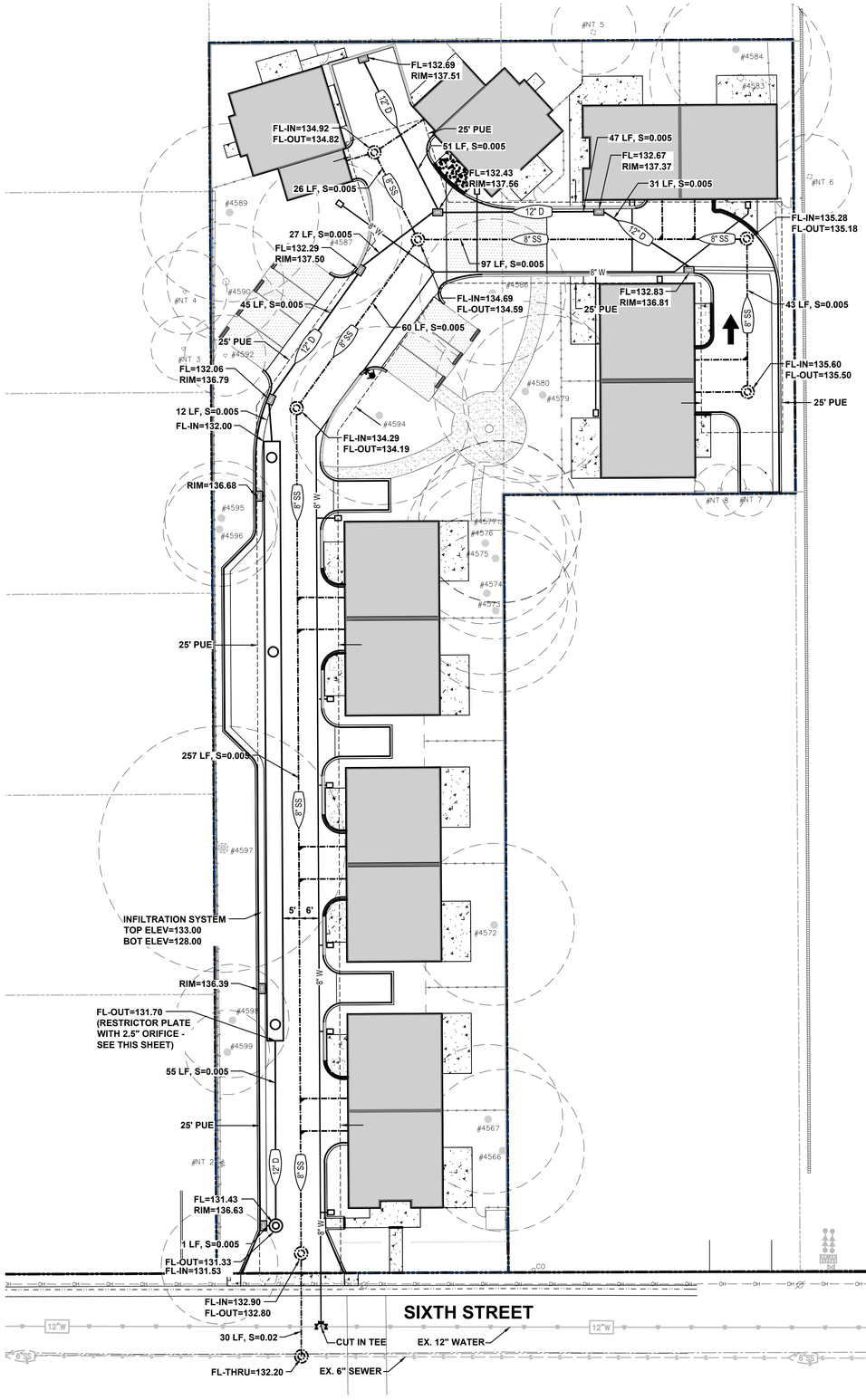
412 6th Street
ROSEVILLE
CALIFORNIA

SHEET TITLE
PRELIMINARY GRADING & DRAINAGE PLAN

DELTA	REVISION	DATE:

DRAWN/CHK BY: MTH / RP
DATE: 4/7/2025
JOB NO.: 1509.001

SHEET NUMBER
G.1



PRELIMINARY UTILITY PLAN

SCALE: 1"= 20'

BAR SCALE

0 10 20 40

(IN FEET)
1 inch = 20 feet

NOTE: EMERGENCY VEHICLE ACCESS SHALL BE DESIGNED PER CITY OF ROSEVILLE FIRE DEPARTMENT FIRE & LIFE SAFETY STANDARDS.

LEGEND:

PROPOSED		EXISTING
	SEWER MANHOLE	
6"SS	SEWER LINE	10"SS
12"D	STORM DRAIN	12"D
	DRAIN INLET	
8"W	WATER LINE	8"W
	OVERLAND RELEASE ARROW	

ORIFICE SIZING CALCULATIONS:

$Q = CA\sqrt{2gH}$

$A = \frac{Q}{C\sqrt{2gH}}$

Q=1.73 cfs
h=4.50 ft.
C=0.61
g=32.2 ft./s

$A = \frac{1.73}{0.61\sqrt{2(32.2)(4.5)}}$

$A = 0.167$ sf

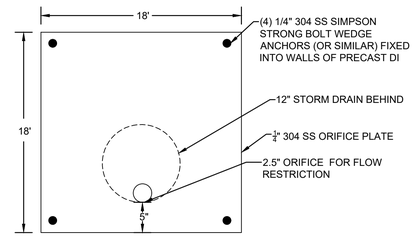
$A = \pi(d/2)^2$

$d = \frac{4A}{\pi}$

$d = \frac{4(0.167)}{\pi}$

$d = 0.2$ ft.

