

Attachment C

CEQA Initial Study - Mitigated Negative Declaration



INITIAL STUDY ♦ MITIGATED NEGATIVE DECLARATION



3001 El Camino Real Affordable Housing Project

PREPARED BY

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250 Hamilton Avenue
Palo Alto, California 94301
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**PREPARED WITH
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REPORT DATE

February 2023

TABLE OF CONTENTS

Initial Study	1
1. Project Title.....	1
2. Lead Agency Name and Address	1
3. Contact Person and Phone Number	1
4. Project Sponsor’s Name and Address.....	1
5. Project Location	1
6. comprehensive Plan Designation	1
7. Zoning	4
8. Location and Existing Setting.....	4
9. Other Public Agencies Whose Approval is Required	11
10. Have California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Requested Consultation Pursuant to Public Resources Code Section 21080.3.1? If so, is There a Plan for Consultation that Includes, for Example, the Determination of Significance of Impacts to Tribal Cultural Resources, Procedures Regarding Confidentiality, etc?	11
Environmental Factors Potentially Affected	13
Determination.....	13
Environmental Checklist	15
1 Aesthetics	15
2 Agriculture and Forestry Resources	17
3 Air Quality	19
4 Biological Resources	29
5 Cultural Resources.....	35
6 Energy	39
7 Geology and Soils.....	45
8 Greenhouse Gas Emissions.....	55
9 Hazards and Hazardous Materials	61
10 Hydrology and Water Quality	87
11 Land Use and Planning.....	91
12 Mineral Resources	95
13 Noise	97
14 Population and Housing	111
15 Public Services	113
16 Recreation.....	117
17 Transportation	119
18 Tribal Cultural Resources	127
19 Utilities and Service Systems	131

TABLE OF CONTENTS

20	Wildfire	137
21	Mandatory Findings of Significance.....	139
References		145
Bibliography.....		145
List of Preparers.....		151

FIGURES

Figure 1	Regional Location	2
Figure 2	Project Location.....	3
Figure 3	Project Site Photographs 1 and 2	6
Figure 4	Project Site Photographs 3 and 4	7
Figure 5	Proposed Site Plan.....	8
Figure 6	Geologic Map of the Project Site.....	52
Figure 7	Project Site – Hazardous Materials Concern	70
Figure 8	Noise Measurement Locations	102

TABLES

Table 1	Proposed Residential Development Summary.....	9
Table 2	Health Effects Associated with Non-Attainment Criteria Pollutants.....	20
Table 3	BAAQMD Air Quality Thresholds of Significance.....	21
Table 4	Estimated Construction Emissions	24
Table 5	Estimated Operational Emissions	26
Table 6	CPAU Service Area Electricity Consumption (GWh)	40
Table 7	Project Construction Fuel Consumption.....	41
Table 8	Project Operational Energy Consumption.....	42
Table 9	Project Consistency with City of Palo Alto 2030 Comprehensive Plan.....	43
Table 10	Combined Annual Emissions of Greenhouse Gases	57
Table 11	Project Consistency with Plan Bay Area 2050	58
Table 12	Project Consistency with S/CAP.....	59
Table 13	Project Consistency with the City of Palo Alto 2030 Comprehensive Plan	59
Table 14	Project Consistency with PAMC CS Development Standards.....	93
Table 15	Vibration Levels Measured during Construction Activities	99
Table 16	Palo Alto Land Use Compatibility for Community Noise Environments.....	99
Table 17	Short-Term Noise Level Measurement Results	101
Table 18	Long-Term Noise Measurement Results	103
Table 19	Groundborne Vibration Architectural Damage Criteria	104
Table 20	Calculated Construction Noise Levels for Each Phase of Construction	105
Table 21	Summary of Project and Cumulative Traffic Noise Increases.....	107

Table 22	Vibration Levels Measured during Construction Activities	108
Table 23	Bicycle Facility Summary	121
Table 24	Estimated Wastewater Generation	134
Table 25	City of Palo Alto Supply/Demand Balance (AFY)	135

APPENDICES

Appendix A	Draft Transportation Analysis
Appendix B	Air Quality Modeling Results
Appendix C	Arborist's Report
Appendix D	Cultural Resources Assessment
Appendix E	Energy Calculations
Appendix F	Hazards Site Photos
Appendix G	Noise Data
Appendix H	Tribal Correspondence with Tamien Nation
Appendix I	AB 52 Correspondence

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INITIAL STUDY

1. PROJECT TITLE

3001 El Camino Real Affordable Housing Project

2. LEAD AGENCY NAME AND ADDRESS

City of Palo Alto
250 Hamilton Avenue
Palo Alto, California 94301

3. CONTACT PERSON AND PHONE NUMBER

Claire Raybould, AICP, Senior Planner
(650) 329-2116

4. PROJECT SPONSOR'S NAME AND ADDRESS

Charities Housing
1400 Parkmoor Avenue, Suite 190
San Jose, California 95126

5. PROJECT LOCATION

The project site is located at 3001 and 3017 El Camino Real in the City of Palo Alto in Santa Clara County. The assessor's parcel number (APN) is 132-37-055. The 1.14-acre project site is situated along the northern side of El Camino Real, at the southeast corner of El Camino Real and Olive Avenue, with access from El Camino Real, Acacia Avenue and Olive Avenue. Figure 1 shows the location of the site in the region. Figure 2 shows the project site in its neighborhood context.

6. COMPREHENSIVE PLAN DESIGNATION

The project site has a land use designation of Service Commercial in the City of Palo Alto's Comprehensive Plan. As described in the Comprehensive Plan, the Service Commercial land use designation allows for facilities providing citywide and regional services and relies on customers arriving by car. Typical uses include auto services and dealerships, motels, lumberyards, appliance stores, and restaurants, including fast service types. In some locations, such as on El Camino Real, residential and mixed-use projects may be appropriate in this land use category.

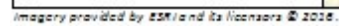
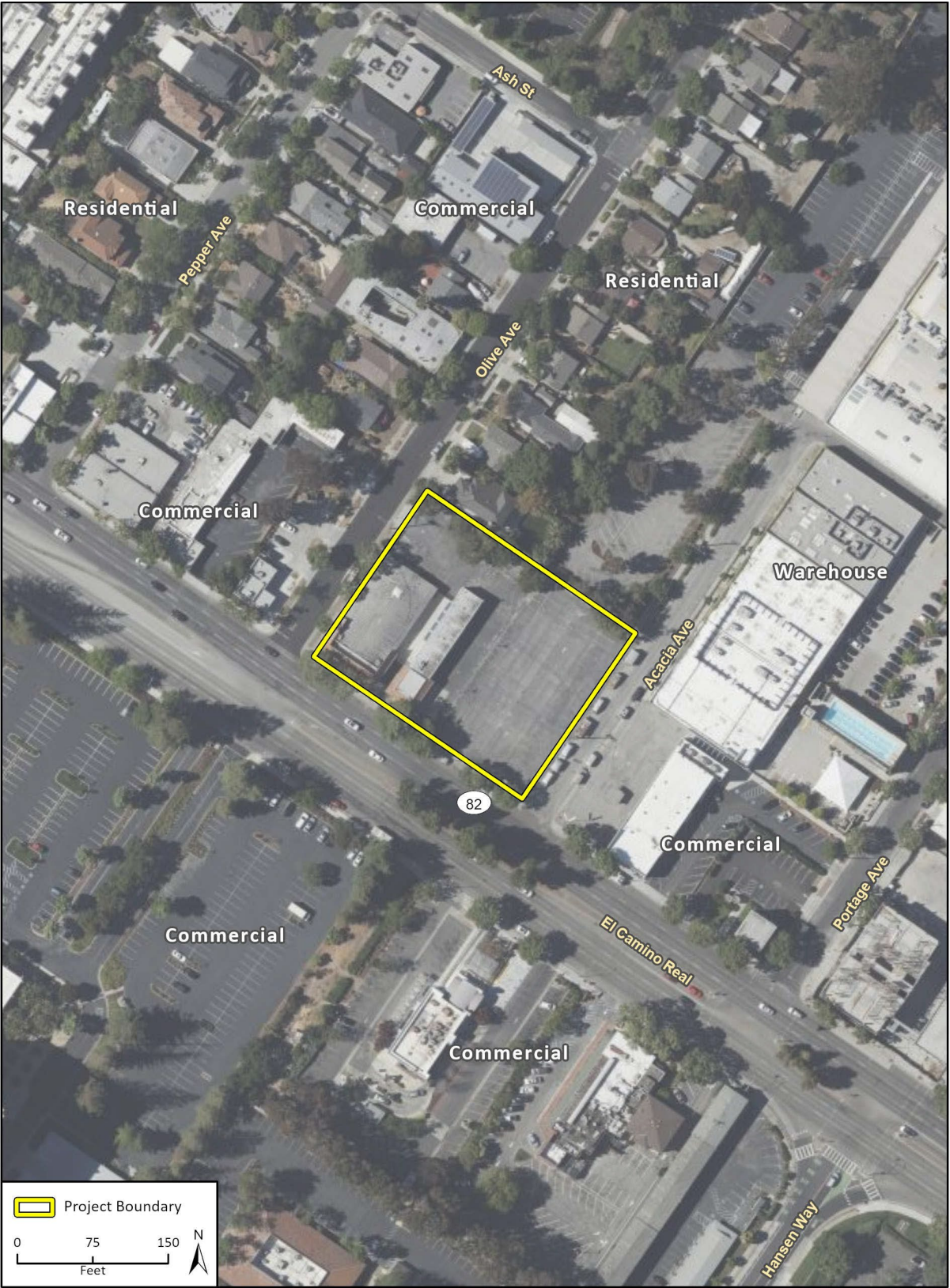


Figure 2 Project Location



Imagery provided by Microsoft Bing and its licensors © 2022.

22-13453 EPS
Fig 2 Project Location

7. ZONING

The site is zoned Service Commercial (CS) District. As described in the Palo Alto Municipal Code (PAMC) in Chapter 18.16, the CS District is intended to create and maintain areas accommodating citywide and regional services that may be inappropriate in neighborhood or pedestrian-oriented shopping areas, and which generally require automotive access for customer convenience, servicing of vehicles or equipment, loading or unloading, or parking of commercial service vehicles. Multi-family residential is a permitted land use in this district.

8. LOCATION AND EXISTING SETTING

The project site is located along the El Camino Real commercial corridor in a neighborhood characterized by a mix of uses including residential, retail, office, and other commercial. The project site is bordered by single family residences and a parking lot to the north, Olive Avenue to the west, Acacia Avenue to the east, and El Camino Real to the south. Across Olive Avenue to the northwest is the Verizon Wireless store; across El Camino Real to the southwest is commercial office space and McDonald's; and across Acacia Avenue to the east is the Equinox Palo Alto fitness club. The proposed project is within a transit priority area according to the Association of Bay Area Government's (ABAG) Transit Priority Map (ABAG 2021b).

The rectangular 1.14-acre project site is generally flat and fully developed. The site currently includes two single-story commercial buildings which have been vacant since 2017 (formerly Mike's Bikes) and a surface parking lot with 66 spaces. The building at 3001 El Camino Real is one-story and approximately 5,500 square feet in size and the building at 3017 El Camino Real is one-story and approximately 2,000 square feet in size.

Figure 3 and Figure 4 show photographs of the project site.

PROJECT DESCRIPTION

The proposed project would involve the demolition of the two existing structures and construction of a 136,945 square foot residential building with 129 units. Of the 136,945 total square feet, 89,992 would be used for residential units and associated circulation, 18,421 square feet would be used for parking, 6,378 square feet for residential common space, and 877 square feet for a property management office. The project would have a maximum height of 59 feet or five stories. The units would be 100 percent affordable and the proposed project would be eligible for a density bonus under the State's density bonus program. Specifically, the project would require state density bonus concessions for maximum floor area, lot coverage, open space requirements, and the minimum rear setback along Acacia Avenue. Allowances under state density bonus law for 100 percent affordable housing projects within 0.5 mile of a major transit stop (the California Avenue Caltrain) would also be utilized to provide reduced parking and increased height in comparison to the City's zoning ordinance requirements.

The project would include 0- to 10-foot setbacks to create a 12 foot sidewalk along the site's Olive Avenue frontage, a 10-foot setback on the side abutting the residential district, and a 5-foot setback against the street side yard (El Camino Real). Design materials include concrete, light and dark gray fiber cement, dark brown perforated and non-perforated metal railings, and storefront glazing. Figure 5 shows the proposed site plan.

Figure 3 Project Site Photographs 1 and 2



Photograph 1. View of the existing structures from El Camino Real looking north.



Photograph 2. View of the existing structure from the northern portion of the project site looking south.

Figure 4 Project Site Photographs 3 and 4

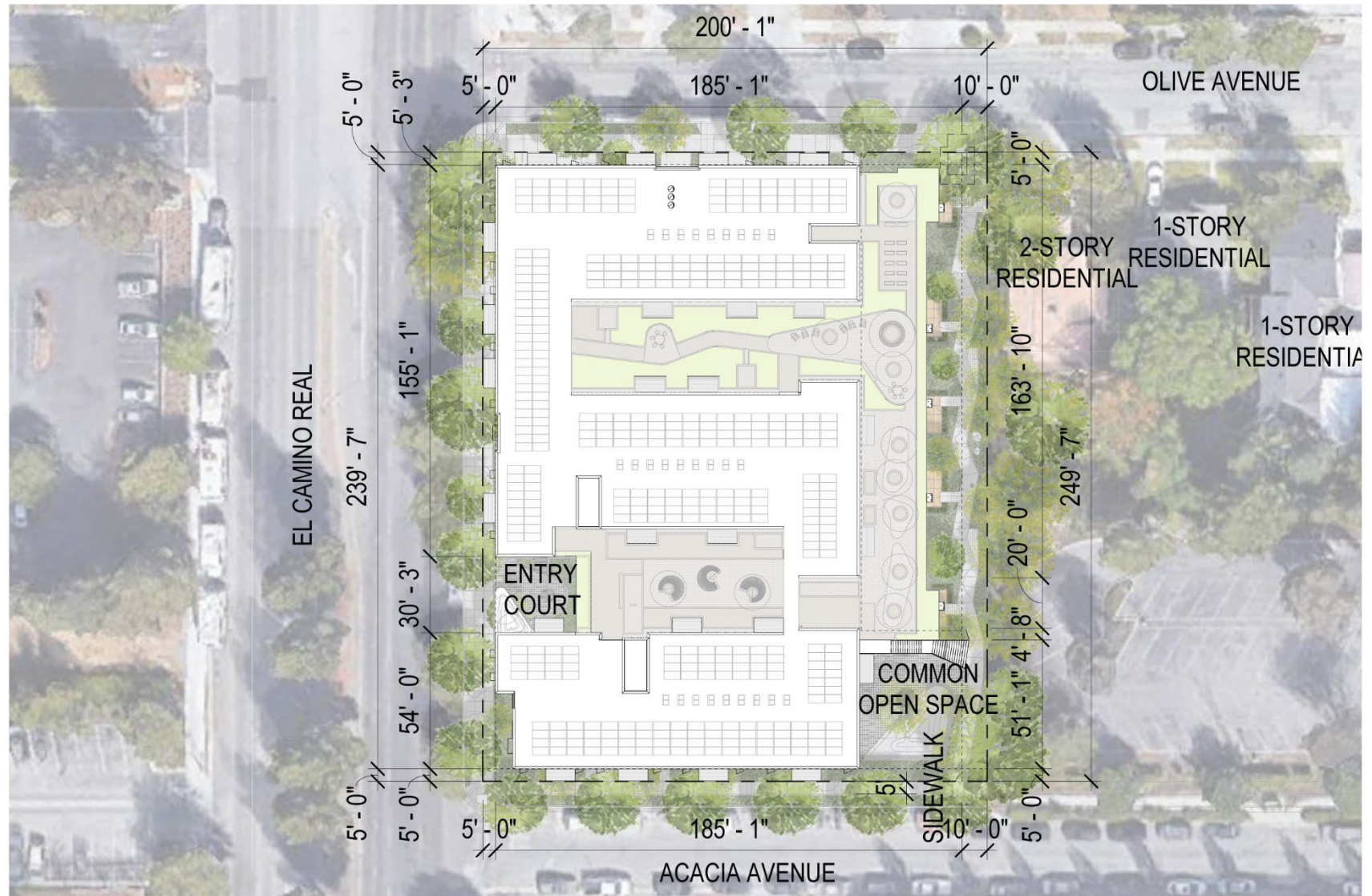


Photograph 3. View of the existing structure from the northern portion of the project site looking south.



Photograph 4. View of the existing structure from the northeast corner of the project site looking southwest.

Figure 5 Proposed Site Plan



Source: David Baker Architects, 2022.

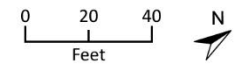


Table 1 provides a summary of the proposed project characteristics.

Table 1 Proposed Residential Development Summary

Feature	Details
Project Characteristics	
Project Floor Area	136,945 square feet
Floor Area Ratio (FAR)	2.7
Density	113 dwelling units/acre
Building Height	Maximum height of 59 feet (five stories)
Proposed Dwelling Units	
Studio	20 units
One-bedroom	44 units
Two-bedroom	31 units
Three-Bedroom	34 units
Total Units	129 units
Proposed Parking	
ADA (EVSE Ready)	5 spaces
Electric Vehicle	1 space
Parking Lifts (EVSE Ready)	97 spaces
Total	103 spaces
Total Bicycle Parking Spaces	152 (138 long-term and 14 short-term)
Proposed Open Space	
Useable Private Open Space	7,154 square feet
Usable Common Open Space	4,517 square feet
Notes:	
ADA=Americans with Disabilities Act	
EVSE=Electric Vehicle Supply Equipment	

SITE ACCESS AND PARKING

The proposed project would include removal of the three existing driveways along Acacia Avenue, El Camino Real, and Olive Avenue, and construction of one driveway approximately 140 feet east of El Camino Real with access to Olive Avenue. Pedestrian access to the entry courtyard would be from El Camino Real. The project would include 103 parking spaces in the parking garage for a parking ratio of 0.82 spaces per unit. The project would also provide 152 bicycle parking spaces in the garage.

LANDSCAPING AND OPEN SPACE

The project site currently includes 17 onsite trees including ten London Plane (*Platanus × acerifolia*), five Aristocrat Callery Pear (*Pyrus calleryana*), one Tree-of-Heaven (*Ailanthus altissima*), and one Purple Robe Locust (*Robinia pseudoacacia*). Due to the species and trunk diameter none of these are identified as protected trees according to the PAMC Chapter 8.10, Tree and Landscape Preservation and Management. An additional six trees are offsite street trees located in the public right-of-way near the proposed project site. The proposed project would include the removal of seven trees and 36 would be planted as part of the proposed project. A tree protection plan which

includes creating tree protection zones around each tree to be kept on site is included in the proposed project.

The project would include 4,517 square feet of ground-floor usable common open space and 7,154 square feet of private usable open space in the form of balconies, for a total of 11,671 square feet of open space. The project would also include 9,157 square feet of podium common open space, which is not considered usable because it is not on Level 3 or above pursuant to PAMC Section 18.40.230.

UTILITIES AND STORMWATER MANAGEMENT

The City of Palo Alto Utilities department (CPAU) provides electric, natural gas, refuse, recycled water, storm drain, wastewater collection, treatment and disposal. Water would be provided by the San Francisco Public Utilities Commission (SFPUC). Police and fire protection services would be provided by the City of Palo Alto.

Stormwater treatment on site would include impervious rooftop draining to bio-swales, impervious pavement training to bio-swales, and bioretention treatment areas. The project would also include landscaped areas to limit stormwater runoff and would include drought-tolerant planting and stormwater treatment plantings.

CONSTRUCTION

Construction of the project would include site preparation, grading, building construction, paving, and architectural coating phases. Construction would occur over an estimated 21 months. The project would require approximately 700 cubic yards of cut and 2,500 cubic yards of fill, requiring 1,800 cubic yards of import. The maximum depth of excavation was conservatively estimated at approximately 15 feet below ground surface. Construction activities would occur Monday through Friday between the hours of 7:00 a.m. and 7:00 p.m. Project construction would implement the following construction noise best management practices (BMPs) as part of the project's design features: use of noise suppression device and techniques, equip all internal combustion engines driven equipment with mufflers, prohibit unnecessary idling on engines, and locate noise-generating equipment and staging areas as from the single-family residences as possible.

PALO ALTO GREEN BUILDING CHECKLIST

In addition to California Building Code (CBC) requirements, the City of Palo Alto has adopted more stringent green building regulations. The Palo Alto Green Building Ordinance (Ord. 5393, 2020) requires applicants to incorporate sustainable design, construction, and operational requirements into most single-family residential, multi-family residential, and non-residential projects. For residential development, the City has adopted California Green Building Standards Code (CALGreen) Tier 1 for additions and renovations over 1,000 square feet and CALGreen for Tier 2 for new construction pursuant to Palo Alto Municipal Code (PAMC) Section 16.14. To achieve Tier 2 status, a project must comply with the requirements identified in CALGreen Appendix A4, Division A4.601.5 and be 10 percent more energy efficient than the base CALGreen code

requirements. In accordance with the City's Green Building Ordinance, the proposed project would satisfy requirements for CALGreen Tier 2. The project would be all electric, and 100 percent of the available automobile parking stalls would be electric vehicle (EV) ready parking stalls. Additionally, the project would include reclaimed water for indoor and outdoor use, water-efficient appliances, stormwater treatment, solar photovoltaic (PV) systems mounted on the roof, and drought tolerant landscaping.

9. OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED

The City of Palo Alto is the lead agency with responsibility for approving the proposed project. An encroachment permit from Caltrans for work within the Caltrans right-of-way along El Camino Real would also be required.

10. HAVE CALIFORNIA NATIVE AMERICAN TRIBES TRADITIONALLY AND CULTURALLY AFFILIATED WITH THE PROJECT AREA REQUESTED CONSULTATION PURSUANT TO PUBLIC RESOURCES CODE SECTION 21080.3.1? IF SO, IS THERE A PLAN FOR CONSULTATION THAT INCLUDES, FOR EXAMPLE, THE DETERMINATION OF SIGNIFICANCE OF IMPACTS TO TRIBAL CULTURAL RESOURCES, PROCEDURES REGARDING CONFIDENTIALITY, ETC?

No California Native American Tribes have requested consultation pursuant to Public Resources Code Section 21080.3.1.

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

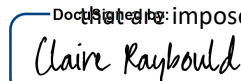
This project would potentially affect the environmental factors checked below, involving at least one impact that is “Potentially Significant” or “Less than Significant with Mitigation Incorporated” as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forestry Resources	☐	Air Quality
☒	Biological Resources	☒	Cultural Resources	☐	Energy
☐	Geology/Soils	☐	Greenhouse Gas Emissions	☒	Hazards & Hazardous Materials
☐	Hydrology/Water Quality	☐	Land Use/Planning	☐	Mineral Resources
☒	Noise	☐	Population/Housing	☐	Public Services
☐	Recreation	☐	Transportation	☒	Tribal Cultural Resources
☐	Utilities/Service Systems	☐	Wildfire	☒	Mandatory Findings of Significance

DETERMINATION

Based on this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures imposed upon the proposed project, nothing further is required.

Digitally signed by

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Signature

Claire Raybould

Printed Name

2/8/2023

Date

Senior Planner

Title

DETERMINATION

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ENVIRONMENTAL CHECKLIST

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Except as provided in Public Resources Code Section 21099, would the project:</i>				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c. 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?	☐	☐	☒	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☒	☐

Senate Bill (SB) 743 was signed into law on September 27, 2013. According to SB 743, which became effective January 1, 2014, "aesthetics...impacts of a residential, mixed-use, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." Pursuant to Section 21099 of the California Public Resources Code, a "transit priority area" is defined in as an area within 0.5 mile of an existing or planned major transit stop. A "major transit stop" is defined in Section 21064.3 of the California Public Resources Code as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

The proposed project is within a transit priority area according to the Association of Bay Area Governments' (ABAG) Transit Priority Map (ABAG 2021b). Therefore, because the proposed project would result in residential use on an infill site within a transit priority area, aesthetics impacts may not be considered significant impacts on the environment.

Pursuant to CEQA Statute Section 21099.d, “aesthetic impacts do not include impacts on historical or cultural resources.” Additional analysis of impacts related to historic or cultural resources is included in Section 5, *Cultural Resources*. In addition, Section 11, *Land Use and Planning*, includes a discussion of the proposed project’s consistency with City plans, policies and regulations, including applicable ones related to design and aesthetics.

2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project have any of the following impacts:</i>				
a. <i>Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</i>	☐	☐	☐	☒
b. <i>Conflict with existing zoning for agricultural use or a Williamson Act contract?</i>	☐	☐	☐	☒
c. <i>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))?</i>	☐	☐	☐	☒
d. <i>Result in the loss of forest land or conversion of forest land to non-forest use?</i>	☐	☐	☐	☒
e. <i>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?</i>	☐	☐	☐	☒

IMPACT ANALYSIS

- Would the project convert Prime Farmland, Unique Farmland, 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?*
- Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?*

- c. *Would the project 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))?*
- d. *Would the project result in the loss of forest land or conversion of forest land to non-forest use?*
- e. *Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?*

The project is located on Urban and Built-Up Land, per the Department of Conservation's Important Farmland Finder (DOC 2022). The project site is not identified as any farmland type, not enrolled in Williamson Act contracts, and does not support forest land or resources. The project site is not located on or adjacent to agricultural land or forest land and the proposed project would not involve any development that could result in the conversion of farmland to non-agricultural uses. The project site is currently occupied by commercial buildings and parking areas. For these reasons, the project would have no impact with respect to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use; conflict with existing agricultural zoning or Williamson Act contracts; result in the loss of forest land or conversion of forest land to non-forest use; or other conversion of farmland to non-agricultural use.

NO IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project have any of the following impacts:</i>				
a. <i>Conflict with or obstruct implementation of the applicable air quality plan?</i>	☐	☐	☒	☐
b. <i>Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?</i>	☐	☐	☒	☐
c. <i>Expose sensitive receptors to substantial pollutant concentrations?</i>	☐	☐	☒	☐
d. <i>Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?</i>	☐	☐	☒	☐

AIR QUALITY STANDARDS AND ATTAINMENT

The project site is located within the San Francisco Bay Area Air Basin (the Basin), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). As the local air quality management agency, BAAQMD is required to monitor air pollutant levels to ensure that state and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards.

Depending on whether the standards are met or exceeded, the Basin is classified as being in “attainment” or “nonattainment.” Under state law, air districts are required to prepare a plan for air quality improvement for pollutants for which the district is in non-compliance. BAAQMD is in non-attainment for state and federal ozone standards, the state and federal PM_{2.5} (particulate matter up to 2.5 microns in size) standards and the state PM₁₀ (particulate matter up to 10 microns in size) standards and is required to prepare a plan for improvement (BAAQMD 2017a). The health effects associated with criteria pollutants for which the Basin is in non-attainment are described in Table 2.

