Initial Study

# 123 Sherman Avenue Office Project


Prepared by

CITY OF PALO ALTO

In Consultation with

DAVID J. POWERS & ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS & PLANNERS

May 2023

CITY OF PALO ALTO

# MITIGATED NEGATIVE DECLARATION

| | |
|---|---|
| **CIRCULATION PERIOD** | 5/5/2023 to 6/5/2023 |
| **PROJECT NAME** | 123 Sherman Avenue Office Building |
| **PROJECT LOCATION** | The project site includes three parcels in the City of Palo Alto located between Sherman Avenue and Grant Avenue, bounded by Park Boulevard to the south. The project site includes 150 Grant Avenue (Assessor's Parcel Number [APN] 124-29-020), 123 Sherman Avenue (APN 124-29-013), and 2501 Park Boulevard (APN 124-29-012). |
| **PROJECT PROPONENT** | KSH Architects |
| **CITY CONTACT** | Emily Foley, AICP, Planner<br>City of Palo Alto, 250 Hamilton Avenue, Ground Floor<br>Palo Alto,CA 94301<br>Fax: 650.329.2240, Email: Emily.Foley@CityofPaloAlto.org |

## PROJECT DESCRIPTION

The project proposes to demolish the existing buildings on-site in order to construct a new three-story, approximately 68,763 square-foot office building with two levels of below-grade parking. The building would include approximately 48,966 square-feet of office space as well as 4,301 square-feet of retail uses on the ground floor. The project would include 75,574 square-feet of total parking area. Parking would be distributed on the ground floor of the proposed building as well as two levels of below-grade parking, which would require approximately 27,000 cubic yards of soil removal. The project would provide a total of approximately 175 parking spaces. The project site is listed on the Cortese List as a Cleanup Program Site under the oversight of the Santa Clara County Department of Environmental Health. The project site is also located within the California-Olive-Emerson (COE) groundwater plume and is adjacent to 2555 Park Boulevard, another site listed on the Cortese List. The proposed project would require an Architecture Review Board (ARB) approval.

## DETERMINATION

In accordance with the City of Palo Alto's procedures for compliance with the California Environmental Quality Act (CEQA), the City has conducted an Initial Study to determine whether the proposed project could have a significant effect on the environment. On the basis of that study, the City makes the following determination:

☐ The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION is hereby adopted.

☒ Although the project, as proposed, could have a significant effect on the environment, there will not be a significant effect on the environment in this case because mitigation measures have been added to the project and, therefore, a MITIGATED NEGATIVE DECLARATION is hereby adopted.

The attached initial study incorporates all relevant information regarding the potential environmental effects of the project and confirms the determination that an EIR is not required for the project. In addition, the following mitigation measures have been incorporated into the project:

**MM BIO-1.1** When possible, construction shall be scheduled to avoid the nesting season to the extent feasible. The nesting season for most birds, including most raptors, in the San Francisco Bay area extends from February 1 through August 31.

If it is not possible to schedule construction and tree removal between September and January, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist, as approved by the City of Palo Alto, to ensure that no nests shall be disturbed during project implementation. This survey shall be completed no more than 14 days prior to the initiation of grading, tree removal, or other demolition or construction activities.

During this survey, the ornithologist shall inspect all trees and other possible nesting habitats within and immediately adjacent to the construction area for nests. If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist shall determine the extent of a construction-free buffer zone to be established around the nest to ensure that nests of bird species protected by the MBTA or Fish and Game code shall not be disturbed during project construction. The construction-free buffer zones shall be maintained until after the nesting season has ended and/or the ornithologist has determined that the nest is no longer active.

A final report of nesting birds, including any protection measures, shall be submitted to the Director of Planning and Development Services prior to the start of grading or tree removal.

**MM CUL-2.1** Prior to commencement of any project-related construction activities, a qualified Archeologist shall provide a worker environmental awareness training to all site personnel. The training shall discuss the

appearance of resources that may be encountered during construction as well as the procedures and notification process in the event of discovery.

**MM CUL-2.2** A Qualified Archaeological monitor shall be present to monitor ground-disturbing activities in the southwest corner of the project site, where the residence previously existed. The Archaeologist shall have the authority to halt construction activities in the event any cultural materials are encountered during ground-disturbing construction activities.

**MM CUL-2.3** In the event any significant cultural materials are encountered during construction grading or excavation, construction within a radius of 50 feet of the find would be halted, the Director of Planning and Development Services shall be notified, and the on-site qualified archaeologist shall examine the find and make appropriate recommendations regarding the significance of the find and the appropriate treatment of the resource. Recommendations could include, but are not limited to, preservation in place or collection, recordation, and analysis of any significant cultural materials. In the event that discovered resources appear to be Native American in nature, the appropriate local Native American tribe(s) shall be contacted for consultation. A report of findings documenting any data recovered during monitoring shall be submitted to the Director of Planning and Development Services.

**MM CUL-3.1** Pursuant to Section 7050.5 of the Health and Safety Code, and Section 5097.94 of the Public Resources Code of the State of California in the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he shall notify the Native American Heritage Commission (NAHC) who shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this state law, then the landowner shall reinter the human remains, and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. If the Director of Planning and Development Services, in consultation with the archaeologist and Native American monitor, finds that the archaeological find is not a significant resource, work would resume only after the submittal of a preliminary archaeological report and after provisions for reburial and ongoing monitoring are accepted by the Director of Planning and Development Services.

**MM GEO-6.1** Should a unique paleontological resource or site or unique geological feature be identified at the project site during any phase of construction, all ground disturbing activities within 25 feet shall cease and the City's Planning Director of Planning and Development Services shall be notified immediately. A qualified paleontologist shall evaluate the find, prescribe recommendations for proper treatment of the resource, and, depending on the nature of the discovery, document their findings in a paleontological report. Treatment may include protection in-place or recovery of the resource and placement in a repository. The paleontological report shall be submitted to the City. If paleontological materials are recovered, they shall be cataloged and donated to a paleontological repository, such as the University of California Museum of Paleontology.

**MM HAZ-2.1** Prior to conducting earthwork activities at the project site, a Site Management Plan (SMP) and Health and Safety Plan (HSP) shall be prepared. The purpose of these documents will be to establish appropriate management practices for handling impacted soil, soil vapor and groundwater that may be encountered during construction activities. Based on the history of the project vicinity, areas of impacted soil, soil vapor and/or groundwater likely will be encountered during construction activities, which may require special monitoring, handling and/or disposal. The SMP shall be submitted to the San Francisco Bay Regional Water Quality Control Board (RWQCB), or an equivalent oversight agency (e.g. the Santa Clara County Department of Environmental Health or Department of Toxic Substances Control) for review and approval prior to commencing earthwork activities at the project site.

**MM HAZ-2.2** Prior to excavation of the proposed below grade parking garage, additional soil sampling will be required to profile the soil for landfill disposal and/or reuse at another construction project. Soil sampling shall also be required during project construction if visibly contaminated soil is discovered during earthmoving activities. Soil profiling shall be performed in accordance with the acceptance criteria of the selected receiving facilities and/or the Department of Toxic Substance Control (DTSC's) October 2001 Clean Fill Advisory. Prior to soil transfer, written approval shall be obtained from the selected receiving facility and a copy shall be provided to the Director of Planning and Development Services upon request.

**MM NOI-2.1** The project proponent shall implement a construction vibration monitoring plan to document conditions prior to, during, and after vibration generating construction activities for all properties within 20 feet of the project site. All plan tasks shall be undertaken under the direction of a licensed Professional Structural Engineer in the State of

California and be in accordance with industry-accepted standard methods.

The construction vibration monitoring plan shall include, but not be limited to, the following measures:

- The report shall include a description of measurement methods, equipment used, calibration certificates, and graphics as required to clearly identify vibration-monitoring locations.
- A list of all heavy construction equipment to be used for this project and the anticipated time duration of using the equipment that is known to produce high vibration levels (clam shovel drops, vibratory rollers, hoe rams, large bulldozers, caisson drillings, loaded trucks, jackhammers, etc.) shall be submitted to the Director of Planning and Development Services or Director's designee of the Department of Planning & Development by the contractor. This list shall be used to identify equipment and activities that would potentially generate substantial vibration and to define the level of effort required for continuous vibration monitoring. Phase demolition, earth-moving, and ground impacting operations so as not to occur during the same time period.
- Where possible, use of the heavy vibration-generating construction equipment shall be prohibited within 20 feet of any adjacent building.
    - Smaller equipment to minimize vibration levels to below 0.5 in/sec PPV at the property lines adjacent to the building at 2555 Park Boulevard or 0.3 in/sec PPV at all other property lines. For example, a smaller vibratory roller, such as the Caterpillar model CP433E vibratory compactor, shall be used when compacting materials within 25 feet of the adjacent conventional building.
    - Avoid using vibratory rollers and clam shovel drops within 25 feet of sensitive areas.
    - Select demolition methods not involving impact tools.
    - Avoid dropping heavy equipment and use alternative methods for breaking up existing pavement, such as a pavement grinder, instead of dropping heavy objects, within 25 feet of the adjacent conventional buildings.

- Document conditions at all structures located within 50 feet of construction prior to, during, and after vibration generating construction activities. All plan tasks shall be undertaken under the direction of a licensed Professional Structural Engineer in the State of California and be in accordance with industry-accepted standard methods. Specifically:
    - Vibration limits shall be applied to vibration-sensitive structures located within 20 feet of construction activities identified as sources of high vibration levels.
    - Performance of a photo survey, elevation survey, and crack monitoring survey for each structure of normal construction within 20 feet of construction activities identified as sources of high vibration levels. Surveys shall be performed prior to any construction activity, in regular intervals during construction, and after project completion, and shall include internal and external crack monitoring in structures, settlement, and distress, and shall document the condition of foundations, walls and other structural elements in the interior and exterior of said structures.
- Develop a vibration monitoring and construction contingency plan to identify structures where monitoring would be conducted, set up a vibration monitoring schedule, define structure-specific vibration limits, and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions. Construction contingencies shall be identified for when vibration levels approach the limits of 0.5 in/sec PPV at the adjacent building at 2555 Park Boulevard or 0.3 in/sec PPV at all other surrounding buildings.
- At a minimum, vibration monitoring shall be conducted during demolition and excavation activities.
- If vibration levels approach limits, suspend construction and implement contingency measures to either lower vibration levels or secure the affected structures.
- Designate a person responsible for registering and investigating claims of excessive vibration. The contact information of such person shall be clearly posted on the construction site.
- Conduct a post-construction survey on structures where either monitoring has indicated high vibration levels or complaints of damage has been made. Make appropriate repairs or

compensation where damage has occurred as a result of construction activities.

| Signature (Project Planner) | Title | Date |
|---|---|---|
| Emily Foley | Planner | 5/4/23 |

| Adopted by City Council, Attested by Director of Planning + Community Environment (signed after MND has been approved) | Title | Date |
|---|---|---|

*WE, THE UNDERSIGNED, HEREBY ATTEST THAT WE HAVE REVIEWED THE INITIAL STUDY AND DRAFT MITIGATED NEGATIVE DECLARATION FOR THE PROJECT DESCRIBED ABOVE AND AGREE TO IMPLEMENT ALL MITIGATION MEASURES CONTAINED THEREIN.*

| Signature (Project Applicant) | Printed Name | Date |
|---|---|---|

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## Figures



## Tables

**Appendices**

# SECTION 1.0 INTRODUCTION AND PURPOSE

## 1.1 PURPOSE OF THE INITIAL STUDY

The City of Palo Alto, as the Lead Agency, has prepared this Initial Study for the 123 Sherman Avenue Office Project in compliance with the California Environmental Quality Act (CEQA), the CEQA Guidelines (California Code of Regulations §15000 et. seq.) and the regulations and policies of the City Palo Alto, California.

The project proposes to merge the three parcels at 123 Sherman Avenue, 150 Grant Avenue, and 2501 Park Boulevard. The project proposes to demolish the existing buildings on-site and redevelop the site with a new three-story office building. This Initial Study evaluates the environmental impacts that might reasonably be anticipated to result from implementation of the proposed project.

## 1.2 PUBLIC REVIEW PERIOD

Publication of this Initial Study marks the beginning of a 30-day public review and comment period. During this period, the Initial Study will be available to local, state, and federal agencies and to interested organizations and individuals for review. Written comments concerning the environmental review contained in this Initial Study during the 30-day public review period should be sent to:

Emily Foley, AICP, Planner
Emily.Foley@cityofpaloalto.org
(650) 617-3125
City of Palo Alto
250 Hamilton Avenue
Palo Alto, California 94301

## 1.3 CONSIDERATION OF THE INITIAL STUDY AND PROJECT

Following the conclusion of the public review period, the City of Palo Alto will consider the adoption of the Initial Study/Mitigated Negative Declaration (MND) for the project at a regularly scheduled meeting. The City shall consider the Initial Study/MND together with any comments received during the public review process. Upon adoption of the MND, the City may proceed with project approval actions.

## 1.4 NOTICE OF DETERMINATION

If the project is approved, the City of Palo Alto will file a Notice of Determination (NOD), which will be available for public inspection and posted within 24 hours of receipt at the County Clerk's Office for 30 days. The filing of the NOD starts a 30-day statute of limitations on court challenges to the approval under CEQA (CEQA Guidelines Section 15075(g)).

# SECTION 2.0 PROJECT INFORMATION

## 2.1 PROJECT TITLE

123 Sherman Avenue Office Project

## 2.2 LEAD AGENCY CONTACT

Emily Foley, AICP, Planner
City of Palo Alto Planning and Development Services Department
285 Hamilton Avenue, Suite 100
Palo Alto, California 94301

## 2.3 PROJECT APPLICANT

Amanda Borden
KSH Architects
349 Sutter Street
San Francisco, CA 94108

## 2.4 PROJECT LOCATION

The project site includes three parcels in the City of Palo Alto located between Sherman Avenue and Grant Avenue, bounded by Park Boulevard to the south. The project site includes 150 Grant Avenue, 123 Sherman Avenue, and 2501 Park Boulevard.

## 2.5 ASSESSOR'S PARCEL NUMBERS

124-29-020, 124-29-013, 123-29-012

## 2.6 GENERAL PLAN DESIGNATION AND ZONING DISTRICT

The project site has a General Plan land use designation of Regional/Community Commercial and is zoned Community Commercial Subdistrict Retail Combining District (CC[2][R]). The Regional/Community Commercial General Plan land use designation is used for larger shopping centers and districts that have a wider variety of goods and services than neighborhood shopping areas. The CC zoning district is intended to create and maintain major commercial centers accommodating a broad range of office, retail sales, and other commercial activities of community-wide or regional significance. The CC(2) subdistrict is intended to modify the site development regulations of the CC district, to allow site specific variations to the community commercial uses and development requirements in the CC district. The retail shopping combining district is intended to modify the uses allowed in a commercial district, to allow only retail, eating, and service-oriented commercial development on the ground floors.

## 2.7 PROJECT-RELATED APPROVALS, AGREEMENTS, AND PERMITS

The City anticipates that the following approvals or permits would be required for the proposed project:

- Planning Entitlement Major Architectural Review
- Building Permit
- Excavation and Grading Permit

# SECTION 3.0 PROJECT DESCRIPTION

## 3.1 PROJECT LOCATION

The project site includes three parcels located between Sherman Avenue and Grant Avenue, bounded by Park Boulevard to the south. The project site includes 150 Grant Avenue (Assessor's Parcel Number [APN] 124-29-020), 123 Sherman Avenue (APN 124-29-013), and 2501 Park Boulevard (APN 124-29-012). Regional, vicinity, and aerial maps are provided in Figure 3.2-1, Figure 3.2-2, and Figure 3.2-3, respectively. The project site is approximately 34,384 square-feet (or approximately 0.79 acres) in size and is currently occupied by two office buildings, a single-family residence, and a garage/storage building totaling approximately 15,523 square-feet of existing building area. The project site also currently contains a surface parking lot and landscaping. There is also a public utility easement on-site along Grant Avenue for an existing transformer.

## 3.2 PROPOSED PROJECT

### 3.2.1 Office Building

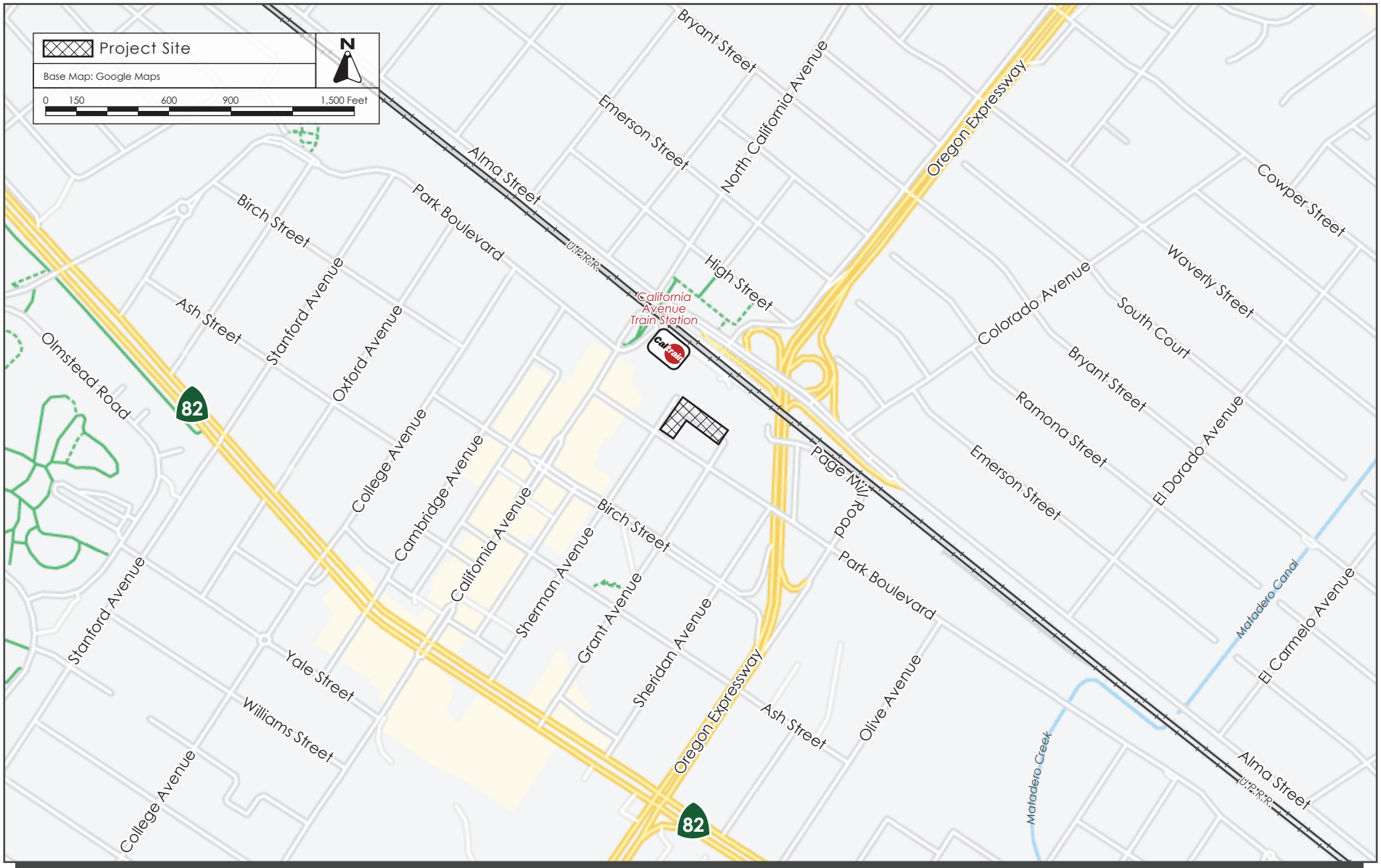
The project proposes to demolish the existing buildings on-site in order to construct a new three-story, approximately 68,763 square-foot office building with two levels of below-grade parking. The building would include approximately 48,966 square-feet of office space as well as 4,301 square-feet of retail uses on the ground floor. The proposed floor area ratio (FAR) for the site would be 2.0:1 and the project would result in approximately 86 percent lot coverage. A site plan and floor plans are shown in Figure 3.2-4 through Figure 3.2-8. The proposed building would reach a maximum height of 37 feet at the top of the roof and 49 feet to the top of the mechanical equipment enclosure. Proposed building elevations are shown in Figure 3.2-9 and Figure 3.2-10.

The proposed building would be set back approximately two to 32 feet from Park Boulevard on the ground floor and would not be set back from Park Boulevard on the second or third floors. The project would not be setback from Sherman Avenue or Grant Avenue for portions opposite of parcels zoned CC(2)(R) and would be setback 10 feet from Sherman Avenue and Grant Avenue for portions opposite parcels zoned High Density Multiple-Family Residence (RM-40). The project would be setback 10 feet from the existing building located at 150 Grant Avenue, along the northwestern boundary of the project site, and would be setback 20 feet from the same building on the second and third floors. The proposed building would abut the existing office building at 2555 Park Boulevard.