$d = 2.55$ in.



RESTRICTOR PLATE DETAIL

N.T.S.

PEABODY TSUMURA ENGINEERING

REGISTERED PROFESSIONAL ENGINEER
R. PEABODY
No. C51090
Exp. 9-30-25
CIVIL
STATE OF CALIFORNIA

CLIENT
BHAVA AVULA

P.O. BOX 2132

PROJECT TITLE
6th Street Multi Family Complex

412 6th Street
ROSEVILLE
CALIFORNIA

SHEET TITLE
PRELIMINARY UTILITY PLAN

DELTA	REVISION	DATE:

DRAWN/CHK BY: MTH / RP

DATE: 4/7/2025

JOB NO.: 1509.001

SHEET NUMBER

U.1

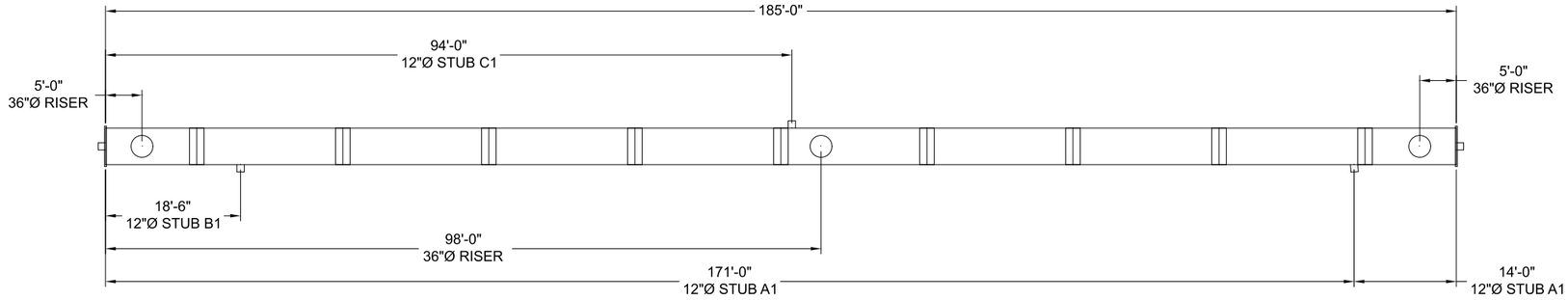
PROJECT SUMMARY

CALCULATION DETAILS
- LOADING = HS20/HS25
- APPROX. LINEAR FOOTAGE = 185 LF

STORAGE SUMMARY
- STORAGE VOLUME REQUIRED = 4,791 CF
- PIPE STORAGE VOLUME = 3,632 CF
- BACKFILL STORAGE VOLUME = 1,165 CF
- TOTAL STORAGE PROVIDED = 4,797 CF
- STONE VOID = 40%

PIPE DETAILS
- DIAMETER = 60"
- CORRUGATION = 5x1
- GAGE = 16
- COATING = ALT2
- WALL TYPE = PERFORATED
- BARREL SPACING = 30"

BACKFILL DETAILS
- WIDTH AT ENDS = 12"
- ABOVE PIPE = 0"
- WIDTH AT SIDES = 12"
- BELOW PIPE = 0"



NOTES

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE. ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE $2\frac{2}{3}$" x $\frac{1}{2}$" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- BAND TYPE TO BE DETERMINED UPON FINAL DESIGN.
- THE PROJECT SUMMARY IS REFLECTIVE OF THE DYODS DESIGN, QUANTITIES ARE APPROX. AND SHOULD BE VERIFIED UPON FINAL DESIGN AND APPROVAL. FOR EXAMPLE, TOTAL EXCAVATION DOES NOT CONSIDER ALL VARIABLES SUCH AS SHORING AND ONLY ACCOUNTS FOR MATERIAL WITHIN THE ESTIMATED EXCAVATION FOOTPRINT.
- THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.

ASSEMBLY

SCALE: 1" = 20'

C:\EXPORTS\TEMPLATES\CMP_V10.DWG 10/18/2019 10:02 AM

DATE	REVISION DESCRIPTION	BY

CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH® CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