Table 2 Health Effects Associated with Non-Attainment Criteria Pollutants

Pollutant	Adverse Effects
Ozone	(1) Short-term exposures: (a) pulmonary function decrements and localized lung edema in humans and animals and (b) risk to public health implied by alterations in pulmonary morphology and host defense in animals; (2) long-term exposures: risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (3) vegetation damage; and (4) property damage.
Suspended particulate matter (PM ₁₀)	(1) Excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease (including asthma). ^a
Suspended particulate matter (PM _{2.5})	(1) Excess deaths from short- and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes, including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children, such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease, including asthma. ^a

^a More detailed discussions on the health effects associated with exposure to suspended particulate matter can be found in the following documents: United States Environmental Protection Agency (USEPA), Air Quality Criteria for Particulate Matter, 2004. Source: USEPA 2021

BAAQMD adopted the 2017 Clean Air Plan (2017 Plan) as an update to the 2010 Clean Air Plan. The 2017 Plan provides a regional strategy to protect public health and the climate. Consistent with the greenhouse gas (GHG) reduction targets adopted by the state, the 2017 Plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. To fulfill state ozone planning requirements, the 2017 control strategy includes all feasible measures to reduce emissions of ozone precursors (ROG and NO_x) and reduce transport of ozone and its precursors to neighboring air basins. In addition, the 2017 Plan builds upon and enhances the BAAQMD's efforts to reduce emissions of fine particulate matter and toxic air contaminants (TAC) (BAAQMD 2017b).

AIR QUALITY MANAGEMENT

The 2017 Plan provides guidance to improve Bay Area air quality and protect public health as well as the climate. The legal impetus for the 2017 Plan was to update the most recent ozone plan, the 2010 Clean Air Plan, to comply with state air quality planning requirements as codified in the California Health and Safety Code. Although steady progress in reducing ozone levels in the Bay Area has been made, the region continues to be designated as non-attainment for both the one-hour and eight-hour state ozone standards as noted previously. In addition, emissions of ozone precursors in the Bay Area contribute to air quality problems in neighboring air basins. Under these circumstances, state law requires the 2017 Plan to include all feasible measures to reduce emissions of ozone precursors and reduce transport of ozone precursors to neighboring air basins (BAAQMD 2017b).

AIR POLLUTANT EMISSION THRESHOLDS

The BAAQMD has adopted guidelines for quantifying and determining the significance of air quality emissions in its *California Environmental Quality Act Air Quality Guidelines* (BAAQMD 2017c). BAAQMD recommends that lead agencies determine appropriate air quality emissions thresholds of significance based on substantial evidence in the record. The BAAQMD's significance thresholds in the updated May 2017 *CEQA Air Quality Guidelines* for project operations within the Basin are the most appropriate thresholds for use in determining air quality impacts of the project. BAAQMD developed screening criteria to provide lead agencies and project applicants with a conservative indication of whether a project could result in potentially significant air quality impacts.

Table 3 presents the significance thresholds for construction and operational-related criteria air pollutant and precursor emissions used for the purposes of this analysis. These represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the Basin's existing air quality conditions. For the purposes of this analysis, the project would result in a significant impact if construction or operational emissions would exceed any of the thresholds shown in Table 3.

Table 3 BAAQMD Air Quality Thresholds of Significance

Pollutant/Precursor	Construction: Average Daily Emissions (lbs/day)	Operation: Average Daily Emissions (lbs/day)	Operation: Maximum Annual Emissions (tpy)
ROG	54	54	10
NOX	54	54	10
PM10	82 (exhaust)	82	15
PM2.5	54 (exhaust)	54	10

lbs/day = pounds per day; tpy = tons per year; ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less.; PM_{2.5} = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less.

Source: BAAQMD 2017c, Table 2-2 and Table 2-4.

In the absence of a qualified Community Risk Reduction Plan, BAAQMD has established the following *Thresholds of Significance* for local community risks and hazards associated with TACs and PM_{2.5} for assessing individual source impacts at a local level. Impacts would be significant if:

- The project would result in an increased cancer risk of > 10 in one million
- The project would result in an increased non-cancer (i.e., Chronic or Acute) risk of > 1.0 Hazard Index
- The project would result in an ambient PM_{2.5} concentration increase of > 0.3 µg/m³ annual average

A project would be considered to have a cumulatively considerable impact if the aggregate total of current and proposed TAC sources within a 1,000-foot radius of the project property line in addition to the project would exceed the *Cumulative Thresholds of Significance*.

Impacts would be significant if:

- The project would result in an increased cancer risk of > 100 in one million
- The project would result in an increased non-cancer (i.e., Chronic or Acute) risk of > 10 Hazard Index
- The project would result in an ambient PM_{2.5} concentration increase of > 0.8 µg/m³ annual average

Excess cancer risks are defined as those occurring in excess of or above and beyond those risks that would normally be associated with a location or activity if toxic pollutants were not present. Non-carcinogenic health effects are expressed as a hazard index, which is the ratio of expected exposure levels to an acceptable reference exposure level.

BAAQMD defines sensitive receptors as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and the chronically ill. These facilities include residences, hospitals, schools, child-care centers, and retirement homes.

METHODOLOGY

Air pollutant emissions generated by project construction and operation were estimated using the California Emissions Estimator Model (CalEEMod), version 2020.4.0. CalEEMod uses project-specific information, including the project's land uses, square footages for different uses (e.g., multi-family residential and parking lot), and location to model a project's construction and operational emissions. The analysis reflects the construction and operation of the project as described under *Project Description*.

Construction emissions modeled include emissions generated by construction equipment used on-site and emissions generated by vehicle trips associated with construction, such as worker and vendor trips. CalEEMod estimates construction emissions by multiplying the amount of time equipment is in operation by emission factors. Construction of the proposed project was analyzed based on the applicant-provided construction schedule and CalEEMod default construction equipment for each construction phase. Construction would occur for six days a week over approximately two years from September 2024 to September 2026, and approximately 700 cubic yards (CY) of cut soil would be exported, 2,500 CY of cut soil would be used as fill, and 1,800 CY of soil would be imported from off-site sources. It is assumed that all construction equipment used would be diesel-powered. This analysis assumes that the project would comply with all applicable regulatory standards. In particular, the project would comply with BAAQMD Regulation 6 Rule 3 for wood burning devices and Regulation 8 Rule 3 for architectural coatings.

Operational emissions modeled include mobile source emissions (i.e., vehicle emissions), energy emissions, and area source emissions. Mobile source emissions are generated by vehicle trips to and from the project site, and trip generation rates provided in the Local Transportation Analysis for the 3001 El Camino Real Project prepared by W-Trans (Appendix A) were used in the modeling. Area source emissions are generated by landscape maintenance equipment, consumer products and architectural coatings.

IMPACT ANALYSIS

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

The California Clean Air Act requires that air districts create a Clean Air Plan that describes how the jurisdiction will meet air quality standards. The most recently adopted air quality plan is the 2017 Plan. The 2017 Plan focuses on two paramount goals, both consistent with the mission of BAAQMD:

- Protect air quality and health at the regional and local scale by attaining all national and state air quality standards and eliminating disparities among Bay Area communities in cancer health risk from TACs
- Protect the climate by reducing Bay Area GHG emissions to 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050
- Under BAAQMD's methodology, a determination of consistency with the 2017 Plan should demonstrate that a project:
- Supports the primary goals of the air quality plan
- Includes applicable control measures from the air quality plan
- Does not disrupt or hinder implementation of any air quality plan control measures

A project that would not support the 2017 Plan's goals would not be considered consistent with the 2017 Plan. On an individual project basis, consistency with BAAQMD quantitative thresholds is interpreted as demonstrating support with the 2017 Plan's goals. As discussed under Impact AQ-2 below, the project would not result in exceedances of BAAQMD thresholds for criteria air pollutants and thus would not conflict with the 2017 Plan's goal to attain air quality standards.

The 2017 Plan includes goals and measures to increase the use of electric vehicles, promote the use of on-site renewable energy, and encourage energy efficiency. The project includes features that are consistent with these goals and measures, including meeting California Green Building Standards, full electrification of the building, incorporating energy efficient appliances and lighting, providing 103 EV ready parking spaces, and providing 14 short-term bicycle parking spaces and 138 long-term bicycle parking spaces. Additionally, the project would be located within a Transit Priority Area (ABAG 2021b), which would encourage the usage of alternative modes of transportation and further reduce VMT.

Therefore, the project would not conflict with or obstruct the implementation of an applicable air quality plan, and impacts would be less than significant impact.

LESS THAN SIGNIFICANT IMPACT

- b. *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

CONSTRUCTION EMISSIONS

Project construction would generate temporary air pollutant emissions associated with fugitive dust (PM₁₀ and PM_{2.5}) and exhaust emissions from heavy construction equipment and construction vehicles, in addition to ROG emissions that would be released during the drying phase of architectural coating. Table 4 shows and compares estimated construction emissions for each construction phase to BAAQMD significance thresholds. As shown therein, construction-related emissions would not exceed BAAQMD thresholds. Project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. Impacts would be less than significant.

Table 4 Estimated Construction Emissions

Construction Phase	Average Daily Emissions (lbs/day)					
	ROG	NO _x	CO	PM ₁₀ (exhaust)	PM _{2.5} (exhaust)	SO ₂
Demolition						
Construction Year 2024	1	14	14	1	1	<1
Site Preparation						
Construction Year 2024	1	14	10	1	<1	<1
Construction Year 2025	1	11	9	<1	<1	<1
Grading						
Construction Year 2025	1	12	9	<1	<1	<1
Building Construction						
Construction Year 2025	2	13	17	<1	<1	<1
Construction Year 2026	2	13	17	<1	<1	<1
Paving						
Construction Year 2026	1	7	12	<1	<1	<1
Architectural Coating						
Construction Year 2026	44	1	2	<1	<1	<1
Maximum Daily Construction Emissions	44	14	17	1	1	<1
BAAQMD Thresholds	54	54	N/A	82	54	N/A
Threshold Exceeded?	No	No	N/A	No	No	N/A

N/A = not applicable; lbs/day = pounds per day; ROG = reactive organic gases; NO_x = oxides of nitrogen; CO = Carbon Monoxide; PM_{2.5} = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM₁₀ = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; SO_x = oxides of sulfur.

See Appendix B for CalEEMod outputs; emission data presented is the highest of mitigated winter or summer outputs.

For all proposed projects, BAAQMD recommends the implementation of all *Basic Construction Mitigation Measures* listed in Table 8-2 of its *California Environmental Quality Act Air Quality Guidelines*, whether or not construction-related emissions exceed applicable *Thresholds of Significance* (BAAQMD 2017c). Pursuant to Mitigation Measure AIR-2a of the 2016 City of Palo Alto Comprehensive Plan Update EIR, construction of the project must comply with the current BAAQMD basic control measurement for reducing construction emissions. Required measures include the following and would further reduce emissions generated from construction activities beyond those presented in Table 4.

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

OPERATIONAL EMISSIONS

Operation of the project would generate criteria air pollutant emissions associated with area sources (e.g., architectural coatings, consumer products, and landscaping equipment) and mobile sources (i.e., vehicle trips to and from the project site). The proposed project would not generate air pollutant emissions associated with energy since the project would not use natural gas as the building would be all electric. Table 5 compares estimated operational emissions to BAAQMD significance thresholds. As shown therein, operational emissions would not exceed BAAQMD regional thresholds for criteria pollutants. Project operation would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment, and impacts would be less than significant.

Table 5 Estimated Operational Emissions

Sources	Emissions (lbs/day)					
	ROG	NO _x	CO	PM ₁₀	PM _{2.5}	SO ₂
Area	4	<1	11	<1	<1	<1
Energy	0	0	0	0	0	0
Mobile	1	1	9	2	1	<1
Total Maximum Daily Operational Emissions	5	1	20	3	1	<1
BAAQMD Thresholds (average daily emissions)	54	54	N/A	82	54	N/A
Threshold Exceeded?	No	No	N/A	No	No	N/A

N/A = not applicable; lbs/day = pounds per day; ROG = reactive organic gases; NO_x = oxides of nitrogen; CO = carbon monoxide; PM_{2.5} = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM₁₀ = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; SO_x = oxides of sulfur.

See Appendix B for CalEEMod outputs; emission data presented is the highest of mitigated winter or summer outputs

LESS THAN SIGNIFICANT IMPACT

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Certain population groups such as children, the elderly, and people with health issues are particularly sensitive to air pollution. The majority of sensitive receptor locations are schools, residences and hospitals. The closest sensitive receptors to the project site are the single-family residences immediately adjacent to the northeastern boundary of the site and the single-family residences approximately 85 feet north of the project site. The following subsections discuss the project's potential to result in impacts related to TAC emissions during construction and operation.

CONSTRUCTION

Construction-related activities would result in temporary project-generated emissions of diesel particulate matter (DPM) exhaust emissions from off-road, heavy-duty diesel equipment for site preparation, grading, building construction, and other construction activities. DPM was identified as a TAC by CARB in 1998 (CARB 2021).

Generation of DPM from construction projects typically occurs in a single area for a short period. Construction of the proposed project would occur over approximately 2 years. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the California Office of Environmental Health Hazard Assessment (OEHHA), health risk

assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of proposed construction activities (i.e., 24 months) is approximately seven percent of the total exposure period used for 30-year health risk calculations. Current models and methodologies for conducting health-risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities, resulting in difficulties in producing accurate estimates of health risk (BAAQMD 2017c).

The maximum PM₁₀ and PM_{2.5} emissions would occur during site preparation and grading activities. These activities would last for approximately 140 days. PM emissions would decrease for the remaining construction period because construction activities such as building construction and architectural coating would require less intensive construction equipment. While the maximum DPM emissions associated with site preparation and grading activities would only occur for a portion of the overall construction period, these activities represent the worst-case condition for the total construction period. This would represent less than two percent of the total 30-year exposure period for health risk calculation. Given the aforementioned discussion, DPM generated by project construction would not create conditions where the probability is greater than one in one million of contracting cancer for the Maximally Exposed Individual or to generate ground-level concentrations of non-carcinogenic TACs that exceed a Hazard Index greater than one for the Maximally Exposed Individual.

In addition, as mentioned above, the project would be required to implement the BAAQMD *Basic Construction Mitigation Measures* during all phases of construction on the project site to reduce dust emissions. Therefore, project construction would not expose sensitive receptors to substantial TAC concentrations, and impacts would be less than significant.

OPERATION

Sources of operational TACs include, but are not limited to, land uses such as freeways and high-volume roadways, truck distribution centers, ports, rail yards, refineries, chrome plating facilities, dry cleaners using perchloroethylene, and gasoline dispensing facilities. The project does not include construction of new gas stations, dry cleaners, highways, roadways, or other sources that could be considered new permitted or non-permitted sources of TAC or PM_{2.5} in proximity to sensitive receptors. In addition, the project would not introduce a new stationary source of emissions and the mobile emissions generated from the project would be minimal and spread over a broad geographical area. Therefore, project operation would not expose sensitive receptors to substantial TAC concentrations, and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

- d. *Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

Table 3-3 in the BAAQMD's 2017 *CEQA Air Quality Guidelines* provides odor screening distances for land uses that have the potential to generate substantial odor complaints. The uses in the table include wastewater treatment plants, landfills or transfer stations, refineries, composting facilities, confined animal facilities, food manufacturing, smelting plants, and chemical plants (BAAQMD 2017c). Odors are typically associated with industrial projects involving the use of chemicals, solvents, petroleum products, and other strong-smelling elements used in manufacturing processes, as well as sewage treatment facilities and landfills. The Palo Alto Comprehensive Plan EIR notes that residential and nonresidential development could include sources of odors, such as composting, greenwaste, and recycling operations; food processing; chemical manufacturing; and painting/coating operations, because these are permitted uses in the commercial and industrial areas in the City.

During construction activities, heavy equipment and vehicles would emit odors associated with vehicle and engine exhaust and during idling. However, these odors would be intermittent and temporary and would cease upon completion.

The project does not involve, nor would locate, new sensitive receptors in proximity to odor-emitting uses as identified in BAAQMD's 2017 *CEQA Air Quality Guidelines* or the Palo Alto Comprehensive Plan EIR. The proposed residential uses would not generate objectionable odors that would affect a substantial number of people. Furthermore, the project would be subject to BAAQMD Regulation 7, Odorous Substances, which requires abatement of any nuisance generating an odor complaint. Therefore, the project would not substantially cause new sources of odors and would not significantly expose sensitive receptors to existing or new odors, and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project have any of the following impacts:</i>				
a. <i>Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?</i>	☐	☒	☐	☐
b. <i>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?</i>	☐	☒	☐	☐
c. <i>Have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?</i>	☐	☐	☐	☒
d. <i>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?</i>	☐	☒	☐	☐
e. <i>Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or as defined by the City of Palo Alto's Tree Preservation Ordinance (Municipal Code Section 8.10)?</i>	☐	☒	☐	☐
f. <i>Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?</i>	☐	☐	☐	☒

IMPACT ANALYSIS

- a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?*
- b. Would the project 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?*
- d. Would the project 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?*

The project site is located in an urbanized area of Palo Alto and has been graded and developed/paved for the existing building and surface parking lot. The site is currently developed with two one-story commercial buildings and surface parking. The proposed project would involve the construction of one five-story residential building. The site contains some trees that may be suitable to provide habitat for sensitive or special status species. The project site does not contain any riparian habitat or sensitive natural communities (USFWS 2017). No federal-or state-listed endangered, threatened, rare, or otherwise sensitive flora or fauna were observed at the project site. The project is not located within any known regional wildlife movement corridors or any other sensitive biological areas as indicated by the USFWS Critical Habitat portal or CDFW BIOS.

There are 17 trees onsite that could be affected by the proposed project. The applicant's Tree Disposition Plan shows the removal of seven trees on the property. The existing trees to be removed may support nesting birds protected under the Migratory Bird Treaty Act. The removal of trees and general construction activity may affect protected nesting birds. This impact is potentially significant. Therefore, Mitigation Measure BIO-1 is required to protect nesting birds.

MITIGATION MEASURE

The following mitigation measure is required.

BIO-1 Nesting Bird Protection. Construction of the project and any other site disturbing activities that would involve vegetation or tree removal shall be prohibited during the general avian nesting season (February 1 – August 31), if feasible. If nesting season avoidance is not feasible, the applicant shall retain a qualified biologist, as approved by the City of Palo Alto, to conduct a preconstruction nesting bird survey to determine the presence/absence, location, and activity status of any active nests on or adjacent to the project site. The extent of the survey buffer area surrounding the site shall be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the MBTA and CFGC,

nesting bird surveys shall be performed not more than 14 days prior to scheduled vegetation clearance and structure demolition. In the event that active nests are discovered, a suitable buffer (typically a minimum buffer of 50 feet for passerines and a minimum buffer of 250 feet for raptors) shall be established around such active nests and no construction shall be allowed within the buffer areas until a qualified biologist has determined that the nest is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest). No ground disturbing activities shall occur within this buffer until the qualified biologist has confirmed that breeding/nesting is completed, and the young have fledged the nest. Nesting bird surveys are not required for construction activities occurring between August 31 and February 1.

SIGNIFICANCE AFTER MITIGATION

Implementation of Mitigation Measure BIO-1 would ensure that nesting and special-status birds are identified and preserved in the event that construction occurs during the breeding season. This would reduce impacts to nesting birds to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

- c. *Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

The National Wetlands Inventory (NWI) was reviewed to determine if any wetland and/or non-wetland waters had been previously documented and mapped on or in the vicinity of the proposed survey area (U.S. Fish and Wildlife Service 2022). The closest potentially jurisdictional water or wetland is Matadero Creek, a riverine wetland resource, which is located approximately 0.3 miles southeast of the project site. The proposed project would not involve the direct removal, filling, hydrological interruption, or other means to the bed, bank, channel or adjacent upland area of Matadero Creek. No impact would occur.

NO IMPACT

- e. *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or as defined by the City of Palo Alto's Tree Preservation Ordinance (Municipal Code Section 8.10)?*

According to the City's CEQA thresholds, a significant impact would occur if the project would conflict with the City's Tree Preservation Ordinance. The purpose of the City of Palo Alto Tree Preservation Ordinance (PAMC Chapter 8.10) is to promote the health, safety, welfare, and quality of life of the residents of the city through the protection of specified trees located on private property within the city, and the establishment of standards for removal, maintenance, and planting of trees. In establishing these procedures and standards, it is the City's intent to encourage the preservation of trees. Although the City adopted a new Tree Protection Ordinance in June 2022, which became effective July 21, 2022, the proposed project filed a compliant SB 330 pre-application on May 17, 2022.

Therefore, in accordance with California Government Code Section 15941, this analysis reflects the regulations in place at the time the compliant pre-application was filed.

Under the Tree Preservation and Management Ordinance, discretionary development approvals for property containing protected trees will include appropriate conditions providing for the protection of such trees during construction and for maintenance of the trees thereafter. "Protected tree" is defined as

- Any locally native tree of the species *Acer macrophyllum* (Bigleaf Maple), *Calocedrus decurrens* (California Incense Cedar), *Quercus agrifolia* (Coast Live Oak), *Quercus douglasii* (Blue Oak), *Quercus kelloggii* (California Black Oak), or *Quercus lobata* (Valley Oak) which is eleven and one-half inches in diameter (thirty-six inches in circumference) or more when measured four and one-half feet (fifty-four inches) above natural grade
- Any Coast Redwood tree (species *Sequoia sempervirens*) that is eighteen inches in diameter (fifty-seven inches in circumference) or more when measured four and one-half feet (fifty-four inches) above natural grade, any tree larger than fifteen inches in diameter (forty-seven inches in circumference) or more when measured four and one-half feet (fifty-four inches) above natural grade of any species except those invasive species described as weeds in Section 8.08.010 and those species classified as high water users by the water use classification of the landscape species list approved by the California Department of Water Resources (with the exception of Coast Redwood),
- Any tree designated for protection during review and approval of a development project
- Any tree designated for carbon sequestration and storage and/or environmental mitigation purposes as identified in an agreement between the property owner and a responsible government agency or recorded as a deed restriction,
- Any heritage tree designated by the city council in accordance with the provisions of this chapter, or any replacement mitigation tree or other tree designated to be planted due to the conditions listed in section 8.10.055 (City of Palo 2022b).

As stated previously, 17 trees were observed and recorded on site and of these trees, none of them were identified as species protected under the Palo Alto Tree Preservation Ordinance. In addition to the 17 trees on site, 32 trees are located directly adjacent to the site, at the northern boundary edge. These trees were analyzed and included in the Arborist Report (see Appendix C which includes the Arborist Report). These trees, as well as the ten London Plane trees along El Camino Real and Olive Avenue, have the potential to be affected by on site construction.

The PAMC regulates specific types of trees on public and private property for the purpose of avoiding their removal or disfigurement without first being reviewed and permitted by the City. Per the Tree Disposition plan, seven trees would be removed, and 10 trees would remain. As a result of construction, the Arborist Report states that injuries to trees as a result of construction can occur that include mechanical injuries to trunks, roots and branches, and injury as a result of change that occurs in the growing environment. The Arborist Report includes recommendations and a Tree Preservation and Protection Plan

which would ensure the safety and protection of the trees off-site. These recommendations have been included as Mitigation Measure BIO-2, in order to reduce potential impacts to a less than significant level.

MITIGATION MEASURE

The following mitigation measure, and compliance with the Tree Preservation and Management Ordinance and Palo Alto Municipal Code, would be required to reduce impacts to trees to a less than significant level.

BIO-2 Tree Preservation and Protection Plan. To avoid disturbance and injury to on-site trees, the recommendations for tree preservation in the Arborist Report dated March 18, 2022 or any subsequent report prepared by a qualified Arborist that has been reviewed and approved by the City's arborist and that is equally as protective to the trees, shall be implemented. These recommendations include, but are not limited to, tree protection fencing to the extent of construction around City trees on El Camino Real and Olive Avenue, no grading encroachments closer than 6 inches to the tree trunk diameter, and periodic inspections by the Site Arborist during construction activities.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

- f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

The project site is not within the area of an approved Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (CDFW 2017). No impact would occur.

NO IMPACT

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5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project have any of the following impacts:</i>				
a. <i>Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 or recognized by City Council resolution?</i>	☐	☐	☐	☒
b. <i>Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?</i>	☐	☒	☐	☐
c. <i>Disturb any human remains, including those interred out of formal cemeteries?</i>	☐	☐	☒	☐

METHODOLOGY

Rincon Consultants prepared a Supplemental Cultural Resources Assessment Report (Appendix D) for the project in November 2022 (Rincon Consultants 2022). This assessment included a cultural resources records search of the California Historical Resources Information System (CHRIS), a Sacred Lands File (SLF) search, historic-period, and an aerial and topographic map review. Rincon also reviewed the NRHP, the CRHR, the California Historical Landmarks list, and the Built Environment Resources Directory (BERD), as well as its predecessor the California State Historic Property Data (HPD) File. Additionally, Rincon reviewed the Archaeological Determination of Eligibility (ADOE) list.

IMPACT ANALYSIS

- a. *Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 or recognized by City Council resolution?*

The structures at 3001 and 3017 El Camino Real are more than 50 years of age; however, both were found ineligible for the CRHR and local designation due to a lack of historical or architectural significance (Rincon Consultants 2017b). As such, the structures are not considered historical resources under CEQA.

One previously identified potential historic district (the Coastland Subdivision) was identified during a Historic Survey prepared in 2001 by Michael Corbett and Denise Bradley for Palo Alto in the vicinity of the project site (Corbett and Bradley 2001; Appendix D). While the exact boundaries of this potential district are not defined, the eastern boundary of the district is estimated as being 685 feet west of the project site. The Coastland Subdivision includes modified ranch style residences built *en masse* in 1947. The buildings within the project site are commercial buildings constructed in 1944 and 1968, and therefore would be

unlikely to be contributing elements to the district (Rincon Consultants 2017). Therefore, no historical resources are identified within the project site and no impact would occur.

No Impact

- b. Would the project cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?*

Rincon Consultants did not identify archaeological resources or archaeological deposits within or adjacent to the project site. Additionally, the SLF returned negative results for the presence of known Native American resources and sacred lands. Previous development of two commercial buildings and associated utilities within the project site indicates a high level of disturbance, yielding a low potential for encountering intact subsurface archaeological deposits. However, there is always a possibility for encountering archaeological resources during ground-disturbing activities. Therefore, impacts are potentially significant.

MITIGATION MEASURES

The following mitigation measure is required:

CR-1 Unanticipated Discovery of Cultural or Tribal Cultural Resources. In the unlikely event that archaeological resources are unexpectedly encountered during ground-disturbing activities, work in the immediate area should be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archeology (National Park Service 1983) should be contacted immediately to evaluate the find. If the find is Native American in origin, then a Native American representative should also be contacted to participate in the evaluation of the find. The qualified archaeologist, and, if applicable, the Native American representative, shall examine the find and make appropriate recommendations regarding additional work necessary to evaluate the significance of the find and the appropriate treatment of the resource. All cultural resources identified shall be evaluated for CRHR eligibility and local listing. Additional work may be necessary to evaluate the resource for inclusion in the CRHR or local listing. Recommendations could include, but are not limited to, invasive or non-invasive testing, sampling, laboratory analysis, preservation in place, or data recovery. A report of findings documenting any data recovered during monitoring shall be prepared by a qualified archaeologist and submitted to the Director of Planning. If the discovery is determined to be Native American in nature locally affiliated Native American tribes shall be invited to consult regarding the appropriate treatment of any Native American resources identified during project construction, including but not limited to a representative from Tamien Nation.