### 3.2.2 Site Access and Parking

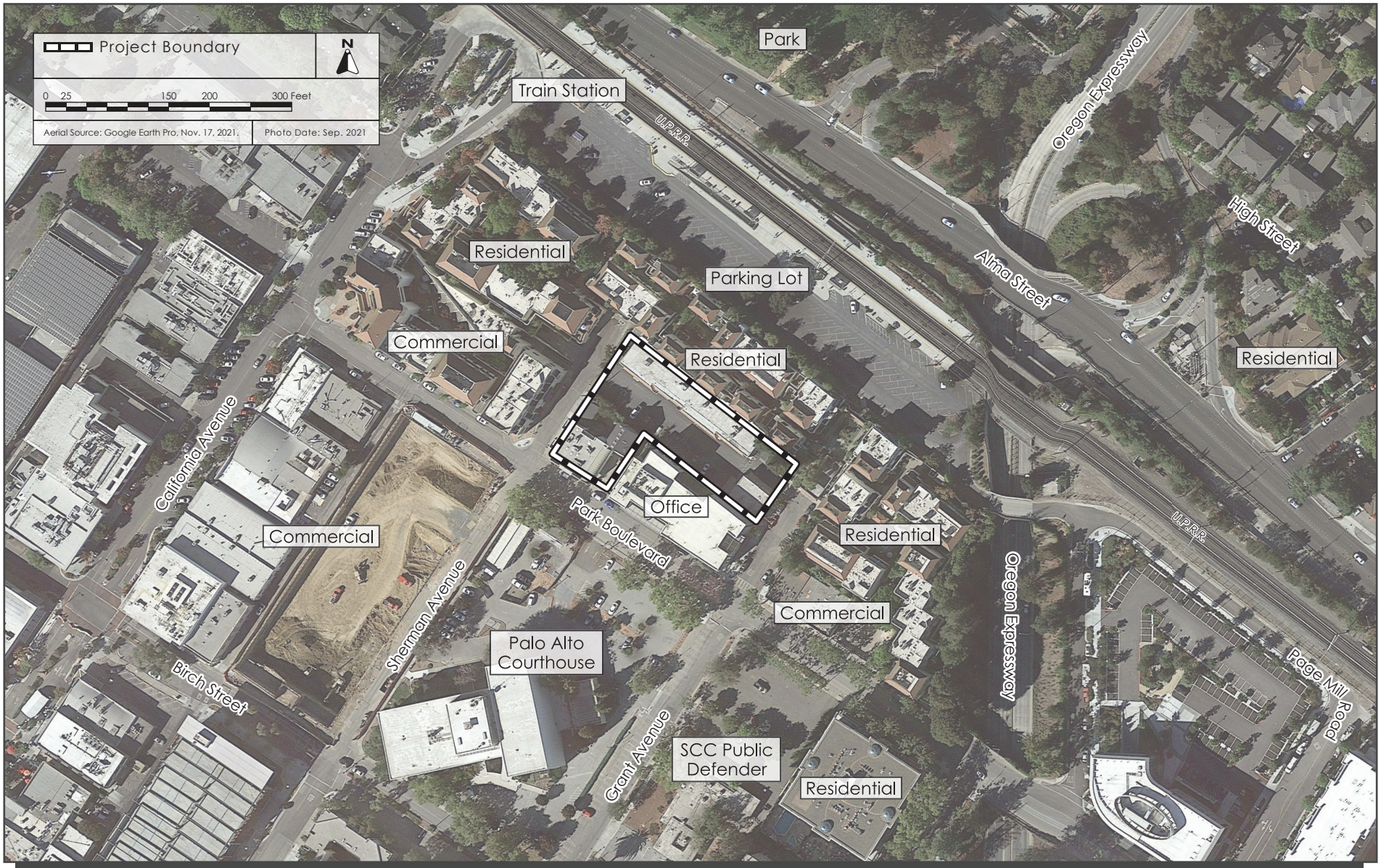
The project would include 75,574 square-feet of total parking area. Parking would be distributed on the ground floor of the proposed building as well as two levels of below-grade parking, which would extend to a depth of approximately 24 feet below ground surface (bgs). The project would provide a total of approximately 175 parking spaces. Additionally, the project would provide a total of 40 bicycle parking spaces. Out of the 40 bicycle parking spaces, 16 spaces would be short-term bicycle parking spaces and 24 would be long-term bicycle parking spaces.


REGIONAL MAP | FIGURE 3.2-1

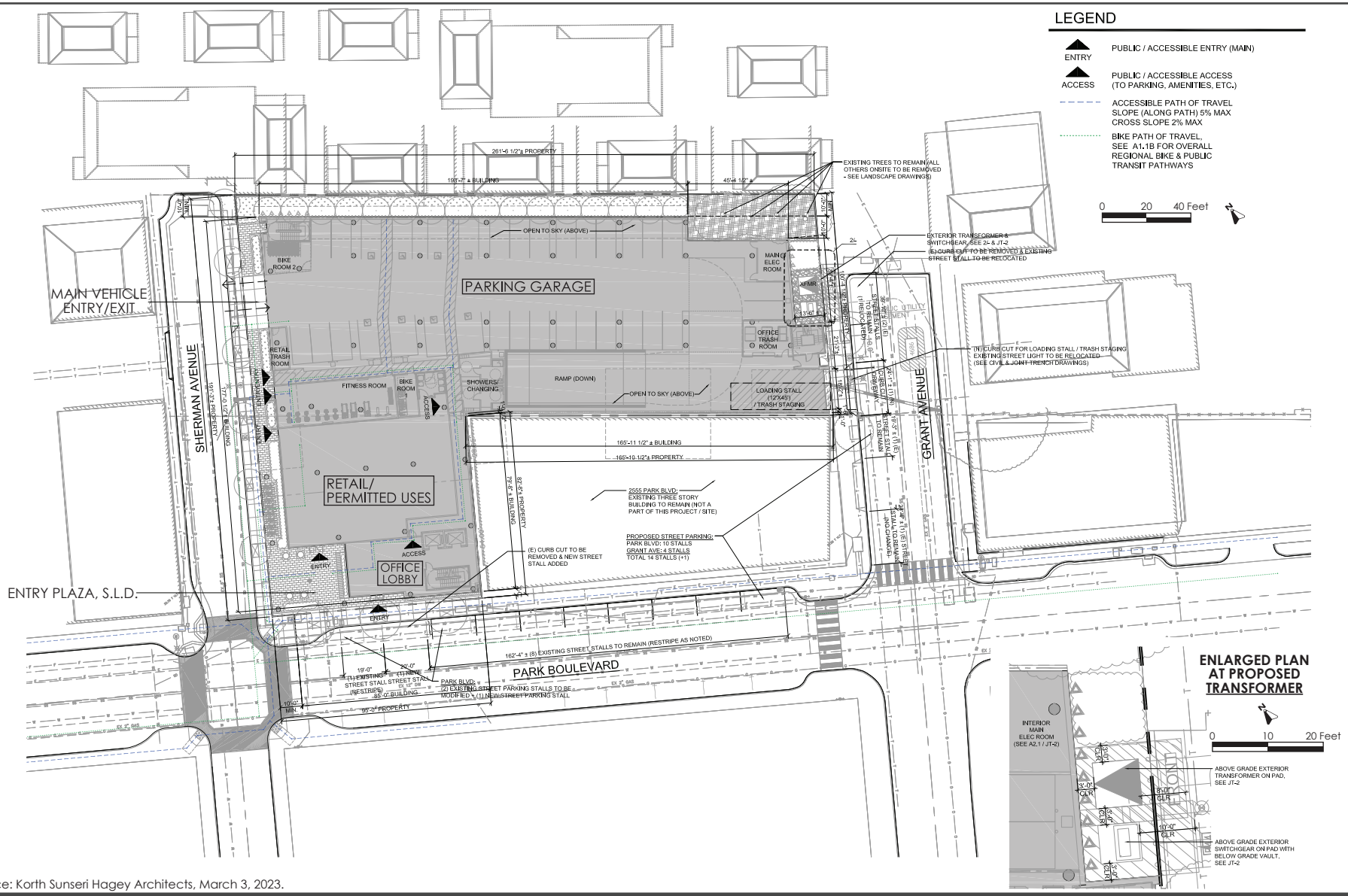



VICINITY MAP

FIGURE 3.2-2



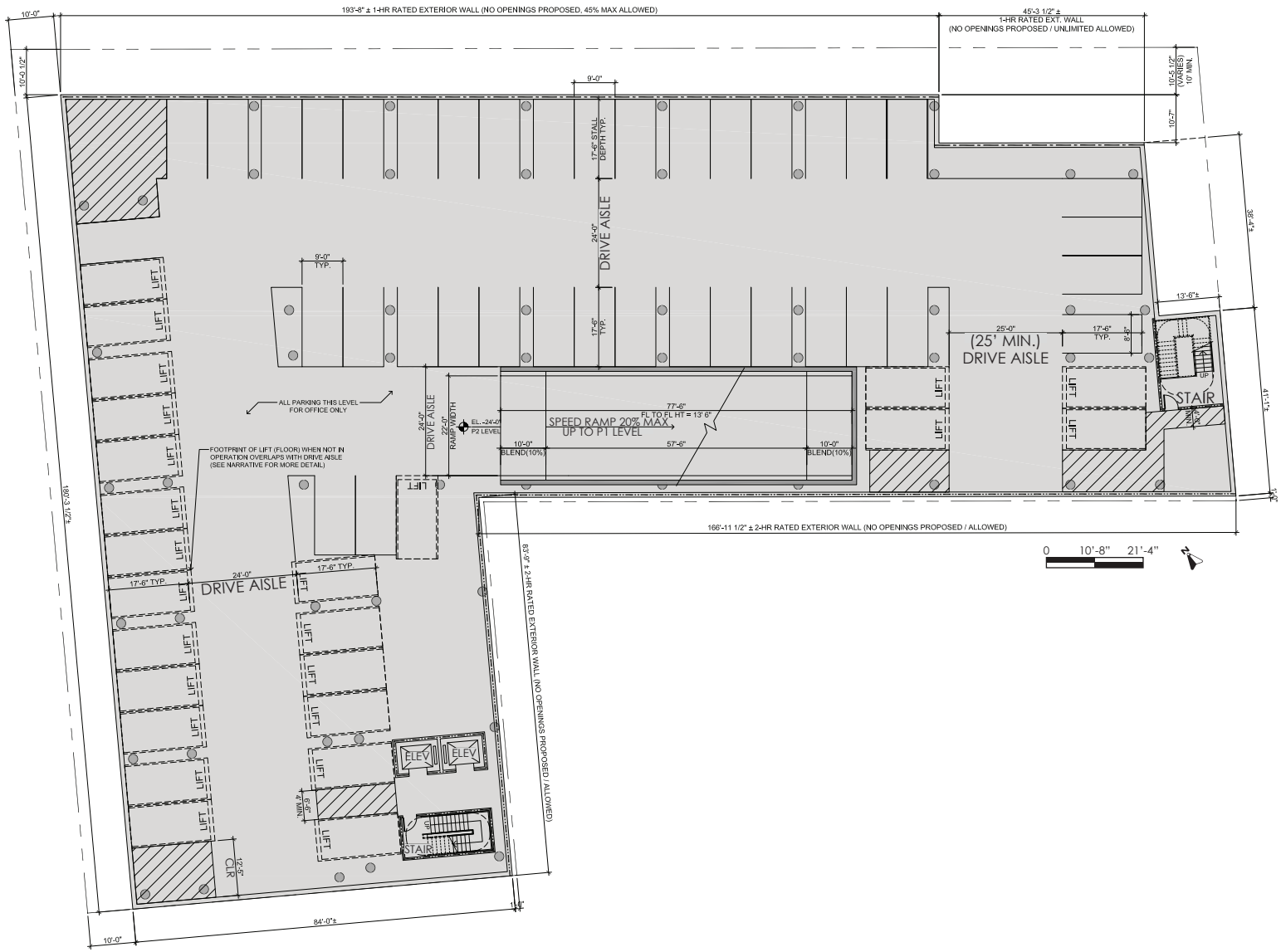

AERIAL PHOTOGRAPH AND SURROUNDING LAND USES | FIGURE 3.2-3




Source: Korth Sunseri Hagey Architects, March 3, 2023.

SITE PLAN

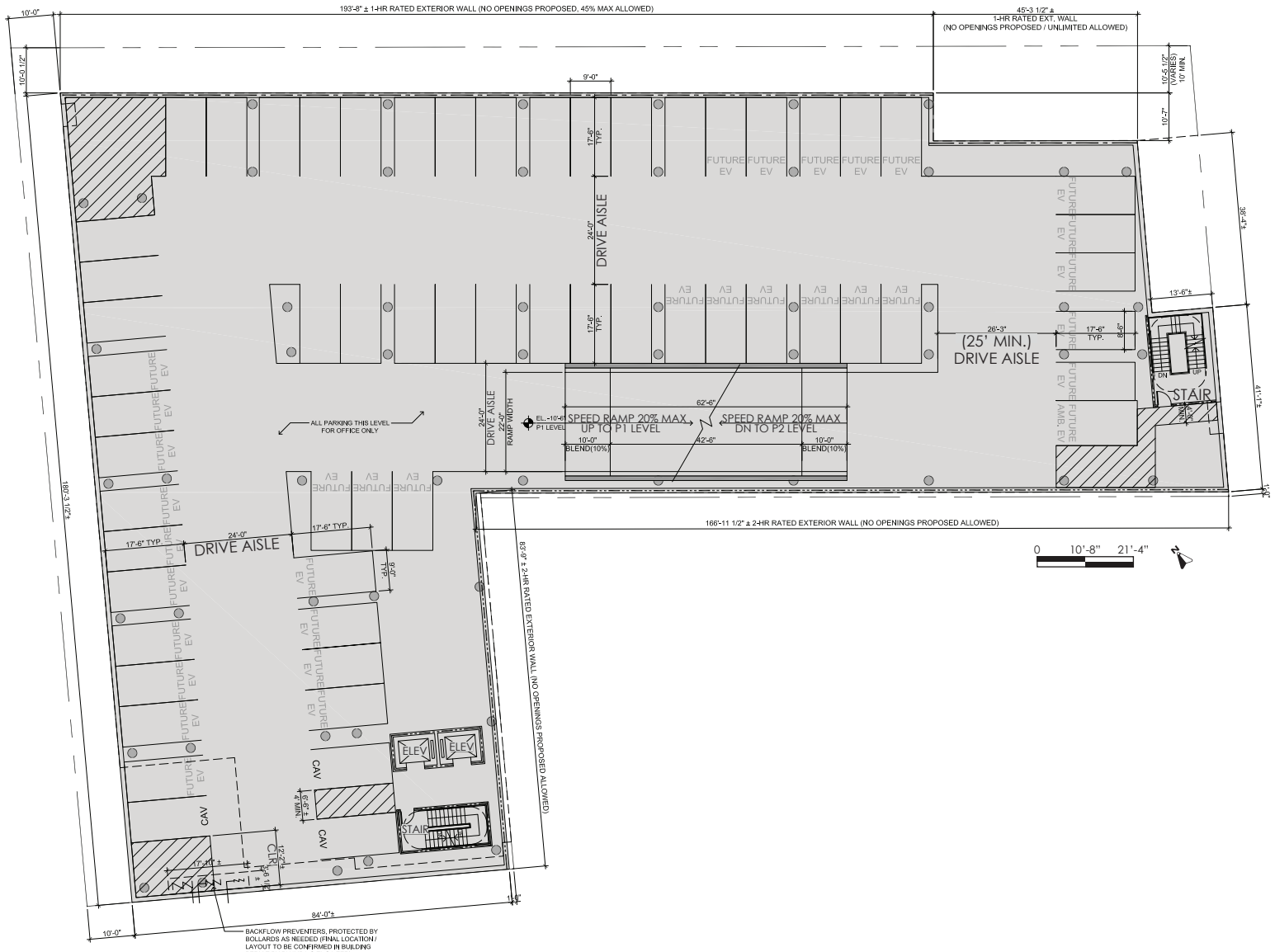
FIGURE 3.2-4




Source: Korth Sunseri Hagey Architects, March 3, 2023.

PROPOSED BASEMENT LEVEL 2 FLOOR PLAN

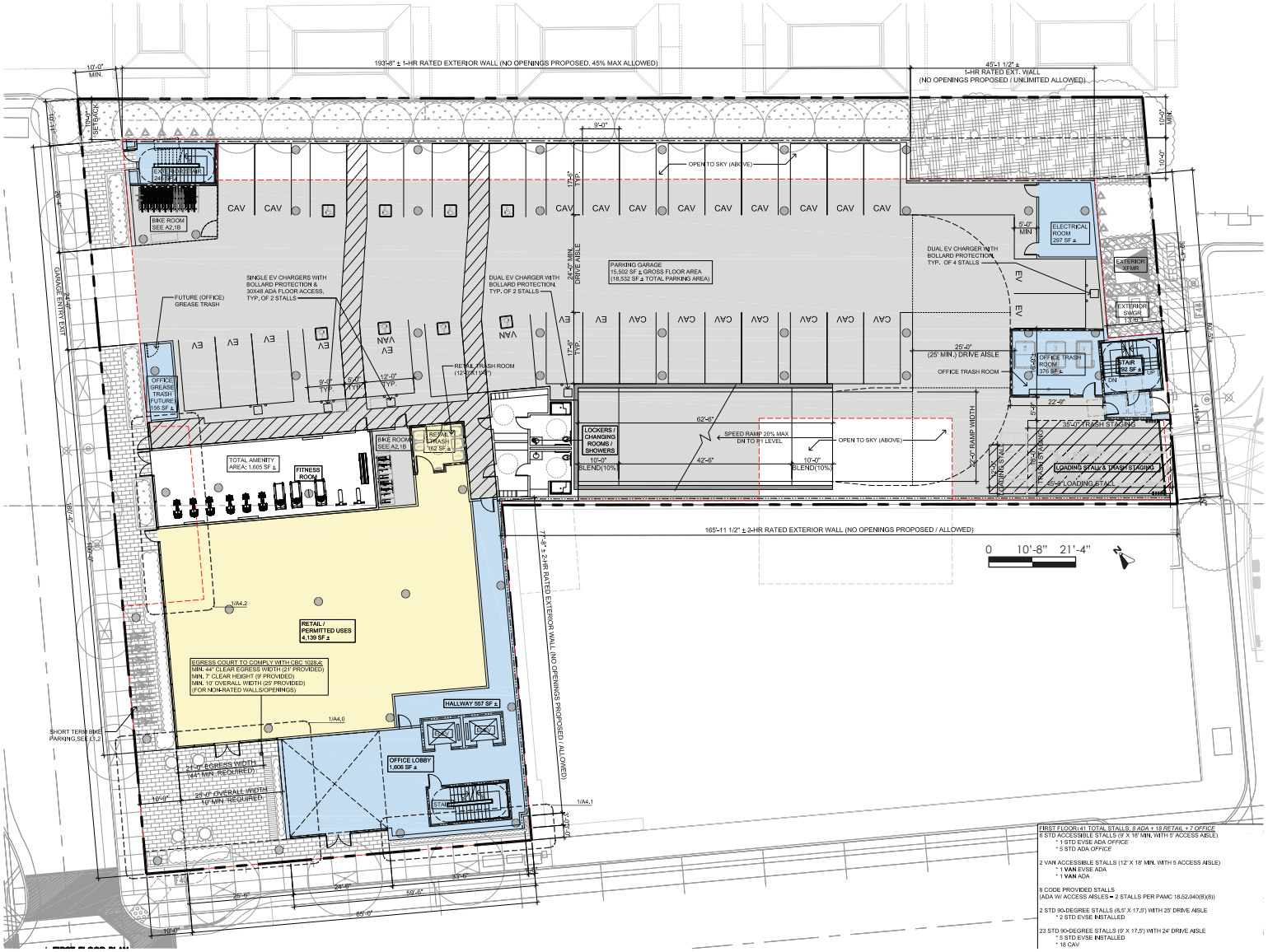
FIGURE 3.2-5




Source: Korth Sunseri Hagey Architects, March 3, 2023.