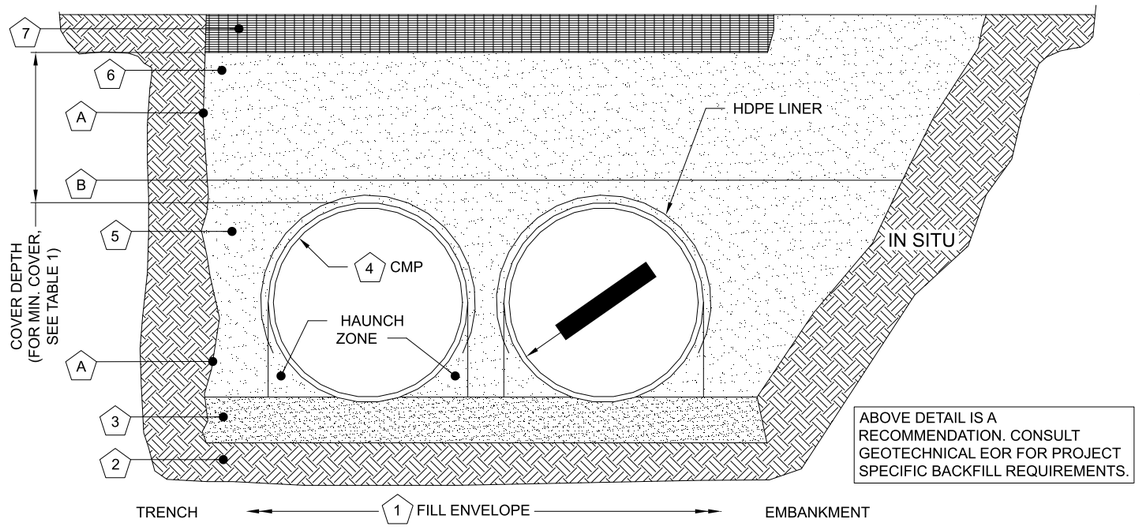
DYO65311 829933 - 6th St Multi
60" CMP - Perforated - SEQ 10
Roseville, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
46461	65311	12/26/2024
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: Drywell-1 1		

TABLE 1:

DIAMETER, D	MIN. COVER	CORR. PROFILE
6"-10"	12"	1 1/2" x 1/4"
12"-48"	12"	2 2/3" x 1/2"
>48"-96"	12"	3" x 1", 5" x 1"
>96"	D/8	3" x 1", 5" x 1"

- STRUCTURAL BACKFILL MUST EXTEND TO LIMITS OF THE TABLE
- TOTAL HEIGHT OF COMPACTED COVER FOR CONVENTIONAL HIGHWAY LOADS IS MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TOP OF RIGID PAVEMENT.



ABOVE DETAIL IS A RECOMMENDATION. CONSULT GEOTECHNICAL EOR FOR PROJECT SPECIFIC BACKFILL REQUIREMENTS.

MINIMUM WIDTH DEPENDS ON SITE CONDITIONS AND ENGINEERING JUDGEMENT

INSTALLATION NOTES

1. WHEN PLACING THE FIRST LIFTS OF BACKFILL IT IS IMPORTANT TO MAKE SURE THAT THE BACKFILL IS PROPERLY COMPACTED UNDER AND AROUND THE PIPE HAUNCHES.
2. OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS, AS APPROVED BY SITE ENGINEER.
3. AN HDPE MEMBRANE LINER WILL BE PLACED ON THE CROWN OF EACH PIPE TO PROVIDE AN IMPERMEABLE BARRIER AGAINST ENVIRONMENTAL CHANGES THAT MAY ADVERSELY AFFECT THE SYSTEM OVER TIME. PLEASE REFER TO THE CORRUGATED METAL PIPE DETENTION DESIGN GUIDE FOR ADDITIONAL TECHNICAL DETAILS.