SIGNIFICANCE AFTER MITIGATION

Implementation of Mitigation Measures CR-1 would ensure that cultural resources are properly identified and preserved in the event they are uncovered during construction and would reduce impacts regarding disrupting intact archaeological resources to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

- c. Would the project disturb any human remains, including those interred out of formal cemeteries?*

No human remains are known to be present within the project site. However, the discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be of Native American origin, the Coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD). The MLD has 48 hours from being granted site access to make recommendations for the disposition of the remains. If the MLD does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from subsequent disturbance. With adherence to existing regulations, Rincon recommends a finding of less than significant impact to human remains under CEQA.

LESS THAN SIGNIFICANT IMPACT

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6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
a. <i>Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?</i>	☐	☐	☒	☐
b. <i>Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?</i>	☐	☐	☒	☐

SETTING

As a state, California is the lowest per capita energy users in the United States, ranked 50th in the nation, due to its energy efficiency programs and mild climate (United States Energy Information Administration [EIA] 2021). Electricity and natural gas are primarily consumed by the built environment for lighting, appliances, heating and cooling systems, fireplaces, and other uses such as industrial processes in addition to being consumed by alternative fuel vehicles. In 2020, California's total generation (in-state generation plus net electricity imports) totaled 277,764 gigawatt-hours (GWH). Primary fuel sources for the State's electricity generation in 2021 included non-carbon dioxide emitting sources such as nuclear, large hydroelectric, and renewables, which accounted for 65 percent of its generation. In addition, approximately 35 percent of California's electricity supply in 2021 came from renewable energy sources, such as wind, solar photovoltaic, geothermal, and biomass (CEC 2022a). In 2018, Senate Bill 100 accelerated the state's Renewable Portfolio Standards Program (SB 350), codified in the Public Utilities Act, by requiring electricity providers to increase procurement from eligible renewable energy and zero-carbon resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

Palo Alto owns and operates full-scale municipal utility services, including electric, fiber optics, natural gas, water and wastewater. The City of Palo Alto Utilities Department (CPAU) supplies electricity to city residents, facilities, and businesses. CPAU has contracted for the construction of 13 new renewable energy generation facilities in California: five landfill gas, six solar, and two wind. These facilities allow CPAU to meet over 50 percent of Palo Alto's electricity demand with renewable energy sources. During a year of normal or high rainfall, CPAU's long-term contracts for carbon free hydroelectric power also meets at least 50 percent of electricity demand. In addition, since 2013, Palo Alto has provided 100 percent carbon neutral electricity. Table 6 shows the electricity consumption by sector and total for the CPAU service area in 2021 (CPAU 2021a).

Table 6 CPAU Service Area Electricity Consumption (GWh)

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Streetlight	Total Usage
2.1	514.6	18.4	108.2	7.1	149.7	0	800.0

Source: CPAU 2021a

The City of Palo Alto consumed approximately 40 million U.S. Therms of natural gas in 2019¹, while Santa Clara County consumed approximately 417 million U.S. Therms of natural gas in 2021 (CEC 2022d). In 2017, Palo Alto began offsetting the GHG emissions caused by natural gas use through the purchase of carbon offsets and became the first 100 percent carbon neutral utility in the world (CPAU 2021a).

Petroleum fuels are primarily consumed by on-road and off-road equipment in addition to some industrial processes, with California being one of the top petroleum-producing states in the nation (CEC 2022e). Gasoline, which is used by light-duty cars, pickup trucks, and sport utility vehicles, is the most used transportation fuel in California with 13.8 billion gallons sold in 2021 (CEC 2022f). Diesel, which is used primarily by heavy-duty trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, and heavy-duty construction and military vehicles, is the second most used fuel in California with 1.8 billion gallons sold in 2021 (CEC 2022f).

Although the proposed project would only affect a small area in the City of Palo Alto, the smallest scale to which petroleum consumption information is available is at the county level. Santa Clara County fuel sales are used herein to provide a regional context for fuel consumption in Palo Alto and the surrounding area. In 2021 Santa Clara County consumed an estimated 599 million gallons of gasoline and 50 million gallons of diesel fuel (CEC 2022f).

Energy consumption is directly related to environmental quality in that the consumption of nonrenewable energy resources releases criteria air pollutant and greenhouse gas (GHG) emissions into the atmosphere. The environmental impacts of air pollutant and GHG emissions associated with the project's energy consumption are discussed in detail in Section 2, *Air Quality*, and Section 8, *Greenhouse Gas Emissions*.

IMPACT ANALYSIS

- a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

CONSTRUCTION ENERGY DEMAND

During project construction, energy would be consumed in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the project site,

¹ Only the City's 2019 natural gas usage was available (CPAU 2021b).

construction worker travel to and from the project site, and vehicles used to deliver materials to the site.

The proposed project would require demolition; site preparation and grading; pavement and asphalt installation; building construction; architectural coating; and landscaping and hardscaping. Construction would be typical for the region and building type. The total consumption of gasoline and diesel fuel during project construction was estimated using the assumptions and factors from CalEEMod modeling (Appendix B).

Table 7 presents the project's estimated construction fuel consumption. As mentioned under *Setting*, retail diesel sales in Santa Clara County totaled approximately 50 million gallons, while retail gasoline sales totaled approximately 599 million gallons in 2021 (CEC 2021f). Therefore, the fuel consumption associated with project construction shown in Table 7 would account for approximately 0.14 percent of annual retail diesel sales and approximately 0.005 percent of annual retail gasoline sales in Santa Clara County.

Table 7 Project Construction Fuel Consumption

Source	Fuel Consumption (gallons)	
	Gasoline	Diesel
Construction Equipment	–	58,522
Construction Vendor Haul Trips	–	9,521
Construction Worker Vehicle Trips	21,041	–
Total	21,041	68,043

See Appendix E for energy calculation sheets.

Similar to the manufacturers utilizing energy conservation methods to reduce costs, it is reasonable to assume contractors would avoid wasteful, inefficient, and unnecessary fuel consumption during construction to reduce construction costs. The project would comply with the CARB In-Use Off-Road Diesel-Fueled Fleets Regulation, which imposes limits on idling and restricts the use of older vehicles. This would reduce fuel consumption and lead to the use of fuel-efficient vehicles on the construction site. Construction equipment would be maintained to applicable standards, and construction activity and associated fuel consumption and energy use would be temporary and typical for construction sites. Further, construction activities would be typical for the region and building type. Therefore, the project would not involve the inefficient, wasteful, and unnecessary use of energy during construction, and the construction-phase impact related to energy consumption would be less than significant.

OPERATIONAL ENERGY DEMAND

Project operation would increase area energy demand from greater electricity and diesel/gasoline consumption at the site. Natural gas would not be used since the building would include an all-electric design. Electricity would be used for heating and cooling systems, lighting, appliances, and water use in new residential units. Diesel and gasoline consumption would be attributed to the new residents and truck deliveries.

Table 8 summarizes the estimated operational energy consumption for the proposed project based upon the project's CalEEMod modeling (Appendix B). Vehicle trips from project residents would represent the project's largest operational energy use.

Table 8 Project Operational Energy Consumption

Source	Annual Energy Consumption ¹	
Transportation Fuels		
Gasoline	42,984 gallons	4,719 MMBtu
Diesel	5,887 gallons	750 MMBtu
Electricity	729,742 kWh/year	2,490 MMBtu

MMBtu = million metric British thermal units; kWh = kilowatt-hours

¹ Energy consumption is converted to MMBtu for each source

See Appendix E for energy calculation sheets and Appendix B for CalEEMod output results for electricity and natural gas usage.

As shown in Table 8, operation of the project is estimated to consume approximately 0.73 GWh of electricity per year. CPAU would serve the project, which provided 880 GWh in its service area in 2020 (CPAU 2021b). Operation of the project would represent approximately 0.083 percent of CPAU's annual electricity demand; therefore, the project would not place a significant demand on CPAU's electricity supply.

As shown in Table 8, the project would consume approximately 42,984 gallons of gasoline and 5,887 gallons of diesel fuel per year. Santa Clara County consumed an estimated 599 million gallons of gasoline and 50 million gallons of diesel fuel in 2021, totaling 649 million gallons of fuel (CEC 2021e). The project would consume less than one percent of Santa Clara County's annual gasoline demand and annual diesel fuel demand. Therefore, the project would not place a significant demand on energy use from gasoline or diesel fuel.

Based on the analysis above, project operation would not result in wasteful or unnecessary energy consumption or conflict with existing energy standards and regulations. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

- b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

The proposed project would result in a potentially significant impact if it would conflict with or obstruct the implementation of the City of Palo Alto Sustainability and Climate Action Plan (S/CAP) or the City of Palo Alto 2030 Comprehensive Plan, which is a local plan with policies related to energy efficiency. Table 9 provides an evaluation of project consistency with applicable renewable energy and energy efficiency measures in the 2030 Comprehensive Plan. As shown in Table 9, the project would be consistent with applicable energy efficiency policies within the 2030 Comprehensive Plan. Impacts would be less than significant. Table 12 in Section 8, *Greenhouse Gas Emissions*, provides an evaluation of project consistency with applicable renewable energy and energy efficiency measures in the S/CAP.

Table 9 Project Consistency with City of Palo Alto 2030 Comprehensive Plan

Measure	Project Consistency
Land Use	
Policy L-1.12 Hold new development to the highest development standards in order to maintain Palo Alto's livability and achieve the highest quality development with the least impacts.	Consistent. The project would be required to comply with the Palo Alto Green Building Ordinance and applicable State and City regulations, and would also include an all-electric design.
Policy L-2.2 Enhance connections between commercial and mixed use centers and the surrounding residential neighborhoods by promoting walkable and bikeable connections and a diverse range of retail and services that caters to the daily needs of residents.	Consistent. The project would be a residential development in an area with existing commercial uses that would allow for walking and cycling between the project and these uses. Sidewalks exist on all streets in the project vicinity and the closest bicycle lanes are on Page Mill Road. The project would not conflict with any future bike lane on El Camino Real. The project would also include 14 short-term bicycle parking spaces and 138 long-term bicycle parking spaces.
Policy T-1.17 Require new office, commercial and multi-family residential developments to provide improvements that improve bicycle and pedestrian connectivity as called for in the 2012 Palo Alto Bicycle + Pedestrian Transportation Plan.	Consistent. The project would include 14 short-term bicycle parking spaces as well as approximately 138 long-term bicycle parking spaces. The project site is located near Class II bicycle lanes on Page Mill Road that start at El Camino Real, and residents would also be able to utilize pedestrian connections such as sidewalks, crosswalks, and curb ramps in order to access transit options.
Policy T-4.7 Require new residential development projects to implement best practices for street design, stormwater management and green infrastructure.	Consistent. The project would be required to comply with the stormwater pollution prevention measures in the Palo Alto Green Building Ordinance and would include flow-through planters on site to reduce pollutants from stormwater runoff.
Policy N-7.4 Maximize the conservation and efficient use of energy in new and existing residences and other buildings in Palo Alto. Policy N-7.5 Encourage energy efficient lighting that protects dark skies and promotes energy conservation by minimizing light and glare from development while ensuring public health and safety.	Consistent. The project would include an all-electric design, and would include energy efficient appliances, water efficient fixtures and irrigation, and energy-efficient lighting that minimizes light trespass and glare.
Source: City of Palo Alto 2017	

LESS THAN SIGNIFICANT IMPACT

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7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project have any of the following impacts:</i>				
a. <i>Directly or indirectly cause potential Expose substantial adverse effects, including the risk of loss, injury, or death involving:</i>				
1. <i>Rupture 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.</i>	☐	☐	☐	☒
2. <i>Strong seismic ground shaking?</i>	☐	☐	☒	☐
3. <i>Seismic-related ground failure, including liquefaction?</i>	☐	☐	☒	☐
4. <i>Landslides?</i>	☐	☐	☒	☐
b. <i>Result in substantial soil erosion or loss of topsoil?</i>	☐	☐	☒	☐
c. <i>Be located on a geologic 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?</i>	☐	☐	☒	☐
d. <i>Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?</i>				
e. <i>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?</i>	☐	☐	☒	☐
f. <i>Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</i>	☐	☐	☒	☐

ENVIRONMENTAL SETTING

FAULT ZONES AND GROUND SHAKING

Similar to much of California, Palo Alto is located in a seismically active region. The major fault zones located near Palo Alto include the San Andreas Fault (5.5 miles southwest from the City), the Hayward Fault (13 miles northeast from the City), and the Calaveras Fault (23 miles northeast from the City). The most intense ground-shaking scenario mapped by the USGS and Associated Bay Area Governments (ABAG) in the vicinity assumes “severe shaking” resulting from an earthquake along the San Andreas fault line (ABAG 2019).

In addition to primary hazards like surface fault ruptures, earthquakes also result in secondary hazards and impacts such as ground shaking, landslides, and liquefaction, which could cause widespread damage. The project site is not located within an identified earthquake fault zone as delineated on the Alquist-Priolo Earthquake Fault Zoning Map (DOC 2021).

LIQUEFACTION AND SEISMICALLY INDUCED SETTLEMENT

Liquefaction is defined as the sudden loss of soil strength due to a rapid increase in soil pore water pressure resulting from seismic ground shaking. Liquefaction potential is dependent on such factors as soil type, depth to ground water, degree of seismic shaking, and the relative density of the soil. According to the DOC, the project site is located in a liquefaction zone (DOC 2021).

Seismically induced settlement occurs in loose to medium dense unconsolidated soil above groundwater. These soils compress (settle) when subject to seismic shaking. The settlement can be exacerbated by increased loading, such as from the construction of buildings. Settlement can also result solely from human activities including improperly placed artificial fill, and structures built on soils or bedrock materials with differential settlement rates.

LANDSLIDES

Landslides result when the driving forces that act on a slope (i.e., the weight of the slope material, and the weight of objects placed on it) are greater than the slope’s natural resisting forces (i.e., the shear strength of the slope material). Slope instability may result from natural processes, such as the erosion of the toe of a slope by a stream, or by ground shaking caused by an earthquake. Slopes can also be modified artificially by grading, or by the addition of water or structures to a slope. Development that occurs on a slope can substantially increase the frequency and extent of potential slope stability hazards. The project site is not located in a landslide hazard zone or an earthquake fault zone (DOC 2021).

EXPANSIVE SOILS

Expansive soils can change dramatically in volume depending on moisture content. When wet, these soils can expand; conversely, when dry, they can contract or shrink. Sources of

moistures that can trigger this shrink-swell phenomenon include seasonal rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soil can develop wide cracks in the dry season, and changes in soil volume have the potential to damage concrete slabs, foundations, and pavement. Special building/structure design or soil treatment are often needed in areas with expansive soils. Expansive soils are typically very fine-grained with a high to very high percentage of clay. The clay minerals present typically include montmorillonite, smectite, and/or bentonite. Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent.

EROSION

Erosion is the wearing away of the soil mantle by running water, wind or geologic forces. Excessive erosion can contribute to landslides, siltation of streams, undermining of foundations, and ultimately the loss of structures. Removal of vegetation tends to heighten erosion hazards. The City enforces grading and erosion control ordinances to reduce these hazards and the 2030 Comprehensive Plan also contains policies to prevent erosion-related issues.

PALEONTOLOGICAL SETTING

Paleontological resources, or fossils, are the evidence of once-living organisms preserved in the rock record. They include both the fossilized remains of ancient plants and animals and the traces thereof (e.g., trackways, imprints, burrows, etc.). Paleontological resources are not found in “soil” but are contained within the geologic deposits or bedrock that underlies the soil layer. Typically, fossils are greater than 5,000 years old (i.e., older than middle Holocene in age) and are typically preserved in sedimentary rocks. Although rare, fossils can also be preserved in volcanic rocks and low-grade metamorphic rocks under certain conditions (Society of Vertebrate Paleontology [SVP] 2010). Fossils occur in a non-continuous and often unpredictable distribution within some sedimentary units, and the potential for fossils to occur within sedimentary units depends on several factors. It is possible to evaluate the potential for geologic units to contain scientifically important paleontological resources, and therefore evaluate the potential for impacts to those resources and provide mitigation for paleontological resources if they are discovered during construction of a development project.

Rincon evaluated the paleontological sensitivity of the geologic units that underlie the project site to assess the project’s potential for significant impacts to scientifically important paleontological resources. The analysis was based on the results of a paleontological locality search and a review of existing information in the scientific literature regarding known fossils within geologic units mapped at the project site. According to the SVP (2010) classification system, geologic units can be assigned a high, low, undetermined, or no potential for containing scientifically significant nonrenewable paleontological resources. Following the literature review, a paleontological sensitivity classification was assigned to each geologic unit mapped within the project site. This criterion is based on rock units

within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. The potential for impacts to significant paleontological resources is based on the potential for ground disturbance to directly impact paleontologically sensitive geologic units.

IMPACT ANALYSIS

- a1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture 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?*

The project site is not located within an area that has been identified as having a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map (DOC 2021). The nearest known active fault is the San Andreas Fault, which is approximately seven miles west of the site (DOC 2021). As a result, there would not be a likelihood of ground rupture at the project site. No impact would occur.

NO IMPACT

- a2. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?*

As with any site in the Bay Area region, the project site is susceptible to strong seismic ground shaking in the event of a major earthquake. Nearby faults include the San Andreas Fault, the Hayward Fault and the Calaveras Fault. These faults are capable of producing strong seismic ground shaking at the project site. The Seismic Hazards Identification Program of Chapter 16.42 of the PAMC addresses public safety by identifying those buildings in Palo Alto which exhibit structural deficiencies and by accurately determining the severity and extent of those deficiencies in relation to their potential for causing loss of life or injury. Additionally, with modern construction and adherence to geology and soil provisions of the California Building Code (CBC), which sets forth seismic design standards (Chapter 6, 18) and geohazard study requirements (Chapter 18), impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

- a3. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?*

Liquefaction is a condition that occurs when unconsolidated, saturated soils change to a near-liquid state during groundshaking. The proposed project is located in an area where there is moderate liquefaction risk (ABAG 2019). With modern construction and adherence to geology and soil provisions of the California Building Code (CBC), which sets forth seismic design standards (Chapter 16, 18) and geohazard study requirements (Chapter 18) impacts

would be less than significant. Additionally, the project would be required to adhere to Palo Alto's Seismic Hazards Identification Program (PAMC Chapter 16.42) in its design and construction elements. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a4. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Earthquakes can trigger landslides that may cause injuries and damage to many types of structures. Landslides are typically a hazard on or near slopes or hillside areas, rather than generally level areas like the project site and vicinity. According to the California Seismic Hazard Zones map, the project site is not located within an earthquake-induced landslide hazard zone (DOC 2021). The project site is generally flat and is not surrounded by hillsides. No impact would occur.

NO IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

The project site is developed and generally level and would remain so with the proposed project, which limits the potential for substantial soil erosion during operation. The grading and excavation phase when soils are exposed has the highest potential for erosion. Ground-disturbing activities that would occur with implementation of the proposed project would include grading for foundations, building pads, access roads, and utility trenches. Temporary erosion could occur during project construction. The project is required to comply with Chapter 16.28.120 of the PAMC, which states that an estimate of the cost of implementing and maintaining all interim erosion and sediment control measures must be submitted in a form acceptable to the city engineer. The applicant may propose the use of any erosion and sediment control techniques in the interim plan provided such techniques are proven to be as or more effective than the equivalent best management practices contained in the Manual of Standards.

In addition, the proposed project would be required to comply with erosion control standards administered by the San Francisco Bay Regional Water Quality Control Board (RWQCB) through the National Pollutant Discharge Elimination System (NPDES) permit process, which requires implementation of nonpoint source control of stormwater runoff. Such controls would be included as best management practices (BMPs) identified in Stormwater Pollution Prevention Plans (SWPPP) for future development at the project site.

Furthermore, as discussed in Section 3, *Air Quality*, BAAQMD specifies measures that are aimed at air quality control but also address the minimization or avoidance of erosion and topsoil lost. Pursuant to Mitigation Measure AIR-2a of the 2016 City of Palo Alto Comprehensive Plan Update EIR, construction of the project must comply with the current BAAQMD basic control measurement for reducing construction emissions.

With compliance with above listed requirements, impacts related to soil erosion would be less than significant.

LESS THAN SIGNIFICANT IMPACT

- c. Would the project be located on a geologic 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?*

The potential for failure from lateral spreading is highest in areas where the groundwater table is high and where soil is relatively soft, where recent alluvial deposits exist, and in areas with liquefaction risks. As mentioned above under Checklist question a3, Liquefaction, the project site is located in a liquefaction zone (DOC 2021). The project would be required to comply with applicable provisions for construction related to potential soils hazards in the most recently adopted version of the CBC and the City's building regulations (CBC seismic design standards, Chapters 16 and 18). Therefore, the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse is low.

LESS THAN SIGNIFICANT IMPACT

- d. Would the project 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;*

As described in the Geology, Soils, and Seismicity Chapter of the Palo Alto Comprehensive Plan, the project site is located in the western part of Palo Alto, where the prevalent soil types include Alo-Altamont, Zeppelin-McCoy, and Zamora-Pleasanton complex soils, and Montavista Clay Loam soils. These soils are generally formed on slopes from 10 to 30 percent and most are moderately well- to well-drained. Loam and clay loam soils of the Zamora-Pleasanton association are known to be expansive in places. A number of widely used treatments are available to mitigate expansive soils, including soil grouting, recompaction, and replacement with a non-expansive material. Compliance with PAMC Chapter 21.12.070 would ensure that a soil report is prepared for the site to document expansive soils or other soil problems prior to construction. In addition, CBC Section 1808.6 requires special foundation design for buildings constructed on expansive soils. If the soil is not removed or stabilized, then foundations must be designed to prevent uplift of the supported structure or to resist forces exerted on the foundation due to soil volume changes or shall be isolated from the expansive soil. Compliance with CBC requirements would ensure protection of structures and occupants from impacts related to expansive soils. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

- f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

The region was mapped at a scale of 1:24,000 by Pampeyan (1993) who identified two geologic units underlying the project site, Quaternary medium-grained alluvium and

Quaternary older alluvium (Figure 6). Additionally, the Phase I Environmental Site Assessment (ESA) reported a 2-foot-thick layer of artificial fill (consisting of clay) underlying the project site (PES Environmental Inc. [PES Environmental] 2020).

Quaternary medium-grained alluvium underlies the majority of the project site (Figure 6) and consists of unconsolidated to moderately consolidated, moderately sorted, fine sand, silt, and clayey silt (Pampeyan 1993). Quaternary medium-grained alluvium is Holocene in age, meaning it is likely too young (i.e., less than 5,000 years old) to preserve paleontological resources (SVP 2010). Therefore, Quaternary medium-grained alluvium has low paleontological sensitivity.

Quaternary older alluvium underlies the southern portion of the project site (Figure 6) and consists of unconsolidated to moderately consolidated gravel, sand, and silt (Pampeyan 1993). Quaternary older alluvium is late Pleistocene in age. Pleistocene alluvial sediments have produced significant paleontological resources throughout California, including Santa Clara County, such as mammoths (*Mammuthus*), horse (*Equus*), sloth (*Paramylodon*), and camel (*Camelops*) (Maguire and Holroyd 2016; Paleobiology Database 2022; University of California Museum of Paleontology 2022). Given this fossil-producing history, Quaternary older alluvium has high paleontological sensitivity.

Excavation in areas mapped as Quaternary older alluvium could result in significant impacts to paleontological resources (Figure 6). Excavation in areas mapped as Quaternary medium-grained alluvium are not expected to result in significant impacts to paleontological resources, but high-sensitivity Quaternary older alluvium underlies Quaternary medium-grained alluvium at some depth in the subsurface (Pampeyan 1993). Test borings for the project's geotechnical report encountered a transition in sediment type between 10 and 13 feet below the surface from gravelly clay to clayey sand (Cornerstone Earth Group 2018). The descriptions of Quaternary older alluvium and Quaternary medium-grained alluvium from Pampeyan (1993) correspond somewhat, but not perfectly, with the sediments in the test borings. Excavation for this project is expected to reach up to 15 feet below the surface. If it is assumed that the sediment transition at 10-13 feet below the surface represents the transition from low-sensitivity Quaternary medium-grained alluvium to high-sensitivity Quaternary older alluvium, then excavation for this project likely would impact high-sensitivity sediments.

Therefore, impacts to paleontological resources are potentially significant, but they would be less than significant with mitigation.

Figure 6 Geologic Map of the Project Site



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Additional data provided by Pampeyan 1993

Fig. X Geologic Map of Project Site

MITIGATION MEASURES

The following mitigation measure is required.

GEO-1 Unanticipated Discovery of Paleontological Resources. Prior to the start of construction, a Qualified Professional Paleontologist (as defined by SVP [2010]) or their designee shall conduct a paleontological Worker Environmental Awareness Program training for construction personnel regarding the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff.

In the event a fossil is discovered during construction of the project, excavation within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a Qualified Professional Paleontologist. The project applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant, the applicant shall retain a Qualified Professional Paleontologist to direct all mitigation measures related to paleontological resources. The Qualified Professional Paleontologist shall design and carry out a data recovery plan consistent with the SVP (2010) standards.

SIGNIFICANCE AFTER MITIGATION

Mitigation Measure GEO-1 would provide for the recovery, identification, and curation of previously unrecovered fossils, which would ensure that potential impacts to paleontological resources are reduced to a less than significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project have any of the following impacts:</i>				
a. <i>Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</i>	☐	☐	☒	☐
b. <i>Conflict with any applicable plan, policy, or regulation adopted to reduce the emissions of greenhouse gases?</i>	☐	☐	☒	☐

CLIMATE CHANGE AND GREENHOUSE GAS (GHG) EMISSIONS

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. Climate change is the result of numerous, cumulative sources of GHG emissions contributing to the "greenhouse effect," a natural occurrence which takes place in Earth's atmosphere and helps regulate the temperature of the planet. The majority of radiation from the sun hits Earth's surface and warms it. The surface, in turn, radiates heat back towards the atmosphere in the form of infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping into space and re-radiates it in all directions.

GHG emissions occur both naturally and as a result of human activities, such as fossil fuel burning, decomposition of landfill wastes, raising livestock, deforestation, and some agricultural practices. GHGs produced by human activities include carbon dioxide (CO₂), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO₂) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as "carbon dioxide equivalent" (CO₂e), which is the amount of GHG emissions emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 30, meaning its global warming effect is 30 times greater than CO₂ on a molecule per molecule basis (Intergovernmental Panel on Climate Change [IPCC] 2021).²

The United Nations Intergovernmental Panel on Climate Change (IPCC) expressed that the rise and continued growth of atmospheric CO₂ concentrations is unequivocally due to

² The Intergovernmental Panel on Climate Change's (2021) *Sixth Assessment Report* determined that methane has a GWP of 30. However, the 2017 Climate Change Scoping Plan published by the California Air Resources Board uses a GWP of 25 for methane, consistent with the Intergovernmental Panel on Climate Change's (2007) *Fourth Assessment Report*. Therefore, this analysis utilizes a GWP of 25.

human activities in the IPCC's Sixth Assessment Report (2021). Human influence has warmed the atmosphere, ocean, and land, which has led the climate to warm at an unprecedented rate in the last 2,000 years. It is estimated that between the period of 1850 through 2019, that a total of 2,390 gigatons of anthropogenic CO₂ was emitted. It is likely that anthropogenic activities have increased the global surface temperature by approximately 1.07 degrees Celsius between the years 2010 through 2019 (IPCC 2021). Furthermore, since the late 1700s, estimated concentrations of CO₂, methane, and nitrous oxide in the atmosphere have increased by over 43 percent, 156 percent, and 17 percent, respectively, primarily due to human activity (United States Environmental Protection Agency 2021). Emissions resulting from human activities are thereby contributing to an average increase in Earth's temperature. Potential climate change impacts in California may include loss of snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (State of California 2018).