PROPOSED BASEMENT LEVEL 1 FLOOR PLAN

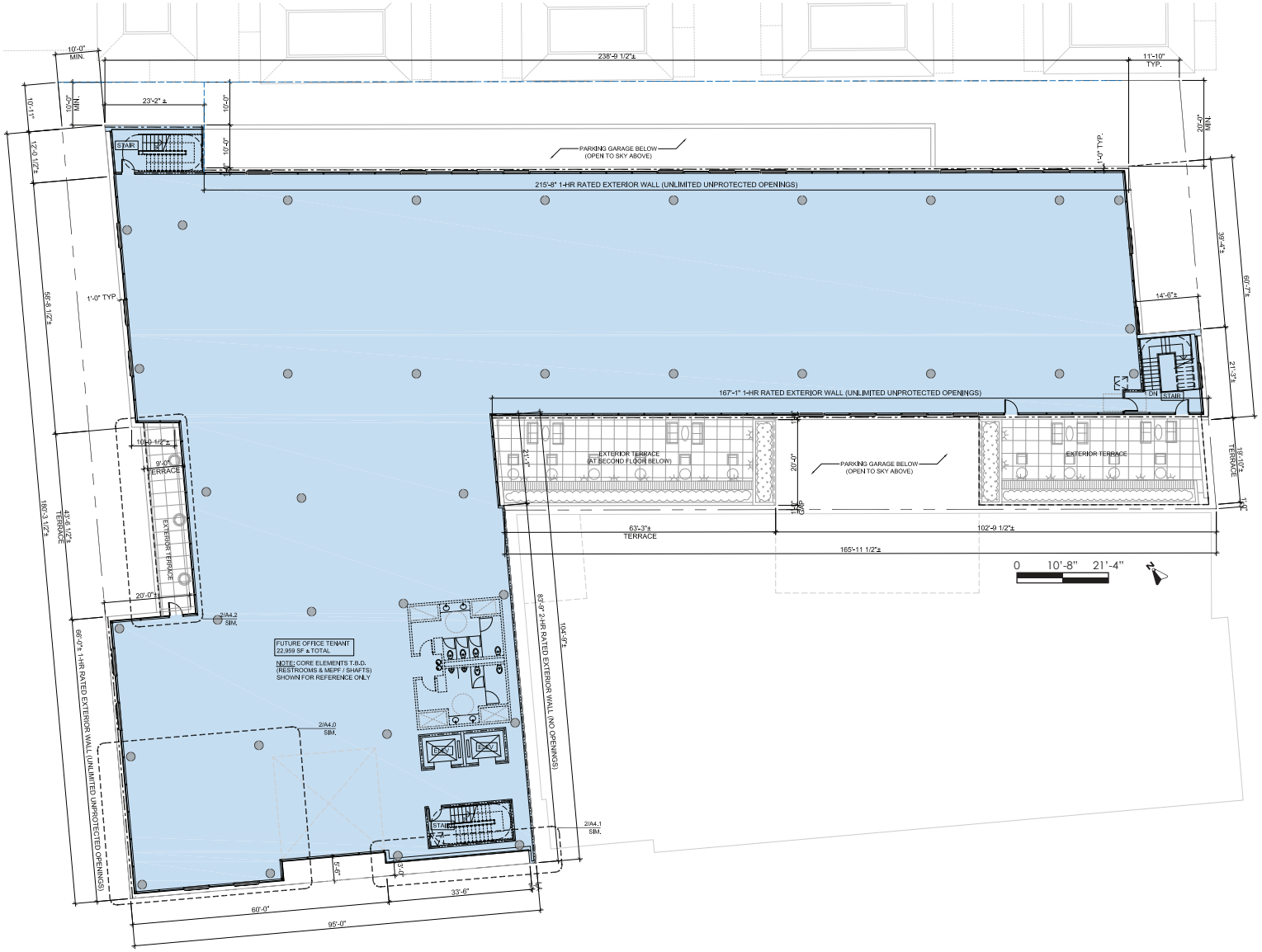
FIGURE 3.2-6




Source: Korth Sunseri Hagey Architects, March 3, 2023.

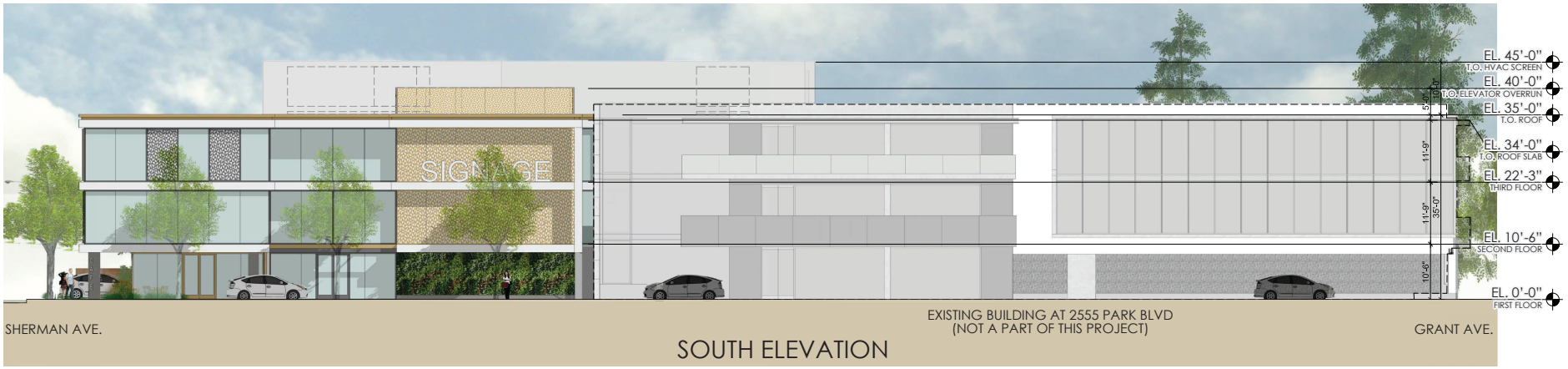
PROPOSED GROUND FLOOR PLAN

FIGURE 3.2-7

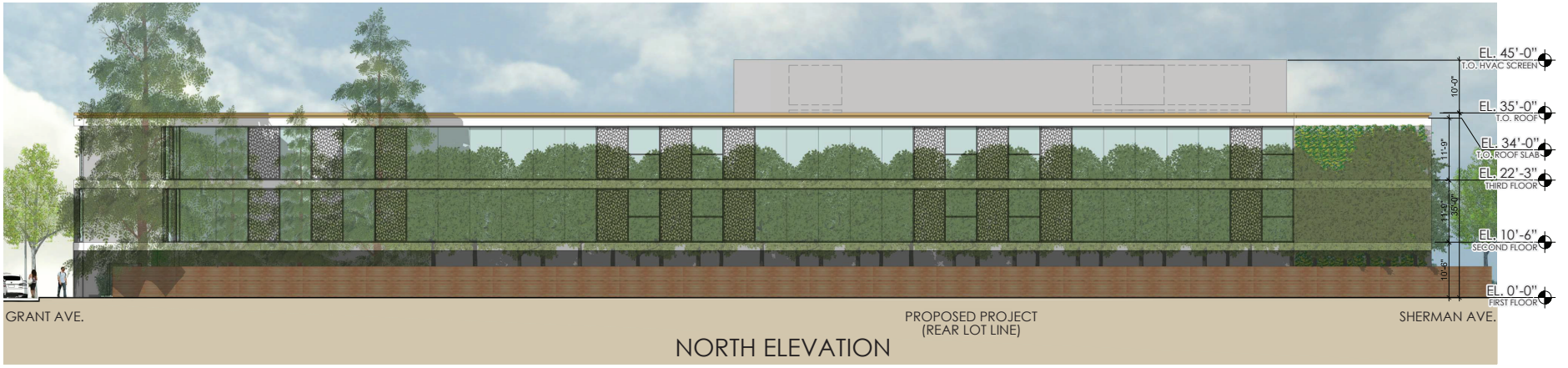



Source: Korth Sunseri Hagey Architects, March 3, 2023.

REPRESENTATIVE PROPOSED UPPER FLOOR PLAN (SECOND AND THIRD FLOORS) | FIGURE 3.2-8




SOUTH ELEVATION




NORTH ELEVATION

Source: Korth Sunseri Hagey Architects, March 3, 2023.

PROPOSED SOUTH AND NORTH BUILDING ELEVATIONS | FIGURE 3.2-9


EAST ELEVATION


WEST ELEVATION

Source: Korth Sunseri Hagey Architects, March 3, 2023.

PROPOSED EAST AND WEST BUILDING ELEVATIONS | FIGURE 3.2-10

Vehicle access to the proposed parking area would be provided along Sherman Avenue. Pedestrian access to the proposed parking area, retail area, and office lobby would be provided along Sherman Avenue and Park Boulevard. An entry plaza would be provided at the corner of Sherman Avenue and Park Boulevard and a pedestrian walkway would be provided along Sherman Avenue in addition to the existing sidewalk.

### 3.2.3 Landscaping and Trees

The project site currently contains 11 trees and there are also two street trees along Grant Avenue that are located along the proposed boundary of the project. The project would remove seven trees and retain four existing trees on-site, in the northeast corner of the project site. The two existing street trees along Grant Avenue would also be retained. The project would also plant three trees along Park Boulevard, six along Sherman Avenue, and 16 along the northern boundary of the project site. In total, the project would plant 25 new trees. The project would also include stormwater treatment areas along stretches of the perimeter of the proposed building, a green wall facing Park Boulevard, and planter pots and raised stormwater treatment planters on terraces on the second and third floor.

### 3.2.4 Green Building and Energy Efficiency

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 requires applicants to incorporate sustainable design, construction, and operational requirements into development projects. For non-residential projects, the City has adopted California Green Building Standards Code (CALGreen) Tier 2 for new construction. In accordance with the City's Green Building Ordinance, the proposed project would satisfy requirements for CALGreen Tier 2. The green measures proposed by the project include, but are not limited to:

- Short and long-term bicycle parking
- 43 total electric vehicle charging stations included in the proposed parking

### 3.2.5 Construction

It is anticipated that the project would be constructed over an approximate 16-month period. It is estimated that construction of the project would require the export of approximately 27,000 cubic yards of soil for the below grade parking garage. This would be equivalent to approximately 2,250 truck trips assuming 12 cubic yards per haul. Construction equipment would be staged on the project site, as necessary. Construction hours in the City of Palo Alto are between 8:00 AM to 6:00 PM Monday through Friday and 9:00 AM to 6:00 PM on Saturdays. Construction is not allowed on Sundays and holidays.

### 3.2.6 Off-Site Improvements

Off-site improvements would be limited to modifications to curb cuts and the planting of new street trees.

# SECTION 4.0 ENVIRONMENTAL SETTING, CHECKLIST, AND IMPACT DISCUSSION

This section presents the discussion of impacts related to the following environmental subjects in their respective subsections:

| | | | |
|---|---|---|---|
| 4.1 | Aesthetics | 4.12 | Mineral Resources |
| 4.2 | Agriculture and Forestry Resources | 4.13 | Noise |
| 4.3 | Air Quality | 4.14 | Population and Housing |
| 4.4 | Biological Resources | 4.15 | Public Services |
| 4.5 | Cultural Resources | 4.16 | Recreation |
| 4.6 | Energy | 4.17 | Transportation |
| 4.7 | Geology and Soils | 4.18 | Tribal Cultural Resources |
| 4.8 | Greenhouse Gas Emissions | 4.19 | Utilities and Service Systems |
| 4.9 | Hazards and Hazardous Materials | 4.20 | Wildfire |
| 4.10 | Hydrology and Water Quality | 4.21 | Mandatory Findings of Significance |
| 4.11 | Land Use and Planning | | |

The discussion for each environmental subject includes the following subsections:

- **Environmental Setting** – This subsection 1) provides a brief overview of relevant plans, policies, and regulations that compose the regulatory framework for the project and 2) describes the existing, physical environmental conditions at the project site and in the surrounding area, as relevant.
- **Impact Discussion** – This subsection 1) includes the recommended checklist questions from Appendix G of the CEQA Guidelines to assess impacts and 2) discusses the project's impact on the environmental subject as related to the checklist questions. For significant impacts, feasible mitigation measures are identified. "Mitigation measures" are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines Section 15370). Each impact is numbered to correspond to the checklist question being answered. For example, Impact BIO-1 answers the first checklist question in the Biological Resources section. Mitigation measures are also numbered to correspond to the impact they address. For example, MM BIO-1.3 refers to the third mitigation measure for the first impact in the Biological Resources section.

## 4.1 AESTHETICS

### 4.1.1 Environmental Setting

#### 4.1.1.1 *Regulatory Framework*

**State**

Senate Bill 743

Senate Bill (SB) 743 was adopted in 2013 and requires lead agencies to use alternatives to level of service (LOS) for evaluating transportation impacts, specifically vehicle miles traveled (VMT). SB 743 also included changes to CEQA that apply to transit-oriented developments, as related to aesthetics and parking impacts. Under SB 743, a project's aesthetic impacts will no longer be considered significant impacts on the environment if:

- The project is a residential, mixed-use residential, or employment center project[1], and
- The project is located on an infill site within a transit priority area.[2]

SB 743 also clarifies that local governments retain their ability to regulate a project's aesthetics impacts outside of the CEQA process.

Streets and Highway Code Sections 260 through 263

The California Scenic Highway Program (Streets and Highway Code, Sections 260 through 263) is managed by the California Department of Transportation (Caltrans). The program is intended to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. There are no state-designated scenic highways in Palo Alto. Interstate 280 from the San Mateo County line to State Route (SR) 17, which includes segments in Palo Alto, is an eligible, but not officially designated, State Scenic Highway.[3]

[1] An "Employment center project" is a project located on property zoned for commercial uses with a floor area ratio of no less than 0.75 and that is located within a transit priority area, as defined in Public Resources Code Section 21099(a)(1).

[2] An "infill site" is defined as "a lot located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses." A "transit priority area" is defined as "an area within 0.5 mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." A "major transit stop" means "a site containing an existing 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." Source: Public Resources Code Section 21009. Accessed March 30, 2022. https://codes.findlaw.com/ca/public-resources-code/prc-sect-21099.html.

[3] California Department of Transportation. "Scenic Highways." Accessed March 30, 2022. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways.

## Local

City of Palo Alto Comprehensive Plan 2030

The City of Palo Alto 2030 Comprehensive Plan (Comprehensive Plan) includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the City. The following policies are specific to aesthetics and are applicable to the proposed project.

| Policy/Program | Description |
|---|---|
| Policy L-1.3 | Infill development in the urban service area should be compatible with its surroundings and the overall scale and character of the city to ensure a compact, efficient development pattern. |
| Policy L-3.1 | Ensure that new or remodeled structures are compatible with the neighborhood and adjacent structures. |
| Policy L-6.1 | Promote high-quality design and site planning that is compatible with surrounding development and public spaces. |
| Policy L-6.2 | Use the Zoning Ordinance, design review process, design guidelines and Coordinated Area Plans to ensure high quality residential and commercial design and architectural compatibility. |
| Policy L-6.5 | Guide development to respect views of the foothills and East Bay hills along public street corridors in the developed portions of the City. |
| Policy L-6.6 | Design buildings to complement streets and public spaces; to promote personal safety, public health and wellbeing; and to enhance a sense of community safety. |
| Policy L-9.1 | Recognize Sand Hill Road, University Avenue between Middlefield Road and San Francisquito Creek, Embarcadero Road, Page Mill Road, Oregon Expressway, Interstate 280, Arastradero Road (west of Foothill Expressway), Junipero Serra Boulevard/Foothill Expressway and Skyline Boulevard as scenic routes and preserve their scenic qualities. |
| Policy L-9.2 | Encourage development that creatively integrates parking into the project, including by locating it behind buildings or underground wherever possible, or by providing for shared use of parking areas. Encourage other alternatives to surface parking lots that minimize the amount of land devoted to parking while still maintaining safe streets, street trees, a vibrant local economy and sufficient parking to meet demand. |

Palo Alto Municipal Code

Chapter 18.76.020 of the Palo Alto Municipal Code describes the Architectural Review process that certain projects must undergo to ensure visual environments of high aesthetic quality and orderly and harmonious development in the City. This section of the Municipal Code outlines the criteria for determining which projects are eligible for architectural review, the required permit findings, and the overall development review process.

#### 4.1.1.2 *Existing Conditions*

**Scenic Vistas**

The term scenic vista typically refers to an expansive view of an area that is visually or aesthetically pleasing, usually as seen from an elevated point or open area. The project site is located in a highly developed area of the City. It is located on relatively flat land which limits the amount of expansive views from the project site. Obstructed views of the Santa Cruz Mountains can be seen in the project vicinity, looking southwest on Sherman Avenue.

**Visual Character and Quality**

There are no state-designated scenic highways in Palo Alto and the project site is not visible from a designated state scenic highway. The project site is currently occupied by two office buildings, a single-family residence, and a garage/storage building. The project site also currently contains a surface parking lot and landscaping. The building at 150 Grant Avenue is a single-story structure with a tile exterior and tall floor-to-ceiling windows that are spaced along the façade. There is a separate garage and storage area associated with this address that is rectangular in shape with a painted masonry exterior and a flat roof. The single-family residence at 123 Sherman Avenue is a two-story structure with a gable roof, two-story chimney, and a metal cladding exterior. There is a small, single-story garage in front of the residence on Sherman Avenue. The office building at 2501 Park Boulevard is a two-story building with a flat roof and smooth concrete exterior walls that are punctuated with a variety of window shapes, rounded awnings, and steel beams.

Surface parking is located between the 150 Grant Avenue and 123 Sherman Avenue. The existing landscaping on-site is comprised of 11 trees and shrubs in planter areas that are located along the perimeter of the site and buildings. There are also two street trees located adjacent to the project site along Grant Avenue.

The surrounding area in the immediate vicinity of the project site consists of one- to four-story residential and office properties. The properties to the north of the project site are two-story multi-family residential buildings with a mix of flat and hip roof types. The property to the west of the project site is a four-story office building that is designed in a similar architectural style to the building at 2501 Park Boulevard. There is a four-story government office building with surface parking lots and sporadic landscaping to the south of the project site. The parcel directly adjacent to the southeast of the project site is a three-story office building with architectural features such as multiple balcony areas, crossbeam covers on the balconies to provides additional shade, large multi-story windows, and a concrete façade.

**Location within a Transit Priority Area**

This project site is located within a half mile of the California Avenue Train Station, which is serviced by Caltrain commuter trains. This qualifies as a major transit stop; therefore, the project site is within a transit priority area as defined in SB 743 and by statute the project's aesthetics impact is considered to be less significant.

### 4.1.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Except as provided in Public Resources Code Section 21099, would the project: | | | | |
| 1) Have a substantial adverse effect on a scenic vista? | ☐ | ☐ | ☒ | ☐ |
| 2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | ☐ | ☐ | ☒ | ☐ |
| 3) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? [4] If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? | ☐ | ☐ | ☒ | ☐ |
| 4) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | ☐ | ☐ | ☒ | ☐ |

Construction of the proposed project would result in changes to the built environment; however, the project qualifies as an employment center project by proposing office development with a Floor Area Ratio (FAR) of 2.0 (greater than 0.75) and is located on an infill site within a transit priority area. Pursuant to SB 743, (Public Resources Code section 21099[d][1]) "aesthetic and parking impacts of a residential, mixed-use residential, or employment center on an infill site within a transit priority area shall not be considered significant impacts on the environment;" therefore, the aesthetics impacts of the project are not considered significant.

In addition, the project is required to obtain City design approval before construction through the Architectural Review process to ensure visual environments of high aesthetic quality. The project would also be required to comply with the design standards outlined in the City Municipal Code. The review and approval of the building design would further reduce the project's less than significant aesthetic impacts. **(Less than Significant Impact)**

[4] Public views are those that are experienced from publicly accessible vantage points.