TABLE 2: PERFORATED STANDARD

CMP RETENTION STANDARD BACKFILL SPECIFICATIONS

	MATERIAL LOCATION	MATERIAL SPECIFICATION	DESCRIPTION	
1	FILL ENVELOPE WIDTH	PER ENGINEER OF RECORD	MINIMUM TRENCH WIDTH MUST ALLOW ROOM FOR PROPER COMPACTION OF HAUNCH MATERIALS UNDER THE PIPE. THE SUGGESTED MINIMUM TRENCH WIDTH, OR EOR RECOMMENDATION: PIPE ≤ 12": D + 16" PIPE > 12": 1.5D + 12"	MINIMUM EMBANKMENT WIDTH (IN FEET) FOR INITIAL FILL ENVELOPE: PIPE < 24": 3.0D PIPE 24" - 144": D + 4'0" PIPE > 144": D + 10'0"
2	FOUNDATION	**AASHTO 26.5.2** - PER ENGINEER OF RECORD	PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND FOUNDATION BROUGHT BACK TO GRADE WITH A FILL MATERIAL APPROVED BY THE ENGINEER OF RECORD.	
3	BEDDING	**AASHTO M 43: 3, 357, 4, 467, 5, 56, 57**	ENGINEER OF RECORD TO DETERMINE IF BEDDING IS REQUIRED. PIPE MAY BE PLACED ON THE TRENCH BOTTOM OF A RELATIVELY LOOSE, NATIVE SUITABLE WELL GRADED GRANULAR MATERIAL THAT IS ROUGHLY SHAPED TO FIT THE BOTTOM OF THE PIPE, 2" MIN DEPTH. THE BEDDING MATERIAL MAY BE SUITABLE OPEN GRADED GRANULAR BEDDING CONFORMING TO AASHTO SOIL CLASSIFICATIONS A1, A2, OR A3 WITH MAXIMUM PARTICLE SIZE OF 3" PER AASHTO 26.3.8.1	
4	CORRUGATED METAL PIPE			
5	BACKFILL	FREE-DRAINING, ANGULAR, NATURALLY OCCURRING WASHED-STONE PER **AASHTO M 43: 3, 357, 4, 467, 5, 56, 57** OR APPROVED EQUAL *	HAUNCH ZONE MATERIAL SHALL BE HAND SHOVELED OR SHOVEL SLICED INTO PLACE TO ALLOW FOR PROPER COMPACTION WITHOUT SOFT SPOTS. BACKFILL SHALL BE PLACED IN 8" +/- LOOSE LIFTS AND COMPACTED TO 90% STANDARD PROCTOR PER AASHTO T 99. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO LIFT (16") DIFFERENTIAL BETWEEN ANY OF THE PIPES AT ANY TIME DURING THE BACKFILL PROCESS. THE BACKFILL SHOULD BE ADVANCED ALONG THE LENGTH OF THE SYSTEM TO AVOID DIFFERENTIAL LOADING. WHERE CONVENTIONAL COMPACTION TESTING IS NOT PRACTICAL, THE MATERIAL SHALL BE MECHANICALLY COMPACTED UNTIL NO FURTHER YIELDING OF MATERIAL IS OBSERVED UNDER THE COMPACTOR. **IN AREAS WITH HIGH WATER TABLE FLUCTUATIONS THAT INTERACT WITH THE PIPE ZONE, CONSIDER INSTALLING A GEOTEXTILE SEPARATION LAYER TO PREVENT SOIL MIGRATION.	
6	COVER MATERIAL	UP TO MIN. COVER - **AASHTO M 145: A-1, A-2, A-3** ABOVE MIN. COVER - PER ENGINEER OF RECORD	COVER MATERIAL MAY INCLUDE NON-BITUMINOUS, GRANULAR ROADBASE MATERIAL WITHIN MIN COVER LIMITS	
7	RIGID OR FLEXIBLE PAVEMENT (IF APPLICABLE)	PER ENGINEER OF RECORD	FLEXIBLE PAVEMENT SHOULD NOT BE COUNTED AS PART OF THE FILL HEIGHT OVER THE CMP. FINAL BACKFILL MATERIAL SELECTION AND COMPACTION REQUIREMENTS SHALL FOLLOW THE PROJECT PLANS AND SPECIFICATIONS PER THE ENGINEER OF RECORD.	
A	OPTIONAL SIDE GEOTEXTILE	NONE	GEOTEXTILE LAYER IS RECOMMENDED ON SIDES OF EXCAVATION TO PREVENT SOIL MIGRATION.	
B	GEOTEXTILE BETWEEN LAYERS	NONE	IF SOIL TYPES DIFFER AT ANY POINT ABOVE PIPE INVERT, A GEOTEXTILE LAYER IS RECOMMENDED TO BE PLACED BETWEEN THE LAYERS TO PREVENT SOIL MIGRATION.	

NOTES:
- FOR MULTIPLE BARREL INSTALLATIONS, THE RECOMMENDED STANDARD SPACING BETWEEN PARALLEL PIPE RUNS SHALL BE THE PIPE DIAMETER /2 BUT NO LESS THAN 12" FOR DIAMETERS <72". FOR 72" AND LARGER DIAMETERS, THE MINIMUM SPACING IS 36". CONTACT YOUR CONTECH REPRESENTATIVE FOR NONSTANDARD SPACING.

* APPROVED REGIONAL EQUIVALENTS FOR SECTION 5 INCLUDE CA-7, MIDOT 6AA, 6A, OR 5G, PROVIDED THEY MEET THE PARTICLE SIZES INDICATED.

MANUFACTURER RECOMMENDED BACKFILL

NOT TO SCALE

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CONTECH CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO65311 829933 - 6th St Multi
60" CMP - Perforated - SEQ 10
Roseville, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
46461	65311	12/26/2024
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: Drywell-2 1		

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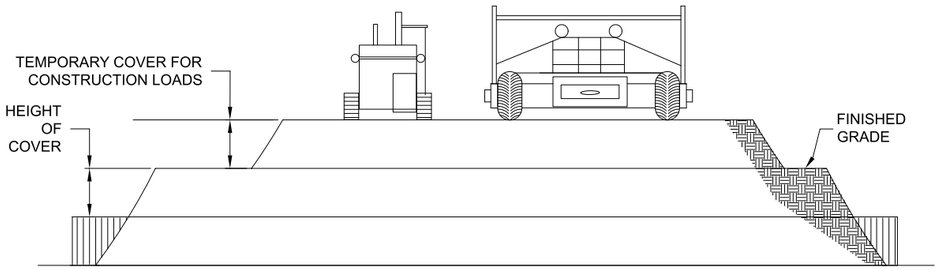


CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)			
	18-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
12-42	2.0	2.5	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-120	3.0	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

CONSTRUCTION LOADING DIAGRAM

SCALE: N.T.S.

SPECIFICATION FOR DESIGNED DETENTION SYSTEM:

SCOPE
THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE DESIGNED DETENTION SYSTEM DETAILED IN THE PROJECT PLANS.

MATERIAL
THE MATERIAL SHALL CONFORM TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-274 OR ASTM A-92.

THE GALVANIZED STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-218 OR ASTM A-929.

THE POLYMER COATED STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-246 OR ASTM A-742.

THE ALUMINUM COILS SHALL CONFORM TO THE APPLICABLE OF AASHTO M-197 OR ASTM B-744.