GREENHOUSE GAS EMISSIONS THRESHOLDS

The BAAQMD adopted updated thresholds of significance for climate impacts on April 20, 2022 (BAAQMD 2022). Under the updated thresholds, a project must include, at a minimum, the following project design elements, or must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b):

- **Buildings**
 - The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
 - The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.
- **Transportation**
 - Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
 - Residential projects: 15 percent below the existing VMT per capita
 - Office projects: 15 percent below the existing VMT per employee
 - Retail projects: no net increase in existing VMT
 - Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

Since the City of Palo Alto does not have a qualified Climate Action Plan, this section would analyze GHG impacts using consistency with the BAAQMD-required project design elements mentioned above.

IMPACT ANALYSIS

- a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?*

The proposed project would be consistent with BAAQMD criteria for buildings since it would include an all-electric building that does not include natural gas appliances or natural gas plumbing. Appliances and plumbing would also be electric and would not utilize natural gas. As described in Section 6, *Energy*, the project would comply with the CARB In-Use Off-Road Diesel-Fueled Fleets Regulation during construction, which imposes limits on idling and restricts the use of older vehicles; this would reduce fuel consumption and lead to the use of fuel-efficient vehicles on the construction site. Construction equipment would also be maintained to applicable standards, and construction activity and associated fuel consumption and energy use would be temporary and typical for construction sites. During operation, the project would not place a significant demand on CPAU's electricity supply or on energy use from gasoline or diesel fuel. Therefore, the project would not result in wasteful or unnecessary energy consumption during construction and operation or conflict with existing energy standards and regulations, and would be consistent with the BAAQMD building thresholds.

As discussed in the project's Local Transportation Analysis (Appendix A), the project would have a daily VMT rate of 5.84 VMT per capita, which is below the City's 15 percent below existing average VMT per resident impact threshold of 11.33 daily VMT. In addition, the project would exceed CALGreen Tier 2 electric vehicle requirements with 100 percent of the available automobile parking stalls being EV ready parking stalls. Therefore, the project would be consistent with the BAAQMD transportation thresholds.

Although BAAQMD does not have numeric thresholds for GHG emissions under the updated guidelines, the project's emissions inventory is presented for informational purposes. Table 10 shows the estimated annual operational GHG emissions associated with the project.

Table 10 Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions (MT CO ₂ e)
Project Operation	
Area	2
Energy	0 ¹
Mobile	309
Solid Waste	15
Water	4
Total Emissions from Proposed Project	330

¹ GHG emissions for energy is zero because CPAU provides 100 percent carbon neutral electricity and because the project would not use natural gas.

Source: CalEEMod annual worksheets (Appendix B)

Given the project's conformance with the BAAQMD GHG thresholds, the proposed project would not directly or indirectly generate GHG emissions that may have a significant impact on the environment, and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

- b. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Applicable plans and policies to the project for reducing GHG emissions includes Plan Bay Area 2050 and the City of Palo Alto S/CAP. The project would result in a potentially significant impact if it would conflict with these plans.

PLAN BAY AREA 2050

Table 11 provides an evaluation of project consistency with applicable GHG key strategies in Plan Bay Area 2050.

Table 11 Project Consistency with Plan Bay Area 2050

Measure	Project Consistency
H3. Allow a greater mix of housing densities and types in Growth Geographies. Allow a variety of housing types at a range of densities to be built in Priority Development Areas, select Transit-Rich Areas and select High-Resource Areas.	Consistent. The project is a five-story multi-family residential development located in a neighborhood characterized by a mix of uses including residential, retail, office, and commercial. The project would diversify housing densities and would be located near transit. The project site is 0.5 miles from the California Avenue Caltrain station, and there are existing bus stops 0.1 and 0.2 miles from the project at the intersections of El Camino Real and Portage Avenue and El Camino Real and Oregon Expressway that are serviced by VTA (Bus Route 22, Bus Route 88, and Bus Route RP PM).
H4. Build adequate affordable housing to ensure homes for all. Construct enough deed-restricted affordable homes to fill the existing gap in housing for the unhoused community and to meet the needs of low-income households.	Consistent. The project is a 100 percent affordable multi-family residential development.
T8. Build a Complete Streets network. Enhance streets to promote walking, biking and other micro-mobility through sidewalk improvements, car-free slow streets, and 10,000 miles of bike lanes or multi-use paths.	Consistent. The project would include 14 short-term bicycle parking spaces as well as 138 long-term bicycle parking spaces. The project site is located near Class II bicycle lanes on Page Mill Road, and residents would also be able to utilize pedestrian connections such as sidewalks, crosswalks, and curb ramps in order to access transit options.
EN4. Maintain urban growth boundaries. Using urban growth boundaries and other existing environmental protections, focus new development within the existing urban footprint or areas otherwise suitable for growth, as established by local jurisdictions.	Consistent. The project would maintain urban growth boundaries through infill development on a developed site.
EN8. Expand clean vehicle initiatives. Expand investments in clean vehicles, including more fuel-efficient vehicles and electric vehicle subsidies and chargers.	Consistent. The project would include 103 EV ready parking stalls.
Source: ABAG 2021	

CITY OF PALO ALTO S/CAP

Table 12 provides an evaluation of project consistency with applicable GHG key actions in the City S/CAP.

Table 12 Project Consistency with S/CAP

Measure	Project Consistency
C3. Complete study to identify any additional Energy, EV, or Mobility key actions needed to achieve 80% reduction in greenhouse gas emissions from 1990 levels by 2030, such as electrification of additional multi-family or commercial end uses, greater electrification of vehicles, or other emissions reduction actions not already identified in this Plan.	Consistent. The project would include 103 EV ready parking stalls.
E1. Seek additional electrification opportunities in commercial and multi-family buildings to contribute as much as possible towards achieving an additional 8% city-wide emissions reduction below 1990 levels.	Consistent. The project would include an all-electric design and would also include energy efficient appliances and lighting, as well as water efficient fixtures and irrigation. The project would also receive carbon neutral electricity from CPAU. Additionally, the project would include 103 EV ready parking stalls.
EV6. Expand access to on-site EV charging for multi-family residents.	Consistent. The project would include 103 EV ready parking stalls.
Source: City of Palo Alto 2022	

CITY OF PALO ALTO 2030 COMPREHENSIVE PLAN

Table 13 provides an evaluation of project consistency with applicable GHG goals and policies in the 2030 Comprehensive Plan.

Table 13 Project Consistency with the City of Palo Alto 2030 Comprehensive Plan

Measure	Project Consistency
Transportation Element	
Policy T-1.3 Reduce GHG and pollutant emissions associated with transportation by reducing VMT and per-mile emissions through increasing transit options, supporting biking and walking, and the use of zero-emission vehicle technologies to meet City and State goals for GHG reductions by 2030.	Consistent. The project itself would not expand transit options; however, the project site is located within 0.5 mile from the Caltrain station, and there are existing bus stops 0.1 and 0.2 miles from the project at the intersections of El Camino Real and Portage Avenue and El Camino Real and Oregon Expressway that are serviced by VTA (Bus Route 22, Bus Route 88, and Bus Route RP PM). The project site is located near Class II bicycle lanes on Page Mill Road that start at El Camino Real, and residents would also be able to utilize pedestrian connections such as sidewalks, crosswalks, and curb ramps in order to access transit options. The project would place residences in a transit-accessible area, improving the viability of transit as an option for travel to services in Palo Alto. Additionally, the project would generate less than significant impacts to VMT. The project site is also designed to promote walking and bicycling and would include 14 short-term bicycle parking spaces and 138 long-term bicycle parking spaces.
Policy T-1.4 Ensure that electric vehicle charging infrastructure, including infrastructure for charging e-bikes, is available citywide.	Consistent. The project would include 103 EV ready parking stalls.
Policy T-1.16 Promote personal transportation vehicles an alternative to cars (e.g., bicycles, skateboards, roller blades) to get to work,	Consistent. The project site is located within 0.5 miles from a Caltrain station and there are existing bus stops 0.1 and 0.2 mile from the project at the intersections of El Camino Real and Portage

ENVIRONMENTAL CHECKLIST
GREENHOUSE GAS EMISSIONS

Measure	Project Consistency
school, shopping, recreational facilities and transit stops.	Avenue and El Camino Real and Oregon Expressway that are serviced by VTA (Bus Route 22, Bus Route 88, and Bus Route RP PM). Since the project site is in proximity to bus stops and the California Avenue Caltrain Station, the project would promote usage of alternative forms of transportation and reduce reliance on single-occupancy vehicles.
Policy T-1.17 Require new office, commercial and multi-family residential developments to provide improvements that improve bicycle and pedestrian connectivity as called for in the 2012 Palo Alto Bicycle + Pedestrian Transportation Plan.	Consistent. The project would promote bicycling and walkability by including 14 short-term bicycle parking spaces and 138 long-term bicycle parking spaces.
Natural Environment Element	
Policy N-7.4 Maximize the conservation and efficient use of energy in new and existing residences and other buildings in Palo Alto.	Consistent. The project would include an all-electric design, and would also include energy efficient appliances and lighting, as well as water efficient fixtures and irrigation. The project would also receive carbon neutral electricity from CPAU.
Policy N-7.7 Explore a variety of cost-effective ways to reduce natural gas usage in existing and new buildings in Palo Alto in order to reduce associated greenhouse gas emissions.	Consistent. The project would include an all-electric design and would not include natural gas usage. CPAU also provides 100 percent carbon neutral electricity and purchases carbon offsets to offset the GHG emissions from natural gas usage in the City.
Policy N-7.8 Support opportunities to maximize energy recovery from organic materials such as food scraps, yard trimmings and residual solids from sewage treatment.	Consistent. The project would be required to comply with SB 1383 which aims to reduce organic waste disposal by 75 percent by 2025.
Source: City of Palo Alto 2017	

As shown in the tables above, the project would be consistent with applicable GHG goals, policies, and strategies in regional plans such as Plan Bay Area 2050 and local plans such as the City of Palo Alto S/CAP and the 2030 Comprehensive Plan. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions and this impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project have any of the following impacts:</i>				
a. <i>Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</i>	☐	☐	☒	☐
b. <i>Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?</i>	☐	☐	☒	☐
c. <i>Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?</i>	☐	☐	☒	☐
d. <i>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?</i>	☐	☒	☐	☐
e. <i>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?</i>	☐	☐	☐	☒
f. <i>Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?</i>	☐	☐	☐	☒
g. <i>Expose people or structures to a significant risk of loss, injury, or death involving wildland fires?</i>	☐	☐	☐	☒

REGULATORY SETTING

HAZARDOUS MATERIALS AND WASTE

The term “hazardous material” is defined in the State of California’s Health and Safety Code (HSC), Chapter 6.95, Section 25501(n)(1) as:

“[Any material] that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.”

“Hazardous materials” include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

Hazardous waste is hazardous material generated, intentionally or unintentionally, as a byproduct of some process or condition. Hazardous wastes are defined in California HSC Section 25141(b) as wastes that:

“...because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in [serious] illness [or] pose a substantial present or potential hazard to human health or the environment due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties, or persistence in the environment, when improperly treated, stored, transported, disposed of, or otherwise managed.”

According to the U.S. Environmental Protection Agency (USEPA), waste may be considered hazardous under the Resource Conservation and Recovery Act (RCRA, the primary Federal hazardous materials law) if it is specifically listed as known hazardous waste or if it meets the one or more of the following characteristics of a hazardous waste:

Toxicity. Poisonous, harmful when ingested or absorbed

Ignitability. Capable of being ignited by open flame, liquids with flash points³ below 60 degrees Celsius, non-liquids that cause fire through specific conditions, ignitable compressed gases, and oxidizers

Corrosivity. Capable of corroding other materials, aqueous wastes with a pH of 2 or less or greater than or equal to 12.5

Reactivity. May be unstable under normal conditions, may react with water, may give off toxic gases, or may be capable of detonation or explosion under normal conditions or when heated

³ Flash point is the lowest temperature at which the vapors of a volatile combustible substance ignite in the air when exposed to flame.

Waste which meets certain criteria included in 40 CFR 261.11 (a) (2), including being ‘fatal to humans in low doses’ or having specified lethal dose levels in laboratory rats or rabbits is designated as ‘acute hazardous waste’ under RCRA; Sections 261.31 and 261.33 set out lists of substances currently classified by USEPA as acutely hazardous.

FEDERAL REGULATIONS

The USEPA is the lead agency responsible for enforcing federal regulations that affect public health or the environment. The primary federal laws and regulations include the RCRA of 1976 and the Hazardous and Solid Waste Amendments enacted in 1984, the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), and the Superfund Act and Reauthorization Act of 1986 (SARA). Federal statutes pertaining to hazardous materials and wastes are contained in the Code of Federal Regulations (CFR) Title 40 – Protection of the Environment. The Occupational Safety and Health Administration (OSHA) regulates the use of hazardous materials, including hazardous building materials, insofar as these affect worker safety through a delegated state program. Furthermore, at the federal level, the Department of Transportation (DOT) regulates transportation of hazardous materials.

HAZARDOUS MATERIALS TRANSPORTATION ACT

The transportation of hazardous materials is regulated by the Hazardous Materials Transportation Act (49 CFR § 101 et seq.), which is administered by the Office of Hazardous Materials Safety within the Pipeline and Hazardous Materials Administration (PHMA) of U.S. DOT. The Hazardous Materials Transportation Act governs the safe transportation of hazardous materials by all modes. The DOT regulations that govern the transportation of hazardous materials are applicable to any person who transports, ships, or causes to be transported or shipped hazardous materials, or who is involved in any way with the manufacture or testing of hazardous materials packaging or containers. The DOT regulations govern every aspect of the movement of hazardous materials including packaging, handling, labeling, marking, placarding, operational standards, and highway routing.

STATE REGULATIONS

The California Environmental Protection Agency’s (CalEPA) Department of Toxic Substances Control (DTSC) is the primary state agency governing the storage, transportation, and disposal of hazardous wastes. DTSC is authorized by the USEPA to enforce and implement federal hazardous materials laws and regulations. Regulation of hazardous material use and transport also occurs under a variety of state agencies and authorities, many of whom are partners in the CalEPA-administered Certified Unified Program Agency (CUPA) program discussed below. There are many state statutes and regulations governing hazardous materials and wastes, and they are contained within many different parts of the States’ codes, therefore only regulations relevant to this analysis are considered below.

CALIFORNIA UNIFIED PROGRAM ADMINISTRATION

The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs, as listed below:

- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- CalARP Program
- Underground Storage Tank (UST) Program
- Aboveground Petroleum Storage Act Program
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs
- California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements

The state agency partners involved in the Unified Program have the responsibility of setting program element standards, working with CalEPA on ensuring program consistency, and providing technical assistance to the CUPA. The following state agencies are involved with the Unified Program:

- CalEPA is directly responsible for coordinating the administration of the Unified Program. The Secretary of the CalEPA certifies CUPAs
- DTSC provides technical assistance and evaluation for the hazardous waste generator program including onsite treatment (tiered permitting)
- The Office of Emergency Services is responsible for providing technical assistance and evaluation of the Hazardous Material Release Response Plan (Business Plan) Program and the CalARP Programs
- The Office of the State Fire Marshal is responsible for ensuring the implementation of the Hazardous Material Management Plans and the Hazardous Material Inventory Statement Programs. These programs tie in closely with the Business Plan Program.
- The State Water Resource Control Board provides technical assistance and evaluation for the UST program in addition to handling the oversight and enforcement for the aboveground storage tank program

The Hazardous Materials Compliance Division (HMCD) within the Santa Clara County Department of Environmental Health (SCCDEH) is the CUPA for Santa Clara County. The HMCD is responsible for implementing the federal and state laws and regulations pertaining to the handling of hazardous wastes and hazardous materials. In Palo Alto, the Palo Alto Fire Department's Hazardous Materials Division is the Participating Agency administering CUPA implementation within the City for above-grade storage.

CALIFORNIA CORTESE LIST, GOVERNMENT CODE 65962.5

Government Code Section 65962.5 requires CalEPA to develop and update the Hazardous Waste and Substance Sites (Cortese) List. The Cortese List is a planning document used by state and local agencies and developers to comply with California Environmental Quality Act (CEQA) requirements in providing information about the location of hazardous materials release sites.

CALIFORNIA ACCIDENTAL RELEASE PREVENTION PROGRAM

The California Accidental Release Prevention (CalARP) Program addresses facilities that contain specified hazardous materials, known as “regulated substances,” that, if involved in an accidental release, could result in adverse off-site consequences. The CalARP Program defines regulated substances as chemicals that pose a threat to public health and safety or the environment because they are highly toxic, flammable, or explosive.

CALIFORNIA HAZARDOUS MATERIALS RELEASE RESPONSE PLANS AND INVENTORY LAW

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires that any business that handles hazardous materials prepare a Business Plan. That Business Plan must include details of the facility and business conducted at the project site, an inventory of hazardous materials that are handled or stored on site, an emergency response plan and a training program for safety and emergency response for new employees, with annual refresher courses.

CALIFORNIA FIRE CODE

The California Fire Code is Chapter 9 of California Code of Regulations (CCR) Title 24. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The California Fire Code regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The California Fire Code and the California Building Code use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the California Fire Code employs a permit system based on hazard classification.

CALIFORNIA HEALTH AND SAFETY CODE

California HSC section 25150 requires DTSC to adopt, and revise when appropriate, standards and regulations for the management of hazardous wastes to protect against hazards to the public health, domestic livestock, wildlife, or the environment. In adopting or revising standards and regulations pursuant to this chapter, the department shall, insofar as practicable, make the standards and regulations conform with corresponding regulations adopted by the USEPA pursuant to the federal act. This section does not prohibit the department from adopting standards and regulations that are more stringent or more extensive than federal regulations.

CalEPA, in cooperation with the DTSC, the California State Water Resources Control Board (SWRCB), and the Office of Environmental Health Hazard Assessment, publishes a list of screening numbers for select contaminants. Screening numbers are defined as the concentration of a contaminant published by CalEPA as an advisory number. In determining screening numbers, CalEPA considers the toxicology of the contaminant, risk assessments prepared by federal or state agencies, epidemiological studies, risk assessments or other evaluations of the contaminant during remediation of a site, and screening numbers that have been published by other agencies.

In January 2018, the DTSC's Human and Ecological Risk Office issued Human Health Risk Assessment Note Number 3. The document lists DTSC-modified screening levels (DTSC-SL) for select compounds in soil, tap water, and air for use in the human health risk assessment process at hazardous waste sites and permitted facilities, and the DTSC-SLs were last updated in 2020.

CALIFORNIA CODE OF REGULATIONS, TITLE 8

CCR Title 8 contains the General Industry Safety Orders of the state regulations. Article 4 addresses dusts, fumes, mists, vapors, and gasses. Article 4, Section 1529 deals with asbestos and asbestos-containing materials (ACM) and Section 1532.1 addresses lead and lead-based paint (LBP). Both Sections set out requirements for employer monitoring of employee exposure to these materials as well as regulations on worker personal protective equipment (PPE), disposal of wastes, medical examinations of exposed workers, and action levels and exposure limits for ACM and LBP dusts. Title 8 is administered by the California Occupational Safety and Health Administration (Cal/OSHA).

CALIFORNIA PUBLIC RESOURCES CODE 21151.4

Pursuant to Public Resources Code Section 21151.4, projects that can be reasonably anticipated to produce hazardous air emissions or handle extremely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school must consult with the potentially affected school district and provide written notification not less than 30 days prior to the proposed certification or adoption of an environmental document. Where a school district proposes property acquisition or the construction of a school, the environmental document must address existing environmental hazards, and written findings must be prepared regarding existing pollutant sources.

REGIONAL AND LOCAL REGULATIONS

Administration and enforcement of the major environmental programs were transferred to local agencies as CUPAs beginning in 1996. The purpose of this was to simplify environmental reporting by reducing the number of regulatory agency contacts a facility must maintain and requiring the use of more standardized forms and reports.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT REGULATION 11, RULE 2

The Bay Area Air Quality Management District (BAAQMD) regulates demolition and renovation operations involving ACM through Rule 2, which applies to any planned renovation that involves 100 square feet, 100 linear feet, or 35 cubic feet or more of ACM, as well as to all demolitions regardless of ACM content. The requirements include a noticing period, the conducting of a pre-demolition survey for ACM materials by a certified inspector, and a general prohibition on demolition until ACM has been abated and removed from the location and requires that abatement be conducted by persons with specific asbestos certifications (primarily Asbestos Hazard Emergency Response Act [AHERA] certification).

SANTA CLARA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH

The HMCD within the SCCDEH is the CUPA for Santa Clara County and is responsible for implementing the federal and state laws and regulations pertaining to the handling of hazardous wastes and hazardous materials within the County, as well as the Santa Clara County Hazardous Materials Management Program. Various local agencies in incorporated areas are Participating Agencies and act as the CUPA administrators within their respective jurisdictions.

CITY OF PALO ALTO HAZARDOUS MATERIALS DIVISION

The Fire Prevention Bureau of the Palo Alto Fire Department (PAFD) is the Participating Agency administering CUPA implementation within the City. It is responsible for regulating the storage, use, treatment, and disposal of hazardous materials and wastes in Palo Alto and for administering the Business Plan program and aboveground storage tanks; responsibility for USTs was transferred to the HMCD in 2009. The Bureau also handles fire code inspections, including inspections related to hazardous material storage (PAFD 2022).

CITY OF PALO ALTO DEWATERING REGULATIONS

The City of Palo Alto incorporates numerous requirements related to groundwater dewatering in Chapter 16.28 of its Municipal Code that were first promulgated in 2016. Although the majority of the regulations deal with ensuring groundwater is not wasted or altering the groundwater flow or direction, the regulations also deal with the treatment of contaminated groundwater such as that potentially existing beneath the project site. The regulations are administered by the City's Public Works Engineering Department and include requirements for a Geotechnical Report and Hydrogeological Report and sets time limits on dewatering operations. The regulations specify that they do not supersede San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) regulations regarding dewatering.

CITY OF PALO ALTO COMPREHENSIVE PLAN

The City of Palo Alto's Comprehensive Plan 2030 Safety Element includes goals, policies, and programs to reduce the risk of death, injuries, and property damage in the city. Relevant goals and policies are listed below:

- Policy S-1.10.** Follow the guidelines in the Emergency Operations Plan and continue towards implementing the four phases of Emergency Management: mitigation/prevention, preparedness, response, and recovery.
- Program S1.10.3.** Implement the mitigation strategies and guidelines provided by the [LHMP], including those that address evolving hazards resulting from climate change.
- Program S1.13.4.** Enhance the safety of City-owned natural gas pipeline operations. Work with customers, public safety officials and industry leaders to ensure the safe delivery of natural gas throughout the service area. Provide safety information to all residents on City-owned natural gas distribution pipelines.
- Policy S-2.1.** Incorporate the [LHMP] ...into the Safety element. In the event of any conflict between the provisions of the LHMP and any other provision of the Safety Element, the LHMP shall control.
- Policy S-3.2.** Continue working with appropriate agencies to identify and clean up hazardous waste sites and contaminated groundwater.
- Policy S-3.3.** Support public health by requiring as part of development review, property owners and private entities to disclose the presence of contaminated soil or groundwater, identify potential health impacts, prevent vapor intrusion, and remediate contamination.
- Policy S-3.4.** Support public agency policies, regulations, legislation, and programs that implement Santa Clara County's Hazardous Materials Management Program.
- Policy S-3.5.** Protect City authority for the approval or denial of proposed commercial hazardous waste treatment, storage, or disposal facilities in the city. Continue to support the concept of "fair share" agreements between counties in the siting of such facilities.
- Policy S-3.6.** Work with the appropriate agencies, including Caltrain, to decrease the risks associated with rail infrastructure in Palo Alto, including the movement of hazardous materials through the city and the dangers of passenger trains in a fully developed, populated environment.

ENVIRONMENTAL SETTING

SITE RECONNAISSANCE

A reconnaissance of the project site was conducted by Rincon Consultants on November 14, 2022. Two vacant commercial buildings and a parking lot were observed on the project site. The interiors of the onsite buildings were not accessed during the site reconnaissance and were unable to be observed. Cracks in the asphalt were observed throughout the parking lot, and a few concrete patches were observed along the southeastern side of the 3017 El

Camino Real building (indications of potential former excavations or underground features, such as a UST). Hazardous materials, hazardous waste, staining, solid waste, and soil piles were not observed at the project site. Photographs of the project site are included in Appendix F.

ONSITE HAZARDOUS MATERIAL RELEASE CASE LISTINGS

The project site is identified as an open SCCDEH Cleanup Program Site (SCCDEH Case #2018-14s) and two closed SCCDEH Leaking Underground Storage Tank (LUST) Cleanup Sites (no SCCDEH case numbers; Santa Clara Valley Water District [SCVWD] Cases #06S3W12K02f and #06S3W12K06f). Because the project site is listed with regulatory agencies as three cleanup cases, and because cleanup and closure of the LUSTs was based on the existing and continued commercial use of the site at the time, which did not necessarily meet the more restrictive screening levels for residential uses, it continues to be identified on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5. Hazardous materials concerns associated with the project site are shown on Figure 7.

3001 EL CAMINO REAL – LUST CASE #06S3W12K02F (CLOSED 1992)

According to the online SWRCB's online GeoTracker database, the LUST Cleanup Site Case #06S3W12K02f was closed in January 1992 by SCVWD (the local oversight agency for Santa Clara County prior to July 1, 2004, when SCCDEH assumed the role). The 1992 case closure report (SCVWD 1992) available on GeoTracker indicates that one 1,000-gallon UST with unknown contents and one 500-gallon kerosene UST were removed from the 3001 El Camino Real portion of the project site in 1986. Initial soil samples collected from below the 1,000-gallon tank contained up to 4.5 milligrams per kilogram (mg/kg) total petroleum hydrocarbons (TPH). The initial soil sample collected from below the kerosene tank contained 372 mg/kg TPH. Neither odors nor staining were observed in either tank excavation by the Palo Alto Fire Department Inspector present at the time of tank removal. Reportedly, the initial soil samples were not analyzed for benzene, toluene, ethylbenzene, and xylenes (collectively known as BTEX). It was assumed by SCVWD (in the case closure report) that excavated soil, which had no product odor or staining, was used to backfill the excavations. TPH in the gasoline and diesel ranges, as well as BTEX, were not detected in groundwater samples collected in 1990 from groundwater monitoring wells. Therefore, the 1992 case closure report concluded that "contamination at [the project site] appears to be limited to the soil and does not pose a threat to groundwater."