## 4.2 AGRICULTURE AND FORESTRY RESOURCES

### 4.2.1 Environmental Setting

#### 4.2.1.1 *Regulatory Framework*

**State**

Farmland Mapping and Monitoring Program

The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) assesses the location, quality, and quantity of agricultural land and conversion of these lands over time. Agricultural land is rated according to soil quality and irrigation status. The best quality land is identified as Prime Farmland. In CEQA analyses, the FMMP classifications and published county maps are used, in part, to identify whether agricultural resources that could be affected are present on-site or in the project area.[5]

California Land Conservation Act

The California Land Conservation Act (Williamson Act) enables local governments to enter into contracts with private landowners to restrict parcels of land to agricultural or related open space uses. In return, landowners receive lower property tax assessments. In CEQA analyses, identification of properties that are under a Williamson Act contract is used to also identify sites that may contain agricultural resources or are zoned for agricultural uses.[6]

Fire and Resource Assessment Program

The California Department of Forestry and Fire Protection (CAL FIRE) identifies forest land, timberland, and lands zoned for timberland production that can (or do) support forestry resources.[7] Programs such as CAL FIRE's Fire and Resource Assessment Program and are used to identify whether forest land, timberland, or timberland production areas that could be affected are located on or adjacent to a project site.[8]

#### 4.2.1.2 *Existing Conditions*

The proposed project site has a General Plan land use designation of Regional/Community Commercial and is zoned Community Commercial Subdistrict Retail Combining District (CC[2][R]). The project site is currently developed with two office buildings, a single-family residence, and a

[5] California Department of Conservation. "Farmland Mapping and Monitoring Program." Accessed April 4, 2022. http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx.
[6] California Department of Conservation. "Williamson Act." Accessed April 4, 2022. http://www.conservation.ca.gov/dlrp/lca.
[7] Forest Land is land that can support 10 percent native tree cover and allows for management of forest resources (California Public Resources Code Section 12220(g)); Timberland is land not owned by the federal government or designated as experimental forest land that is available for, and capable of, growing trees to produce lumber and other products, including Christmas trees (California Public Resources Code Section 4526); and Timberland Production is land used for growing and harvesting timber and compatible uses (Government Code Section 51104(g)).
[8] California Department of Forestry and Fire Protection. "Fire and Resource Assessment Program." Accessed April 4, 2022. http://frap.fire.ca.gov/.

garage/storage building. The Santa Clara County Important Farmlands 2018 Map designates the project site as "Urban and Built-Up Land", which is defined as land with at least six structures per 10 acres. Common examples of "Urban and Built-Up Land" are residential, institutional, industrial, commercial, landfill, golf course, airports, and other utility uses.[9] No lands adjacent to the project site are used for agricultural production, forest land, or timberland. Surrounding properties are designated, zoned, and used for urban uses. There are no Williamson Act parcels on or in the vicinity of the project site.[10]

### 4.2.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | ☐ | ☐ | ☐ | ☒ |
| 2) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | ☐ | ☐ | ☐ | ☒ |
| 3) 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))? | ☐ | ☐ | ☐ | ☒ |
| 4) Result in a loss of forest land or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |
| 5) 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? | ☐ | ☐ | ☐ | ☒ |

[9] California Natural Resources Agency. "Santa Clara County Important Farmland 2018." Accessed April 4, 2022. https://www.conservation.ca.gov/dlrp/fmmp/Pages/SantaClara.aspx

[10] County of Santa Clara. "Williamson Act and Open Space Easement". Accessed April 4, 2022. https://plandev.sccgov.org/policies-programs/williamson-act-and-open-space-easement

| | |
|---|---|
| **Impact AG-1:** | The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. **(No Impact)** |

The proposed project would redevelop a site that is designated as "Urban and Built-Up Land" on maps prepared by the California Resources Agency for Santa Clara County. Therefore, no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would be converted to non-agricultural use as a result of project implementation. **(No Impact)**

| | |
|---|---|
| **Impact AG-2:** | The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. **(No Impact)** |

As discussed in Section 4.2.1.2 Existing Conditions, the project site has a General Plan land use designation of Regional/Community Commercial and is zoned Community Commercial Subdistrict Retail Combining District (CC[2][R]). The project site is not under a Williamson Act contract, nor are any of the adjacent parcels. Therefore, the project would not conflict with existing zoning for an agricultural use or a Williamson Act contract. **(No Impact)**

| | |
|---|---|
| **Impact AG-3:** | The project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. **(No Impact)** |

As discussed in Section 4.2.1.2 Existing Conditions, the project site is not zoned, or adjacent to land zoned, for forest land, timberland, or Timberland Production. It is in an urban area surrounded by urban development. Therefore, the project would not conflict with existing zoning or require rezoning of forest land or timberland uses. **(No Impact)**

| | |
|---|---|
| **Impact AG-4:** | The project would not result in a loss of forest land or conversion of forest land to non-forest use. **(No Impact)** |

The project site is in an urbanized area of the City and is currently developed with office, a residence, and commercial uses. Therefore, no forest land would be lost as a result of the project. **(No Impact)**

| | |
|---|---|
| **Impact AG-5:** | The project would not 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. **(No Impact)** |

The proposed development of this office building would occur in an urbanized area of the City. No agricultural or forestry uses are located on-site or in the vicinity of the project site. Therefore, the project would not result in impacts to agricultural lands or forest lands. **(No Impact)**

## 4.3 AIR QUALITY

The following discussion is based, in part, on an Air Quality and Greenhouse Gas Assessment prepared for the project by Illingworth & Rodkin, Inc., dated May 2022. A copy of this report is included in Appendix A of this Initial Study.

### 4.3.1 Environmental Setting

#### 4.3.1.1 *Background Information*

**Criteria Pollutants**

Air quality in the Bay Area is assessed related to six common air pollutants (referred to as criteria pollutants), including ground-level ozone ($O_3$), nitrogen oxides ($NO_x$), particulate matter (PM), carbon monoxide (CO), sulfur oxides ($SO_x$), and lead.[11] Criteria pollutants are regulated because they result in health effects. An overview of the sources of criteria pollutants and their associated health are summarized in Table 4.3-1. The most commonly regulated criteria pollutants in the Bay Area are discussed further below.

**Table 4.3-1: Health Effects of Air Pollutants**

| Pollutants | Sources | Primary Effects |
|---|---|---|
| Ozone ($O_3$) | Atmospheric reaction of organic gases with nitrogen oxides in sunlight | • Aggravation of respiratory and cardiovascular diseases<br>• Irritation of eyes<br>• Cardiopulmonary function impairment |
| Nitrogen Dioxide ($NO_2$) | Motor vehicle exhaust, high temperature stationary combustion, atmospheric reactions | • Aggravation of respiratory illness<br>• Reduced visibility |
| Fine Particulate Matter ($PM_{2.5}$) and Coarse Particulate Matter ($PM_{10}$) | Stationary combustion of solid fuels, construction activities, industrial processes, atmospheric chemical reactions | • Reduced lung function, especially in children<br>• Aggravation of respiratory and cardiorespiratory diseases<br>• Increased cough and chest discomfort<br>• Reduced visibility |
| Toxic Air Contaminants (TACs) | Cars and trucks, especially diesel-fueled; industrial sources, such as chrome platers; dry cleaners and service stations; building materials and products | • Cancer<br>• Chronic eye, lung, or skin irritation<br>• Neurological and reproductive disorders |

High $O_3$ levels are caused by the cumulative emissions of reactive organic gases (ROG) and $NO_x$. These precursor pollutants react under certain meteorological conditions to form high $O_3$ levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to

[11] The area has attained both state and federal ambient air quality standards for CO. The project does not include substantial new emissions of sulfur dioxide or lead. These criteria pollutants are not discussed further.

reduce $O_3$ levels. The highest $O_3$ levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources.

PM is a problematic air pollutant of the Bay Area. PM is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less ($PM_{10}$) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of $PM_{10}$ and $PM_{2.5}$ are the result of both region-wide emissions and localized emissions.

**Toxic Air Contaminants**

TACs are a broad class of compounds known to have health effects. They include but are not limited to criteria pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, diesel fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway).

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs. Diesel exhaust is a complex mixture of gases, vapors, and fine particles. Medium- and heavy-duty diesel trucks represent the bulk of DPM emissions from California highways. The majority of DPM is small enough to be inhaled into the lungs. Most inhaled particles are subsequently exhaled, but some deposit on the lung surface or are deposited in the deepest regions of the lungs (most susceptible to injury).[12] Chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the California Air Resources Board (CARB).

**Sensitive Receptors**

Some groups of people are more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools.

#### 4.3.1.2 *Regulatory Framework*

**Federal and State**

Clean Air Act

At the federal level, the United States Environmental Protection Agency (EPA) is responsible for overseeing implementation of the Clean Air Act and its subsequent amendments. The federal Clean Air Act requires the EPA to set national ambient air quality standards for the six common criteria pollutants (discussed previously), including PM, $O_3$, CO, $SO_x$, $NO_x$, and lead.

[12] California Air Resources Board. "Overview: Diesel Exhaust and Health." Accessed March 30, 2022. https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health.

CARB is the state agency that regulates mobile sources throughout the state and oversees implementation of the state air quality laws and regulations, including the California Clean Air Act. The EPA and the CARB have adopted ambient air quality standards establishing permissible levels of these pollutants to protect public health and the climate. Violations of ambient air quality standards are based on air pollutant monitoring data and are determined for each air pollutant. Attainment status for a pollutant means that a given air district meets the standard set by the EPA and/or CARB.

Risk Reduction Plan

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, the plan involves application of emission control strategies to existing diesel vehicles and equipment to reduce DPM (in additional to other pollutants). Implementation of this plan, in conjunction with stringent federal and CARB-adopted emission limits for diesel fueled vehicles and equipment (including off-road equipment), will significantly reduce emissions of DPM and $NO_X$.

**Regional**

2017 Clean Air Plan

The Bay Area Air Quality Management District (BAAQMD) is the agency primarily responsible for assuring that the federal and state ambient air quality standards are maintained in the San Francisco Bay Area. Regional air quality management districts, such as BAAQMD, must prepare air quality plans specifying how state and federal air quality standards will be met. BAAQMD's most recently adopted plan is the Bay Area 2017 Clean Air Plan (2017 CAP). The 2017 CAP focuses on two related BAAQMD goals: protecting public health and protecting the climate. To protect public health, the 2017 CAP describes how BAAQMD will continue its progress toward attaining state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the 2017 CAP includes control measures designed to reduce emissions of methane and other super-greenhouse gases (GHGs) that are potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.[13]

CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. Jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing air quality impacts developed by BAAQMD within their CEQA Air Quality Guidelines. The guidelines include information on legal requirements, BAAQMD rules, methods of analyzing impacts, and recommended mitigation measures.

[13] BAAQMD. *Final 2017 Clean Air Plan.* April 19, 2017. http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans.

**Local**

Palo Alto 2030 Comprehensive Plan

The Comprehensive Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the City. The following policies are specific to air quality and are applicable to the proposed project.

| Policy/Program | Description |
|---|---|
| Program N-5.1.2 | Implement BAAQMD recommended standards for the design of buildings near heavily traveled roads, in order to minimize exposure to auto-related emissions. |
| Policy N-5.3 | Reduce emissions of particulates from, manufacturing, dry cleaning, construction activity, grading, wood burning, landscape maintenance, including leaf blowers and other sources. |
| Policy N-5.4 | All potential sources of odor and/or toxic air contaminants shall be adequately buffered, or mechanically or otherwise mitigated to avoid odor and toxic impacts that violate relevant human health standards. |
| Policy N-5.5 | Support the BAAQMD in its efforts to achieve compliance with existing air quality regulations by continuing to require development applicants to comply with BAAQMD construction emissions control measures and health risk assessment requirements. |

### 4.3.1.3 *Existing Conditions*

The Bay Area is considered a non-attainment area for ground-level $O_3$ and $PM_{2.5}$ under both the federal Clean Air Act and state Clean Air Act. The area is also considered nonattainment for $PM_{10}$ under the state act, but not the federal act. The area has attained both state and federal ambient air quality standards for CO. As part of an effort to attain and maintain ambient air quality standards for $O_3$ and $PM_{10}$, BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for $O_3$ precursor pollutants (ROG and $NO_X$), $PM_{10}$, and $PM_{2.5}$, and apply to both construction period and operational period impacts.

### 4.3.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 1) Conflict with or obstruct implementation of the applicable air quality plan? | ☐ | ☐ | ☒ | ☐ |
| 2) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? | ☐ | ☐ | ☒ | ☐ |
| 3) Expose sensitive receptors to substantial pollutant concentrations? | ☐ | ☐ | ☒ | ☐ |

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 4) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | ☐ | ☐ | ☒ | ☐ |

#### 4.3.2.1 *Thresholds of Significance*

**Impacts from the Project**

As discussed in CEQA Guidelines Section 15064(b), the determination of whether a project may have a significant effect on the environment calls for judgment on the part of the lead agency and must be based to the extent possible on scientific and factual data. The City of Palo Alto has considered the air quality thresholds updated by BAAQMD in May 2017 and regards these thresholds to be based on the best information available for the San Francisco Bay Area Air Basin and conservative in terms of the assessment of health effects associated with TACs and $PM_{2.5}$. The BAAQMD CEQA Air Quality thresholds used in this analysis are identified in Table 1.3-2 below.

**Table 4.3-2: BAAQMD Air Quality Significance Thresholds**

| **Pollutant** | **Construction Thresholds** | **Operation Thresholds** | |
|---|---|---|---|
| | **Average Daily Emissions (pounds/day)** | **Average Daily Emissions (pounds/day)** | **Annual Average Emissions (tons/year)** |
| **Criteria Air Pollutants** | | | |
| ROG, $NO_x$ | 54 | 54 | 10 |
| $PM_{10}$ | 82 (exhaust) | 82 | 15 |
| $PM_{2.5}$ | 54 (exhaust) | 54 | 10 |
| CO | Not Applicable | 9.0 ppm (eight-hour) or 20.0 ppm (one-hour) | |
| Fugitive Dust | Dust Control Measures/Best Management Practices | Not Applicable | |
| **Health Risks and Hazards for New Sources (within a 1,000-foot Zone of Influence)** | | | |
| **Health Hazard** | **Single Source** | **Combined Cumulative Sources** | |
| Excess Cancer Risk | 10 per one million | 100 per one million | |
| Hazard Index | 1.0 | 10.0 | |
| Incremental Annual $PM_{2.5}$ | 0.3 $\mu g/m^3$ | 0.8 $\mu g/m^3$ (average) | |

| **Impact AIR-1:** | The project would not conflict with or obstruct implementation of the applicable air quality plan. **(Less than Significant Impact)** |
|---|---|

**Clean Air Plan**

BAAQMD is the regional agency responsible for overseeing compliance with State and Federal laws, regulations, and programs within the San Francisco Bay Area Air Basin. As previously stated, BAAQMD's most recently adopted plan is 2017 CAP. The primary goals of the Clean Air Plan are to attain air quality standards, reduce population exposure and protect public health, and reduce GHG emissions and protect the climate. The BAAQMD has also developed CEQA guidelines to assist lead agencies in evaluating the significance of air quality impacts. In formulating compliance strategies, BAAQMD relies on planned land uses established by local general plans. Land use planning affects vehicle travel, which in turn affects region-wide emissions of air pollutants and GHGs.

The 2017 CAP includes control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. Plans must show consistency with the control measures listed within the Clean Air Plan. The proposed project would not conflict with the latest Clean Air planning efforts because the project would have emissions below the BAAQMD thresholds (as described below), would be an urban infill development, and would be located near transit with regional connections. **(Less than Significant Impact)**

**Regional Criteria Pollutant Emissions**

The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to estimate emissions from construction and operation of the project. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The model output from CalEEMod along with construction and operational inputs can be found in Appendix A.

Construction Period Emissions

CalEEMod provided annual emissions for construction including both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The project construction schedule and equipment usage assume the project would take 16 months to construct. Average daily emissions were computed by dividing the total construction emissions by the number of construction days. Table 4.3-3 shows average daily construction emissions of ROG, $NO_X$, $PM_{10}$ exhaust, and $PM_{2.5}$ exhaust during construction of the project.

**Table 4.3-3: Construction Period Emissions**

| Year | ROG | $NO_x$ | $PM_{10}$ Exhaust | $PM_{2.5}$ Exhaust |
|---|---|---|---|---|
| *Construction Emissions Per Year (Tons)* | | | | |
| Year 1 | 0.03 | 0.38 | 0.02 | 0.01 |
| Year 2 | 0.30 | 0.20 | 0.01 | 0.01 |
| *Average Daily Construction Emissions Per Year (Pounds/Day)* | | | | |

| Table 4.3-3: Construction Period Emissions | | | | |
|---|---|---|---|---|
| **Year** | **ROG** | **$NO_x$** | **$PM_{10}$ Exhaust** | **$PM_{2.5}$ Exhaust** |
| Year 1 (114 construction workdays) | 0.58 | 6.74 | 0.33 | 0.24 |
| Year 2 (112 construction workdays) | 5.42 | 3.59 | 0.20 | 0.12 |
| **BAAQMD Thresholds (pounds per day)** | **54 lbs./day** | **54 lbs./day** | **82 lbs./day** | **54 lbs./day** |
| Exceed Threshold? | No | No | No | No |

As shown in the Table 4.3-3, above, project construction period emissions would not exceed the BAAQMD significance thresholds. The project, therefore, would have a less than significant criteria pollutant emissions impact and would not conflict with or obstruct implementation of the 2017 CAP. **(Less than Significant Impact)**

### Operational Period Emissions

Operational criteria pollutant emissions from the project would be generated primarily from vehicles driven by future employees and customers. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) would also occur. CalEEMod was used to calculate emissions from operation of the proposed project. Vehicle trip generation rates were input to the model using the daily trip generation rate provided by Hexagon Transportation Consultants (see Section 4.17 Transportation). Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest year of full operation would be 2025 if construction begins in 2023. Emissions associated with build-out later than 2025 would be lower.

The project proposes to include one stand-by emergency generator on the roof of the building. The generator would be 375-kilowatts (kW) powered by a 503 horsepower (HP) natural gas engine. The generator would be tested periodically and power the building in the event of a power failure. For modeling purposes, it was assumed that the generator would be operated primarily for testing and maintenance purposes. CARB and BAAQMD requirements limit the engine operations to 50 hours each per year of non-emergency operation. During testing periods, the engine would typically be run for less than one hour.

Emissions from the existing land uses on-site were also modeled as the baseline condition for the project site. Table 4.3-4, below, summarizes the results of the CalEEMod calculations.

| Table 4.3-4: Operational Period Emissions | | | | |
|---|---|---|---|---|
| **Scenario** | **ROG** | **$NO_x$** | **$PM_{10}$** | **$PM_{2.5}$** |
| 2025 Annual Project Operational Emissions (tons/year) | 0.66 | 0.22 | 0.39 | 0.10 |
| 2022 Existing Use Emissions (tons/year) | 0.15 | 0.08 | 0.10 | 0.03 |

| Table 4.3-4: Operational Period Emissions | | | | |
|---|---|---|---|---|
| **Scenario** | **ROG** | **$NO_x$** | **$PM_{10}$** | **$PM_{2.5}$** |
| Net Annual Emissions (tons/year) | 0.51 | 0.14 | 0.29 | 0.07 |
| **BAAQMD Thresholds (tons/year)** | 10 tons | 10 tons | 10 tons | 10 tons |
| Exceed Threshold? | No | No | No | No |
| 2025 Daily Project Operational Emissions (pounds/day)[1] | 2.77 | 0.75 | 1.58 | 0.40 |
| **BAAQMD Thresholds (pounds/day)** | 54 lbs. | 54 lbs. | 85 lbs. | 54 lbs. |
| Exceed Threshold? | No | No | No | No |
| Notes: [1]Assumes 365-day operation. | | | | |

As shown in Table 4.3-4, above, the project would not exceed BAAQMD thresholds of significance for operational period emissions. The project, therefore, would not result in a significant increase of regional criteria pollutants and would not conflict with or obstruct implementation of the 2017 CAP. **(Less than Significant Impact)**

**Impact AIR-2:** The project 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. **(Less than Significant Impact)**

Per the BAAQMD CEQA Air Quality Guidelines, air pollution by its nature is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. As discussed above, the proposed project would not, by itself, result in any air pollutant emissions exceeding BAAQMD's significance thresholds. As a result, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment. **(Less than Significant Impact)**

**Impact AIR-3:** **The project would not expose sensitive receptors to substantial pollutant concentrations. (Less than Significant Impact)**

### Dust Generation

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of $PM_{10}$ and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less-than-significant if best management practices (BMPs) are implemented to reduce these emissions. Mitigation Measure AIR-2a of the Comprehensive Plan Update EIR requires the implementation of the standard BAAQMD BMPs for all development projects. These BMPs shall be

implemented during all demolition, grading, and construction activities to reduce construction-related particulate emissions:

- Exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day or covered.
- Haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- 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.
- Vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- 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.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Chapter13, Section 2485 of California Code of Regulations [CCR]). Clear signage explaining this rule shall be provided for construction workers at all access points.
- Construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. Equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly visible sign shall be posted with the telephone number and name of an individual working for the construction contractor who can be contacted regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Implementation of these BAAQMD-recommended BMPs during construction are standard measures that are required for all projects. Implementation of these measures would ensure that the project's fugitive dust impacts are less than significant.

**Project Community Health Risks**

The project would introduce new sources of TACs during construction and operation that would affect nearby sensitive receptors. Sensitive receptors in the project vicinity include existing residences to the north, east, and south of the project site (see Figure 4.3-1). While there are additional sensitive receptors within 1,000 feet of the project site, the receptors chosen are adequate to identify maximum impacts from the project. Project construction activities would generate dust and equipment exhaust.

Project operation would include the installation of a natural gas-powered generator and would generate some traffic consisting of mostly light-duty gasoline-powered vehicles. However, given that the proposed generator would be powered by natural gas, and not diesel, it would not emit substantial TACs. Therefore, it was not considered further in the health risk analysis. Per BAAQMD methodology, a road with less than 10,000 total vehicles per day is considered a low-impact source of TACs. The project would result in approximately 669 daily trips or 511 net daily trips (see Section 4.17 Transportation) from primarily light-duty vehicles which would result in negligible contributions to TAC emissions and, therefore, are not considered further in this analysis.