CONSTRUCTION LOADS
CONSTRUCTION LOADS MAY BE HIGHER THAN FINAL LOADS. FOLLOW THE MANUFACTURER'S OR NCSPA GUIDELINES.

PIPE
THE PIPE SHALL BE MANUFACTURED IN ACCORDANCE TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2: AASHTO M-36 OR ASTM A-760

GALVANIZED: AASHTO M-36 OR ASTM A-760

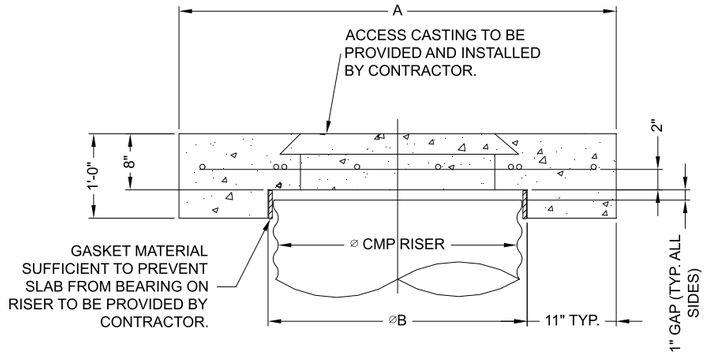
APPLICABLE POLYMER COATED: AASHTO M-245 OR ASTM A-762

ALUMINUM: AASHTO M-196 OR ASTM B-745

APPLICABLE
HANDLING AND ASSEMBLY
SHALL BE IN ACCORDANCE WITH NCSP'S (NATIONAL CORRUGATED STEEL PIPE ASSOCIATION) FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL. SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR ALUMINUM PIPE.
REQUIREMENTS
INSTALLATION
SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II DIVISION II OR ASTM A-798 (FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL) OR ASTM B-788 (FOR ALUMINUM PIPE) AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

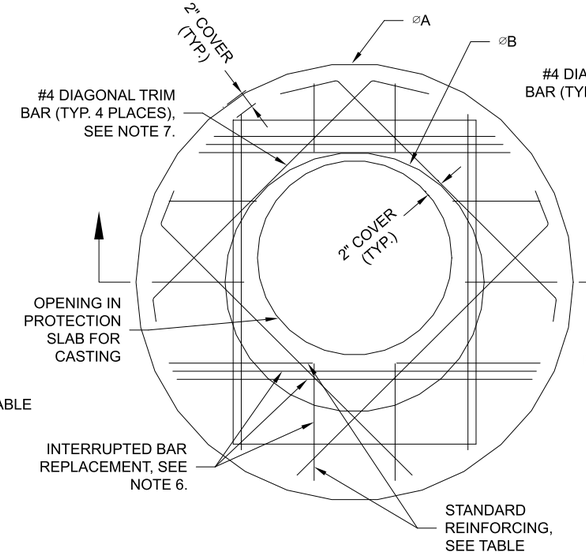
NOTE:
THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.



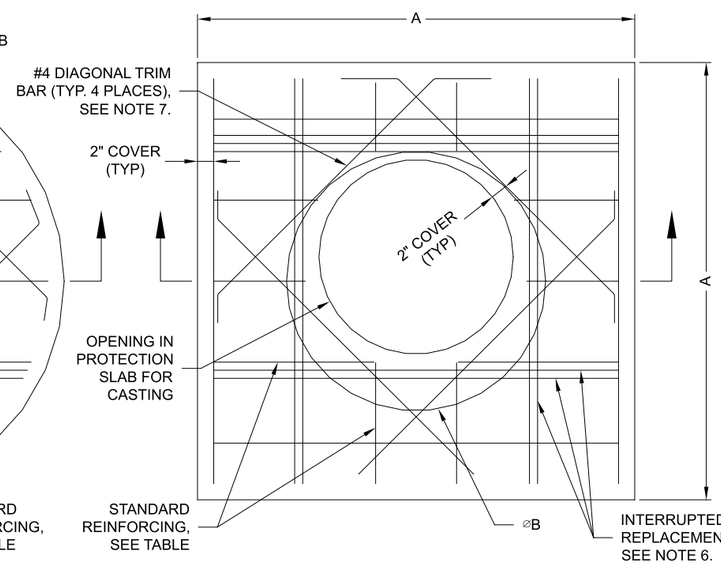
SECTION VIEW

REINFORCING TABLE				
⌀ CMP RISER	A	⌀ B	REINFORCING	**BEARING PRESSURE (PSF)
24"	⌀ 4' 4'X4'	26"	#5 @ 12" OCEW #5 @ 12" OCEW	2,410 1,780
30"	⌀ 4'-6" 4'-6" X 4'-6"	32"	#5 @ 12" OCEW #5 @ 12" OCEW	2,120 1,530
36"	⌀ 5' 5' X 5'	38"	#5 @ 10" OCEW #5 @ 10" OCEW	1,890 1,350
42"	⌀ 5'-6" 5'-6" X 5'-6"	44"	#5 @ 10" OCEW #5 @ 9" OCEW	1,720 1,210
48"	⌀ 6' 6' X 6'	50"	#5 @ 9" OCEW #5 @ 8" OCEW	1,600 1,100

** ASSUMED SOIL BEARING CAPACITY



ROUND OPTION PLAN VIEW



SQUARE OPTION PLAN VIEW

NOTES:

1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION.
2. DESIGN LOAD HS25.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 3,500 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. DETAIL DESIGN BY DELTA ENGINEERING, BINGHAMTON, NY.