3017 EL CAMINO REAL – LUST CASE #06S3W12K06F (CLOSED 2004)

According to the online SWRCB's online GeoTracker database, the LUST Cleanup Site Case #06S3W12K06f was closed in August 2004 by SCCDEH. The 2004 case closure report (SCCDEH 2004) available on GeoTracker indicates that one 500-gallon UST with unknown contents was removed from the 3017 El Camino Real portion of the project site in 2004 and TPH in the gasoline range (TPH-g), oil and grease, and lead were detected in soil samples collected from the tank excavation. The case closure report concluded that "due to the absence of significant contamination and limited potential for a large release of petroleum

Figure 7 Project Site – Hazardous Materials Concern



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CRFigs 1 & 2 Project Location and Site Maps
HazFig 1 Project Site - Hazardous Material Concerns

products (based on conversations with owner and past site use), no further corrective action should be required and the case should be closed.” The 2004 case closure letter indicates that residual contamination in soil and groundwater remains in place at the project site.

3001-3017 EL CAMINO REAL – CLEANUP PROGRAM SITE CASE #2018-14S (OPEN AS OF 2020)

According to the online SWRCB’s online GeoTracker database, the Cleanup Program Site Case #2018-14s has an “open – inactive” case status as of 2020. The 2020 case summary on GeoTracker (SWRCB 2022a) indicates that 1) previous site assessment activities identified trichloroethene (TCE) in soil vapor at concentrations exceeding the SFBRWQCB Environmental Screening Levels (ESLs) for subslab/soil gas vapor intrusion, and 2) the case is currently inactive until property development or building occupation. Case documents available on GeoTracker include a 2013 Phase I ESA, a 2018 Site Management and Contingency Plan (SMCP; summarized later in this section), and a 2020 letter issued by the SCCDEH. The 2020 SCCDEH letter indicates that the 2018 SMCP was previously approved by the SCCDEH; however, because The Sobrato Organization informed the SCCDEH that it will be donating the property to a new owner, the SCCDEH approval of the SMCP is no longer valid and “if the property is redeveloped, a new SMCP should be prepared and submitted to the [SCCDEH], or other environmental regulatory agency, prior to issuance of demolition and grading permits” (SCCDEH 2020).

REVIEW OF ENVIRONMENTAL DOCUMENTS

Rincon reviewed the following environmental documents prepared for the project site:

2015 LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT

A 2015 Limited Phase II ESA prepared by PES Environmental, Inc. (PES) was conducted for the project site and the northeastern adjacent parking lot (PES 2015). The report indicates that the following environmental concerns were identified in previous PES Phase I ESA reports (reportedly dated 2010 and 2012):

- Former onsite dry cleaner and former automotive sales (and possibly automotive repair) at 3001 El Camino Real
- Regional groundwater plume of chlorinated solvents from offsite sources in Palo Alto
- Two formerly onsite underground storage tanks (USTs) removed from 3001 El Camino Real
- Former onsite UST removed from 3017 El Camino Real
- Former railroad on the eastern portion of the project site
- Potential ACM and LBP at the project site buildings

Two potential additional onsite USTs at 3017 El Camino Real were also identified in the previous Phase I ESA reports; however, a geophysical survey conducted did not identify evidence of USTs other than the former UST excavation on the southeastern side of the 3017 El Camino Real building.

Based on these findings, PES conducted soil, soil vapor, and groundwater sampling at the project site.

2015 SOIL MATRIX ANALYTICAL RESULTS

Soil matrix samples were collected from four borings on the project site and analyzed for TPH, volatile organic compounds (VOCs), and organic lead.

Detected concentrations of TPH in the gasoline, Stoddard Solvent, and diesel ranges (TPH-g, TPH-SS, and TPH-d, respectively) in these soil samples exceed the current (2019) ESLs for residential and commercial shallow soil exposure. There are no ESLs established for carbon disulfide. The report noted that one soil sample was collected from the area of the former railroad tracks and analyzed for petroleum hydrocarbons and arsenic; “no evidence of impacts was identified.”

2015 SOIL VAPOR ANALYTICAL RESULTS

The report indicates that soil vapor samples were collected from six borings on the project site and analyzed for TPH-g and VOCs.

The detected concentrations of TPH-g, benzene, TCE, and vinyl chloride in soil vapor at the project site exceed the current (2019) ESLs for subslab/soil gas vapor intrusion at residential and commercial/industrial properties. The detected concentrations of ethylbenzene in soil vapor at the project site exceed the 2019 residential ESL.

2015 GROUNDWATER ANALYTICAL RESULTS

The report indicates that groundwater was first encountered at the project site at depths ranging from 24 to 27 feet below ground surface. Groundwater samples were collected from six borings and analyzed for TPH and VOCs.

The detected concentrations of TCE and vinyl chloride in the grab groundwater samples collected and analyzed exceed the current (2019) ESLs for groundwater vapor intrusion. There are no groundwater vapor intrusion ESLs established for TPH; however, the detected concentrations of TPH-g and TPH-d exceed the direct exposure ESL (Maximum Contaminant Level [MCL] Priority). There are no ESLs established for sec-butylbenzene.

2015 PHASE II ESA SUMMARY AND RECOMMENDATIONS

The report concluded that the elevated concentrations of TPH-g in soil vapor and TPH-g, TPH-SS, and TPH-d in soil indicated the presence of residual hydrocarbon contamination, which was “attributable to the former USTs behind 3001 El Camino Real.”

Additionally, the petroleum hydrocarbon impacts to groundwater detected “are consistent with an aged release and comprised chiefly of diesel-range organics and aged gasoline.” However, PES concluded that petroleum hydrocarbon-related soil impacts were not encountered in the vicinity of the former UST at 3017 El Camino Real.

PES noted in the report that the lack of detections of chlorinated VOCs in soil at the project site appeared to indicate that “the source of chlorinated VOCs [in soil vapor] at the [project site] appears to be associated with the regional groundwater plume.” Therefore, PES indicated that the former dry cleaner at 3001 El Camino Real may have used Stoddard Solvent instead of tetrachloroethene (PCE) as a dry cleaning solvent.

The report recommended conducting ACM and LBP surveys, notifying the SCCDEH prior to change in land use and proposed redevelopment, preparing a soil management plan, and installing a vapor intrusion mitigation system for a proposed subsurface parking structure at the project site.

2016 PHASE I ESA

A 2016 Phase I ESA conducted by Rincon Consultants, Inc. (Rincon) for the project site and the northeastern adjacent parking lot (Rincon 2016a) indicates that an automotive repair facility (3017 El Camino Real) was present at the project site from 1969 through 1978 and that three former petroleum USTs were removed from the project site (3001 and 3017 El Camino Real) in 1986 and 2004. These former USTs are associated with two LUST cases, which were closed in 1992 and 2004, and residual impacts of petroleum hydrocarbons to soil. According to the report, a dry cleaner (3001 El Camino Real) was present at the project site from at least 1955 through at least 1965, and railroad tracks were formerly located on the eastern portion of the project site from at least 1939 through at least 1982.

The report indicates that an automotive body shop was present on a northeastern adjacent property (411 Acacia Avenue) from 1970 through 1978, and two nearby properties (Hewlett-Packard Company and Varian Associates) are associated with a co-mingled chlorinated solvent groundwater plume, with combined cleanup and monitoring efforts – the nearest groundwater monitoring well to the project site (approximately 75 feet northwest) contained elevated concentrations of TCE during a June 2015 groundwater monitoring event. Additionally, a nearby, hydrologically upgradient property (Kodak Processing Laboratory) was reported to be associated with a closed LUST case, eight USTs, and limited regulatory agency information was available at the time of the 2016 Phase I ESA. Based on the research conducted, the report identified the following environmental concerns at the project site:

- Three leaking USTs and automotive repair facilities formerly located at the project site
- Former use of the project site as a drycleaning facility
- Railroad tracks formerly located on the eastern portion of the project site
- Former automotive repair facilities located on the northeastern adjacent property
- Co-mingled chlorinated solvent groundwater plume located upgradient and in the vicinity of the project site
- One upgradient release site located near the project site

Rincon recommended conducting a soil and soil vapor sampling assessment, implementing engineering control measures for proposed redevelopment, and conducting ACM and LBP surveys at the project site.

2016 PHASE II ESA REVIEW LETTER

Rincon prepared a 2016 Phase II ESA Review Letter (Rincon 2016b) regarding the PES 2015 Limited Phase II ESA report. In the review letter, Rincon indicated that the 2015 PES Limited Phase II ESA report was not provided to Rincon prior to or during the completion of Rincon's 2016 Phase I ESA. The review letter summarized the activities conducted at the project site and northeastern adjacent parking lot by PES and results of the soil, soil vapor, and groundwater sampling completed. Based on Rincon's review of the 2015 PES Limited Phase II ESA report, no sampling was conducted within the former dry cleaner on the project site (3001 El Camino Real) or within the former automotive repair facility on the project site (3017 El Camino Real). Rincon noted the following environmental issues that warrant additional assessment:

- Former dry cleaner on the project site (3001 El Camino Real)
- Former railroad tracks on the project site (eastern portion)
- Known TPH and VOC impacts to soil, soil vapor, and groundwater throughout the project site

In the 2016 review letter, Rincon recommended additional soil and soil vapor sampling, proper management and disposal of contaminated soil encountered during redevelopment of the project site, SCCDEH notification of any change in land use, preparation of a soil management plan, installation of a vapor barrier or other engineering controls, and ACM and LBP surveys. Rincon noted that based on the findings of additional investigations, additional recommendations may also be warranted.

2017 PHASE II ESA SAMPLING PLAN

A 2017 Phase II ESA Sampling Plan (Rincon 2017) was prepared by Rincon for the project site and northeastern adjacent parking lot. The sampling plan was based on the results of PES's 2015 Limited Phase II ESA and Rincon's 2016 Phase I ESA. The sampling plan summarized the findings of these two previous reports, and recommended collecting soil vapor samples from within the former onsite dry cleaner (3001 El Camino Real) and additional soil samples from the former onsite railroad tracks.

2017 DRAFT SUPPLEMENTAL SUBSURFACE INVESTIGATION REPORT

A 2017 Draft Supplemental Subsurface Investigation Report (PES 2017) was prepared by PES Environmental, Inc. (PES) for the project site and northeastern adjacent parking lot, based on Rincon's 2017 Phase II ESA Sampling Plan and correspondence with Rincon and the City of Palo Alto. Fifteen soil samples were collected from four soil borings advanced along the former railroad tracks on the eastern portion of the project site and northeastern adjacent parking lot and were analyzed for metals and TPH.

Detected concentrations of arsenic in the soil samples collected on the project site exceed the current (2019) ESLs for residential and commercial shallow soil exposure, and its range of naturally-occurring background concentrations for metals in California soils (Kearny

1996). Detected concentrations of cobalt in the soil samples collected on the project site exceed the current (2019) ESL for residential shallow soil exposure. The PES report concluded that “shallow soil is not significantly impacted by petroleum hydrocarbons or metals” and “no further investigation or remediation appears warranted and none is recommended.”

2018 BUILDING MATERIALS SURVEY

A 2018 pre-demolition building materials survey (PES 2018a) for ACM, LBP, and polychlorinated biphenyls (PCBs) was conducted by PES at the project site. The survey identified ACM and LBP in the 3001 and 3017 El Camino Real buildings, and PCBs in the 3017 El Camino Real building. The report recommended that a hazardous material abatement work plan be prepared for the identified and assumed ACM, LBP, and PCB-containing materials at the project site buildings.

2018 SITE MANAGEMENT AND CONTINGENCY PLAN

A 2018 Site Management and Contingency Plan (PES 2018b) was prepared by PES for the project site and northeastern adjacent parking lot and summarized the findings of previous environmental reports for the project site. In 2018, planned redevelopment reportedly included one building with below-grade parking and excavation to approximately 15 feet below grade on the project site.

Site investigation activities conducted by PES earlier in 2018 and documented in the Site Management and Contingency Plan included the collection of soil samples from the footprints of both proposed future buildings and the collection of soil vapor samples from the footprint of the proposed future adjacent building. Soil samples were also collected from the vicinity of the former UST located at 3017 El Camino Real.

2018 SOIL SAMPLING RESULTS (PES) - PROPOSED FUTURE BUILDING FOOTPRINT

Detected concentrations of arsenic in the soil samples collected and analyzed from the proposed future building footprint on the project site exceed the current (2019) ESLs for residential and commercial shallow soil exposure, but not its range of naturally-occurring background concentrations for metals in California soils (Kearny 1996). There are no ESLs established for cis-chlordane, trans-chlordane, n-propylbenzene, 1,3,5-trimethylbenzene, or 1,2,4-trimethylbenzene.

2018 SOIL SAMPLING RESULTS (PES) – FORMER UST

Detected concentrations of TPH-g and TPH-d in the soil samples collected and analyzed from the vicinity of the former UST on the southeastern side of the 3017 El Camino Real building on the project site exceed the current (2019) ESLs for residential and commercial shallow soil exposure. There are no ESLs established for TPH-k, hexane extractable materials (HEM; equivalent to oil and grease), 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, or carbon disulfide.

2018 SUMMARY AND RECOMMENDATIONS

Based on the results of the soil and soil vapor sampling, PES concluded that the TPH-g-impacted soil in the vicinity of the former UST on the northeastern side of the 3001 El Camino Real building “should be segregated and handled separately from other soils on-site.”

Based on the elevated concentrations of VOCs identified in soil vapor at the project site during PES’s 2010, 2012, and 2018 soil vapor investigations, PES recommended installation of a vapor intrusion mitigation system for proposed subsurface garages. The remainder of the report outlined management and contingency procedures for implementation during redevelopment construction of the project site, including excavation, confirmation sampling, stockpiling, transportation, and offsite disposal of impacted soil.

2021 PHASE I ESA

A 2021 Phase I ESA (SLR 2021) conducted by SLR International Corporation (SLR) for the project site and northeastern adjacent parking lot summarized previous environmental reports prepared for the project site by others and identified the following environmental concerns at the Project Site:

- Nearby agricultural activities
- ACM, LBP, and PCBs identified in building materials at the project site
- Regional VOC groundwater plume with impacted groundwater migrating beneath the project site
- Former 500-gallon UST at the 3017 El Camino Real building with residual petroleum hydrocarbon-impacted soil and groundwater
- Three other USTs at the project site
- Former use of 3001 El Camino Real as a dry cleaner
- Former railroad tracks on the project site

Based on the findings of PES’s 2018 report, SLR also recommended a hazardous material abatement workplace specification for the identified and assumed ACM, LBP, and PCB-containing materials at the buildings on the project site. Consistent with the recommendations of previous PES reports, SLR recommended the installation of a vapor intrusion mitigation system to address VOC-impacted groundwater beneath the project site. Additionally, regarding the former 500-gallon UST next to the 3017 El Camino Real building at the project site, SLR recommended notifying SCCDEH prior to any changes in land use, grading activities, excavation, and installation of water wells. No further investigation or remediation was recommended by SLR with regard to the former dry cleaner, the three other former USTs, or the former railroad tracks at the project site.

OFFSITE HAZARDOUS MATERIAL RELEASE CASE LISTINGS

The project site is located within the Study Area and Perimeter Area of a regional chlorinated solvent groundwater plume, dubbed the California-Olive-Emerson (COE) Plume, that is under long-term management by SFBRWQCB. There are no groundwater monitoring or extraction wells associated with the COE Plume located on the project site; however, there is a COE Plume-associated groundwater monitoring well located approximately 75 feet northwest of the project site. In June 2022, groundwater in the well was measured at approximately 19 feet below ground surface (Stantec Consulting Services Inc. 2022). Analytical testing completed at this groundwater monitoring well in June 2022 detected:

- TCE in the groundwater at a concentration that exceeded the current (2019) ESLs for direct exposure and groundwater vapor intrusion for residential and commercial/industrial properties
- cis-1,2-Dichloroethene in the groundwater at a concentration that exceeded the current (2019) ESL for direct exposure (MCL Priority)

POTENTIAL REGIONAL HAZARDS

Additional research was completed to determine if landfills, oil and gas wells, hazardous material transportation pipelines, and per- and polyfluoroalkyl substances (PFAS) investigative sites are located onsite or could be affecting the project site.

LANDFILLS

According to a review of the California Department of Resources, Recycling, and Recovery (CalRecycle) online Solid Waste Information System (SWIS) database, there is one active solid waste facility, Peninsula Sanitary Services Direct Transfer Facility located approximately 1 mile west-northwest of the project site (CalRecycle 2022). This facility is classified as an active, permitted direct transfer facility. Based on the nature of the facility (transfer facility, no solid waste is stored or disposed) and distance to the subject property, this facility would not have an impact on the construction or operation of the project.

There is also one landfill (closed City of Palo Alto Refuse Disposal Site) located approximately 2 miles northeast of the project site and one landfill (closed Shoreline/Mountain View Regional Solid Waste Landfill) located approximately 2.4 miles east-northeast of the Project Site. Based on distance to the project site, these landfills would or would not have an impact on the construction or operation of the project.

OIL AND GAS WELLS/FIELDS

According to a review of California Department of Conservation, Geologic Energy Management Division (CalGEM) online oil and gas well and field records, the project site is not located within an oil/gas field and there are no oil or gas wells located within 0.25 mile of the project site (CalGEM 2022). The nearest oil well is a plugged dry hole well located approximately 9.5 miles west of the project site near the City of Half Moon Bay. Therefore, oil and gas wells and fields would have no impact on the construction or operation of the project.

HAZARDOUS MATERIAL PIPELINES

According to a review of the United States Department of Transportation (USDOT), Pipeline and Hazardous Materials Safety Administration's online National Pipeline Mapping System database, there are no hazardous liquid pipelines within or adjacent to the project site, or within 1,000 feet of the project site (USDOT 2022). However, there is one natural gas transmission pipeline (Pacific Gas & Electric Co. pipeline #9249, active/filled) located approximately 250 feet to the northwest of the project site along Page Mill Road. Based on the distance to the natural gas transmission pipeline, hazardous material/natural gas transmission pipelines would have no impact on the construction or operation of the project.

PER- AND POLYFLUOROALKYL SUBSTANCES

Beginning in 2019, the SWRCB issued letters to property owners of sites that may be potential sources of PFAS. These sites currently include select landfills, airports, chrome plating facilities, publicly owned treatment works facilities, Department of Defense sites, and bulk fuel storage terminals and refineries. The letters included a SWRCB Water Code Section 13267 Order (Investigative Order); an Investigative Order is a directive from the SWRCB to conduct on-site testing of groundwater and/or leachate. This does not mean that PFAS has been produced, used, or discharged at these sites. According to the SWRCB, "PFAS are a large group of human-made substances that do not occur naturally in the environment and are resistant to heat, water, and oil" (SWRCB 2022b).

According to a review of the California Statewide PFAS Investigation online Public Map Viewer, there are no current landfill, airport, chrome plating, publicly owned treatment works, or Department of Defense PFAS orders at any facilities listed as located within 2 miles of the project site (SWRCB 2022b). According to a review of the SWRCB's March 12, 2021 Bulk Fuel Terminal/Refinery Investigative Order, the project site is not listed on the Bulk Fuel Storage Terminals and Refineries List (Attachment 1 of the Order). Furthermore, none of the Bulk Fuel Storage Terminals or Refineries on the list are located within 1 mile of the project site (SWRCB 2021).

Review of the California 2019 Statewide Drinking Water System Quarterly Testing Results Public Map Viewer indicates that perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were not detected above laboratory reporting limits in the two nearest drinking water wells to the project site, located approximately 2 miles southeast of the Project Site and tested quarterly as part of a PFAS investigative order (SWRCB 2022c). Therefore, PFAS would have no impact on the construction or operation of the project.

ENVIRONMENTAL SETTING SUMMARY

The results of previous assessments conducted at the project site in association with the onsite cleanup cases and for private due diligence purposes indicate the following environmental concerns:

- Former dry cleaner and automotive repair operated at the project site with no samples collected within these former facilities.
- Three former petroleum USTs were removed from the project site, and residual petroleum hydrocarbon-impacted soil and/or groundwater remain in place at those areas at concentrations exceeding the current (2019) ESLs for residential and commercial shallow soil exposure.
- Former railroad tracks were located on the eastern portion of the project site, and arsenic-impacted soil is present in this area at concentrations exceeding the current (2019) ESLs for residential and commercial shallow soil exposure and its background concentration.
- VOC-impacted soil vapor is present at the project site at concentrations exceeding the current (2019) ESLs for subslab/soil gas vapor intrusion at residential and commercial/industrial properties.
- TPH- and VOC-impacted groundwater is present beneath the project site at concentrations exceeding the current (2019) ESLs for direct exposure (MCL Priority) and groundwater vapor intrusion.
- ACM, LBP, and PCBs are present in building materials at the project site.
- A regional, co-mingled chlorinated solvent groundwater plume (the COE Plume) originating from offsite sources is associated with VOC-impacted groundwater migrating beneath the project site.

IMPACT ANALYSIS

- a. *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*
- b. *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

CONSTRUCTION IMPACTS

A hazardous building materials survey conducted at the project site in 2014 indicated the presence of ACM, LBP, and PCB-containing materials at the project site buildings. Therefore, demolition of the project site buildings prior to construction of the proposed project has the potential to release asbestos fibers, LBP dust, and other toxic constituents in building components (including PCBs) into the atmosphere if not remediated prior to demolition, thereby exposing workers and the community to health hazards. Demolition activities may also include temporary storage or transport of these hazardous materials.

With respect to ACM, the BAAQMD regulates demolition and renovation operations involving ACM. The BAAQMD requirements include a noticing period, a pre-demolition survey for ACM materials by a certified inspector, and a general prohibition on demolition until ACM has been abated and removed from the location. The BAAQMD also requires that abatement be conducted by persons with specific asbestos certifications (primarily AHERA

certification). Compliance with BAAQMD requirements would reduce the potential demolition and construction impacts related to ACM to less than significant levels.

Similarly, there are existing federal and State regulations that would apply to handling of LBP and PCBs (e.g., Title 40 of the CFR, Title 22 of the CCR, TSCA, and HMTA, described above). Compliance with these federal and State regulations would reduce the potential demolition and construction impacts related to LBP or PCBs to less than significant levels.

During project construction, accidental conditions involving hazardous materials could occur and result of any of the following: direct dermal contact with hazardous materials, incidental ingestion of hazardous materials, or inhalation of airborne dust released from dried hazardous materials. Additionally, the transportation of hazardous materials could result in accidental spills, leaks, toxic releases, fire, or explosion. Appropriate documentation for all hazardous waste that is transported, stored, or used in connection with specific project-site activities is required for compliance with existing hazardous materials regulations codified in the CCR. Compliance with federal, State, and local laws, regulations, and Cal/OSHA training programs would minimize potential impacts associated with the routine transport, use, or disposal of hazardous materials during construction. Therefore, impacts associated with project construction would be less than significant. Compliance with these regulations would reduce the potential demolition and construction impacts related to accidental conditions involving hazardous materials to less than significant levels.

OPERATIONAL IMPACTS

Although new residential development at the project site could involve the use, storage, disposal, or transportation of minute quantities of hazardous materials, new residential uses would not be expected to involve large quantities of these materials. Normal residential activities do not generally present a significant threat to the public or the environment through the use, storage, disposal, or transportation of significant quantities of hazardous materials. Some materials considered hazardous may be used or stored on the project site, but these materials would be limited primarily to common household solvents, paints, chemicals used for cleaning and building maintenance, and landscaping supplies and would not be substantially different from household chemicals and solvents already in general and wide use throughout any residential area.

Residential uses would not involve the transport of materials such that regulation would be triggered. In addition, the prior uses of the project site included regular transport of hazardous materials for commercial and retail purposes. The proposed redevelopment of the project site would remove such uses and corresponding transport from the project site. Therefore, the overall amounts of hazardous materials being transported to and from the project site is likely to decrease from prior levels, and exposure of the public or environment to the routine use or accidental release of hazardous materials from operation of the proposed townhome development would be less than significant.

LESS THAN SIGNIFICANT IMPACT

- c. *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?*

El Carmelo Elementary School, located approximately half a mile northeast on Loma Verde Avenue, is the closest existing school to the project site. No schools are within a quarter mile of the project site and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

- d. *Would the project be located on a site that is included on a list of hazardous material 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?*

As described in *Onsite Hazardous Material Release Case Listings*, above, the project site is listed as three regulatory agency cleanup cases, including a list of hazardous material sites compiled pursuant to Government Code Section 65962.5. In addition, two former project site uses were not fully investigated for potential hazardous material impacts: former dry cleaning and automotive repair.

Based on the results of soil, soil vapor, and groundwater investigations conducted at the project site, there are known TPH, VOCs, SVOCs, and metals in soil at the project site at concentrations exceeding the current (2019) ESLs for residential and/or commercial shallow soil exposure. There is known VOC-impacted soil vapor at the project site at concentrations exceeding the current (2019) ESLs for subsurface/soil gas vapor intrusion at residential and commercial/industrial properties. Additionally, there is TPH- and VOC-impacted groundwater beneath the project site at concentrations exceeding the current (2019) ESLs for direct exposure (MCL Priority) and groundwater vapor intrusion.

CONSTRUCTION IMPACTS

With the unknown and known hazardous material project site conditions, there is a potential for demolition, grading, and construction workers to be exposed to contaminants (e.g., TPH, VOCs, SVOCs, and metals) via dust, soil, soil vapor, or groundwater. Additionally, if offsite disposal of soils from the project site would occur during project construction, the soil may require special handling or disposal as a waste. Consequently, the existing conditions at this known release site would result in a potentially significant hazard to the public or the environment during demolition and grading/construction at the project site. Therefore, this impact is potentially significant and mitigation is required.

Groundwater beneath the project site and in the vicinity has been measured at 19 to 27 feet below ground surface. The proposed project would involve a maximum depth of excavation of 15 feet below ground surface. Therefore, groundwater is not expected to be encountered during construction activities at the project site.

OPERATION IMPACTS

The risk of hazardous materials creating a significant hazard to the public or the environment would primarily occur during construction of the project site as on-site

contamination is disturbed. Once the project is operational, the contaminated media would mostly be removed or covered and would no longer pose a risk.

As discussed above, with the unknown and known hazardous material project site conditions, there is a potential for maintenance workers and building occupants (residential) to be exposed to contaminants via soil vapor at the project site.