Community risk impacts were addressed by predicting increased cancer risk, the increase in annual $PM_{2.5}$ concentrations and computing the Hazard Index (HI) for non-cancer health risks. The modeling results indicated that the construction maximally exposed individuals (MEI) were located in two places. The construction cancer risk MEI was determined to be located at a residence on the first floor to the southeast of the project site. The $PM_{2.5}$ concentration MEI was determined to be located at a residence on the first floor to the east of the project site (see Figure 4.3-1). To give the most conservative analysis, the MEIs were assumed to be infants. The project risk impacts are summarized in Table 4.3-5.

**Table 4.3-5: Community Health Risk Impacts at Off-Site Receptors**

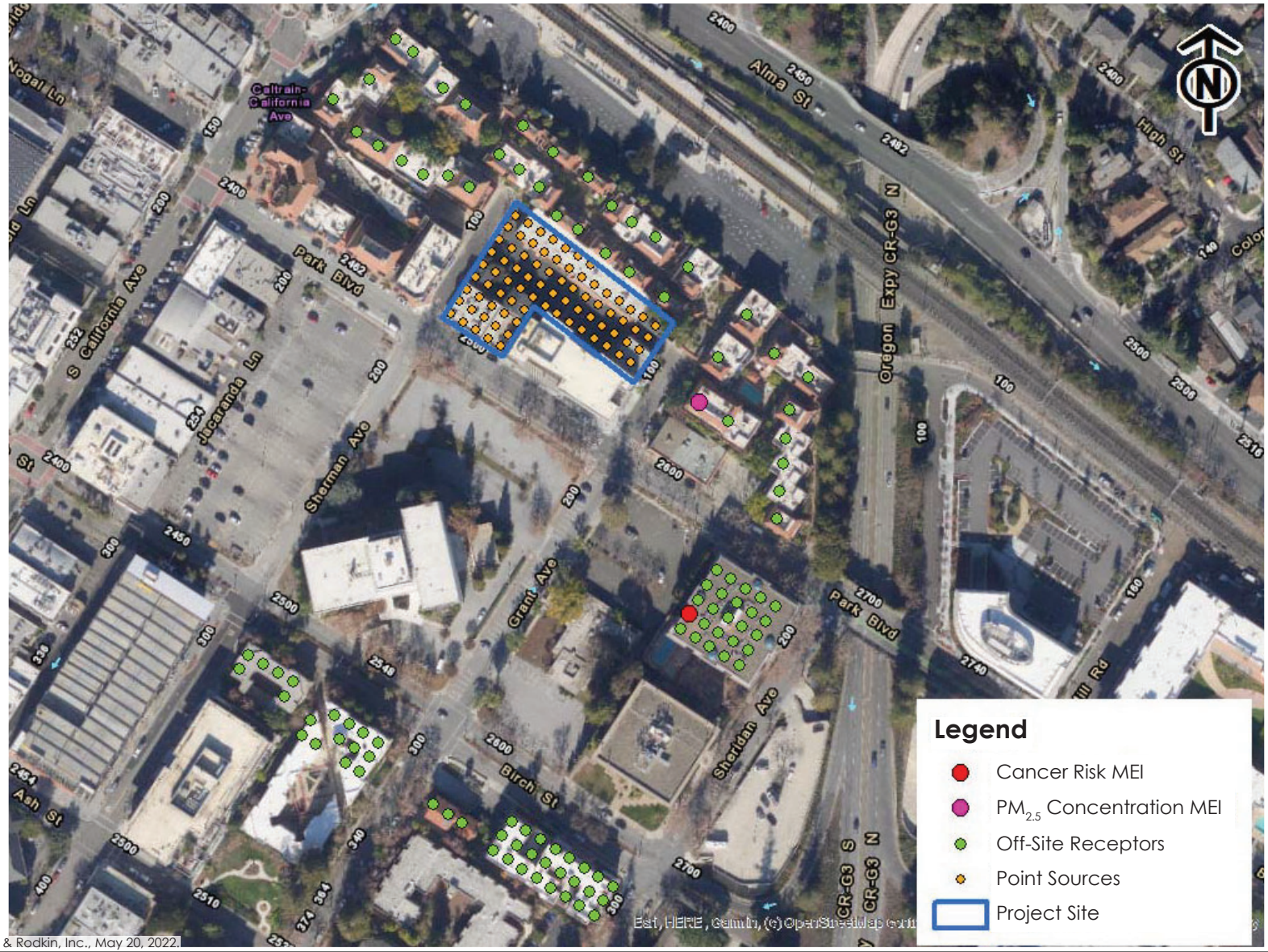
| Source | Cancer Risk* (per million) | Annual $PM_{2.5}$* ($\mu g/m^3$) | Hazard Index |
|---|---|---|---|
| Project Construction (unmitigated) | 4.38 (infant) | 0.13 | <0.01 |
| **BAAQMD Single-Source Threshold** | 10 | 0.3 | 1.0 |
| Exceed Threshold? | No | No | No |

*Cancer risk MEI and $PM_{2.5}$ are located at different receptors.

As shown in Table 4.3-5, the unmitigated maximum cancer risks, annual $PM_{2.5}$ concentration, and HI from construction activities at the MEI locations would not exceed the respective BAAQMD single-source significance thresholds.

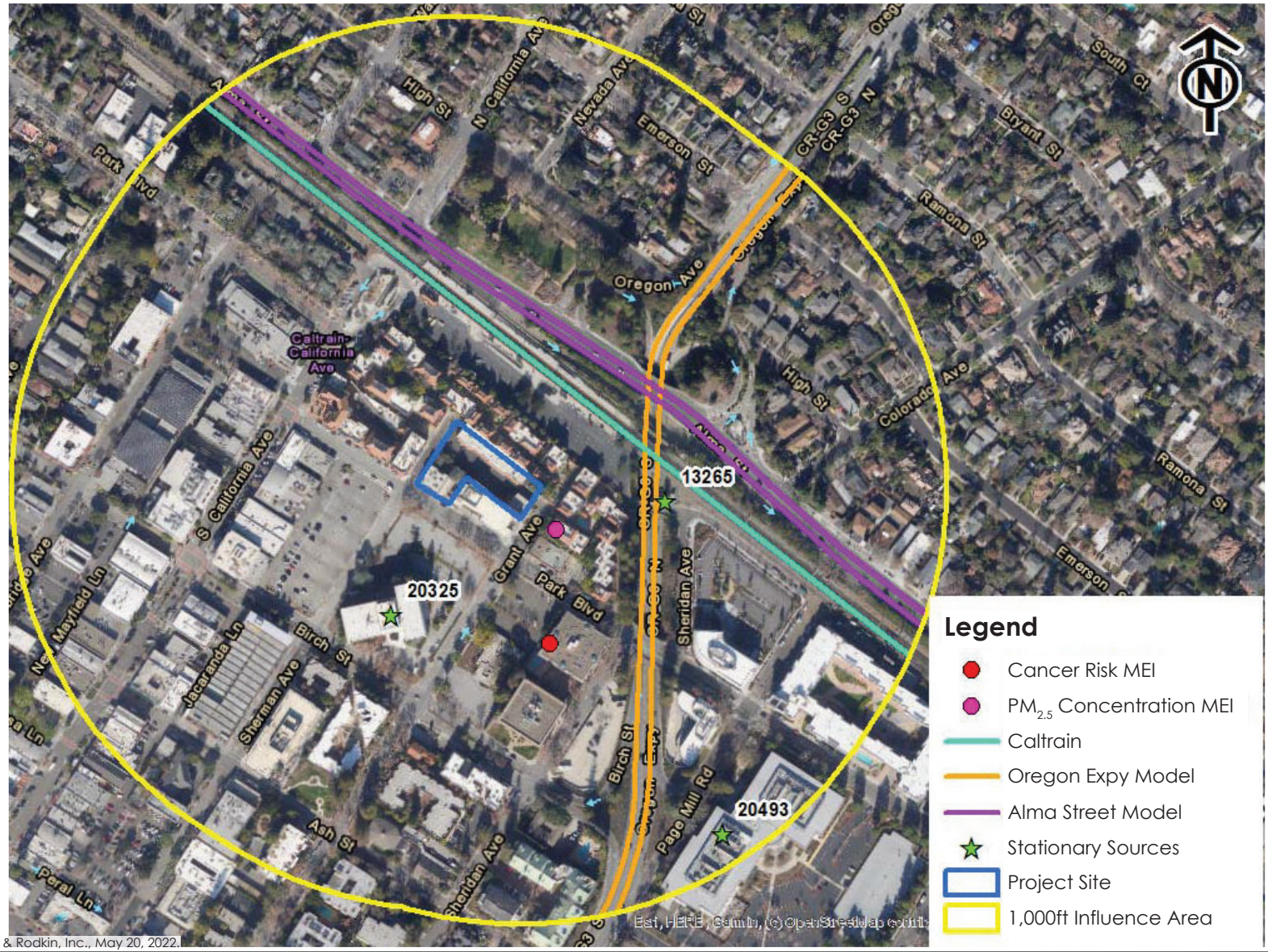
### Cumulative Community Health Risks

Cumulative TAC impacts are analyzed by combining the community risk impacts of the project construction and nearby sources of TACs within 1,000 feet of the project site. TAC sources include rail lines, highways, busy surface streets (>10,000 average daily trips or ADT), and stationary sources identified by BAAQMD. A review of the project area indicates that traffic on Oregon Expressway and Alma Street would exceed 10,000 vehicles per day. Additionally, there are Caltrain tracks to the north of the project site. A review of BAAQMD's stationary source map website identified three stationary sources with the potential to affect the project MEI. The stationary sources identified include two diesel generators and one auto body coating operation. Figure 4.3-2 shows the location of the existing sources affecting the MEIs. Table 4.3-6 summarizes the cumulative community health risks at the project construction MEI.




Source: Illingworth & Rodkin, Inc., May 20, 2022.

LOCATIONS OF SENSITIVE RECEPTORS AND MEIS | FIGURE 4.3-1




Source: Illingworth & Rodkin, Inc., May 20, 2022.

LOCATIONS OF EXISTING TAC SOURCES | FIGURE 4.3-2

| Table 4.3-6: Cumulative Community Risk Impacts at the Off-Site MEIs | | | |
|---|---|---|---|
| **Source** | **Cancer Risk* (per million)** | **Annual $PM_{2.5}$* ($\mu g/m^3$)** | **Hazard Index** |
| Project Impacts | | | |
| Project Construction (unmitigated) | 4.38 (infant) | 0.13 | <0.01 |
| **BAAQMD Single-Source Threshold** | **10** | **0.3** | **1.0** |
| Exceed Threshold? | No | No | No |
| Cumulative Sources | | | |
| Caltrain | 18.32 | 0.06 | -- |
| Oregon Expressway, ADT 33,252 | 1.83 | 0.14 | <0.01 |
| Alma Street, ADT 26,000 | 0.77 | 0.12 | <0.01 |
| Santa Clara County Roads & Airports Dep. (auto body coating), Cancer/$PM_{2.5}$ MEIs at 460/260 feet | 1.31 | -- | <0.01 |
| Judicial Council of California (diesel generator), Cancer/$PM_{2.5}$ MEIs at 285/350 feet | 0.56 | <0.01 | <0.01 |
| Cloudera, Inc. (diesel generator) Cancer/$PM_{2.5}$ MEIs at 550/750 feet | 0.11 | <0.01 | <0.01 |
| Combined Sources | 27.28 | <0.47 | <0.06 |
| **BAAQMD Cumulative Source Threshold** | **100** | **0.8** | **10.0** |
| Exceed Threshold? | No | No | No |
| *Cancer risk MEI and $PM_{2.5}$ are located at different receptors. | | | |

As shown in Table 4.3-6, above, the project would not exceed BAAQMD's cumulative TAC source threshold of significance. The project would not contribute to a cumulatively significant community health risk impact. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact AIR-4:** | The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. **(Less than Significant Impact)** |

The project does not include any odor-causing operations, and any odors emitted during construction would be temporary and localized. **(Less than Significant Impact)**

## 4.4 BIOLOGICAL RESOURCES

The discussion of trees in this section is based on an arborist report prepared by Kielty Arborist Services, LLC in April 2021. This report is included as Appendix B to this Initial Study.

### 4.4.1 Environmental Setting

#### 4.4.1.1 *Regulatory Framework*

**Federal & State**

Endangered Species Act

Individual plant and animal species listed as rare, threatened, or endangered under state and federal Endangered Species Acts are considered special-status species. Federal and state endangered species legislation has provided the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Permits may be required from both the USFWS and CDFW if activities associated with a proposed project would result in the take of a species listed as threatened or endangered. To "take" a listed species, as defined by the State of California, is "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" these species. Take is more broadly defined by the federal Endangered Species Act to include harm of a listed species.

In addition to species listed under state and federal Endangered Species Acts, Sections 15380(b) and (c) of the CEQA Guidelines provide that all potential rare or sensitive species, or habitats capable of supporting rare species, must be considered as part of the environmental review process. These may include plant species listed by the California Native Plant Society and CDFW-listed Species of Special Concern.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits killing, capture, possession, or trade of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. Hunting and poaching are also prohibited. The taking and killing of birds resulting from an activity is not prohibited by the MBTA when the underlying purpose of that activity is not to take birds.[14] Nesting birds are considered special-status species and are protected by the USFWS. The CDFW also protects migratory and nesting birds under California Fish and Game Code Sections 3503, 3503.5, and 3800. The CDFW defines taking as causing abandonment and/or loss of reproductive efforts through disturbance.

Sensitive Habitat Regulations

Wetland and riparian habitats are considered sensitive habitats under CEQA. They are also afforded protection under applicable federal, state, and local regulations, and are generally subject to regulation by the United States Army Corps of Engineers (USACE), Regional Water Quality Control

[14] United States Department of the Interior. "Memorandum M-37050. The Migratory Bird Treaty Act Does Not Prohibit Incidental Take." Accessed March 31, 2022. https://www.doi.gov/sites/doi.gov/files/uploads/m-37050.pdf.

Board (RWQCB), CDFW, and/or the USFWS under provisions of the federal Clean Water Act (e.g., Sections 303, 304, 404) and State of California Porter-Cologne Water Quality Control Act.

Fish and Game Code Section 1602

Streambeds and banks, as well as associated riparian habitat, are regulated by the CDFW per Section 1602 of the Fish and Game Code. Work within the bed or banks of a stream or the adjacent riparian habitat requires a Streambed Alteration Agreement from the CDFW.

**Regional & Local**

Palo Alto 2030 Comprehensive Plan

The Comprehensive Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the City. The following policies are specific to biological resources and are applicable to the proposed project.

| Policy/Program | Description |
|---|---|
| Policy N-1.4 | Protect special-status species and plant communities, including those listed by State and federal agencies and recognized organizations from the impacts of development and incompatible activities. |
| Policy N-2.8 | Require new commercial, multi-unit and single-family housing projects to provide street trees and related irrigation systems. |
| Policy N-2.9 | Minimize removal of, and damage to, trees due to construction-related activities such as trenching, excavation, soil compacting and release of toxins. |
| Policy N-2.10 | Preserve and protect Regulated Trees, such as native oaks and other significant trees, on public and private property, including landscape trees approved as part of a development review process and consider strategies for expanding tree protection in Palo Alto. |
| Program N-2.10.1 | Continue to require replacement of trees, including street trees lost to new development. |

City of Palo Alto Municipal Code

Section 8.10 of the PAMC[15], "Tree Preservation and Management Regulations," (Tree Preservation Ordinance), protects categories of trees on public or private property from removal or disfigurement. These categories of regulated trees include:

- **Protected Trees**. Includes all coast live oak (*Quercus agrifolia*) and valley oak (Quercus lobata) trees 11.5 inches or greater in diameter measured at a height of 54 inches above grade, coast redwood (Sequoia sempervirens) trees 18 inches or greater in diameter, and heritage trees designated by the City Council according to any of the following provisions: it

[15] The City of Palo Alto City Council adopted Ordinance 5557 on June 20, 2022, which became effective on July 21, 2022. The adopted ordinance included revisions to Palo Alto Municipal Code Chapter 8.10, including the definition of protected trees. However, in accordance with that ordinance, applications filed prior to July 21, 2022 shall be analyzed in accordance with the previous regulations. Therefore, the project complies with the tree protection requirements in Chapter 8.10 prior to adoption of the new ordinance.

is an outstanding specimen of a desirable species; it is one of the largest or oldest trees in Palo Alto; or it possesses distinctive form, size, age, location, and/or historical significance.

- **Street Trees**. Also protected under Section 8.04 of the PAMC "Street Trees, Shrubs and Plants) are City-owned street trees (all trees growing within the street right-of-way, outside of private property). A permit is required for work that would in any way damage, destroy, injure, or mutilate a street tree. The excavation of any ditch or tunnel or placement of concrete or other pavement within ten feet from the center of any street tree trunk also requires a permit. Street trees require special protection by a fenced enclosure, according to the Standard Tree Protection Instructions, before demolition, grading or construction.
- **Designated Trees**. Designated trees are all public and private trees that are specifically designated by the City to be saved and protected during the course of a development project on public and private property which is subject to discretionary development review. These instances can include variances, home improvement exceptions, architectural reviews, site and design reviews and subdivision reviews.[16]

Palo Alto Tree Preservation Guidelines

For all development projects within the City of Palo Alto, discretionary or ministerial, a *Tree Disclosure Statement* (TDS) is part of the submittal checklist to establish and verify trees that exist on the site, trees that overhang the site originating on an adjacent property, and trees that are growing in a City easement, parkway, or publicly-owned land. The TDS stipulates that a Tree Survey is required (for multiple trees), when a Tree Preservation Report is required (development within the dripline of a Regulated Tree), and who may prepare these documents. The City of Palo Alto Tree Technical Manual (Tree Technical Manual) describes acceptable procedures and standards to preserve Regulated Trees, including:

- The protection of trees during construction;
- If allowed to be removed, the acceptable replacement strategy;
- Maintenance of protected trees (such as pruning guidelines);
- Format and procedures for tree reports; and
- Criteria for determining whether a tree is a hazard.

#### 4.4.1.2 *Existing Conditions*

The project site is completely developed, within an urban area, and provides habitat and foraging opportunities for urban-adapted birds. Habitats primarily associated with Bay Area special-status species, such as riparian, wetland, salt marsh, freshwater marsh, and serpentine grassland habitats, are not present on or adjacent to the site. The nearest waterway is the Matadero Creek, which is located approximately 0.40-mile to southeast of the project site. The primary biological resources on-site are trees. The project site contains 11 trees, with two additional trees located along Grant Avenue, adjacent to the project site. Of the 13 trees in the project area, four are protected trees as defined in the PAMC. The arborist report evaluated the health of the trees on-site and found that they

[16] City of Palo Alto. "Regulated Trees". Accessed April 8, 2022. Available at: https://www.cityofpaloalto.org/Departments/Public-Works/Public-Services/Palo-Altos-Urban-Forest/Development-Process/Regulated-Trees.

ranged from dead to good health, with a majority of them receiving a "fair" health rating. The predominant tree species on-site is the Redwood, which comprises approximately 30 percent of the trees within the project site. The four protected trees on-site are primarily located along the northeastern corner of the project site. The largest tree on-site is a Redwood located on the northeastern corner of the project site, which has a trunk diameter of approximately 36.8 inches and is in good health. See Table 4.4-1 below for additional details.

**Table 4.4-1: Summary of Existing Trees**

| Name | Number of Trees | Number of Protected Trees |
|---|---|---|
| Japanese maple (*Acer palmatum*) | 1 | -- |
| Magnolia (*Magnolia grandiflora*) | 3 | 2 (street trees) |
| Plum (*Prunus spp.*) | 1 | -- |
| Photinia (*Photinia x fraseri*) | 1 | -- |
| Raywood ash (*Fraxinus angustifolia* 'Raywood') | 2 | -- |
| Redwood (*Sequoia sempervirens*) | 4 | 2 |
| Tree of heaven (*Ailanthus altissima*) | 1 | -- |
| **Total** | **13** | **4** |

### 4.4.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS)? | ☐ | ☒ | ☐ | ☐ |
| 2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS? | ☐ | ☐ | ☐ | ☒ |

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 3) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | ☐ | ☐ | ☐ | ☒ |
| 4) 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? | ☐ | ☐ | ☐ | ☒ |
| 5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | ☐ | ☐ | ☒ | ☐ |
| 6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | ☐ | ☐ | ☐ | ☒ |

| | |
|---|---|
| **Impact BIO-1:** | The project would not 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 CDFW or USFWS. **(Less than Significant Impact with Mitigation Incorporated)** |

The project would remove seven trees on-site and retain six existing trees. The project site is completely developed and located in an urban area. Due to the developed nature of the site, its location in an urban area, and lack of sensitive habitats on-site, special status species are not expected on the project site.

However, nesting birds (which are protected under provisions of the MBTA and Fish and Game Code Sections) may be periodically present in trees and landscaping on and adjacent to the project site. Future construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes abandonment and/or loss of reproductive effort is considered a taking by the CDFW and MBTA. Construction activities, such as tree removal and site grading, that disturb a nesting bird on a site or immediately adjacent to the construction zone would constitute a significant impact.