MANHOLE CAP DETAIL

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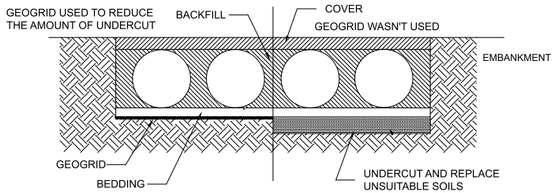
CMP DETENTION INSTALLATION GUIDE

PROPER INSTALLATION OF A FLEXIBLE UNDERGROUND DETENTION SYSTEM WILL ENSURE LONG-TERM PERFORMANCE. THE CONFIGURATION OF THESE SYSTEMS OFTEN REQUIRES SPECIAL CONSTRUCTION PRACTICES THAT DIFFER FROM CONVENTIONAL FLEXIBLE PIPE CONSTRUCTION. CONTECH ENGINEERED SOLUTIONS STRONGLY SUGGESTS SCHEDULING A PRE-CONSTRUCTION MEETING WITH YOUR LOCAL SALES ENGINEER TO DETERMINE IF ADDITIONAL MEASURES, NOT COVERED IN THIS GUIDE, ARE APPROPRIATE FOR YOUR SITE.

FOUNDATION

CONSTRUCT A FOUNDATION THAT CAN SUPPORT THE DESIGN LOADING APPLIED BY THE PIPE AND ADJACENT BACKFILL WEIGHT AS WELL AS MAINTAIN ITS INTEGRITY DURING CONSTRUCTION.

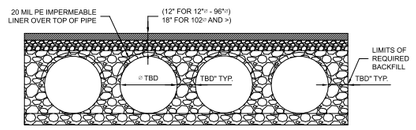
IF SOFT OR UNSUITABLE SOILS ARE ENCOUNTERED, REMOVE THE POOR SOILS DOWN TO A SUITABLE DEPTH AND THEN BUILD UP TO THE APPROPRIATE ELEVATION WITH A COMPETENT BACKFILL MATERIAL. THE STRUCTURAL FILL MATERIAL GRADATION SHOULD NOT ALLOW THE MIGRATION OF FINES, WHICH CAN CAUSE SETTLEMENT OF THE DETENTION SYSTEM OR PAVEMENT ABOVE. IF THE STRUCTURAL FILL MATERIAL IS NOT COMPATIBLE WITH THE UNDERLYING SOILS AN ENGINEERING FABRIC SHOULD BE USED AS A SEPARATOR. IN SOME CASES, USING A STIFF REINFORCING GEOGRID REDUCES OVER EXCAVATION AND REPLACEMENT FILL QUANTITIES.



GRADE THE FOUNDATION SUBGRADE TO A UNIFORM OR SLIGHTLY SLOPING GRADE. IF THE SUBGRADE IS CLAY OR RELATIVELY NON-POROUS AND THE CONSTRUCTION SEQUENCE WILL LAST FOR AN EXTENDED PERIOD OF TIME, IT IS BEST TO SLOPE THE GRADE TO ONE END OF THE SYSTEM. THIS WILL ALLOW EXCESS WATER TO DRAIN QUICKLY, PREVENTING SATURATION OF THE SUBGRADE.

GEOMEMBRANE BARRIER

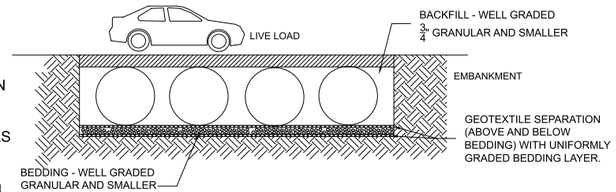
THE RESISTIVITY OF A PROJECT SITE MAY CHANGE OVER TIME DUE TO THE USE OF VARIOUS SALTING, DE-ICING, AND AGRICULTURAL AGENTS APPLIED ON OR NEAR THE AREA. TO MITIGATE THE POTENTIAL IMPACT OF THESE AGENTS, AN HDPE MEMBRANE LINER WILL BE INSTALLED ON THE CROWN OF EACH PIPE, CREATING AN IMPERMEABLE BARRIER. THIS MEASURE IS DESIGNED TO PROTECT THE SYSTEM FROM ENVIRONMENTAL CHANGES THAT COULD LEAD TO PREMATURE CORROSION AND REDUCE THE OVERALL SERVICE LIFE.



IN-SITU TRENCH WALL

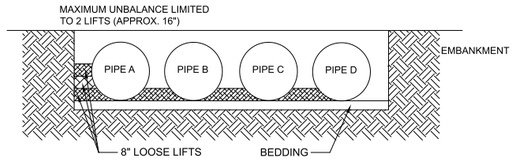
IF EXCAVATION IS REQUIRED, THE TRENCH WALL NEEDS TO BE CAPABLE OF SUPPORTING THE LOAD THAT THE PIPE SHEDS AS THE SYSTEM IS LOADED. IF SOILS ARE NOT CAPABLE OF SUPPORTING THESE LOADS, THE PIPE CAN DEFLECT. PERFORM A SIMPLE SOIL PRESSURE CHECK USING THE APPLIED LOADS TO DETERMINE THE LIMITS OF EXCAVATION BEYOND THE SPRING LINE OF THE OUTER MOST PIPES.