Vapor intrusion occurs when volatile compounds migrate from contaminated groundwater or subsurface soils into the indoor air of an overlying building. Therefore, vapor intrusion of volatile compounds from the impacted groundwater and soil vapor could expose future occupants to potentially unacceptable health risks. The potential risk for vapor intrusion can be mitigated through engineering controls (e.g., sub-slab vapor barrier) to mitigate against the potential for VOC vapors to collect in overlying structures. The California Supreme Court in a December 2015 opinion (*BIA v. BAAQMD*) confirmed CEQA is concerned with the impacts of a project on the environment, not the effects the existing environment may have on a project. Therefore, potential hazards impacts to new residents would not be an impact under CEQA, and mitigation of vapor intrusion for future occupants is accordingly not include within CEQA's scope. Nevertheless, the City has policies that address existing hazards conditions affecting a proposed project. Policy S-3.3 of the City's Comprehensive Plan 2030 Update calls for the City to "support public health by requiring as part of development review, property owners and private entities to disclose the presence of contaminated soil or groundwater, identify potential health impacts, prevent vapor intrusion and remediate contamination." In accordance with this policy, the City would require the following standard condition of approval:

VAPOR INTRUSION PREVENTION STANDARD CONDITION OF APPROVAL

Prior to issuance of building permits, the applicant shall retain a qualified environmental consultant, California Professional Geologist (PG) or California Professional Engineer (PE) to assess site conditions to determine both the nature and extent of contamination. If contamination at the site exceeds the most current environmental screening levels (ESLs) identified by the SFBRWQCB, the applicant shall retain a qualified environmental consultant, California PG or California PE to prepare and submit a Site Management and Contingency Plan (SMCP) to either the DTSC, RWQCB, or the SCCDEH for approval. The SMCP shall include details regarding the pending development and evaluate remediation and/or mitigation to address any environmental risk identified in the site assessment. The applicant shall agree to and implement all recommendations of the reviewing regulatory agency approving the SMCP in order to reduce the exposure of future occupants to contaminants that exceed the applicable screening levels. If the reviewing agency requires that a sub-slab vapor intrusion barrier system or similar be installed, the Vapor Intrusion Mitigations (VIMs) shall be documented in the building permit plan set prior to issuance of the building permit.

Compliance with the approved SMCP regarding vapor intrusion would reduce risk to future occupants by ensuring that the buildings comply with the established RWQCB ESLs for

residential uses and is consistent with Comprehensive Plan Policy S-3.3. As noted previously, CEQA only requires analysis of the project's impacts on the environment, not the environment's impact on the project. However, the condition described above will be included as conditions of approval of the project to ensure compliance with the Comprehensive Plan.

MITIGATION MEASURES

The project site is listed as an open Santa Clara County Department of Environmental Health (SCCDEH) Cleanup Program Site (SCCDEH Case #2018-14s) and two closed SCCDEH Leaking Underground Storage Tank Cleanup Sites (no SCCDEH case numbers; Santa Clara Valley Water District [SCVWD] Cases #06S3W12K02f and #06S3W12K06f).

HAZ-1 SCCDEH Regulatory Agency Submittal. The project applicant shall continue to utilize Santa Clara County Department of Environmental Health (SCCDEH) Case #2018-14s for agency oversight of assessment and remediation of the project site through completion of building demolition, subsurface demolition, and construction. Prior to commencement of demolition and construction/grading activities at the project site, the project applicant shall submit the following documents to the SCCDEH project manager of the open Cleanup Program Site case:

- Current development plan and any modifications to the development plan
- All environmental documents completed for the project
- Following demolition and construction grading activities, all future environmental documents completed for the project

Subsurface soil, soil vapor, groundwater investigations, and/or other remediation reports, if required by SCCDEH after submittal of above required documents, shall be conducted in accordance with a sampling plan that shall be reviewed and approved by SCCDEH. SCCDEH may require approval of the final Site Management Plan (SMP) required by Mitigation Measure HAZ-2, below, prior to issuance of any required building or grading permits. The project applicant shall comply with SCCDEH requirements, conduct further investigations as required, and submit the results to SCCDEH.

SCCDEH may determine that San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) or Department of Toxic Substances Control (DTSC) may be best suited to perform the cleanup oversight agency duties for the assessment and/or remediation of the Project. Should the cleanup oversight agency be transferred from SCCDEH to SFBRWQCB or DTSC, this and other mitigation measures will still apply.

If groundwater wells or soil vapor monitoring probes are identified during demolition, subsurface demolition, or construction at the project site, they will be abandoned per Santa Clara Valley Water District (SCVWD) specifications.

Abandonment activities will be documented in a letter report submitted to SCVWD within 60 days of the completion of abandonment activities.

The SCCDEH closure and approval documents shall be delivered to and reviewed by the project applicant. The project applicant shall furnish copies of the completed reports and approval documents to the City Planning Department prior to issuance of grading permits.

HAZ-2 Site Management Plan. As described in Mitigation Measure HAZ-1, prior to commencement of demolition and construction/grading activities at the project site, the project applicant shall retain a qualified environmental consultant (PG or PE) to prepare a SMP for the project site. Where groundwater impacts are identified during implementation of Mitigation Measure HAZ-1, a groundwater management section shall be added to the SMP. The SMP shall address:

1. On-site handling and management of impacted soils or other impacted wastes (e.g., stained soil, and soil or groundwater with solvent or chemical odors) if such soils or impacted wastes are encountered, and
2. Specific actions to reduce hazards to construction workers and offsite receptors during the construction phase.

The plan must establish remedial measures and soil management practices to ensure construction worker safety, the health of future workers and visitors, and the off-site migration of contaminants from the project. These measures and practices shall include, but are not limited to:

- Stockpile management including stormwater pollution prevention and the installation of best management practices (BMPs)
- Soil sampling procedures for imported fill material (in accordance with DTSC's 2001 *Information Advisory Clean Imported Fill Material*)
- Proper disposal procedures of contaminated materials
- Investigation procedures for encountering known and unexpected odorous or visually stained soils, other indications of hydrocarbon piping or equipment, and/or debris during ground-disturbing activities
- Monitoring and reporting
- A health and safety plan for contractors working at the project site that addresses the safety and health hazards of each phase of site construction activities with the requirements and procedures for employee protection
- The health and safety plan shall outline proper soil handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction

The project applicant shall implement the SMP during demolition, grading, and construction at the project site. SCCDEH shall review and approve the SMP prior to

construction (demolition and grading) activities at the project site. The City shall review the SMP prior to issuance of grading permits.

SIGNIFICANCE AFTER MITIGATION

Implementation of Mitigation Measures HAZ-1 and HAZ-2 would reduce the potential for construction workers and nearby residents to be exposed to contaminants. Implementation of a vapor intrusion condition of approval will reduce exposure for future site occupants to contaminants.

By contacting SCCDEH prior to the issuance of any permits necessary for the beginning of construction or development, the implementation of Mitigation Measure HAZ-1 would ensure that the proper regulatory oversight is applied to project approval and proper cleanup activities occur throughout the development process.

Mitigation Measure HAZ-2 would ensure that planning for the procedures to be implemented throughout work with impacted soils, soil vapor, or groundwater is conducted prior to approval of permits to begin construction from City or other agencies. Adherence to an approved SMP developed under regulatory oversight would reduce potential impacts relating to disturbance and removal of potentially contaminated soils and exposure to soil vapor or groundwater. Further, adherence to the SMP would reduce potential impacts with regard to fugitive dust and volatile organic compounds (VOCs) generated during ground disturbance that could pose a temporary risk to human health due to inhalation.

With implementation of these mitigation measures and adherence to existing regulatory requirements for development of the project site, impacts to the public and the environment from on-site contamination would be less than significant.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

- 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?*

The closest airport is the Palo Alto Airport, located approximately 3.4 miles northeast of the project site. The project site is not located within the airport's noise contours or within the airport's safety zone (Santa Clara County 2020). There would be no impact.

NO IMPACT

- f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Construction of the proposed project would occur within the boundary of the project site and would not lead to street closures which would interfere with emergency evacuations or response. The proposed project does not involve the development of structures that could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No streets or property access points would be

closed, rerouted, or substantially altered upon implementation and operation of the project. There would be no impact.

No IMPACT

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

As described below in Section 20, *Wildfire*, the project site is in a developed urban area and is not within or adjacent to a designated very high wildland fire hazard zone (CalFire 2022). Therefore, the project would not expose people or structures to a significant loss, injury, or death involving wildland fires. There would be no impact.

No IMPACT

10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project have any of the following impacts:</i>				
a. <i>Violate any water quality standards or waste discharge requirements or otherwise degrade surface or groundwater quality?</i>	☐	☐	☒	☐
b. <i>Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?</i>	☐	☐	☒	☐
c. <i>Substantially alter the existing drainage pattern of the site or area, including through the alteration of a course of a stream or river or through the addition of impervious surfaces in a manner which would:</i>				
1. <i>Result in substantial erosion or siltation on- or off-site?</i>				
2. <i>Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?</i>				
3. <i>Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff</i>				
4. <i>Impede or redirect flows</i>	☐	☐	☒	☐
d. <i>In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?</i>	☐	☐	☐	☒
e. <i>Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?</i>	☐	☐	☒	☐

IMPACT ANALYSIS

- a. Would the project violate any water quality standards or waste discharge requirements or otherwise degrade surface or groundwater quality?*

The project site is currently almost entirely developed and/or paved, with a total of approximately 47,218 square feet of impervious surface. The proposed project would decrease the coverage of impervious surfaces to 41,321 square feet; thus, the proposed project would increase pervious space from 2,745 square feet to 8,642 square feet. The proposed project would be required to comply with Chapter 16.11 of the PAMC, which requires that permanent stormwater pollution prevention measures be incorporated into the project. In compliance with PAMC requirements, a Stormwater Pollution Prevention Plan must be prepared for the proposed project. The project would include roughly 8,642 square feet of pervious surface through landscaping and other vegetation. The project would also include three biotreatment ponds that would retain and treat stormwater runoff and would include permeable planting material for stormwater treatment and retention. The biotreatment ponds would treat 1,379 square feet of the project site. With compliance with PAMC requirements and implementation of on-site stormwater retention and treatment, impacts related to stormwater runoff and pollution would be less than significant.

As discussed in Section 9, *Hazards and Hazardous Materials*, groundwater contamination is known to exist beneath the project site. The project would require an NPDES Construction General Permit since it will disturb over 1 acre of land. The project would also be required to comply with the Santa Clara Valley Urban Runoff Pollution Prevention Program's C.3. Requirement. Maximum excavation depth would be 15 feet. As discussed in Section 9, *Hazards and Hazardous Materials*, groundwater exists at 19 to 27 feet below ground surface at the project site. Therefore, groundwater is not likely to be encountered during construction. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

- b. Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering or the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?*

As discussed in Section 17, *Utilities and Service Systems*, the proposed project would receive its water from the San Francisco Public Utilities Commission (SFPUC). The Regional Water System collects water from the Tuolumne River in the Sierra Nevada and from protected local watersheds in the East Bay and Peninsula. Therefore, water supply to the project site would not rely on groundwater supplies. Development under the proposed project would not include installation of new groundwater wells or use of groundwater from existing wells. Maximum excavation depth is near where groundwater is encountered, but not below it, thus the project would not require permanent dewatering such that it would result

in significant depletion of groundwater supply. Therefore, development under the proposed project would not result in a net deficit in aquifer volume or a lowering of the groundwater table. The project would not result in an exceedance of safe yield or a significant depletion of groundwater supplies. Impacts related to groundwater would be less than significant.

LESS THAN SIGNIFICANT IMPACT

- c1. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of a course of a stream or river or through the addition of impervious surfaces in a manner which would result in substantial erosion or siltation on- or off-site?*
- c2. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of a course of a stream or river or through the addition of impervious surfaces in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*
- c3. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of a course of a stream or river or through the addition of impervious surfaces in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*
- c4. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of a course of a stream or river or through the addition of impervious surfaces in a manner which would impede or redirect flows?*

Matadero Creek is 0.3 miles southeast of the proposed project site and does not flow through or adjacent to the site. North of El Camino Real the creek is not channelized, but south of El Camino Real it is. The area is currently developed, and construction of the proposed project would not alter the course of this creek or any other stream or river (no other surface water features are identified in the project area). The proposed project would not alter the course of a stream or river and would not cause erosion, flooding, water pollution, or change in water flows. The project site is largely paved, and proposed development would not introduce new paved areas to the extent that the rate or amount of surface runoff would substantially increase (see discussion under questions a, f, g, above). The project site is connected to an existing stormwater drainage system located in the City of Palo Alto Matadero Creek Watershed. Stormwater runoff in the project area is currently flowing directly to Matadero Creek and eventually to the San Francisco Bay. The amount and direction of runoff would not substantially change due to the proposed project. The existing site contains 47,218 square feet of impervious surfaces and the project would decrease total impervious surfaces to 41,321 square feet, thereby reducing the amount of stormwater runoff.

The proposed project would not substantially increase polluted runoff volumes, would not exceed the capacity of existing or planned stormwater drainage systems, would not lead to

erosion or siltation, would not impede or redirect flows, and would not result in flooding on- or off-site. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

- d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?*

Most of Palo Alto is within Flood Zone "X" according to the Federal Emergency Management Agency (FEMA). Flood Zone X describes an area either lying outside the 100-year flood limit and inside the 500-year flood limit, or as lying within the 100-year flood limit but shallow enough to not represent a special hazard. The project site is located within Flood Zone X and is not within a 100-year flood hazard area (FEMA 2021). Therefore, the proposed project would not expose people or structures to a significant loss, injury, or death involving flooding.

The project site is located approximately three miles from the San Francisco Bay and approximately 15 miles from the coast of the Pacific Ocean. The risk of a tsunami is negligible due to the distance from the Pacific Ocean and San Francisco Bay. According to the City of Palo Alto's Natural and Urban Environment and Safety Element, mudflows and seiches are not identified as issues for the city. In addition, the nearest body of water that could experience a seiche event is the San Francisco Bay, which is located approximately three miles northeast of the project site. Due to various physical barriers (i.e. buildings) and extensive distance between the Bay and the project site, a seiche in the Bay would not have potential to affect the project site. The project site is flat and surrounded by commercial development away from crests and steep ridges. Therefore, the project site is located in a low hazard area for tsunami or seiche. No impact would occur.

NO IMPACT

- e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

As discussed under Impact (a) above, the project would not violate water quality standards or degrade water quality during construction or operation.

The City of Palo Alto is under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB). The San Francisco Bay RWQCB provides permits for projects that may affect surface waters and groundwater locally and is responsible for preparing the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). The Basin Plan designates beneficial uses of water in the region and establishes narrative and numerical water quality objectives. The Basin Plan serves as the basis for the San Francisco Bay RWQCB's regulatory programs and incorporates an implementation plan for achieving water quality objectives (California Water Board 2017). The proposed project would not interfere with the objectives and goals in the Basin Plan. This impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project have any of the following impacts:</i>				
a. <i>Physically divide an established community?</i>	☐	☐	☐	☒
b. <i>Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?</i>	☐	☐	☒	☐

IMPACT ANALYSIS

a. *Would the project physically divide an established community?*

Implementation of the proposed project would continue the existing commercial and residential development pattern in the vicinity and would not cut off connected neighborhoods or land uses from each other. No new roads, linear infrastructure or other development features are proposed that would divide an established community or limit movement, travel or social interaction between established land uses. Therefore, no impact would occur.

No Impact

b. *Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental*

The proposed project's consistency with the City of Palo Alto 2030 Comprehensive Plan and Zoning Ordinance are discussed below. The proposed project's compliance with the State Density Bonus is also discussed below.

CITY OF PALO ALTO 2030 COMPREHENSIVE PLAN

The project site has a land use designation of Service Commercial. As described in the 2030 Comprehensive Plan, typical uses include auto services and dealerships, motels, lumberyards, appliance stores, and restaurants, including fast service types. However, near transit centers, higher density multi-family housing may be allowed in specific locations in this land use category. The proposed project involves residential use on El Camino Real. The Comprehensive Plan provides that residential uses are permitted in the Service Commercial zone and encourages residential uses near transit. The project site is served by transit such as VTA Bus Routes 22, 89, 522, Rapid 522, Express 101, Express 102, Express 103 and Express 104, as well as Dumbarton Express Route DB1 at the intersection of Page Mill

Road/Ramos Way, and the Caltrain station at 101 California Avenue, and therefore would be consistent with the land use designation for the site. The Comprehensive Plan indicates that non-residential uses in the CS land use zones should have FARs ranging up to 0.4; however, the proposed project is not a non-residential use and is not subject to this requirement.

The project site is in the Cal-Ventura area which is identified under Policy L-9 as a location where “continued mixing of land uses is encouraged” and as a location that should be augmented by new development including multi-family housing. The Land Use and Design Element also states that the proximity of this area to transit and services makes it “an excellent location for both housing and commercial uses.” The proposed project would be consistent with the goals and policies for this area as specified in the Land Use and Design Element.

STATE DENSITY BONUS LAW COMPLIANCE

The proposed project would provide 100 percent of the units to very low income (30-50 percent of Area Median Income) households except for manager’s units. Therefore, the project is a qualifying project in accordance with California Government Code Section 65915(b)(1)(G), which includes projects that provide “One hundred percent of all units in the development, including total units and density bonus units, but exclusive of a manager’s unit or units, are for lower income households, as defined by Section 50079.5 of the Health and Safety Code, except that up to 20 percent of the units in the development, including total units and density bonus units, may be for moderate-income households, as defined in Section 50053 of the Health and Safety Code.” Accordingly, under Section 65915(d)(2)(D) and PAMC Section 18.15.050(c)(iv), the project is eligible for four incentives or concessions. Specifically, the project applicant is requesting concessions for Floor Area Ratio (FAR), setbacks, site coverage and usable open space.

In addition, because the project is located within a Transit Priority Area (ABAG 2021b), separate from the concessions or waivers, the applicant is also eligible for a height increase of up to three additional stories, or 33 feet, is eligible for unlimited density (Section 65915[f][3][d][ii]), and is not required to comply with a minimum parking requirement (Section 65915[p][3]). Because there is no density requirement for residential development along El Camino Real (PAMC 2022c), no request for a waiver of density is necessary. Table 14 includes a list of the applicant-requested concessions under the State density bonus law.

CITY OF PALO ALTO ZONING ORDINANCE

The site is zoned Service Commercial (CS) District. As described in PAMC Chapter 18.16, residential is a permitted land use in this district. The project’s consistency with PAMC development standards for the CS district are included in Table 14.

Table 14 Project Consistency with PAMC CS Development Standards

Project Characteristics	CS Requirements ¹	Proposed by Project	Project Compliance with RM-30 Requirements
Density	No maximum	113 dwelling units/acre	Complies
Floor Area Ratio	0.6: 1	2.74: 1 (136,945 sf)	Requested density bonus concession
Building Height	50 (maximum)	59	Density bonus allowance per California Government Code (§65915[f][3][d][iii])
Useable Open Space (private and common)	150 sf per unit (19,350 sf)	100 sf per unit (12,917 sf)	Requested density bonus concession
Site Coverage	50%	74%	Requested density bonus concession
Front Setback	0-10 feet to create an 8-12 foot effective sidewalk width	8-foot effective sidewalk width	Complies
Rear Setback	10 ft	5 ft	Requested density bonus concession
Interior Side Setback	10 ft (when abutting a residential district)	10 ft	Complies
Street Side Setback	5 ft	5 feet (12-foot effective sidewalk proposed)	Complies
Parking			
Garage Parking	0.5 spaces per residential unit	103 spaces (0.79 spaces per residential unit)	Density bonus allowance for minimum required parking
Total Spaces	—	103 spaces (0.79 spaces ratio)	-
Total Bicycle Parking Spaces	1 space per unit	152 spaces (138 long-term, 14 short-term)	Complies

¹ Per PAMC Section 18.16.040, development standards for the CS district.

Overall, with allowed density bonus concessions, the project would be consistent with the 2030 Comprehensive Plan and the City of Palo Alto Zoning Ordinance. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
<i>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?</i>	☐	☐	☐	☒
<i>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?</i>	☐	☐	☐	☒

SETTING

A small portion of Palo Alto is classified as Mineral Resource Zone-2 (MRZ-2), defined as “adequate information indicated that significant mineral deposits are present or a likelihood of their presence and development should be controlled”. The MRZ-2 is located in the southern portion of the city, adjacent to the San Mateo County/Santa Clara County border north of Foothills Park (0.5 mile east of the project site) (City of Palo Alto 2017). Pursuant to USGS records, there are no known mineral resources or mines present on the project site and work area (USGS 2022).

IMPACT ANALYSIS

- Would the project 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?*
- Would the project 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?*

The project site and surrounding properties are located in an urbanized area with no current oil or gas extraction. According to the Natural Environment Element of the Comprehensive Plan, there are no policies relating to mineral resources because Palo Alto does not contain any mineral deposits of regional significance (City of Palo Alto Comprehensive Plan 2017). No mineral resource activities would be altered or displaced by the proposed project. No impact would occur.

NO IMPACT

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13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project result in:</i>				
a. <i>Generation of a substantial temporary or permanent increase in ambient noise levels in the project vicinity in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?</i>	☐	☐	☒	☐
b. <i>Generation of excessive groundborne vibration or groundborne noise levels?</i>	☐	☒	☐	☐
c. <i>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?</i>	☐	☐	☐	☒

SETTING

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (California Department of Transportation [Caltrans] 2013).

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000 Hertz and less sensitive to frequencies around and below 100 Hertz (Kinsler, et. al. 1999). Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dBA; dividing the energy in half would result in a 3 dBA decrease (Crocker 2007).

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not “sound

twice as loud” as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible; and that an increase (or decrease) of 10 dBA sounds twice (or half) as loud (Crocker 2007).

Sound changes in both level and frequency spectrum as it travels from the source to the receptor. The most obvious change is the decrease in level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (e.g., point or line, the path the sound will travel, site conditions, and obstructions). Noise levels from a point source typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance (e.g., construction, industrial machinery, ventilation units). Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this “shielding” depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, and man-made features such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5 dBA reduction in source noise levels at the receptor (Federal Highway Administration [FHWA] 2011). Structures can substantially reduce exposure to interior noise as well. The FHWA’s guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

One of the most frequently used noise metrics is the equivalent noise level (L_{eq}); it considers both duration and sound power level. L_{eq} is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time. Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{dn}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. It is also measured using CNEL, which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013). Noise levels described by L_{dn} and CNEL usually differ by about 1 dBA. The relationship between the peak-hour L_{eq} value and the L_{dn} /CNEL depends on the distribution of traffic during the day, evening, and night.

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Construction vibration estimates are based on vibration levels at 25 feet reported by the FTA (FTA 2018). Table 15 shows typical vibration levels for various pieces of construction equipment used in the assessment of construction vibration (FTA 2018).

Table 15 Vibration Levels Measured during Construction Activities

Equipment	PPV at 25 feet (in/sec)
Vibratory Roller	0.21
Large Bulldozer	0.089
Loaded Trucks	0.076
Small Bulldozer	0.003

PPV = peak particle velocity; in./sec. = inches per second
Source: FTA 2018

Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as groundborne noise. Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. Vibration amplitudes are usually expressed in peak particle velocity (PPV), which is normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of blasting vibration and other construction activities because it is related to the stresses that are experienced by buildings (Caltrans 2020).

CITY OF PALO ALTO NOISE STANDARDS

The City's Comprehensive Plan Natural Environment Element includes goals and policies related to noise. This element establishes land use compatibility categories for community noise exposure (see Table 16). For residential uses, noise levels up to 60 dBA L_{dn} are identified as normally acceptable and noise levels between 60 and 75 dBA L_{dn} are identified as conditionally acceptable.

Table 16 Palo Alto Land Use Compatibility for Community Noise Environments

Land Use Category	Exterior Noise Exposure L_{dn} or CNEL or dB		
	Normally Acceptable	Conditionally Acceptable	Unacceptable
Residential, Hotel and Motels	50-60	60-75	75+
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds	50-65	65-80	80+
Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches	50-60	60-75	75+
Office Buildings, Business Commercial, and Professional	50-70	70-80	80+
Auditoriums, Concert Halls, and Amphitheaters	N/A	50-75	75+
Industrial, Manufacturing, Utilities, and Agriculture	50-70	75+	N/A

Source: City of Palo Alto 2017

The Palo Alto Municipal Code (PAMC) regulates noise primarily through the Noise Ordinance, which comprises Chapter 9.10 of the Code, under Title 9, Public Peace, Morals and Safety. The Municipal Code contains additional specific and general provisions relating to noise.

Section 9.10.030 of the Noise Ordinance regulates residential property noise limits as follows:

- No person shall produce, suffer or allow to be produced by any machine, animal or device, or any combination of same, on residential property, a noise level more than six dBA above the local ambient at any point outside of the property plane.
- No person shall produce, suffer or allow to be produced by any machine, animal, or device, or any combination of same, on multi-family residential property, a noise level more than six dBA above the local ambient three feet from any wall, floor, or ceiling inside any dwelling unit on the same property, when the windows and doors of the dwelling unit are closed, except within the dwelling unit in which the noise source or sources may be located.

The Noise Ordinance also regulates noise associated with construction activities. Section 9.10.060 of the PAMC restricts construction activities to the hours of 8 AM to 6 PM Monday through Friday and 9 AM to 6 PM on Saturday. Construction is prohibited on Sundays and holidays. Construction, demolition, or repair activities during construction hours must meet the following standards:

- No individual piece of equipment shall produce a noise level exceeding 110 dBA at a distance of 25 feet. If the device is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close to 25 feet from the equipment as possible.
- The noise level at any point outside of the property plane of the project shall not exceed 110 dBA.
- The holder of a valid construction permit for a construction project in a non-residential zone shall post a sign at all entrances to the construction site upon commencement of construction, for the purpose of informing all contractors and subcontractors, their employees, agents, materialmen, and all other persons at the construction site, of the basic requirements of this chapter.

Section 18.42.190 of the PAMC states that all uses within 150 feet of a residential property should be operated as not to generate vibration discernible without instruments at or beyond the lot line upon which the source is located or within adjoining enclosed space if more than one establishment occupies a structure. Vibration caused by motor vehicles, trains, and temporary construction or demolition work is exempted from this standard.

SENSITIVE RECEIVERS

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Sensitive receivers are defined as places where noise could interfere with regular activities such as sleeping, talking, and recreating, which include hospitals, residences, convalescent homes, schools, libraries, churches, and other religious institutions. Noise sensitive receivers near the site include single-family residences adjacent to the project site along the northeastern project boundary.

Vibration sensitive receivers are similar to noise sensitive receivers, including residences and institutional uses such as schools, churches, and hospitals. However, vibration sensitive receivers also include buildings where vibrations may interfere with vibration-sensitive equipment. Vibration sensitive receivers near the site include single-family residences adjacent to the project site along the northeastern project boundary.

PROJECT SITE NOISE SETTING

The most common source of noise in the project site vicinity is vehicular traffic from El Camino Real, Olive Avenue, and Acacia Avenue. To characterize ambient noise levels in the project vicinity, two short-term (15 minute) and one long-term (24 hour) noise level measurements were conducted on November 14 and November 15, 2022. The noise measurement locations are shown in Figure 8. Short-term noise measurement (ST)-1 was conducted along the southwestern project boundary to capture noise levels attributable to El Camino Real. ST-2 was conducted along the northwestern project boundary to capture ambient noise levels attributable to Olive Avenue. Long-term noise measurement (LT)-1 was conducted along the northeastern project boundary, adjacent to the single-family residences, to characterize the local noise environment for comparison to City standards.

Table 17 and Table 18 summarize the results of the short-term and long-term noise measurements.