**Impact BIO-1:** Project construction may disturb nesting birds on or adjacent to the project site.

**Mitigation Measures:**

**MM BIO-1.1:** When possible, construction shall be scheduled to avoid the nesting season to the extent feasible. The nesting season for most birds, including most raptors, in the San Francisco Bay area extends from February 1 through August 31.

If it is not possible to schedule construction and tree removal between September and January, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist, as approved by the City of Palo Alto, to ensure that no nests shall be disturbed during project implementation. This survey shall be completed no more than 14 days prior to the initiation of grading, tree removal, or other demolition or construction activities.

During this survey, the ornithologist shall inspect all trees and other possible nesting habitats within and immediately adjacent to the construction area for nests. If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist shall determine the extent of a construction-free buffer zone to be established around the nest to ensure that nests of bird species protected by the MBTA or Fish and Game code shall not be disturbed during project construction. The construction-free buffer zones shall be maintained until after the nesting season has ended and/or the ornithologist has determined that the nest is no longer active.

A final report of nesting birds, including any protection measures, shall be submitted to the Director of Planning and Development Services prior to the start of grading or tree removal.

The proposed project, with the implementation of the above mitigation measure, would result in less than significant impacts to nesting birds by avoiding construction activities during the nesting season and conducting preconstruction surveys in order to avoid disturbing active nests that may be affected by project construction. **(Less than Significant Impact with Mitigation Incorporated)**

| | |
|---|---|
| **Impact BIO-2:** | The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS. **(No Impact)** |

The project site and adjacent sites are fully developed and do not contain sensitive habitats. There is no riparian habitat on or adjacent to the site. The nearest waterway is Matadero Creek, located approximately 0.40-mile to southeast of the project site. Therefore, the project would not have an impact on state or federally protected riparian habitat or other sensitive natural community identified in local or regional plans and policies. **(No Impact)**

| | |
|---|---|
| **Impact BIO-3:** | The project would not have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. **(No Impact)** |

There are no wetlands on or adjacent to the site. The nearest wetland to the project site is the riverine habitat of Matadero Creek, approximately 0.40-mile southeast of the project site.[17] Therefore, the project would not have an impact on state or federally protected wetlands. **(No Impact)**

| | |
|---|---|
| **Impact BIO-4:** | The project would not 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. **(No Impact)** |

The project site is in a developed urban area and it does not contain any waterways, wetlands, or open space areas along the San Francisco Bay that could provide habitat or movement corridors for wildlife species (including fish, birds, and non-flying wildlife) in the region. For these reasons, the project would not impact the movement of fish and wildlife species, wildlife corridors, and wildlife nursery sites. **(No Impact)**

| | |
|---|---|
| **Impact BIO-5:** | The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. **(Less than Significant Impact)** |

The project would retain all four protected trees in the project area. Seven non-protected trees would be removed. The project would include 25 new trees spread around the perimeter of the building and along the adjacent streets, resulting in a total of 31 trees in the project area. This would be a net increase of 20 trees compared to existing conditions, including the street trees and trees along the shared parcel line.

In accordance with the City's Municipal Code, the applicant would be required to obtain a tree removal permit for the removal of the protected trees and would be required to provide a replacement tree(s) or pay a fee in lieu of replacement upon the approval of the Director of Planning & Development Services. Additionally, as a standard condition of approval, the project would protect the two trees to be retained within the project in accordance with the recommendations in the project-specific arborist report and the standards set forth by the Tree Technical Manual. Therefore, the project would not conflict with any local policies or ordinances protecting biological resources. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact BIO-6:** | **The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. (No Impact)** |

The project site is not part of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. **(No Impact)**

[17] United States Fish and Wildlife Service. *National Wetlands Inventory, Surface Waters and Wetlands*. Map. May 2021.

## 4.5 CULTURAL RESOURCES

The following discussion is based, in part, on a Cultural Resources Sensitivity Assessment prepared for the project by Archaeological/Historical Consultants, dated February 2022. A copy of this report is on file with the City of Palo Alto.

### 4.5.1 Environmental Setting

#### 4.5.1.1 *Regulatory Framework*

**Federal and State**

National Historic Preservation Act

Federal protection is legislated by the National Historic Preservation Act of 1966 (NHPA) and the Archaeological Resource Protection Act of 1979. These laws maintain processes for determination of the effects on historical properties eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA and related regulations (36 Code of Federal Regulations [CFR] Part 800) constitute the primary federal regulatory framework guiding cultural resources investigations and require consideration of effects on properties that are listed or eligible for listing in the NRHP. Impacts to properties listed in the NRHP must be evaluated under CEQA.

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is administered by the State Office of Historic Preservation and encourages protection of resources of architectural, historical, archeological, and cultural significance. The CRHR identifies historic resources for state and local planning purposes and affords protections under CEQA. Under Public Resources Code Section 5024.1(c), a resource may be eligible for listing in the CRHR if it meets any of the NRHP criteria.[18]

Historical resources eligible for listing in the CRHR must meet the significance criteria described previously and retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if it maintains the potential to yield significant scientific or historical information or specific data.

The concept of integrity is essential to identifying the important physical characteristics of historical resources and, therefore, in evaluating adverse changes to them. Integrity is defined as "the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance." The processes of determining integrity are similar for both the CRHR and NRHP and use the same seven variables or aspects to define integrity that are used to evaluate a resource's eligibility for listing. These seven characteristics include 1) location, 2) design, 3) setting, 4) materials, 5) workmanship, 6) feeling, and 7) association.

[18] California Office of Historic Preservation. "CEQA Guidelines Section 15064.5(a)(3) and California Office of Historic Preservation Technical Assistance Series #6." Accessed April 1, 2022. http://www.ohp.parks.ca.gov/pages/1069/files/technical%20assistance%20bulletin%206%202011%20update.pdf.

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act applies to both state and private lands. The act requires that upon discovery of human remains, construction or excavation activity must cease and the county coroner be notified.

Public Resources Code Sections 5097 and 5097.98

Section 15064.5 of the CEQA Guidelines specifies procedures to be used in the event of an unexpected discovery of Native American human remains on non-federal land. These procedures are outlined in Public Resources Code Sections 5097 and 5097.98. These codes protect such remains from disturbance, vandalism, and inadvertent destruction, establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establish the Native American Heritage Commission (NAHC) as the authority to resolve disputes regarding disposition of such remains.

Pursuant to Public Resources Code Section 5097.98, in the event of human remains discovery, no further disturbance is allowed until the county coroner has made the necessary findings regarding the origin and disposition of the remains. If the remains are of a Native American, the county coroner must notify the NAHC. The NAHC then notifies those persons most likely to be related to the Native American remains. The code section also stipulates the procedures that the descendants may follow for treating or disposing of the remains and associated grave goods.

**Local**

Palo Alto 2030 Comprehensive Plan

The Comprehensive Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the City. The following policies are specific to cultural resources and are applicable to the proposed project.

| Policy/Program | Description |
|---|---|
| Policy L-7.15 | Protect Palo Alto's archaeological resources, including natural land formations, sacred sites, the historical landscape, historic habitats and remains of settlements here before the founding of Palo Alto in the 19th century |
| Policy L-7.17 | Assess the need for archaeological surveys and mitigation plans on a project-by-project basis, consistent with the California Environmental Quality Act and the National Historic Preservation Act. |
| Policy L-7.18 | Require project proponents to meet State codes and regulations regarding the identification and protection of archaeological and paleontological deposits, and unique geologic features. |

City of Palo Alto Municipal Code

Chapter 16.49 of the PAMC, "Historic Preservation," outlines the procedures for designating historic structures, sites, or districts, the permitting and review requirements for exterior alterations to historic structures, the permitting and review requirements for the demolition of contributing or significant buildings in the City, and the enforcement procedures for these regulations. Chapter 2.27 of the

PAMC establishes the Historic Resources Board, which provides recommendations concerning the designation of historic resources in the City and informs the Architecture Review Board on the significance of historic resources that are proposing exterior alterations.

Palo Alto Historic Inventory

The Palo Alto Historic Inventory provides a list of all of the designated historic resources within the City and organizes them into four Historic Categories.[19]

- Category 1: An "Exceptional Building" of pre-eminent national or state importance. These buildings are meritorious works of the best architects, outstanding examples of a specific architectural style, or illustrate stylistic development of architecture in the United States.
- Category 2: A "Major Building" of regional importance. These buildings are meritorious works of the best architects, outstanding examples of an architectural style, or illustrate stylistic development of architecture in the state or region.
- Category 3 or 4: A "Contributing Building" is a good local example of an architectural style and relates to the character of a neighborhood grouping in scale, materials, proportion or other factors.

#### 4.5.1.2 *Existing Conditions*

**Archaeological Context**

A record search for previously recorded cultural resources in the project area was completed at the Northwest Information Center (NWIC). One archaeological resource was identified within a quarter-mile radius of the project site. This resource is a prehistoric site that contains midden soils and habitation debris that was identified in 1994.

NWIC identified four previous cultural resource reports that covered the project area. In 2006, SCWA Environmental Consultants recorded 30 resources, all of which are over a quarter-mile from the project site. In 1997, Dames & Moore Group identified the Professorville Historic District, located approximately two miles from the project site, as a historic resource. A Historic American Building Survey was prepared for a building that was demolished in 2017, adjacent to the east of the project site. Lastly, in 2011 PBS&J identified 140 archaeological resources, the nearest of which is located approximately one mile to the east of the project site.

The project site's distance to freshwater makes it an area of low sensitivity for prehistoric or Native American resources. The closest water source is the Matadero Creek, which is located approximately 2,100 feet southeast of the project area; San Francisquito Creek is approximately 10,000 feet to the northwest of the project site.

**Historical Context**

The project area was lightly developed until the 20th century. A residence was present on the southwest corner of the project site from 1899 to 1941. A stable was also present on-site from 1904

[19] City of Palo Alto. "Palo Alto Historic Inventory." Accessed April 1, 2022. https://www.cityofpaloalto.org/Departments/Planning-Development-Services/Historic-Preservation/Historic-Registers.

to 1930. Given that this residential structure was on-site for several decades before indoor plumbing and trash collection were widespread, it is likely that the project site contains hollow-fill historic-era archaeological deposits associated with the disposal of household refuse. This makes the project area of moderate sensitivity for historic-era archaeological resources.

The existing buildings at 123 Sherman Avenue were constructed in 1990, the existing building at 150 Grant Avenue was constructed in 1979, and the existing building at 2501 Park Boulevard was constructed in 1947.[20] This building was included in the City's 2001 Historical Survey Update but was not deemed to be a historic resource. The 2001 Historical Survey Update included all buildings constructed in 1947 and earlier. [21]During the survey process, the list of properties to be evaluated on a more in-depth level was narrowed down from 6,660 buildings to 291. The property at 2501 does not appear on the list of 291 buildings that were given in-depth evaluation for eligibility as historic resources, meaning that the building was screened out from further evaluation due to either a lack of architectural distinction or a lack of historic integrity. Given that the existing building is an office, it is likely not associated with a historic event or person (i.e., the residence of a historic person).

### 4.5.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 1) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5? | ☐ | ☐ | ☒ | ☐ |
| 2) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5? | ☐ | ☒ | ☐ | ☐ |
| 3) Disturb any human remains, including those interred outside of dedicated cemeteries? | ☐ | ☒ | ☐ | ☐ |

**Impact CUL-1:** The project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5. **(Less than Significant Impact)**

The existing buildings located at 123 Sherman Avenue and 150 Grant Avenue are less than 50 years old. The National Register would require the buildings to be of "exceptional significance" in order to be considered a historic resource if a structure is less than 50 years old. The California Register requires "demonstration that sufficient time has passed to understand [the structures] historic importance." The architects for the properties at 123 Sherman and 150 Grant Avenue, Larrick Alan Hill and Jay Hammond, respectively, do not appear to have gained recognition since the construction of either of these buildings such that it would elevate the significance of the structures despite their age. The buildings at these two properties are therefore not considered to be a historic resource. The

[20] City of Palo Alto. "Property Information". Map. Accessed May 5, 2022. https://opengis.cityofpaloalto.org/parcelreports/
[21] City of Palo Alto. Final Survey Report: Palo Alto Historical Survey Update. February 2001.

building at 2501 Park Boulevard was built in 1947 and thus, is over 50 years old, but is not considered a historic resource.

The project site is not located in a historic district. As previously stated, the nearest historic district is the Professorville Historic District, located approximately two miles from the project site. For these reasons, the project would not cause a substantial adverse change in the significance of a historical resource. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact CUL-2:** | The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. **(Less than Significant Impact with Mitigation Incorporated)** |

As previously described, the project site has a low sensitivity for Native American archaeological resources due to its distance from freshwater sources. However, the project does have a moderate sensitivity for historic-era archaeological resources due to the historical presence of a residence on-site prior to widespread plumbing and trash collection services. As a result, there is the possibility of encountering undisturbed subsurface archaeological resources. If archaeological resources are identified, as defined by Section 21083.2 of the Public Resources Code, the site would be required to be treated in accordance with the provisions of Section 21083.2 of the Public Resources Code as appropriate. If human remains are unearthed, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98.

**Impact CUL-2:** Unknown subsurface archaeological resources could be present on the site in underlying soils and could be disturbed during project construction.

With implementation of the following mitigation measures, potential impacts to subsurface cultural resources would be reduced to a less than significant level.

**MM CUL-2.1:** Prior to commencement of any project-related construction activities, a qualified Archeologist shall provide a worker environmental awareness training to all site personnel. The training shall discuss the appearance of resources that may be encountered during construction as well as the procedures and notification process in the event of discovery.

**MM CUL-2.2:** A Qualified Archaeological monitor shall be present to monitor ground-disturbing activities in the southwest corner of the project site, where the residence previously existed. The Archaeologist shall have the authority to halt construction activities in the event any cultural materials are encountered during ground-disturbing construction activities.

**MM CUL-2.3:** In the event any significant cultural materials are encountered during construction grading or excavation, construction within a radius of 50 feet of the find would be halted, the Director of Planning and Development Services shall be notified, and the on-site qualified archaeologist shall examine the find and make appropriate recommendations regarding the significance of the find and the appropriate treatment of the resource. Recommendations could include, but are not limited to,

preservation in place or collection, recordation, and analysis of any significant cultural materials. In the event that discovered resources appear to be Native American in nature, the appropriate local Native American tribe(s) shall be contacted for consultation. A report of findings documenting any data recovered during monitoring shall be submitted to the Director of Planning and Development Services.

With implementation of MM CUL-2.1, MM CUL-2.2, and MM CUL-2.3, impacts to any incidental discoveries of archaeological resources would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation)**.

| | |
|---|---|
| **Impact CUL-3:** | The project would not disturb any human remains, including those interred outside of dedicated cemeteries. **(Less than Significant Impact with Mitigation Incorporated)** |

As previously discussed, the project site has a moderate sensitivity to historic-era archaeological resources and a low sensitivity to prehistoric archaeological resources. Thus, while it is highly unlikely, it is possible that human remains could be discovered on-site during construction activities. In the event any archaeological or human remains are discovered on the site, impacts would be potentially significant. Implementation of the following mitigation measure, in addition to MM CUL-2.1 which requires monitoring by an archaeologist, as a condition of approval would reduce this impact to a less than significant level.

**Impact CUL-3:** Buried human remains could be present on the site in underlying soils and could be disturbed during project construction.

**MM CUL-3.1:** Pursuant to Section 7050.5 of the Health and Safety Code, and Section 5097.94 of the Public Resources Code of the State of California in the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he shall notify the Native American Heritage Commission (NAHC) who shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this state law, then the landowner shall reinter the human remains, and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. If the Director of Planning and Development Services, in consultation with the archaeologist and Native American monitor, finds that the archaeological find is not a significant resource, work would resume only after the submittal of a preliminary archaeological report and after provisions for reburial and ongoing monitoring are accepted by the Director of Planning and Development Services.

With implementation of MM CUL-3.1, any potential impacts from incidental discoveries of human remains would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

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## 4.6 ENERGY

### 4.6.1 Environmental Setting

#### 4.6.1.1 *Regulatory Framework*

**Federal and State**

Energy Star and Fuel Efficiency

At the federal level, energy standards set by the EPA apply to numerous consumer products and appliances (e.g., the EnergyStar™ program). The EPA also sets fuel efficiency standards for automobiles and other modes of transportation.

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2010. Governor Schwarzenegger issued Executive Order (EO) S-3-05, requiring statewide emissions reductions to 80 percent below 1990 levels by 2050. In 2008, EO S-14-08 was signed into law, requiring retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. In October 2015, Governor Brown signed SB 350 to codify California's climate and clean energy goals. A key provision of SB 350 requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from renewable sources by 2030. SB 100, passed in 2018, requires 100 percent of electricity in California to be provided by 100 percent renewable and carbon-free sources by 2045.

Executive Order B-55-18 To Achieve Carbon Neutrality

In September 2018, Governor Brown issued an executive order, EO-B-55-18 To Achieve Carbon Neutrality, setting a statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." The executive order requires CARB to "ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal." EO-B-55-18 supplements EO S-3-05 by requiring not only emissions reductions, but also that, by no later than 2045, the remaining emissions be offset by equivalent net removals of $CO_2$ from the atmosphere through sequestration.

California Building Standards Code

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6 of the California Code of Regulations (Title 24), was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately every three years.[22] Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments.[23]

[22] California Building Standards Commission. "California Building Standards Code." Accessed April 1, 2022. https://www.dgs.ca.gov/BSC/Codes#@ViewBag.JumpTo.
[23] California Energy Commission (CEC). "2019 Building Energy Efficiency Standards." Accessed April 1, 2022. https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency.

California Green Building Standards Code

CALGreen establishes mandatory green building standards for buildings in California. CALGreen was developed to reduce GHG emissions from buildings, promote environmentally responsible and healthier places to live and work, reduce energy and water consumption, and respond to state environmental directives. CALGreen covers five categories: planning and design, energy efficiency, water efficiency and conservation, material and resource efficiency, and indoor environmental quality.

Advanced Clean Cars Program

CARB adopted the Advanced Clean Cars program in 2012 in coordination with the EPA and National Highway Traffic Safety Administration. The program combines the control of smog-causing pollutants and GHG emissions into a single coordinated set of requirements for vehicle model years 2015 through 2025. The program promotes development of environmentally superior passenger cars and other vehicles, as well as saving the consumer money through fuel savings.[24]

**Local**

Palo Alto 2030 Comprehensive Plan

The Comprehensive Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the City. The following policies are specific to energy and are applicable to the proposed project.

| Policy/Program | Description |
|---|---|
| Policy N-7.1 | Continue to procure carbon neutral energy for both long-term and short-term energy supplies, including renewable and hydroelectric resources, while investing in cost-effective energy efficiency and energy conservation programs. |
| 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. |
| Program N-7.6.3 | Promote solar energy in individual private projects. |

#### 4.6.1.2 *Existing Conditions*

Total energy usage in California was approximately 6,956.6 trillion British thermal units (Btu) in the year 2020, the most recent year for which this data was available.[25] Out of the 50 states, California is ranked second in total energy consumption and 47th in energy consumption per capita. The breakdown by sector was approximately 21.8 percent (1,507.7 trillion Btu) for residential uses, 19.6

[24] California Air Resources Board. "The Advanced Clean Cars Program." Accessed May 25, 2022. https://www.arb.ca.gov/msprog/acc/acc.htm.
[25] United States Energy Information Administration. "State Profile and Energy Estimates, 2019." Accessed May 3, 2023. https://www.eia.gov/state/?sid=CA#tabs-2.

percent (1,358.3 trillion Btu) for commercial uses, 24.6 percent (1,701.2 trillion Btu) for industrial uses, and 34 percent (2,355.5 trillion Btu) for transportation.[26] This energy is primarily supplied in the form of natural gas, petroleum, nuclear electric power, and hydroelectric power.