IN MOST CASES THE REQUIREMENTS FOR A SAFE WORK ENVIRONMENT AND PROPER BACKFILL PLACEMENT AND COMPACTION TAKE CARE OF THIS CONCERN.



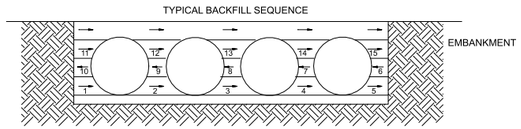
BACKFILL PLACEMENT

MATERIAL SHALL BE WORKED INTO THE PIPE HAUNCHES BY MEANS OF SHOVEL-SLICING, RODDING, AIR TAMPER, VIBRATORY ROD, OR OTHER EFFECTIVE METHODS.

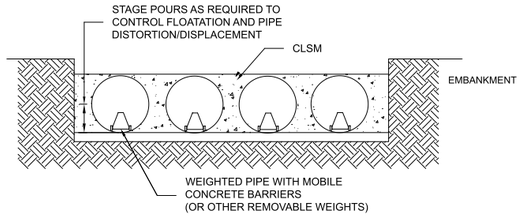


IF AASHTO T99 PROCEDURES ARE DETERMINED INFEASIBLE BY THE GEOTECHNICAL ENGINEER OF RECORD, COMPACTION IS CONSIDERED ADEQUATE WHEN NO FURTHER YIELDING OF THE MATERIAL IS OBSERVED UNDER THE COMPACTOR, OR UNDER FOOT, AND THE GEOTECHNICAL ENGINEER OF RECORD (OR REPRESENTATIVE THEREOF) IS SATISFIED WITH THE LEVEL OF COMPACTION.

FOR LARGE SYSTEMS, CONVEYOR SYSTEMS, BACKHOES WITH LONG REACHES OR DRAGLINES WITH STONE BUCKETS MAY BE USED TO PLACE BACKFILL. ONCE MINIMUM COVER FOR CONSTRUCTION LOADING ACROSS THE ENTIRE WIDTH OF THE SYSTEM IS REACHED, ADVANCE THE EQUIPMENT TO THE END OF THE RECENTLY PLACED FILL, AND BEGIN THE SEQUENCE AGAIN UNTIL THE SYSTEM IS COMPLETELY BACKFILLED. THIS TYPE OF CONSTRUCTION SEQUENCE PROVIDES ROOM FOR STOCKPILED BACKFILL DIRECTLY BEHIND THE BACKHOE, AS WELL AS THE MOVEMENT OF CONSTRUCTION TRAFFIC. MATERIAL STOCKPILES ON TOP OF THE BACKFILLED DETENTION SYSTEM SHOULD BE LIMITED TO 8- TO 10-FEET HIGH AND MUST PROVIDE BALANCED LOADING ACROSS ALL BARRELS. TO DETERMINE THE PROPER COVER OVER THE PIPES TO ALLOW THE MOVEMENT OF CONSTRUCTION EQUIPMENT SEE TABLE 1, OR CONTACT YOUR LOCAL CONTECH SALES ENGINEER.



WHEN FLOWABLE FILL IS USED, YOU MUST PREVENT PIPE FLOATATION. TYPICALLY, SMALL LIFTS ARE PLACED BETWEEN THE PIPES AND THEN ALLOWED TO SET-UP PRIOR TO THE PLACEMENT OF THE NEXT LIFT. THE ALLOWABLE THICKNESS OF THE CLSM LIFT IS A FUNCTION OF A PROPER BALANCE BETWEEN THE UPLIFT FORCE OF THE CLSM, THE OPPOSING WEIGHT OF THE PIPE, AND THE EFFECT OF OTHER RESTRAINING MEASURES. THE PIPE CAN CARRY LIMITED FLUID PRESSURE WITHOUT PIPE DISTORTION OR DISPLACEMENT, WHICH ALSO AFFECTS THE CLSM LIFT THICKNESS. YOUR LOCAL CONTECH SALES ENGINEER CAN HELP DETERMINE THE PROPER LIFT THICKNESS.

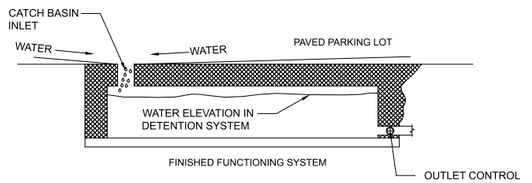


CONSTRUCTION LOADING

TYPICALLY, THE MINIMUM COVER SPECIFIED FOR A PROJECT ASSUMES H-20 LIVE LOAD. BECAUSE CONSTRUCTION LOADS OFTEN EXCEED DESIGN LIVE LOADS, INCREASED TEMPORARY MINIMUM COVER REQUIREMENTS ARE NECESSARY. SINCE CONSTRUCTION EQUIPMENT VARIES FROM JOB TO JOB, IT IS BEST TO ADDRESS EQUIPMENT SPECIFIC MINIMUM COVER REQUIREMENTS WITH YOUR LOCAL CONTECH SALES ENGINEER DURING YOUR PRE-CONSTRUCTION MEETING.