Table 17 Short-Term Noise Level Measurement Results

Measurement Location	Measurement Location	Sample Times	Approximate Distance to Primary Noise Source	Leq (dBA)	Lmin (dBA)	Lmax (dBA)
ST 1	Southwestern property boundary, adjacent to El Camino Real	9:11 – 9:26 a.m.	Approximately 50 feet to El Camino Real centerline	72	50	85
ST 2	Northwestern property boundary, adjacent to Olive Avenue	9:28 – 9:43 a.m.	Approximately 25 feet to Olive Avenue centerline and approximately 195 feet to El Camino Real centerline	58	43	71

dBA = A-weighted decibels; Leq = equivalent noise level; Lmin = minimum noise level, Lmax = maximum noise level
Detailed sound level measurement data are included in Appendix G.

Figure 8 Noise Measurement Locations



Table 18 Long-Term Noise Measurement Results

Sample Time	dBA L _{eq}	Sample Time	dBA L _{eq}
24-hour Measurement – November 14-15, 2022			
8:59 a.m.	58	9:59 p.m.	53
9:59 a.m.	59	10:59 p.m.	52
10:59 a.m.	56	11:59 p.m.	54
11:59 a.m.	58	12:59 p.m.	52
12:59 p.m.	58	1:59 a.m.	46
1:59 p.m.	58	2:59 a.m.	46
2:59 p.m.	58	3:59 a.m.	49
3:59 p.m.	59	4:59 a.m.	51
4:59 p.m.	58	5:59 a.m.	55
5:59 p.m.	58	6:59 a.m.	57
6:59 p.m.	57	7:59 a.m.	61
7:59 p.m.	57	8:59 a.m.	60
24-hour Noise Level (CNEL)			61
dBA = A-weighted decibels; L _{eq} = equivalent noise level; CNEL = community equivalent noise level			
See Figure 8 for Approximate Noise Measurement Locations; see Appendix G for full measurement details.			

METHODOLOGY

CONSTRUCTION NOISE

The City has adopted construction noise standards in the Municipal Code regulation noise associated with construction activities in the City. The project would result in a significant impact if noise from construction activities associated with the project would exceed 110 dBA L_{max}, as discussed in the *City of Palo Alto Noise Standards* section above.

CONSTRUCTION VIBRATION

Vibration limits used in this analysis to determine a potential impact to local land uses from construction activities, such as vibratory compaction or excavation, are based on information contained in the FTA *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018). Groundborne vibration levels that could induce potential architectural damage to buildings are identified in Table 19. Based on FTA recommendations, limiting vibration levels to below 0.2 in/sec PPV at non-engineered timber and masonry buildings (which would apply to the nearby residential structures) would prevent architectural damage.

Table 19 Groundborne Vibration Architectural Damage Criteria

Building Category	PPV (in/sec)
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Nonengineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12
in/sec = inches per second; PPV = peak particle velocity	
Source: FTA 2018	

ON-SITE STATIONARY OPERATIONAL NOISE

The City has adopted noise standards in the Municipal Code regulating operational noise sources in the City. The project would result in a significant impact if noise from project mechanical equipment (primary project stationary operational noise source) would exceed six dBA above local ambient noise levels, as discussed in the *City of Palo Alto Noise Standards* section above.

TRAFFIC NOISE

A project would normally have a significant effect on the environment related to noise if it would substantially increase the ambient noise levels for adjoining areas. The following thresholds of significance similar to those recommended by the Federal Aviation Administration (FAA), are used to assess traffic noise impacts at sensitive receptor locations. A significant impact would occur if traffic noise increases the existing noise environment by the following:

- Greater than 1.5 dBA for ambient noise environments of 65 dBA CNEL and higher.
- Greater than 3 dBA for ambient noise environments of 60 to 64 dBA CNEL.
- Greater than 5 dBA for ambient noise environments of less than 60 dBA CNEL.

IMPACT ANALYSIS

- Would the project generate a substantial temporary or permanent increase in ambient noise levels in the project vicinity in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

CONSTRUCTION NOISE

As discussed above, PAMC Section 9.10.060 regulates temporary construction noise. Construction of the project would generate temporary noise that would be audible at the single-family residence adjacent to the northeastern of project site. Noise associated with construction is a function of the type of construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of the construction activities. Based on construction details provided by the applicant, it is estimated that the construction period would involve approximately 35 days for demolition, 100 days for site preparation, 40 days

for grading, 400 days for building construction, 21 days for paving, and 30 days for architectural coating. While all phases of construction would generate noise, the building construction phase would represent the longest period of noise-generating activity. According to applicant provided information, pile drivers would not be used in building construction.

Construction noise was estimated using the Federal Highway Administration's Roadway Construction Noise Model (RCNM) (Appendix G). Noise was modeled based on the list of anticipated equipment list for each phase of construction and the distances to nearby sensitive receivers. For a conservative approach, it was assumed that all construction equipment per phase would be operating simultaneously and would combine as a collective noise source. Table 20 shows the results of construction noise modeling from the closest distance from construction equipment to the closest property line at the single-family residences approximately 20 feet northeast of the project site.

Table 20 Calculated Construction Noise Levels for Each Phase of Construction

Construction Phase	Equipment	Estimated Noise at 20 feet (dBA L _{max})
Demolition	Backhoe, concrete/industrial saw, and rubber tired dozer	98
Site Preparation	Backhoe, grader, and scrapper	93
Grading	Backhoe, grader, and rubber tired dozer	93
Building Construction	Backhoe, crane, forklift, generator set, and welder	93
Paving	Backhoe, cement and mortar mixer, paver, paving equipment, and roller	93
Architectural coating	Air Compressor	88

See Appendix G for RCNM outputs.

As shown in Table 20, construction noise could be as high as 98 dBA L_{max} during demolition, which would be the loudest phase of project construction and is anticipated to occur for approximately 35 days. Construction noise levels would be below the City's standard of 110 dBA L_{max} at any point outside the property line during allowable construction hours (PAMC Section 9.10.060). Additionally, as discussed in the Project Description (Construction), the following construction noise best management practices (BMPs) would be implemented as a project design feature: use of noise suppression device and techniques, equip all internal combustion engines driven equipment with mufflers, prohibit unnecessary idling on engines, and locate noise-generating equipment and staging areas as from the single-family residences as possible. This analysis conservatively assumes distances of 20 feet, which is the distance between the proposed building and the property line adjacent to the single-family uses. However, demolition would primarily occur at a distance of approximately 80 feet (the distance between the property line and the closest existing building). Additionally, although subsequent phases of construction are anticipated to occur over a greater period of time, work would occur across the entire property, portions of which are much further than 20 feet from adjacent sensitive receivers which would thus be exposed to lower noise

levels than shown in Table 20. Therefore, impacts related to construction noise would be less than significant.

OPERATIONAL NOISE

MECHANICAL EQUIPMENT

The primary on-site operational noise source from the project would be from HVAC units that are anticipated to be on the rooftop of various buildings. Rooftop HVAC units would be located as close as approximately 80 feet from the sensitive receivers to the north of the project site. Typical HVAC equipment generates noise levels ranging up to 72 dBA at a distance of 3 feet. At a distance of 80 feet, noise levels from HVAC noise would attenuate to approximately 45 dBA. As discussed above under the City of Palo Alto Noise Standards, no person may produce a noise level more than six dBA above the local ambient noise level. An increase of six dBA or more would result in a significant impact. Based on noise measurements taken at the project site, the local ambient noise level is 61 dBA CNEL. Therefore, noise generated by HVAC equipment would not produce a noise level more than six dBA above the local ambient noise level, and impacts would be less than significant.

OTHER OPERATIONAL NOISE SOURCES

On-site noise sources such as landscape maintenance, conversations, and outdoor common open space would be typical of noise generated by neighboring land uses. Therefore, noise from these sources would be similar to the existing noise condition and would not substantially increase ambient noise levels in the project vicinity.

OFF-SITE TRAFFIC NOISE

The project would generate new vehicle trips that would increase noise levels on nearby roadways. The project is anticipated to generate 621 net new daily vehicle trips (W Trans 2023).

The project would not make substantial alterations to roadway alignments or substantially change the vehicle classifications mix on local roadways. Therefore, the primary factor affecting off-site noise levels would be increased traffic volumes. Table 21 summarizes the estimated project and cumulative traffic noise increases based on average daily traffic (ADT) volumes provided by W-Trans (W-Trans 2023). As shown in Table 21, the maximum increase in traffic noise would be 2.46 dBA CNEL under cumulative conditions along Olive Avenue east of El Camino Real. The project's contribution to the cumulative increase from traffic noise would be a maximum of 1.60 dBA CNEL on Olive Avenue west of El Camino Real. A significant impact would occur if traffic noise increases the existing noise environment greater than three dBA for ambient noise environments of 60 to 64 dBA CNEL.⁴ The maximum noise level increase from the project would be 1.60 dBA under project cumulative conditions, which is less than three dBA. Traffic noise impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

⁴ The ambient noise environment is 61 dBA CNEL as a result of the long-term noise measurement shown in Table 18.

Table 21 Summary of Project and Cumulative Traffic Noise Increases

Roadway	Segment	Roadway Segment Volumes (ADT)				dBA (CNEL)		
		Existing	Existing + Project	Cumulative	Cumulative + Project	Project Noise Increase	Cumulative Increase	Project Cumulative Contribution
El Camino Real	El Camino Real - North of Page Mill Road	36,970	37,090	48,100	48,220	0.01	1.15	0.01
El Camino Real	El Camino Real - South of Page Mill Road	36,240	36,600	42,330	47,510	0.04	1.18	0.50
Page Mill Road	Page Mill Road - East of El Camino Real	34,080	34,200	39,530	44,470	0.02	1.16	0.51
Page Mill Road	Page Mill Road - West of El Camino Real	35,890	36,010	46,700	46,820	0.01	1.15	0.01
El Camino Real	El Camino Real - South of Olive Avenue	36,230	36,590	47,150	47,510	0.04	1.18	0.03
El Camino Real	El Camino Real - North of Olive Avenue	36,380	36,570	47,010	47,530	0.02	1.16	0.05
Olive Avenue	Olive Avenue - West of El Camino Real	790	800	740	1,070	0.05	1.32	1.60
Olive Avenue	Olive Avenue - East of El Camino Real	1,300	1,860	1,740	2,290	1.56	2.46	1.19
El Camino Real	El Camino Real - North of Hansen Way	29,020	29,210	37,750	37,940	0.03	1.16	0.02
El Camino Real	El Camino Real - South of Hansen Way	29,350	29,500	38,170	38,320	0.02	1.16	0.02
Hansen Way	Hansen Way - East of El Camino Real	2,750	2,790	3,640	3,640	0.06	1.22	0.00
ADT = Average Daily Traffic								
CNEL = Community Noise Equivalent Level								
Source: W-Trans 2023								

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

The proposed project involves residential uses and would not include substantial vibration sources associated with operation. Therefore, operational vibration impacts would be less than significant. Thus, construction activities have the greatest potential to generate ground-borne vibration affecting nearby receivers. The greatest anticipated source of vibration during general project construction activities would be from a vibratory roller, which may be used within 30 feet of the nearest off-site structure, the single-family residences to the northeast. Neither blasting nor pile driving would be required for construction of the project. Table 22 shows vibration levels of anticipated equipment used during construction at distances of 20 feet and 30 feet from the nearest off-site structure. Vibration levels were estimated using the FTA reference vibration levels at 25 feet, shown in Table 15 above.

Table 22 Vibration Levels Measured during Construction Activities

Equipment	PPV at 20 feet (in/sec)	PPV at 30 feet (in/sec)
Vibratory Roller	0.293	0.1598
Large Bulldozer	0.124	0.06770
Small Bulldozer	0.004	0.0023
Source: FTA 2018		

Based on FTA recommendations, limiting vibration levels to below 0.2 in/sec PPV at residential structures would prevent architectural damage regardless of building construction type. A vibratory roller generates up to approximately 0.21 in/sec PPV at a distance of 25 feet, which would exceed the significance threshold of 0.2 in/sec PPV. Therefore, if a vibratory roller were to operate within 20 feet of an off-site structure, the 0.2 in/sec PPV threshold could be exceeded. However, at a distance of 30 feet or more, a roller would create approximately 0.1598 in/sec PPV (FTA 2018), which would not exceed the FTA recommendation of limiting vibration levels to below 0.2 in/sec PPV. Therefore, Mitigation Measure NOI-1 would be required to ensure that vibration associated with construction activities would not exceed vibration thresholds at sensitive receivers and that construction activities would not result in generation of excessive groundborne vibration. Impacts would be less than significant with mitigation.

MITIGATION MEASURE

The following mitigation measure is required.

NOI-1 Construction Vibration. For any activities within 25 feet of off-site sensitive receivers, static rollers, or similar alternative construction equipment that is demonstrated to have vibratory levels below the level of significance of 0.2 in/sec PPV shall be used in lieu of vibratory rollers. The applicant shall designate a disturbance coordinator who shall be responsible for responding to any local complaints about construction noise. The noise disturbance coordinator shall

determine the cause of the noise complaint and shall require that reasonable measures warranted to correct the problem. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.

SIGNIFICANCE AFTER MITIGATION

Implementation of Mitigation Measure NOI-1 would ensure that vibration impacts from construction activities would not exceed vibration thresholds and would reduce impacts to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

- 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?*

The Palo Alto Airport is located over two miles away and the project site is not located within the Palo Alto Airport's noise contours (Santa Clara County Airport Land Use Commission 2020). Furthermore, there is no private airstrip in the vicinity of the project site. Thus, future residents would not be exposed to excessive noise levels associated with air traffic and no impacts would occur.

NO IMPACT

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14 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
a. <i>Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?</i>	☐	☐	☒	☐
b. <i>Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere?</i>	☐	☐	☐	☒

IMPACT ANALYSIS

- a. *Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

The current population of Palo Alto is estimated at 67,473 with an average per-person household rate of 2.51 (Department of Finance [DOF] 2022). ABAG estimates that the population will increase to 86,510 by 2040 while the per-person household rate will increase to 2.48 (ABAG 2017). The City also currently has 29,165 housing units (DOF 2022). ABAG projections estimate that the number of housing units will increase to 32,940 by 2040.

The proposed project would include development of a residential building with 129 housing units. The proposed residential units include 20 studios, 40 one-bedrooms, 35 two-bedrooms, and 34 three-bedroom units. Based on an average rate of 2.51 persons per household in Palo Alto, the project would add approximately 323 new residents (average of 2.51 persons per household x 129 units = 323) which would bring the total population to approximately 67,795. ABAG estimates that the City's population would increase to 81,595 by 2025, an increase of 14,122 residents. The population increase associated with the proposed project would be well within the population forecast for Palo Alto. Therefore, the proposed project would not substantially induce population growth through the provision of new housing units.

The proposed project would not involve the extension of any roads or other infrastructure that would indirectly induce population growth. This impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

ENVIRONMENTAL CHECKLIST
POPULATION AND HOUSING

- b. Would the project displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere?*

There are no existing housing units at the project site or people residing on the project site in a form of temporary housing. Therefore, the project would not displace existing housing units or people. No impacts would occur.

NO IMPACT

15 Public Services

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental 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 public services:</i>				
a. Fire protection?	☐	☐	☒	☐
b. Police protection?	☐	☐	☒	☐
c. Schools?	☐	☐	☒	☐
d. Parks?	☐	☐	☒	☐
e. Other public facilities?	☐	☐	☒	☐

IMPACT ANALYSIS

- a. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?*

Fire protection is provided to the project site by the City of Palo Alto Fire Department (PAFD). The Fire Department provides fire suppression, paramedic ambulance service, search and rescue, fire prevention inspections/permits, public fire education programs, emergency preparedness planning and other services based on community needs. The proposed project would be required to adhere to the conditions of approval set forth by the PAFD based on their review of the project plans.

The fire station closest to the project site is Fire Station 2, located at 2675 Hanover Street, approximately a half mile southwest of the project site. The PAFD currently has a goal response time of 5 minutes which they are not currently meeting 90 percent of the time (PAFD 2018). The project would increase the number of people demanding emergency services; however, PAFD has policies in place to lower their response times including using GPS to dispatch those closest to the emergency and a traffic signal preemption program. In light of these measures, the project would not create excessive demand for emergency services or introduce development to areas outside of normal service range that would necessitate new fire protection facilities. With the continued implementation of existing practices of the City, including compliance with the California Fire Code, the proposed

project would not result in the need for construction or substantial alteration of fire protection facilities. This impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

- b. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?*

Police protection is provided by the Palo Alto Police Department (PAPD). The closest police station is located at 275 Forest Avenue, which is approximately 2.5 miles from the project site. The project site is within the PAPD's service area and is currently serviced by the PAPD. The project would not create excessive demand for police services or introduce development to areas outside of normal service range that would necessitate new or substantially altered police protection facilities. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

- c. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?*

The project site is served by the Palo Alto Unified School District (PAUSD). The project would involve 129 new residential units. Assuming a conservative student generation rate of one student per two- or three-bedroom unit (this assumes students would not be housed in the one-bedroom units or studios), the proposed project would generate 69 additional students at PAUSD schools. This incremental increase in the number of students would not result in the need for new or physically altered school facilities.

In addition, pursuant to Senate Bill 50 (Section 65995(h)), payment of mandatory fees to the affected school district would reduce school facility impacts to a less than significant level under CEQA. Therefore, the project would not have a significant impact with respect to schools.

LESS THAN SIGNIFICANT IMPACT

- d. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?*

Refer to Section 15, *Recreation*.

LESS THAN SIGNIFICANT IMPACT

- e. *Would the project result in substantial adverse physical impacts associated with the provision of other new or physically altered public facilities, or the need for other new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?*

As discussed in Section 14 *Population and Housing*, the increase in population resulting from the proposed project would not be significant. As described in checklist questions (a) through (d), impacts related to expanded or altered government facilities, including fire, police, school, and park facilities, would be less than significant. Further, as described in Section 10, *Hydrology and Water Quality*, and Section 19, *Utilities and Service Systems*, the project would not result in the need for new or altered public water, wastewater, or stormwater facilities. As such, there would be no need for additional public facilities to maintain acceptable service ratios, response times, or other performance standards. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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16 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?</i>	☐	☐	☒	☐
b. <i>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?</i>	☐	☐	☒	☐

IMPACT ANALYSIS

- a. *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*
- 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?*

The City of Palo Alto maintains 162 acres of urban parks distributed throughout the City as well as 43.2 miles of trail and over 4,000 acres in natural open space preserves. The four natural open space preserves are: Baylands Nature Preserve (which includes Byxbee Park), Esther Clark Preserve, Foothills Nature Preserve, and Pearson-Arastradero Preserve (City of Palo Alto n.d.). The ratio of public parks to residents in the City is 2.6 acres of parkland per for every 1,000 residents, which is slightly less than the standard ratio of 3 acres of parkland for every 1,000 residents used by the Quimby Act. Accounting for open space, the City has approximately 62 acres of parks and open space for every 1,000 residents.

The proposed project would not directly affect existing or planned parks or recreation facilities. The addition of 320 new residents to the total City population refer to Section 13, *Population and Housing*, would reduce the ratio of parkland to residents, but not significantly. The parkland ratio would remain around 2.4 acres per 1,000 residents and 62 acres of parks and open space per 1,000 residents after development of the proposed project. Therefore, the project would not substantially alter citywide demand for parks.

The project does not include the construction or expansion of recreational facilities that would create an adverse effect on the environment. As discussed in the project description, the project would include common open space areas and impacts related to those features

ENVIRONMENTAL CHECKLIST
RECREATION

are analyzed in this document along with the other project components. Impacts related to parks or recreational facilities would be less than significant.

LESS THAN SIGNIFICANT IMPACT

17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
a. <i>Conflict with an applicable plan, ordinance or policy addressing the circulation system, taking into account all modes of transportation, including transit, bicycle, and pedestrian facilities?</i>	☐	☐	☒	☐
b. <i>Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?</i>	☐	☐	☒	☐
c. <i>Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</i>	☐	☐	☒	☐
d. <i>Result in inadequate emergency access?</i>	☐	☐	☒	☐

The following analysis is based on the Local Transportation Analysis (LTA) prepared for the proposed project by W-Trans (W-Trans 2023). This report is included in Appendix A.

SETTING

LOCAL ROADWAY NETWORK

The project area served by a network of arterials, collectors, and local streets. Through traffic is generally served by arterial streets, while collector streets connect arterials to local streets and land uses. Local streets provide direct access to land uses. Project area roadways are summarized below.

- **El Camino Real (State Route 82)** is a north-south principal arterial roadway that provides local and regional access between San Francisco and San Jose. This road has three travel lanes in each direction and one to two left turn lanes at major driveways and intersections. Within the study area, the northbound and southbound travel lanes are separated by a median. El Camino Real has a posted speed limit of 35 mph.
- **Page Mill Road** is a four-lane, east-west principal arterial which provides access between US 101 and I-280 and El Camino Real. Within the study area, Page Mill Road has a posted speed limit of 35 mph.

PEDESTRIAN FACILITIES

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. In

general, a network of sidewalks, crosswalks, pedestrian signals, and curb ramps provide access for pedestrians near the project site.

- El Camino Real – Continuous sidewalks are provided along both sides of El Camino Real between Page Mill Road and Lambert Avenue, with curb ramps and overhead lighting provided at intersections. Crosswalks are provided at the intersection with Portage Avenue.
- Page Mill Road – On the south side of Page Mill Road between El Camino Real and Park Boulevard there are continuous sidewalks, with curb ramps and overhead lighting provided at intersections.
- Olive Avenue – Continuous sidewalks are provided along both sides of Olive Avenue between El Camino Real and Park Boulevard, with curb ramps and overhead lighting provided at intersections. Crosswalks are provided at the intersection with Park Boulevard.

BICYCLE FACILITIES

The Highway Design Manual, Caltrans, 2017, classifies bikeways into four categories:

- Class I Multi-Use Path – a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
- Class II Bike Lane – a striped and signed lane for one-way bike travel on a street or highway.
- Class III Bike Route – signing only for shared use with motor vehicles within the same travel lane on a street or highway.
- Class IV Bikeway – also known as a separated bikeway, a Class IV Bikeway is for the exclusive use of bicycles and includes a separation between the bikeway and the motor vehicle traffic lane. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

In the immediate project area, Class II bike lanes exist west of El Camino Real on both Hansen Way and Page Mill Road. Bicyclists ride in the roadway and/or on sidewalks along all other streets within the project study area. Table 23 summarizes the existing and planned bicycle facilities in the project vicinity, as contained in the City of Palo Alto Bicycle & Pedestrian Transportation Plan, 2012.

Table 23 Bicycle Facility Summary

Status	Class	Length (miles)	Begin Point	End Point
Existing				
Page Mill Rd	II	1.4	El Camino Real	Berry Hill Ct
Hansen Wy	II	0.5	El Camino Real	Page Mill Rd
Planned				
Page Mill Rd	I	0.5	Hanover St	El Camino Real
Portage Rd	II	0.3	El Camino Real	Park Blvd
El Camino Real	II	1.2	Page Mill Rd	Maybell Ave
Oregon Expressway	III	2.0	El Camino Real	W. Bayshore Rd

Source: City of Palo Alto Bicycle & Pedestrian Transportation Plan, Alta Planning & Design, 2012

TRANSIT FACILITIES

Development sites which are located within a half-mile (2,640-foot) walk of a transit stop are generally considered to be adequately served by transit

SANTA CLARA VALLEY TRANSPORTATION AUTHORITY

The Santa Clara Valley Transportation Authority (VTA) provides fixed route bus service and light rail train service in Santa Clara County. Within a half-mile walk of the project site there are bus stops for Routes 22, 89, 522, Rapid 522, Express 101, Express 102, Express 103 and Express 104. The combined service areas of these routes provide access between the project site and a variety of destinations such as the Palo Alto Transit Center, Palo Alto VA Hospital, Stanford Research Park, Santa Clara University, Winchester Light Rail Station, Santa Teresa Light Rail Station, Downtown San Jose, and Eastridge Transit Center.

DUMBARTON EXPRESS

The Dumbarton Express service is provided through a consortium of AC Transit, Bay Area Rapid Transit (BART), Union City Transit, Caltrain, SamTrans and the VTA. This service is provided on weekdays as an express bus service across the Dumbarton Bridge, connecting Palo Alto and Menlo Park with Union City, Fremont, and Newark. Route DB1 provides services from the Union City BART Station to the Stanford research park and operates from 5:10 a.m. to 8:30 p.m. with headways ranging from 15 to 25 minutes depending on the time of day. The nearest bus stop for Route DB1 is located approximately 0.3 miles away from the project site at the intersection of Page Mill Road/Ramos Way. Weekend service is not provided on Route DB1.

STANFORD RESEARCH PARK SHUTTLE

The Research Park shuttle provides rides from the Palo Alto Transit Center to the Research Park during the morning commute period and back to the Palo Alto Transit Center during the evening commute. Shuttles are typically available at 30-minute headways between 7:00 a.m. to 10:00 a.m. in the morning and 3:20 p.m. to 7:00 pm in the evening. The nearest shuttle stop for this service is located approximately 0.3 miles away at the intersection of Page Mill Road/Ramos Way.

CALTRAIN

Caltrain is the commuter rail line serving the San Francisco Peninsula. It connects Palo Alto with San Francisco to the north and San Jose and Gilroy to the south. The California Avenue Caltrain Station is located at 101 California Avenue which is within 0.5 miles north of the project site. Weekday train service is provided at this station with both northbound and southbound trains at one-hour headways from 8:00 a.m. to 11:00 p.m.

IMPACT ANALYSIS

The analysis in this section is primarily based on a Local Transportation Analysis prepared for the project by W-Trans (W-Trans 2023), which is included as Appendix A.

- a. Conflict with an applicable plan, ordinance or policy addressing the circulation system, taking into account all modes of transportation, including transit, bicycle, and pedestrian facilities?*

TRANSIT FACILITIES

Development sites which are located within one-half mile of a transit stop are generally considered to be adequately served by transit. The project is located within a half-mile walk to VTA bus stops for Routes 22, 89, 522, Rapid 522, Express 101, Express 102, Express 103 and Express 104, and is located approximately 0.3 miles away from the nearest Dumbarton Express Route DB1 at the intersection of Page Mill Road/Ramos Way. Furthermore, the Caltrain Station at 101 California Avenue is within 0.5 mile of the project site and is considered a major transit stop. Additionally, the project site is located in a Transit Priority Area according to ABAG (ABAG 2021b). The proposed project would not involve changes to the transit network and would not directly affect transit facilities. If 20 percent of peak hour trips were made by transit, there would be 9 (a.m.) and 12 (p.m.) additional transit riders during the peak hours, spread out over multiple buses and times. As such, the volume of transit riders expected to be generated by the project is not anticipated to exceed the carrying capacity of the existing transit services near the project site. Existing transit routes are adequate to accommodate project-generated transit trips. Existing stops are within an acceptable walking distance of the site and would be accessible via the existing sidewalk network in the study area.

Overall, the proposed project would not conflict with a program, plan, ordinance, or policy addressing transit facilities.

BICYCLE FACILITIES

Existing bicycle facilities, including the bicycle lanes on Hansen Way and Page Mill Road, together with the shared use of minor streets, provide adequate access for bicyclists within the vicinity of the project site. Bicycle use would be further supported through the provision of 152 bicycle parking spaces included as part of the project. The proposed project would not involve modifications to the bicycle network, nor would it preclude the potential for a

future Class II bicycle lane on El Camino Real, consistent with the City's Bicycle and Pedestrian Transportation Plan (City of Palo Alto 2012). Therefore, the project would be consistent with the City of Palo Alto Bicycle and Pedestrian Transportation Plan. Overall, the proposed project would not conflict with a program, plan, ordinance, or policy addressing bicycle facilities.