### Electricity

Electricity in Santa Clara County in 2021 was consumed primarily by the non-residential sector (74 percent), followed by the residential sector consuming 23 percent. In 2021, a total of approximately 16,904 gigawatt hours (GWh) of electricity was consumed in Santa Clara County.[27]

The City of Palo Alto Utilities (CPAU) owns and operates its own utility systems, including electric, fiber optic, natural gas, water, and wastewater services. In 2019, CPAU purchased 26.5 GWh of electricity entirely from carbon-neutral sources for use within its service area.[28]

### Natural Gas

City of Palo Alto Utilities, Waste, Gas, Water Division provides natural gas services within the City of Palo Alto. In 2021 residential and commercial customers in California used 39 percent of the state's natural gas, power plants used 26 percent, the industrial sector used 35 percent, and other uses used six percent.[29] Transportation accounted for one percent of natural gas use in California. In 2020, Santa Clara County used less than one percent of the state's total consumption of natural gas.[30]

### Fuel for Motor Vehicles

In 2022, 19.2 billion gallons of gasoline were sold in California.[31] The average fuel economy for light-duty vehicles (autos, pickups, vans, and sport utility vehicles) in the United States has steadily increased from about 13.1 miles per gallon (mpg) in the mid-1970s to 25.4 mpg in 2021.[32] Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. That standard, which originally mandated a national fuel economy standard of 35 miles per gallon by the year 2020, was updated in April 2022 to require all cars and light duty trucks achieve an overall industry average fuel economy of 49 mpg by model year 2026. [33,34]

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[26] Ibid.
[27] California Energy Commission. Energy Consumption Data Management System. "Electricity Consumption by County." Accessed May 3, 2023. http://ecdms.energy.ca.gov/elecbycounty.aspx.
[28] City of Palo Alto. *Annual Report to the California Energy Commission*. Accessed May 25, 2022. https://www.cityofpaloalto.org/files/assets/public/agendas-minutes-reports/reports/city-manager-reports-cmrs/year-archive/2020-2/id-11562.pdf?t=58191.13.
[29] United States Energy Information Administration. "State Profile and Energy Estimates, 2019." Accessed May 25, 2022. https://www.eia.gov/state/?sid=CA#tabs-2.
[30] California Energy Commission. "Natural Gas Consumption by County." Accessed May 3, 2023. http://ecdms.energy.ca.gov/gasbycounty.aspx.
[31] California Department of Tax and Fee Administration. "Net Taxable Gasoline Gallons." Accessed May 3, 2023. https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=VehicleTaxableFuelDist.
[32] United States Environmental Protection Agency. "The 2021 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975." November 2021. https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1010U68.pdf
[33] United States Department of Energy. *Energy Independence & Security Act of 2007.* Accessed May 25, 2022. http://www.afdc.energy.gov/laws/eisa.
[34] Public Law 110–140—December 19, 2007. *Energy Independence & Security Act of 2007.* Accessed May 25, 2022. http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf.

### 4.6.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 1) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | ☐ | ☐ | ☒ | ☐ |
| 2) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | ☐ | ☐ | ☒ | ☐ |

**Impact EN-1:** The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. **(Less than Significant Impact)**

**Construction**

The anticipated construction schedule assumes the project would be built over a period of approximately 16 months. The project would require demolition, excavation, site preparation, grading, trenching, building construction, paving, landscaping, and the building interior. The overall construction schedule and process is designed to be efficient in order to avoid excess monetary costs. That is, equipment and fuel would not be used wastefully on the site because of the added expense associated with renting, maintaining, and fueling equipment. Energy is consumed during construction because the use of fuels and building materials are fundamental to construction of new buildings; however, energy would not be wasted or used inefficiently by project construction equipment. Therefore, construction of the proposed project would not consume energy in a manner that is wasteful, inefficient, or unnecessary.

**Operation**

Electricity and Natural Gas

The proposed office building and associated subsurface parking and surface parking lot would use approximately 1,284,461 kilowatt-hours of electricity per year according to CalEEMod.[35] The project would be 100 percent electric and would not use any natural gas energy.

The energy use increase is likely overstated, however, because the estimates for energy use do not take into account the efficiency measures which would be incorporated into the project. Additionally, the existing electricity demand for the existing land uses were not taken into account. The project would be subject to energy conservation requirements in the CBC (Title 24, Part 6, of the California Code of Regulations, California's Energy Efficiency Standards for Residential and Nonresidential

[35] Illingworth & Rodkin, Inc. *123 Sherman Avenue Office Project Air Quality and Greenhouse Gas Assessment. Attachment 2: CalEEMod Modeling Inputs and Outputs.* May 20, 2022.

Buildings) and CALGreen (Title 24, Part 11 of the California Code of Regulations). In addition to CBC requirements, the City of Palo Alto has adopted more stringent green building regulations. In accordance with the City's Green Building Ordinance, the proposed project would satisfy requirements for CALGreen Tier 2. Adherence to Title 24 and the City's Green Building Ordinance requirements would ensure that the project would not result in wasteful and inefficient use of non-renewable resources due to building operation.

Vehicle Usage

The proposed office building would generate approximately 1,132,343 VMT annually[36] and 51,470 gallons of vehicle fuel would be consumed annually as a result of the project (assuming the EPA average fuel economy estimate of 22.0 miles per gallon). The annual VMT estimate is conservative because the CalEEMod assumptions do not take into account alternative commuter options. The project site is located near transit stops provided by the Santa Clara Valley Transportation Authority (VTA), Caltrain, and the Stanford Research Park Shuttle. These existing transit facilities are discussed in more detail in Section 4.17 Transportation. Given the existing high-quality transit options in the project area, energy in the form of gasoline would not be used wastefully, inefficiently, or unnecessarily. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact EN-2:** | The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. **(Less than Significant Impact)** |

The project would be required to meet the building energy efficiency standards set forth in Title 24 and the CALGreen Code, thereby satisfying General Plan policies regarding waste reduction and energy and water efficiency. The project would not create a demand for energy resources beyond what is expected upon General Plan buildout given the proposed project is consistent with the General Plan and the buildout assumptions for the General Plan. For these reasons, the proposed project would not conflict with or obstruct the implementation of General Plan energy policies. **(Less than Significant Impact)**

[36] Ibid.

## 4.7 GEOLOGY AND SOILS

### 4.7.1 Environmental Setting

#### 4.7.1.1 *Regulatory Framework*

**State**

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed following the 1971 San Fernando earthquake. The act regulates development in California near known active faults due to hazards associated with surface fault ruptures. Alquist-Priolo maps are distributed to affected cities, counties, and state agencies for their use in planning and controlling new construction. Areas within an Alquist-Priolo Earthquake Fault Zone require special studies to evaluate the potential for surface rupture to ensure that no structures intended for human occupancy are constructed across an active fault.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) was passed in 1990 following the 1989 Loma Prieta earthquake. The SHMA directs the California Geological Survey (CGS) to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. CGS has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, landslides, and ground shaking, including the central San Francisco Bay Area. The SHMA requires that agencies only approve projects in seismic hazard zones following site-specific geotechnical investigations to determine if the seismic hazard is present and identify measures to reduce earthquake-related hazards.

California Building Standards Code

The CBC prescribes standards for constructing safe buildings. The CBC contains provisions for earthquake safety based on factors including occupancy type, soil and rock profile, ground strength, and distance to seismic sources. The CBC requires that a site-specific geotechnical investigation report be prepared for most development projects to evaluate seismic and geologic conditions such as surface fault ruptures, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability. The CBC is updated every three years.

California Division of Occupational Safety and Health Regulations

Excavation, shoring, and trenching activities during construction are subject to occupational safety standards for stabilization by the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) under Title 8 of the California Code of Regulations and Excavation Rules. These regulations minimize the potential for instability and collapse that could injure construction workers on the site.

Public Resources Code Section 5097.5

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. They range from mammoth and dinosaur bones to impressions of ancient animals and plants, trace remains, and microfossils. These materials are valued for the information they yield about the history of the earth and its past ecological settings. California Public Resources Code Section 5097.5 specifies that unauthorized removal of a paleontological resource is a misdemeanor. Under the CEQA Guidelines, a project would have a significant impact on paleontological resources if it would disturb or destroy a unique paleontological resource or site or unique geologic feature.

**Regional and Local**

Municipal Regional Permit Provision C.6.c

Provision C.6.c of the MRP outlines the BMP categories that permittees must require all construction sites to implement. These BMPs are divided into six sections which include erosion control, run-on and run-off control, sediment control, active treatment systems, good site management, and non-stormwater management. Each construction site is required to implement the BMPs that are seasonally and phase appropriate.

Palo Alto 2030 Comprehensive Plan

The Comprehensive Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the City. The following policies are specific to geology and soils and are applicable to the proposed project.

| Policy/Program | Description |
|---|---|
| Policy L-7.18 | Require project proponents to meet State codes and regulations regarding the identification and protection of archaeological and paleontological deposits, and unique geologic features |
| Policy S-2.5 | Minimize exposure of people and structures to geologic hazards, including slope stability, subsidence and expansive soils, and to seismic hazards including groundshaking, fault rupture, liquefaction and landslides. |
| Program S-2.7.1 | As part of the construction permitting process for proposed new and redeveloped buildings in areas of identified hazard shown on Map S-2, require submittal to the City of a geotechnical/seismic report that identifies specific risks and appropriate mitigation measures. |

City of Palo Alto Municipal Code

Chapter 16.28 of the PAMC requires that projects prepare a soils engineering report and an engineering geology report prior to receiving a Grading Permit unless the City Engineer determines that the reports would not be required for the project. These reports are reviewed by the City Engineer and any recommendations in the reports are required to be incorporated into the site design and grading plans.

#### 4.7.1.2 *Existing Conditions*

**Regional Geology**

The City of Palo Alto is located in the Coast Ranges Geomorphic Province in California. The mountain ranges in this Geomorphic Province are generally northwest trending and were formed by intense folding and faulting caused by tectonic activity between the Pacific Oceanic Plate and the North American Continental Plate.

**On-Site Geological Conditions**

Soils and Topography

The project site is located on relatively flat land in a highly developed, urban area of the City. Palo Alto, including the project site, is a part of Santa Clara Valley which spans the stretch between the Santa Cruz Mountain Range to the southwest and west and the Diablo Range to the northeast. The soil profile beneath the paved surface on-site is generally composed of a silty clay soil type.[37] The silty clay layer generally extends to 12 feet bgs, with a layer of moderately plastic silty clays between 12 to 17 feet bgs. The soil between 17 to 30 feet bgs is comprised of a silty gravel.[38] The project site is not located within an area of the City with expansive soils that would pose a geologic hazard.[39]

Seismicity and Seismic Hazards

As the San Francisco Bay Area contains numerous active and potentially active faults, there is a high potential for seismic events such as fault surface ruptures and ground shaking, which can cause geologic hazards. Faults in the region are capable of generating earthquakes of magnitude 6.7 or higher, and strong-to-very-strong ground shaking would be expected to occur at the project site during a major earthquake on one of the nearby faults. There are several major faults located near the project site (refer to Table 4.7-1).

**Table 4.7-1: Active Faults in the Vicinity of the Project Sites**

| Fault Name | Distance and Direction from Project Site* |
|---|---|
| San Andreas | 6 miles west |
| Hayward | 13 miles east |
| Calaveras | 17 miles east |
| * Approximate distances | |

During a major earthquake on a segment of one of the nearby faults, strong to severe ground shaking is expected to occur at the project site. The ground shaking intensity felt at the project site would depend on the size of the earthquake (magnitude), the distance from the site to the fault source, the

[37] USDA Natural Resources Conservation Service. Web Soil Survey. Accessed April 11, 2022. Available at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx
[38] EKI Environment & Water. *Phase I Environmental Site Assessment and Results of Soil Vapor Sampling Survey.* March 2020.
[39] City of Palo Alto. 2030 Comprehensive Plan. Geotechnical Hazards, Map S-4. November 2017.

directivity (focusing of earthquake energy along the fault in the direction of the rupture), and the site-specific soil conditions.

The project site is not located within a State of California Earthquake Fault Zone or a Fault-Rupture Hazard Zone.[40]

Liquefaction, Landslide, and Lateral Spreading

Soil liquefaction can be defined as a complete loss of strength that causes otherwise solid soil to take on the characteristics of a liquid. The types of soil most susceptible to this hazard are loose, saturated, uniformly graded, fine-grain sands that comprise the soil layer within approximately 45 to 50 feet of the ground surface. Soils saturated with groundwater are more likely to experience liquefaction. Liquefaction mostly frequently occurs under vibratory conditions, such as those created by seismic events. According to Santa Clara County Geologic Hazard Zones Maps, the project area is not located in a designated landslide hazard zone, compressible soil hazard zone or a liquefaction hazard zone.[41] The Comprehensive Plan Draft EIR determined that the project site is located in an area of the City with a moderate liquefaction susceptibility level.[42]

Despite not being in a designated liquefaction hazard zone, groundwater measured below the site increases the risk of liquefaction during seismic activity. The depth of groundwater beneath the project site is estimated to range from approximately 21 to 23 feet below ground surface (bgs).[43]

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. There are no open faces in proximity to the project site where lateral spreading could occur.

Groundwater

As mentioned above, typical groundwater depths at the project site range from 21 to 23 feet bgs. Groundwater levels on-site may vary depending on seasonal precipitation, irrigation practices, and other climate conditions.

**Paleontological Resources**

Paleontological resources or fossils are the remains of prehistoric plant and animal life. Paleontological resources do not include human remains or artifacts. Most of the paleontological remains in the Palo Alto Area are small marine fossils such as clams and snails. The area also contains old quarries, creek beds, cut slopes and rock outcroppings, which are of geological interest

[40] Santa Clara County Planning & Development. *Geologic Hazard Zones Mapping Application.* 2021.
[41] Santa Clara County. *Santa Clara County Geologic Hazard Zones Map.* October 2012.
[42] City of Palo Alto. *Comprehensive Plan Update Draft Environmental Impact Report*. SCH # 2014052101. Figure 4.5-3. February 2016.
[43] EKI Environment & Water. *Phase I Environmental Site Assessment and Results of Soil Vapor Sampling Survey.* March 2020.

and educational value. The Berkeley Museum has documented four paleontological sites in the area surrounding Stanford University.[44]

### 4.7.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 1) 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 (refer to Division of Mines and Geology Special Publication 42)? | ☐ | ☐ | ☐ | ☒ |
| – Strong seismic ground shaking? | ☐ | ☐ | ☒ | ☐ |
| – Seismic-related ground failure, including liquefaction? | ☐ | ☐ | ☒ | ☐ |
| – Landslides? | ☐ | ☐ | ☐ | ☒ |
| 2) Result in substantial soil erosion or the loss of topsoil? | ☐ | ☐ | ☒ | ☐ |
| 3) 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? | ☐ | ☐ | ☒ | ☐ |
| 4) Be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property? | ☐ | ☐ | ☒ | ☐ |
| 5) 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? | ☐ | ☐ | ☐ | ☒ |
| 6) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature? | ☐ | ☒ | ☐ | ☐ |

[44] City of Palo Alto. *Comprehensive Plan Update Draft Environmental Impact Report*. SCH # 2014052101. Pages 4.4-8 to 4.4-9. February 2016.

| | |
|---|---|
| **Impact GEO-1:** | The project would not 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; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides. **(Less than Significant Impact)** |

### Fault Rupture

As discussed in Section 4.7.1.2 Existing Conditions, the project site is not located in an Alquist-Priolo Earthquake Fault Zone and no known faults cross the site. While the San Andreas fault, which is currently considered active, is located within 10 miles of the site, the proposed project is located outside of its fault rupture zone. For these reasons, the project would not directly or indirectly cause potential substantial adverse effects from rupture of a known earthquake fault. **(No Impact)**

### Seismic Ground Shaking

There are several active, major fault lines within 20 miles of the project site that have the potential to produce a major earthquake during the lifespan of this project. During a major earthquake, this site is expected to experience strong to severe ground shaking. The level of intensity of this ground shaking at the project site would depend on a variety of factors such as the magnitude, distance from the site to the fault source, and the site-specific soil conditions. The ground shaking could potentially damage structures and threaten the safety of occupants in the proposed development.

The project would be required to adhere to the current CBC and any design recommendations in the site-specific geotechnical report prepared for the project, prior to permit issuance. Additionally, the project would be required to utilize standard engineering techniques to increase the likelihood that the project could withstand minor earthquakes without damage and major earthquakes without collapse. For these reasons, the proposed project would not result in seismic hazards as it would be constructed in accordance with current design and engineering standards. **(Less than Significant Impact)**

### Liquefaction and Lateral Spreading

As discussed previously in Section 4.7.1.2 Existing Conditions, the project site is not located within a designated liquefaction hazard zone. Despite that, there is a moderate potential for liquefaction due to the estimated depth of groundwater below the site, which ranges from approximately 21 to 23 feet bgs. Adherence to the current CBC and the recommendations in the site-specific geotechnical report would reduce the risk of liquefaction at the project site.

There are no adjacent bodies of water, channels, or excavations in the vicinity of the site that would increase the potential for lateral spreading, therefore, the project would not exacerbate such conditions off-site. For these reasons, the project would not cause potential substantial adverse effects related to liquefaction and lateral spreading. **(Less than Significant Impact)**

**Landslides**

As discussed under 4.7.1.2 Existing Conditions, the project site is not located in a local or County designated landslide hazard zone. The project site is relatively flat and is not located in the vicinity of steep embankments that could increase the risk of landslides affecting the site. Construction of the project would not include substantial earthwork that would create unstable slopes that would exacerbate any existing landslide risks. **(No Impact)**

| | |
|---|---|
| **Impact GEO-2:** | The project would not result in substantial soil erosion or the loss of topsoil. **(Less than Significant Impact)** |

Ground disturbance related to the demolition of the five existing buildings and improvements on-site and excavation and construction of the proposed office building would occur on-site. Transportation of construction materials and equipment to and from the project site could also result in disturbance of the soils. The project site is located in a flat area and would not be exposed to substantial slope instability, erosion, or landslide-related hazards. However, ground-disturbing activities could result in temporary erosion 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 BMPs contained in the Manual of Standards.

In addition, the project would be required to comply with erosion control standards administered by the San Francisco Bay RWQCB through the National Pollutant Discharge Elimination System (NPDES) permit process, which requires implementation of nonpoint source control of stormwater runoff. Compliance with the best management practices regarding erosion control listed in Provision C.6.c of the Municipal Regional Stormwater Permit (MRP) would reduce potential construction-related erosion impacts. Compliance with these requirements would reduce the project impacts to a less than significant level. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact GEO-3:** | The project would not 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. **(Less than Significant Impact)** |

As discussed under Section 4.7.1.2 Existing Conditions and Impact GEO-1, while the project site is not located in a designated liquefaction area, there is still a moderate liquefaction susceptibility level on-site due to the soil type and estimated groundwater level below the surface. Adherence to the current CBC and the recommendations in the required site-specific geotechnical report would reduce the risk of liquefaction at the project site.

As discussed previously, the project site is not subject to landslide, lateral spreading, or other forms of ground failure. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact GEO-4:** | The project would not be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property. **(Less than Significant Impact)** |

Expansive soils possess a "shrink-swell" characteristic. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Structural damage may result over a long period of time, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Although expansive soils can be a hazard, it is generally mitigated through adherence with the standard engineering and building practices and techniques specified in the CBC and adherence to the recommendations in the site-specific geotechnical report.

As discussed in Section 4.7.1.2 Existing Conditions, the proposed project would be constructing an underground parking garage in soil that is classified as a moderately plastic silty clay. Moderately plastic soils would have a moderate shrink-swell potential, which requires certain design considerations for underground structures and foundations. With adherence to the recommendations of the site-specific geotechnical report required by Chapter 16.28 of the PAMC and the current CBC, the project would not create substantial direct or indirect risks to life or property due to expansive soils. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact GEO-5:** | The project would not 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. **(No Impact)** |

The project would connect to the City's existing sanitary sewer system. Therefore, the project would not need to support septic tanks or alternative wastewater disposal systems on-site. **(No Impact)**

| | |
|---|---|
| **Impact GEO-6:** | The project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature. **(Less than Significant Impact with Mitigation Incorporated)** |

As discussed in Section 4.7.1.2 Existing Conditions, paleontological resources have been discovered previously within the City limits. Although it is improbable that paleontological resources would be discovered on-site given its prior disturbance from the existing development, construction activities would include excavation for a basement garage and extend to greater depth than prior site construction and could result in the disturbance and/or accidental destruction of unknown paleontological resources if on-site.

**Impact GEO-6:** Buried paleontological resources or unique geological features could be present on the site in underlying soils and could be disturbed during project construction.

**Mitigation Measures:** The following mitigation measure would ensure that the proper precautions are taken during an inadvertent paleontological discovery.

**MM GEO-6.1:** *Unique Paleontological and/or Geologic Features and Reporting*. Should a unique paleontological resource or site or unique geological feature be

identified at the project site during any phase of construction, all ground disturbing activities within 25 feet shall cease and the City's Director of Planning and Development Services shall be notified immediately. A qualified paleontologist shall evaluate the find, prescribe recommendations for proper treatment of the resource, and, depending on the nature of the discovery, document their findings in a paleontological report. Treatment may include protection in-place or recovery of the resource and placement in a repository. The paleontological report shall be submitted to the City. If paleontological materials are recovered, they shall be cataloged and donated to a paleontological repository, such as the University of California Museum of Paleontology. **(Less than Significant Impact with Mitigation Incorporated)**

## 4.8 GREENHOUSE GAS EMISSIONS

The following discussion is based, in part, on an Air Quality and Greenhouse Gas Assessment prepared for the project by Illingworth & Rodkin, Inc., dated May 2022. A copy of this report is included in Appendix A of this Initial Study.