ADDITIONAL CONSIDERATIONS

BECAUSE MOST SYSTEMS ARE CONSTRUCTED BELOW-GRADE, RAINFALL CAN RAPIDLY FILL THE EXCAVATION; POTENTIALLY CAUSING FLOATATION AND MOVEMENT OF THE PREVIOUSLY PLACED PIPES. TO HELP MITIGATE POTENTIAL PROBLEMS, IT IS BEST TO START THE INSTALLATION AT THE DOWNSTREAM END WITH THE OUTLET ALREADY CONSTRUCTED TO ALLOW A ROUTE FOR THE WATER TO ESCAPE. TEMPORARY DIVERSION MEASURES MAY BE REQUIRED FOR HIGH FLOWS DUE TO THE RESTRICTED NATURE OF THE OUTLET PIPE.



CMP DETENTION SYSTEM INSPECTION AND MAINTENANCE

UNDERGROUND STORMWATER DETENTION AND INFILTRATION SYSTEMS MUST BE INSPECTED AND MAINTAINED AT REGULAR INTERVALS FOR PURPOSES OF PERFORMANCE AND LONGEVITY.

INSPECTION

INSPECTION IS THE KEY TO EFFECTIVE MAINTENANCE OF CMP DETENTION SYSTEMS AND IS EASILY PERFORMED. CONTECH RECOMMENDS ONGOING, ANNUAL INSPECTIONS. SITES WITH HIGH TRASH LOAD OR SMALL OUTLET CONTROL ORIFICES MAY NEED MORE FREQUENT INSPECTIONS. THE RATE AT WHICH THE SYSTEM COLLECTS POLLUTANTS WILL DEPEND MORE ON SITE SPECIFIC ACTIVITIES RATHER THAN THE SIZE OR CONFIGURATION OF THE SYSTEM.

INSPECTIONS SHOULD BE PERFORMED MORE OFTEN IN EQUIPMENT WASHDOWN AREAS, IN CLIMATES WHERE SANDING AND/OR SALTING OPERATIONS TAKE PLACE, AND IN OTHER VARIOUS INSTANCES IN WHICH ONE WOULD EXPECT HIGHER ACCUMULATIONS OF SEDIMENT OR ABRASIVE/ CORROSIVE CONDITIONS. A RECORD OF EACH INSPECTION IS TO BE MAINTAINED FOR THE LIFE OF THE SYSTEM

MAINTENANCE

CMP DETENTION SYSTEMS SHOULD BE CLEANED WHEN AN INSPECTION REVEALS ACCUMULATED SEDIMENT OR TRASH IS CLOGGING THE DISCHARGE ORIFICE.

ACCUMULATED SEDIMENT AND TRASH CAN TYPICALLY BE EVACUATED THROUGH THE MANHOLE OVER THE OUTLET ORIFICE. IF MAINTENANCE IS NOT PERFORMED AS RECOMMENDED, SEDIMENT AND TRASH MAY ACCUMULATE IN FRONT OF THE OUTLET ORIFICE. MANHOLE COVERS SHOULD BE SECURELY SEATED FOLLOWING CLEANING ACTIVITIES. CONTECH SUGGESTS THAT ALL SYSTEMS BE DESIGNED WITH AN ACCESS/INSPECTION MANHOLE SITUATED AT OR NEAR THE INLET AND THE OUTLET ORIFICE. SHOULD IT BE NECESSARY TO GET INSIDE THE SYSTEM TO PERFORM MAINTENANCE ACTIVITIES, ALL APPROPRIATE PRECAUTIONS REGARDING CONFINED SPACE ENTRY AND OSHA REGULATIONS SHOULD BE FOLLOWED.

ANNUAL INSPECTIONS ARE BEST PRACTICE FOR ALL UNDERGROUND SYSTEMS. DURING THIS INSPECTION, IF EVIDENCE OF SALTING/DE-ICING AGENTS IS OBSERVED WITHIN THE SYSTEM, IT IS BEST PRACTICE FOR THE SYSTEM TO BE RINSED, INCLUDING ABOVE THE SPRING LINE SOON AFTER THE SPRING THAW AS PART OF THE MAINTENANCE PROGRAM FOR THE SYSTEM.

MAINTAINING AN UNDERGROUND DETENTION OR INFILTRATION SYSTEM IS EASIEST WHEN THERE IS NO FLOW ENTERING THE SYSTEM. FOR THIS REASON, IT IS A GOOD IDEA TO SCHEDULE THE CLEANOUT DURING DRY WEATHER.

THE FOREGOING INSPECTION AND MAINTENANCE EFFORTS HELP ENSURE UNDERGROUND PIPE SYSTEMS USED FOR STORMWATER STORAGE CONTINUE TO FUNCTION AS INTENDED BY IDENTIFYING RECOMMENDED REGULAR INSPECTION AND MAINTENANCE PRACTICES. INSPECTION AND MAINTENANCE RELATED TO THE STRUCTURAL INTEGRITY OF THE PIPE OR THE SOUNDNESS OF PIPE JOINT CONNECTIONS IS BEYOND THE SCOPE OF THIS GUIDE.

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