PEDESTRIAN FACILITIES

Given the proximity of the site to surrounding residential and retail uses, as well as the California Avenue Caltrain Station, it is reasonable to assume that some residents would choose to walk to destinations near the site and use the existing sidewalk network. Sidewalk connectivity is continuous throughout the surrounding neighborhood. Residents from the proposed project would be able to walk to reach nearby bus stops and the Caltrain Station. The project does not include any changes to the existing pedestrian network. The proposed project would be consistent with the City of Palo Alto Bicycle and Pedestrian Transportation Plan and the proposed project would not conflict with a program, plan, ordinance, or policy addressing pedestrian facilities.

Overall, this impact would be less than significant.

ROADWAY FACILITIES

Although the City adopted a separate Local Transportation Analysis (LTA) Policy in July 2020 that retains level of service (LOS) to determine whether projects create local transportation impacts, according to California Public Resources Code section 21099(b)(2) and CEQA Guidelines Section 15064.3 "a project's effect on automobile delay shall not constitute a significant environmental impact." Therefore, inconsistency with the City's LTA Policy would not constitute an impact under CEQA. Nonetheless, the LTA prepared by W-Trans (Appendix A) provides a discussion of the project's effects on background and cumulative LOS conditions for informational purposes, because they are relevant to consistency with City standards for the performance of the circulation system.

LESS THAN SIGNIFICANT IMPACT

b. Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

SB 743 established the increase in VMT associated with a project as the basis for determining traffic impacts. W-Trans prepared a VMT analysis for the project using guidance from both the California Governor's Office of Planning and Research (OPR) in the publication Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory, 2018, and the City of Palo Alto VMT Transportation Analysis Methodology Under CEQA (dated June 15, 2020). Guidance provided in these documents recommends the use of screening thresholds to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. The Palo Alto VMT Criteria states that projects consisting of 100-percent affordable housing can be presumed to cause a less-than-significant VMT impact. This policy is consistent with OPR guidance which states that there is evidence supporting a presumption of a less-than-significant impact for a 100-percent affordable residential development in infill locations.

The proposed project would satisfy the affordable housing screening criteria since 100 percent of the units would be affordable housing units. The City of Palo Alto, as the lead agency, may at their discretion choose to identify this project as having a less-than-significant impact based on this factor and the recommended guidance from OPR. However, to inform the decision-making process, a VMT analysis was conducted for this specific development project. According to the Palo Alto VMT Criteria, the appropriate significance threshold for residential projects is that a project would have a less than significant impact on VMT if it generates 15 percent or more VMT below the baseline County home-based average VMT per capita (W-Trans 2023).

According to the Santa Clara Countywide VMT Evaluation Tool (Version 2), the countywide VMT per capita is 13.33 miles. Based on the Palo Alto VMT Criteria, a project generating a VMT that is 15 percent or more below this value, or 11.33 miles per capita or less, would have a less than significant VMT impact. The proposed project would have an estimated VMT per capita of 5.84. This is below the significance threshold of 11.33 miles per capita. Because this per capita VMT rate is below the significance threshold of 11.33 miles, VMT impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

- c. *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

The proposed project would add residential units on a property adjacent to El Camino Real and Olive Avenue but would not affect the configuration of these or other roadways. The project would include removal of all existing driveways along Acacia Avenue, El Camino Real, and Olive Avenue, and construction of one driveway approximately 140 feet east of El Camino Real with access to Olive Avenue. The proposed project would not introduce incompatible uses such as agricultural vehicles or farm equipment on roadways.

At driveways, a substantially clear line of sight should be maintained between the driver of a vehicle waiting to enter the street and the driver of an approaching vehicle to reduce traffic hazards. Sight distances along Olive Avenue at the project driveway were evaluated by W-Trans based on sight distance criteria contained in the Highway Design Manual published by Caltrans. The recommended sight distances for driveway approaches are based on stopping sight distance and use the approach travel speed as the basis for determining the recommended sight distance. Based on the posted speed limit of 25 mph, the minimum stopping sight distance required is 150 feet. A review in the field shows that sight distances at the proposed project driveway on Olive Avenue exceed 150 feet so are adequate.

For a motorist traveling westbound on Olive Avenue intending to turn left into the project driveway, the stopping sight distance looking west along Olive Avenue is also greater than 150 feet, providing adequate visibility to allow a following driver to observe and react to a vehicle that may stop in the roadway before making a left turn into the driveway.

W-Trans also evaluated pedestrian circulation and found that pedestrian access to the site would be provided via numerous pedestrian entrances located around the building and connecting to adjacent streets (W-Trans 2023; Appendix A).

Overall, the proposed project would not introduce potentially hazardous design features such as sharp curves or dangerous intersections. City staff would also review the proposed project to ensure that it avoids potential traffic hazards related to access and internal circulation. Therefore, the project would have a less than significant impact related to traffic hazards.

LESS THAN SIGNIFICANT IMPACT

d. Result in inadequate emergency access?

According to the PAMC Section 15.04.105, vertical clearance above the entire width of the driveway should be at least 13 feet 6 inches, and the driveway itself should be at least 20 feet wide. The proposed driveway on Olive Avenue would be 20 feet wide with 15 feet of vertical clearance, which would comply with PAMC requirements. Emergency response vehicles would be able to service the site by either entering the parking lot at the driveway or via the use of ladder trucks parked on adjacent streets. Since all roadway users must yield the right-of-way to emergency vehicles when using their sirens and lights, the added project-generated traffic would not impact access or response times for emergency vehicles. Impacts to emergency access would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a 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:</i>				
a. <i>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), or</i>	☐	☒	☐	☐
b. <i>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 2024.1. 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.</i>	☐	☒	☐	☐

SETTING

As of July 1, 2015, California Assembly Bill 52 of 2014 (AB 52) was enacted and expands CEQA by defining a new resource category, "tribal cultural resources." AB 52 establishes that "A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is:

1. 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), or
2. 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 these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. Under AB 52, lead agencies are required to “begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.” Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

The applicant initially filed a pre-application in accordance with Senate Bill 35 for the proposed project. Pursuant to Government Code §65913.4(b)(1)(A)(ii), the City of Palo provided a formal notice of Charity Housing’s intent to submit an application for an affordable housing project in accordance with Senate Bill 35 to each California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed development. Tamien Nation Chairperson Quirina Luna Geary responded via e-mail on May 16, 2022 that the tribe had “no concerns regarding the project” but requested notification in the event of a discovery (Geary 2022; Appendix H). The City subsequently determined that the project could not be processed in accordance with Senate Bill 35 because the project is located on a site that qualifies as a Hazardous Waste Site pursuant to 65962.5 (Cortese list) due to former leaking underground storage tanks on the property.

Following the submittal of a formal Major Architectural Review application, the City of Palo Alto, pursuant to Public Resources 21080.3.1 and AB 52, sent via a certified mail notification letter on October 18, 2022 to each of the California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed development as recommended by the Native American Heritage Commission (Appendix I) The City did not receive any responses or requests for tribal consultation from any of the tribal contacts, and tribal consultation was deemed concluded on November 17, 2022.

IMPACT ANALYSIS

- a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?*
- b. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is 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 2024.1?*

Although no tribal cultural resources are expected to be present within the project site, there is the possibility of encountering undisturbed subsurface tribal cultural resources during construction activities which could potentially result in significant impacts on

unanticipated tribal cultural resources. Therefore, Mitigation Measure CR-1 would be required to reduce impacts on unidentified tribal cultural resources to a less than significant level.

MITIGATION MEASURES AND SIGNIFICANCE AFTER MITIGATION

Implementation of Mitigation Measure CR-1 listed in Section 5, *Cultural Resources*, would require that in the unlikely event that Native American resources are unexpectedly encountered during ground-disturbing activities, work in the immediate area will be halted and a Native American representative would be contacted to participate in the evaluation of the find.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. <i>Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electrical power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?</i>	☐	☐	☒	☐
b. <i>Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?</i>	☐	☐	☒	☐
c. <i>Result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?</i>	☐	☐	☒	☐
d. <i>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?</i>	☐	☐	☒	☐
e. <i>Comply with federal, state, and local statutes and regulations related to solid waste?</i>	☐	☐	☒	☐

SETTING

WASTEWATER

The City of Palo Alto Utilities Department (CPAU) oversees a wastewater collection system consisting of over 217 miles of sewer lines. The City operates and uses recycled water produced at the Palo Alto-operated Regional Water Quality Control Plant (RWQCP), which has primary treatment (bar screening and primary sedimentation), secondary treatment (fixed film reactors, conventional activated sludge, clarification and filtration), and tertiary treatment (filtration through a sand and coal filter and UV disinfection). Wastewater is routed to RWQCP, where it is treated prior to discharge into the San Francisco Bay. While the CPAU is responsible for the wastewater collection system, the Palo Alto Public Works

Department is responsible for the collection/conveyance of sewage collected and delivered to the RWQCP (City of Palo Alto 2021).

The RWQCP has an average dry weather flow design capacity of 39 million gallons per day (MGD) with full tertiary treatment, and a peak wet weather flow capacity of 80 MGD with full secondary treatment. Average flows in 2020 were approximately 17.24 MGD. Therefore, the current available capacity of the RWQCP is approximately 22 MGD. The plant capacity is sufficient for current dry and wet weather loads and for future load projections. The RWQCP does not experience any major treatment system constraints and has no planned capacity expansions. Approximately 220,000 people live in the RWQCP service area. Of the wastewater flow to the RWQCP, about 60 percent is estimated to come from residences, 10 percent from industries, and 30 percent from commercial businesses and institutions. The RWQCP treats 21 million gallons per day of effluent from all the partner cities. All the wastewater treated at the RWQCP can be recycled. The plant already has some capability to produce recycled water that meets the Title 22 unrestricted use standard (approximately 4.5 MGD is presently available) (City of Palo Alto 2021).

WATER SUPPLY

The City receives 100% of its potable water from the San Francisco Public Utilities Commission (SFPUC) through the Regional Water System (RWS). To deliver water to its customers, the utility owns roughly 233 miles of mains (which transport the water from the San Francisco Public Utilities Commission (SFPUC) meters at the city's borders to the customer's service laterals and meters), eight wells (to be used in emergencies), five water storage reservoirs (also for emergency purposes), and several tanks used to moderate pressure and deal with peaks in flow and demand (due to fire suppression, heavy usage times, etc.).

In 1993, the City prepared its first Water Integrated Resources Plan (WIRP), and most recently updated and approved a new version in 2017. Supplies from the SFPUC were found to be adequate in normal years, but additional supplies are needed in drought years to avoid shortages. Short-term emergency water needs will be met with the City's groundwater wells and storage system. The City is also a participating agency on the Bay Area Water Supply and Conservation Agency's Long-Term Reliable Water Supply Strategy to meet the projected water needs of its member agencies and their customers through 2040 and to increase their water supply reliability under normal and drought conditions (City of Palo Alto 2021).

STORMWATER

Palo Alto's storm drainage system contains over 550,000 linear feet of pipelines, ranging in size from 8 to 96 inches. The storm drains collect stormwater and convey it primarily to San Francisquito, Matadero, Barron, and Adobe creeks. These creeks ultimately discharge the stormwater to San Francisco Bay. The Santa Clara Valley Water District (SCVWD) oversees County-wide programs for flood protection and stormwater management. For local lines

that connect to the creeks, the City maintains a Storm Drain Master Plan that recommends improvements to be made over a 30-year horizon.

SOLID WASTE

The City is currently contracted with GreenWaste of Palo Alto for collection of garbage, recycling and composting services and partners with the cities of Mountain View and Sunnyvale on the Sunnyvale Materials Recovery and Transfer Station (SMaRT Station). The SMaRT Station processes mixed garbage from Palo Alto and recovers recyclable and compostable materials that would have otherwise gone to landfill. The City is also contracted with Waste Management Inc. to use the Kirby Canyon Landfill for waste disposal (City of Palo Alto 2018). The Kirby Canyon Landfill has a remaining capacity of 16,191,600 tons (CalRecycle 2019) and the daily permitted capacity is 2,600 tons per day (CalRecycle 2019).

ELECTRICITY

The City of Palo Alto Utilities (CPAU) receives electricity at a single connection point with Pacific Gas and Electric's (PG&E's) transmission system. From there the electricity is delivered to customers through nearly 470 miles of distribution lines, of which 223 miles (48 percent) are overhead lines and 245 miles (52 percent) are underground. The City also maintains six substations, roughly 2,000 overhead line transformers, 1,075 underground and substation transformers, and the associated electric services (which connect the distribution lines to the customers' homes and businesses) (City of Palo Alto 2017).

IMPACT ANALYSIS

- a. *Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electrical power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*
- c. *Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

WATER

Water to the project site would be supplied by the San Francisco Regional Water System which is operated by the San Francisco Public Utilities Commission. This is discussed in further detail under Impact (b) below.

WASTEWATER

The proposed project would introduce new residential uses to the project site. Palo Alto's Utilities Urban Water Management Plan (UWMP) does not list wastewater generation factors. As a result, wastewater generation rates from the City of Los Angeles were used to estimate the amount of wastewater that would be generated by the proposed project. As

shown in Table 24, the proposed project would generate a net increase of approximately 18,800 gallons of wastewater per day.

Table 24 Estimated Wastewater Generation

Type of Use	Quantity	Generation Factor	Amount (gallons per day)
Residential: Studio Unit	20 du	80 gallons /day/ du	1,600
Residential: 1 Bedroom Unit	40 du	120 gallons/day / du	4,800
Residential: 2 Bedroom Unit	35 du	160 gallons/day / du	5,600
Residential: 3 Bedroom Unit	34 du	200 gallons/day / du	6,800
Total			18,800

Source: City of Los Angeles CEQA Thresholds Guidelines (2006)

Notes: sf= square feet, du=dwelling unit

As stated above in the Setting, the RWQCP has a dry weather flow capacity of 39 mgd and has an excess capacity of approximately 22 MGD. This increase of 18,800 gallons per day would be approximately less than 0.09 percent of the existing unused capacity of the RWQCP. Therefore, there would be sufficient wastewater capacity to serve the project site. The proposed project would not exceed wastewater treatment requirements or require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. Impacts would be less than significant.

STORMWATER

As discussed in Section 10, *Hydrology and Water Quality*, pursuant to and in accordance with PAMC and C.3 requirements, the proposed project would be designed to include three biotreatment ponds totaling 45,425 square feet, impervious rooftop space that directs runoff to the bio-swale, and impervious pavement draining to the bio-swale. The proposed project would not result in a substantial increase in stormwater runoff and therefore would not require or result in the construction of new stormwater facilities or the expansion of existing facilities. Impacts would be less than significant.

ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS FACILITIES

The proposed project would continue to be served by CPAU for both electricity and natural gas and would not require or result in the construction of new utilities or the expansion of existing facilities. The proposed project would also involve intensification of uses within an already developed urban area of Palo Alto. Therefore, it would be sufficiently served by existing telecommunication facilities. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

- b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?*

The City of Palo Alto attempts to address issues of water supply in its UWMP. According to the UWMP, the City of Palo Alto has analyzed three different hydrological conditions to determine the reliability of water supplies for the City: average/normal water year, single dry water year, and multiple dry water year period. In each of the three hydrological conditions, the projected water demand was calculated taking into account growth in billing data, water conservation efforts, and demographics. The UWMP states that the City of Palo Alto can reliably meet the projected water demand in each of the hydrological conditions through 2035 (City of Palo Alto 2021). As stated in Sections 11, *Land Use and Planning*, and 14, *Population and Housing*, the proposed project would be consistent with the City of Palo Alto Comprehensive Plan and the growth forecast.

Table 25 shows the projected City water supply and demand through the year 2045 according to the City's Urban Water Management Plan.

Table 25 City of Palo Alto Supply/Demand Balance (AFY)

	2020	2025	2030	2035	2040	2045
Projected SFPUC Demand	10,921	11,287	11,394	11,546	11,801	12,113
Individual Supply Guarantee	18,579	18,579	18,579	18,579	18,579	18,579
Difference	7,658	7,292	7,185	7,033	6,778	6,466

Source: City of Palo Alto Urban Water Management Plan, Table 26, June 2021

Development of the proposed project would increase demand for potable water. Assuming that water use is approximately 120 percent of wastewater generation, the proposed project would demand approximately 22,567 gallons of water per day, or 25.28 acre-feet per year (AFY). As shown in Table 25, available water supply is projected through 2045. The proposed project would have sufficient water supplies available to serve the project. The project would not result in a substantial physical deterioration of public water facilities or result in adverse physical impacts from new or expanded utility facilities due to increased usage as a result of the project. Therefore, this impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

- d. Would the project 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?*
- e. Would the project comply with federal, state, and local statutes and regulations related to solid waste?*

Currently, the City is contracted with GreenWaste of Palo Alto for collection of garbage, recycling, and composting services in the City and with Waste Management Inc. to use the Kirby Canyon Landfill for waste disposal. The Kirby Canyon Landfill has a remaining capacity of roughly 16,191,600 tons. The daily permitted capacity of Kirby Canyon Landfill is up to 2,600 tons per day (CalRecycle 2019). According to the latest Disposal Facility Inspection

Report in 2022, the peak tonnage is 2,218 tons per day. Therefore, the landfill has a remaining daily capacity of 382 tons per day.

Based on an estimated waste generation rate of 4 pounds per day for multifamily residential units (CalRecycle 2022), the proposed project would generate 516 pounds, or 0.26 tons, of solid waste per day. This incremental increase in solid waste would be within the permitted capacities of Kirby Canyon Landfill. Therefore, the project would not generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure. The proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. Furthermore, the project would be required to comply with all federal, state, and local solid waste regulations, such as the Palo Alto Recycling and Composting Ordinance. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>If located in or near a state responsibility area or land classified as very high fire hazard severity zones, would the project result in any of the following impacts:</i>				
<i>a. Substantially impact an adopted emergency response plan or emergency evacuation plan?</i>	☐	☐	☐	☒
<i>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?</i>	☐	☐	☐	☒
<i>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?</i>	☐	☐	☐	☒
<i>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?</i>	☐	☐	☐	☒

IMPACT ANALYSIS

- If located in or near a state responsibility area or land classified as very high fire hazard severity zones, would the project substantially impact an adopted emergency response plan or emergency evacuation plan?*
- If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, 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?*

- c. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project 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?*
- d. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

According to the California Department of Forestry and Fire Protection (CAL FIRE) Hazard Severity Zone map (CAL FIRE 2022), the project site is not located in a State Responsibility Area (SRA) or in a Very High Fire Hazard Severity Zone (VHFHSZ). The nearest VHFHSZ is located approximately 12 miles southwest of the project site near Portola Valley (CAL FIRE 2022). No impact would occur.

NO IMPACT

21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
a. <i>Have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</i>	☐	☒	☐	☐
b. <i>Have impacts that 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)?</i>	☐	☒	☐	☐
c. <i>Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</i>	☐	☒	☐	☐

IMPACT ANALYSIS

- a. *Would the project have 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

As discussed in Section 4, *Biological Resources*, implementation of the proposed project may affect nesting birds. Implementation of Mitigation Measure BIO-1 would reduce this impact to a less than significant level. Mitigation Measure BIO-2 is designed to protect the existing trees from construction impacts and would implement the recommendations of the Tree Preservation and Protection Plan. All other impacts related to biological resources would be less than significant or no impact would occur. Therefore, with incorporation of mitigation, the proposed project would not significantly impact biological resources.

As discussed under Section 5, *Cultural Resources*, and Section 18, *Tribal Cultural Resources*, the project would not eliminate important examples of the major periods of California history or prehistory with adherence to Mitigation Measure CR-1 which would reduce potential impact to unknown resources to less than significant. There are no known cultural, archeological, or tribal cultural resources on the project site or within the immediate vicinity of the site. Overall, impacts would be less than significant with mitigation.

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- b. *Would the project have impacts that 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)?*

The following includes a list of planned and pending development within 0.3 miles of the project site (City of Palo Alto 2022d):

- 2951 El Camino Real, Palo Alto – Mixed-Use Project (148 feet west of the project site)
- 200 Portage Avenue, Palo Alto – Townhouse Project (0.2 miles northeast of the project site)
- 430 Pepper Avenue, Palo Alto – Single-Family Project (383 feet northwest of the project site)
- 2585 El Camino Real, Palo Alto – Mixed-Use Project (0.3 miles northwest of the project site)
- 305 Olive Avenue, Palo Alto – Single-Family Project (0.1 mile northeast of the project site)
- 3241 Park Boulevard, Palo Alto – Office Project (0.3 miles northeast of the project site)
- 300 Lambert Avenue, Palo Alto – Multi-Family Project (0.2 miles east of the project site)
- 3225 El Camino Real, Palo Alto – Mixed-Use Project (381 feet southeast of the project site)
- 440 Fernando Avenue, Palo Alto – Single-Family Project (0.2 miles southeast of the project site)
- 434 Fernando Avenue, Palo Alto – Single-Family Project (0.2 miles southeast of the project site)
- 420 Fernando Avenue, Palo Alto – Single Family Project (0.2 miles southeast of the project site)
- 289 Fernando Avenue, Palo Alto – Single-Family Project (0.3 miles east of the project site)
- 3300 El Camino Real, Palo Alto – Office/R&D Project (0.1 mile southeast of the project site)
- 3200 El Camino Real, Palo Alto – Hotel Project (423 feet south of the project site)
- 3150 El Camino Real, Palo Alto – Multi-Family Project (296 feet south of the project site)

Cumulative impacts are addressed in the individual topical sections above for Air Quality and Greenhouse Gas Emissions (*CEQA Guidelines* Section 15064[h][3]). For these issue areas, cumulative impacts were found to be less than significant (not cumulatively considerable). Some of the other resource areas were determined to have no impact in comparison to existing conditions, and therefore would not contribute to cumulative impacts, such as those related to mineral resources, agricultural resources, and wildfire. As such, cumulative impacts in these issue areas would also be less than significant (not cumulatively considerable).

The project would involve infill development in an urban area on a site that is currently developed and does not contain special-status species or habitat. Cumulative projects also

involve infill development on urban sites. Overall, the project would not significantly contribute to a cumulative impact related to the loss of habitat or loss of special-status species. Like the proposed project, cumulative development would be required to comply with local tree preservation requirements to protect the overall urban forest for development in Palo Alto.

Cumulative development involves projects on areas potentially identified as moderately sensitive for cultural resources; therefore, cumulative development may disturb areas that may potentially contain cultural or tribal cultural resources. Although the majority of the project site has low sensitivity for paleontological resources, the southern portion of the project site is underlain with Quaternary older alluvium which has high paleontological sensitivity. However, implementation of Mitigation Measure GEO-1 would reduce impacts to a less than significant level. Additionally, the proposed project includes mitigation to reduce the potential for project-specific impacts to cultural or tribal cultural resources. It is anticipated that the other cumulative projects would include similar measures to reduce impacts associated with individual development projects. Impacts associated with cultural resources are typically addressed on a case-by-case basis. Therefore, significant cumulative resource impacts would not occur.

Cumulative development would gradually increase population and therefore gradually increase the number of people exposed to potential geological hazards, including effects associated with seismic events such as ground rupture and strong shaking. However, conformance with the current CBC as well as other laws and regulations mentioned above, would ensure that project-specific impacts associated with geology and soils would be less than significant. Potential impacts associated with geology and soils would not be cumulatively considerable, and cumulative impacts related to geologic hazards would be less than significant.

Cumulative development includes residential, school, and commercial uses which do not typically involve the use or storage large quantities of hazardous materials, other than those typically used for cleaning, maintenance, or landscaping. Therefore, no cumulative impacts related to the use transport, use, or disposal of hazardous materials would be less than significant. Overall, hazards and hazardous materials impacts associated with individual developments are site specific in nature and must be addressed on a case-by-case basis. Since hazards and hazardous materials are required to be examined as part of the permit application and environmental review process, it is anticipated that potential impacts associated with individual projects will be adequately addressed and mitigated prior to permit approval. With adherence to existing federal, State, and local regulations, no significant cumulative human health impacts are anticipated.

The proposed project would be consistent with the applicable zoning and goals and policies in the City's Comprehensive Plan and Zoning Code. All other pending and future projects in Palo Alto would be required to adhere to applicable City zoning and development regulations and Comprehensive Plan policies to mitigate environmental impacts where feasible. The project in combination with listed cumulative projects would not result in significant cumulative impacts with respect to consistency with land use plans.

The listed cumulative projects would generate temporary noise and vibration during construction and noise typical of their proposed use during operation. However, construction noise and vibration and operational noise are localized and rapidly attenuate in an urban environment, and implementation of Mitigation Measure NOI-1 would reduce construction vibration to a less than significant level. The closest project is 148 feet away. Although cumulative noise impacts could occur should multiple projects become under construction or operation simultaneously, projects would be required to comply with the City's allowable construction hours and noise standards, and would be encouraged to implement noise BMPs. While cumulative growth in traffic volumes on roadways near the project site would likely increase traffic noise, depending on the number of net new trips associated cumulative projects, vehicle trips generated by the project are incremental such that the project would not considerably contribute to future traffic noise increases.

The proposed project would involve new residential uses and would induce direct or indirect population growth. However, population increase associated with the proposed project would be well within the population forecast for the City. Therefore, the project would not significantly contribute to potential population increases throughout Palo Alto and the region.

The proposed project and cumulative development involve development on urban infill sites that are within the service areas for existing public services such as fire and police protection services. Although growth overall would contribute to the need for expanded public services, existing local regulations and policies ensure that capacity issues are addressed as they arise. It is not anticipated that cumulative development would increase the need for public services such that new or expanded facilities would be required resulting in significant environmental effects. No significant cumulative impacts would occur.

The project would be comprised of 100-percent affordable housing and is expected to have a VMT per capita less than 15-percent below the countywide average VMT per capita, indicating a less-than-significant cumulative VMT impact.

Cumulative development in the city would continue to increase wastewater generation, water use, and solid waste generation which would affect City-provided utilities. As discussed in Section 19, *Utilities and Service Systems*, the City's UWMP estimates water supply and demand for the city to 2045 including cumulative future development in the city. Water demand would be adequate to meet the City's needs; therefore, no cumulative impact would occur. The project would require less than 0.09 percent of the existing unused capacity of the RWQCP and would contribute 0.26 tons of solid waste per day to the Kirby Canyon Landfill. These incremental increases would not be cumulatively considerable.

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- c. *Would the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

Effects on human beings are generally associated with impacts related to such issue areas as air quality, geology and soils hazards, noise, traffic safety, and hazards. As discussed in this Initial Study, implementation of the project would not result in impacts related to air quality, geology or soils hazards, noise, or traffic safety. The project would result in potential environmental impacts with respect to hazards and hazardous materials. However, implementation of mitigation measures HAZ-1 and HAZ-2 would minimize exposure to contaminants for both construction workers and nearby residents. Therefore, the project would not cause substantial adverse effects on human beings, either directly or indirectly. Impacts would be less than significant with mitigation.

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