### 4.8.1 Environmental Setting

#### 4.8.1.1 *Background Information*

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. In GHG emission inventories, the weight of each gas is multiplied by its global warming potential (GWP) and is measured in units of $CO_2$ equivalents ($CO_2e$). The most common GHGs are carbon dioxide ($CO_2$) and water vapor but there are also several others, most importantly methane ($CH_4$), nitrous oxide ($N_2O$), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride ($SF_6$). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- $CO_2$ and $N_2O$ are byproducts of fossil fuel combustion.
- $N_2O$ is associated with agricultural operations such as fertilization of crops.
- $CH_4$ is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents, but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and $SF_6$ emissions are commonly created by industries such as aluminum production and semiconductor manufacturing.

An expanding body of scientific research supports the theory that global climate change is currently causing changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

#### 4.8.1.2 *Regulatory Framework*

**State**

Assembly Bill 32

Under the California Global Warming Solutions Act, also known as AB 32, CARB established a statewide GHG emissions cap for 2020, adopted mandatory reporting rules for significant sources of GHGs, and adopted a comprehensive plan, known as the Climate Change Scoping Plan, identifying how emission reductions would be achieved from significant GHG sources.

In 2016, SB 32 was signed into law, amending the California Global Warming Solution Act. SB 32, and accompanying Executive Order B-30-15, require CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. CARB updated its Climate Change Scoping Plan in December of 2017 to express the 2030 statewide target in terms of million metric tons of $CO_2e$ ($MMTCO_2e$). Based on the emissions reductions directed by SB 32, the annual 2030 statewide target emissions level for California is 260 $MMTCO_2e$.

Senate Bill 375

SB 375, known as the Sustainable Communities Strategy and Climate Protection Act, was signed into law in September 2008. SB 375 builds upon AB 32 by requiring CARB to develop regional GHG reduction targets for automobile and light truck sectors for 2020 and 2035. The per capita GHG emissions reduction targets for passenger vehicles in the San Francisco Bay Area include a seven percent reduction by 2020 and a 15 percent reduction by 2035.

Consistent with the requirements of SB 375, the Metropolitan Transportation Commission (MTC) partnered with the Association of Bay Area Governments (ABAG), BAAQMD, and the Bay Conservation and Development Commission to prepare the region's Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan process. The SCS is referred to as Plan Bay Area 2040. Plan Bay Area 2040 establishes a course for reducing per capita GHG emissions through the promotion of compact, high-density, mixed-use neighborhoods near transit, particularly within identified Priority Development Areas (PDAs).

**Regional and Local**

2017 Clean Air Plan

To protect the climate, the 2017 CAP (prepared by BAAQMD) includes control measures designed to reduce emissions of methane and other super-GHGs that are potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. The jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing GHG impacts developed by BAAQMD within the CEQA Air Quality Guidelines. The

guidelines include information on legal requirements, BAAQMD rules, methods of analyzing impacts, and recommended mitigation measures.

Palo Alto Sustainability and Climate Action Plan

The City of Palo Alto's Climate Protection Plan was adopted in December 2007, and updated goals were adopted in 2010. This plan addresses measures that the City's municipal operations and residents should implement to reduce GHG emissions. By 2014, the City of Palo Alto cut its GHG emissions by approximately 32 percent from 2005 levels and 37 percent from 1990 levels. A combination of actions led to these reductions, including use of entirely carbon-neutral electricity sources by the municipal utility.

In November of 2016, the Palo Alto City Council adopted a framework for its Sustainability and Climate Action Plan (S/CAP). The goal of the S/CAP is to achieve an 80 percent reduction in GHG emissions below 1990 levels by 2030, as well as address broader issues of sustainability. The City subsequently adopted a 2018-2020 Sustainability Implementation Plan in December of 2017. The Implementation Plan focuses on two key S/CAP concerns, Greenhouse Gases and Water, and four action areas: Energy, Mobility, Electric Vehicles, and Water.

Palo Alto 2030 Comprehensive Plan

The Comprehensive Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the City. The following policies are specific to greenhouse gas emissions and are applicable to the proposed project.

| Policy/Program | Description |
|---|---|
| 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. |
| Policy T-1.4 | Ensure that electric vehicle charging infrastructure, including infrastructure for charging e-bikes, is available citywide. |

#### 4.8.1.3 *Existing Conditions*

Unlike emissions of criteria and toxic air pollutants, which have regional and local impacts, emissions of GHGs have a broader, global impact. Global warming is a process whereby GHGs accumulating in the upper atmosphere contribute to an increase in the temperature of the earth and changes in weather patterns.

### 4.8.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 1) Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment? | ☐ | ☐ | ☒ | ☐ |
| 2) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs? | ☐ | ☐ | ☒ | ☐ |

#### 4.8.2.1 *Thresholds of Significance*

The City of Palo Alto's S/CAP has not been fully developed or adopted to address 2030 emissions. Therefore, BAAQMD's CEQA Air Quality Guideline's thresholds were used in this Initial Study.

For quantified emissions, BAAQMD's 2010 CEQA Air Quality Guidelines recommended a GHG threshold of 1,100 metric tons or 4.6 metric tons (MT) per capita. These thresholds were developed based on meeting the 2020 GHG targets set in the scoping plan that addressed AB 32. Development of the project would occur beyond 2020, so a threshold that addresses a future target is appropriate. Although BAAQMD has not published a quantified threshold for 2030, this assessment uses a "Substantial Progress" efficiency metric of 2.8 MT $CO_2e$/year/service population and a bright-line threshold of 660 MT $CO_2e$/year based on the GHG reduction goals of SB32 and EO B-30-15. The service population metric of 2.8 is calculated for 2030 based projections from BAAQMD.[45] The 2030 bright-line threshold of 660 MT $CO_2e$/year is a 40 percent reduction of the 1,100 MT $CO_2e$/year threshold for 2020. Only projects exceeding both the bright-line and service population thresholds are considered to have a significant GHG emissions impact.

On April 20, 2022, BAAQMD adopted new thresholds of significance for operational GHG emissions from land use projects for projects beginning the CEQA process. The following framework is how BAAQMD will determine GHG significance moving forward.[46]

A. Projects must include, at a minimum, the following project design elements:
    a. Buildings
        i. The project will not include natural gas appliances or natural gas plumbing (in both residential and non-residential development).
        ii. 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.

[45] Bay Area Air Quality Management District, 2016. *CLE International 12th Annual Super-Conference CEQA Guidelines, Case Law and Policy Update*. December.
[46] Justification Report: BAAQMD CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Project and Plans. https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf.pdf?la=en

b. Transportation
    i. Achieve a reduction in project-generated 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:
        1. Residential Projects: 15 percent below the existing VMT per capita
        2. Office Projects: 15 percent below the existing VMT per employee
        3. Retail Projects: no net increase in existing VMT
    ii. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

Any new land use project would have to include either section A or B from the above list, not both, to be considered in compliance for GHG emissions from project operation. The CEQA process for this project began before May 2022 and therefore, the project is subject to the guidelines and threshold in place at the time the environmental analysis commenced in 2021 and not required to be evaluated with the updated guidelines.

| | |
|---|---|
| **Impact GHG-1:** | The project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. **(Less than Significant Impact)** |

### Construction Emissions

CalEEMod was used to predict the GHG emissions from project construction and operational activities. GHG emissions associated with project construction were estimated to be 226 MT of $CO_2e$ per year of construction. The GHG emissions generated during construction would come from operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction related GHG emissions. As previously discussed in the Energy section, the overall construction schedule and process is designed to be efficient in order to avoid excess monetary costs. That is, equipment and fuel would not be used wastefully on the site because of the added expense associated with renting, maintaining, and fueling equipment. Additionally, equipment idling would be limited per the required BAAQMD construction BMPs as described in Section 4.3 Air Quality.

### Operational Emissions

The annual emissions resulting from operation of the proposed office building are summarized in Table 4.8-1. The estimated emissions from the existing land use on-site are also provided as a baseline condition for the project site.

| Table 4.8-1: Annual Project GHG Emissions ($CO_2e$) in Metric Tons and Per Capita | | | |
|---|---|---|---|
| **Source Category** | **Existing Land Use** | **Proposed Project** | |
| | **2022** | **2025** | **2030** |
| Area | 0 | 0 | 0 |
| Energy Consumption | 13 | 0* | 0* |
| Mobile | 104 | 385 | 346 |
| Solid Waste Generation | 7 | 25 | 25 |
| Water Usage | 4 | 5 | 5 |
| Total (MT $CO_2e$/year) | 128 | 415 | 376 |
| Net Emissions | | 287 MT $CO_2e$/year | 248 MT $CO_2e$/year |
| **Significance Threshold** | | | **660 MT $CO_2e$/year** |
| Service Population Emissions[47] (MT $CO_2e$/year/service population) | | 1.7 | 1.6 |
| Significance Threshold | | | 2.8 in 2030 |
| Exceeds Both Thresholds? | | | No |
| *Project energy consumption is assumed to utilize carbon-free electricity because the project would include rooftop solar panels to generate electricity on-site and any supplemental energy needed would come from the CPAU, which purchases electricity from carbon-neutral sources (see Section 4.6 Energy). The project would not utilize natural gas. | | | |

To be considered an exceedance, the project must exceed both the GHG significance threshold in metric tons per year and the service population significance threshold in the future year of 2030. As shown in Table 4.8-1, the project would not exceed the annual emissions bright-line threshold of 660 MT $CO_2e$/year in 2030 and would not exceed the per service population threshold of 2.8 MT of $CO_2e$/year/service population in 2030. Therefore, the project would not exceed thresholds for GHG emissions. **(Less than Significant Impact)**

| **Impact GHG-2:** | The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. **(Less than Significant Impact)** |
|---|---|

The proposed building would be constructed in conformance with CALGreen and the Title 24 Building Code, which requires high-efficiency water fixtures, water-efficient irrigation systems, and compliance with current energy efficacy standards. The project would be required to implement energy efficient measures to meet the CALGreen Building Standards Code. The project would be

[47] The project service population efficiency rate is based on the number of future full-time employees. For this project, the number of employees was provided at 220 for the office component and 20 for the retail component, for a total population of 240. This total service population was used to calculate the per capita emissions.

100 percent electric (no natural gas), in compliance with the City's Reach Code. The project would also provide electric vehicle charging infrastructure that meets the current Building Code CALGreen Tier 2 compliance. Additionally, the project is located within near public transit with regional connections (Caltrain), reducing overall VMT generated. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. **(Less than Significant Impact)**

## 4.9 HAZARDS AND HAZARDOUS MATERIALS

The following discussion is based on a Phase I Environmental Site Assessment and Results of Soil Vapor Sampling Survey prepared for the project by EKI Environment & Water, Inc. (EKI), dated March 2020. Given the size of the project site, EKI prepared a second Phase I Environmental Site Assessment in September 2020 evaluating a different parcel of the site than was previously analyzed. The discussion is also based on a follow-up letter from EKI regarding the findings of the Phase I Assessments, dated May 2022. Copies of these reports are included in Appendices C1, C2, and C3, respectively, of this Initial Study.

### 4.9.1 Environmental Setting

#### 4.9.1.1 *Regulatory Framework*

**Overview**

The storage, use, generation, transport, and disposal of hazardous materials and waste are highly regulated under federal and state laws. In California, the EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (CalEPA). In turn, local agencies have been granted responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program.

Worker health and safety and public safety are key issues when dealing with hazardous materials. Proper handling and disposal of hazardous material is vital if it is disturbed during project construction. Cal/OSHA enforces state worker health and safety regulations related to construction activities. Regulations include exposure limits, requirements for protective clothing, and training requirements to prevent exposure to hazardous materials. Cal/OSHA also enforces occupational health and safety regulations specific to lead and asbestos investigations and abatement.

**Federal and State**

Federal Aviation Regulations Part 77

Federal Aviation Regulations, Part 77 Objects Affecting Navigable Airspace (FAR Part 77) sets forth standards and review requirements for protecting the airspace for safe aircraft operation, particularly by restricting the height of potential structures and minimizing other potential hazards (such as reflective surfaces, flashing lights, and electronic interference) to aircraft in flight. These regulations require that the Federal Aviation Administration (FAA) be notified of certain proposed construction projects located within an extended zone defined by an imaginary slope radiating outward for several miles from an airport's runways, or which would otherwise stand at least 200 feet in height above the ground.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly

to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over five years, $1.6 billion was collected and the tax went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. CERCLA accomplished the following objectives:

- Established prohibitions and requirements concerning closed and abandoned hazardous waste sites;
- Provided for liability of persons responsible for releases of hazardous waste at these sites; and
- Established a trust fund to provide for cleanup when no responsible party could be identified.

The law authorizes two kinds of response actions:

- Short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response; and
- Long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life-threatening. These actions can be completed only at sites listed on the EPA's National Priorities List.

CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.[48]

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), enacted in 1976, is the principal federal law in the United States governing the disposal of solid waste and hazardous waste. RCRA gives the EPA the authority to control hazardous waste from the "cradle to the grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous solid wastes.

The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focused on waste minimization, phasing out land disposal of hazardous waste, and corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.[49]

[48] United States Environmental Protection Agency. "Superfund: CERCLA Overview." Accessed April 1, 2022. https://www.epa.gov/superfund/superfund-cercla-overview.
[49] United States Environmental Protection Agency. "Summary of the Resource Conservation and Recovery Act." Accessed April 1, 2022. https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act.

Government Code Section 65962.5

Section 65962.5 of the Government Code requires CalEPA to develop and update a list of hazardous waste and substances sites, known as the Cortese List. The Cortese List is used by state and local agencies and developers to comply with CEQA requirements. The Cortese List includes hazardous substance release sites identified by the Department of Toxic Substances Control (DTSC) and State Water Resources Control Board (SWRCB).[50]

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides. The TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint.

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) Program aims to prevent accidental releases of regulated hazardous materials that represent a potential hazard beyond the boundaries of a property. Facilities that are required to participate in the CalARP Program use or store specified quantities of toxic and flammable substances (hazardous materials) that can have off-site consequences if accidentally released. The City of Palo Alto reviews CalARP risk management plans as the CUPA.

Asbestos-Containing Materials

Friable asbestos is any asbestos-containing material (ACM) that, when dry, can easily be crumbled or pulverized to a powder by hand, allowing the asbestos particles to become airborne. Common examples of products that have been found to contain friable asbestos include acoustical ceilings, plaster, wallboard, and thermal insulation for water heaters and pipes. Common examples of non-friable ACMs are asphalt roofing shingles, vinyl floor tiles, and transite siding made with cement. The EPA phased out the use of friable asbestos products between 1973 and 1978. National Emission Standards for Hazardous Air Pollutants (NESHAP) guidelines require that potentially friable ACMs be removed prior to building demolition or remodeling that may disturb the ACMs.

CCR Title 8, Section 1532.1

The United States Consumer Product Safety Commission banned the use of lead-based paint in 1978. Removal of older structures with lead-based paint is subject to requirements outlined by the Cal/OSHA Lead in Construction Standard, CCR Title 8, Section 1532.1 during demolition activities. Requirements include employee training, employee air monitoring, and dust control. If lead-based paint is peeling, flaking, or blistered, it is required to be removed prior to demolition.

[50] California Environmental Protection Agency. "Cortese List Data Resources." Accessed April 1, 2022. https://calepa.ca.gov/sitecleanup/corteselist/.

## Regional and Local

Municipal Regional Permit Provision C.12.f

Polychlorinated biphenyls (PCBs) were produced in the United States between 1955 and 1978 and used in hundreds of industrial and commercial applications, including building and structure materials such as plasticizers, paints, sealants, caulk, and wood floor finishes. In 1979, the EPA banned the production and use of PCBs due to their potential harmful health effects and persistence in the environment. PCBs can still be released to the environment today during demolition of buildings that contain legacy caulks, sealants, or other PCB-containing materials.

With the adoption of the San Francisco Bay Region Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (MRP) by the San Francisco Bay Regional Water Quality Control Board on November 19, 2015, Provision C.12.f requires that permittees develop an assessment methodology for applicable structures planned for demolition to ensure PCBs do not enter municipal storm drain systems.[51] Municipalities throughout the Bay Area are currently modifying demolition permit processes and implementing PCB screening protocols to comply with Provision C.12.f. Buildings constructed between 1950 and 1980 that are proposed for demolition must be screened for the presence of PCBs prior to the issuance of a demolition permit. Single family homes and wood-frame structures are exempt from these requirements.

## Local

Palo Alto 2030 Comprehensive Plan

The Comprehensive Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the City. The following policies are specific to hazards and hazardous materials and are applicable to the proposed project.

| Policy/Program | Description |
|---|---|
| Program S-3.1.1 | Continue City permitting procedures for commercial and industrial storage, use and handling of hazardous materials and regulate the commercial use of hazardous materials that may present a risk of off-site health or safety effects. |
| Program S-3.1.3 | Strengthen development review requirements and construction standards for projects on sites with groundwater contamination. |
| 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. |

[51] California Regional Water Quality Control Board. *San Francisco Bay Region Municipal Regional Stormwater NPDES Permit.* November 2015.

#### 4.9.1.2 *Existing Conditions*

**Site History**

The parcel at 123 Sherman Avenue has generally been used for residential land uses on and off since at least 1888. The parcels at 150 Grant Avenue and 2501 Park Boulevard were largely vacant, save for some small structures, until the existing buildings were constructed. The adjoining property addressed 2555 Park Boulevard was occupied by a dry-cleaning facility from approximately 1945 to 1969 prior to development of the existing office building.

**Database Search**

An environmental database review was conducted to identify any known releases of hazardous substances at or near the project site. Several hazardous materials sites were identified in the project vicinity. These sites are described further below.

COE Study Area

The project site is reported as being located within the California-Olive-Emerson (COE) Study Area, an area where regional shallow groundwater is impacted by volatile organic compounds (VOCs). The VOCs in the COE Study Area primarily consist of trichloroethylene (TCE) and tetrachloroethylene (PCE) that were released at several properties, including the former Hewlett-Packard and Varian Medical facilities located at 395 and 640 Page Mill Road and 601 California Avenue. The groundwater contamination is currently being investigated and remediated by the responsible parties under a Site Cleanup Requirements Order issued in 1994 by the RWQCB.

123 Sherman Avenue

The project site is listed as a Cleanup Program Site under the RWQCB's Geotracker database, which is included on the Cortese List.[52] The case at 123 Sherman Avenue was opened in September 2022 under a Remedial Action Agreement between the Palo Alto Sherman Ventures LP and the Santa Clara County Department of Environmental Health (SCCDEH). The current status of the project site, as of October 2022, is "Open – Site Assessment", meaning that the site is currently being evaluated to identify the nature and extent of contamination that exists on-site. The information that is currently known about the site's existing conditions is summarized below under "On-Site Soil Vapor Sampling".

2555 Park Boulevard

As previously mentioned, the parcel located adjacent to the project site at 2555 Park Boulevard was formerly occupied by a dry-cleaning facility. This site is an open Cleanup Program Site under the supervision of the RWQCB. Releases of TCE and PCE occurred on-site from the former dry-cleaning operations. Concentrations of TCE and PCE were detected in soil vapor samples below their current Water Board Environmental Screening Levels (ESLs) for commercial buildings. PCE and TCE have also been detected in groundwater samples at this site but are not associated with the

[52] California Environmental Protection Agency. "Cortese List Data Resources." Accessed October 3, 2022. https://calepa.ca.gov/sitecleanup/corteselist/.

former dry-cleaning facility. The source for the groundwater contamination is unknown but likely associated with the COE groundwater plume.

**On-Site Soil Vapor Sampling**

In February and March 2020, EKI collected samples of soil vapor from eight locations within the project site to screen for the presence of PCE and other VOCs in the subsurface. PCE was detected in one sample at a concentration of 116 micrograms per cubic meter (ug/$m^3$), exceeding its current commercial RWQCB ESL of 67 ug/$m^3$ for commercial buildings. Another sample detected PCE at a concentration of 18.9 ug/$m^3$, which falls below the ESL for commercial buildings. PCE was not measured at concentrations above its laboratory reporting limit of 6.78 ug/$m^3$ in the other six samples taken on-site.

### 4.9.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | ☐ | ☐ | ☒ | ☐ |
| 2) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | ☐ | ☒ | ☐ | ☐ |
| 3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | ☐ | ☐ | ☒ | ☐ |
| 4) 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? | ☐ | ☒ | ☐ | ☐ |
| 5) 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, result in a safety hazard or excessive noise for people residing or working in the project area? | ☐ | ☐ | ☐ | ☒ |
| 6) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☒ | ☐ |
| 7) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires? | ☐ | ☐ | ☐ | ☒ |

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |

| | |
|---|---|
| **Impact HAZ-1:** | The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. **(Less than Significant Impact)** |

Construction activities may include the temporary transport, storage, use, or disposal of potentially hazardous materials including fuels, lubricating fluids, cleaners, solvents, or contaminated soils. If spilled, these substances could pose a risk to the environment and to human health. The transport, storage, use, or disposal of hazardous materials would be subject to federal, state, and local regulations pertaining to the transport, use, storage, and disposal of hazardous materials, which would assure that risks associated with hazardous materials are minimized.

Hazardous materials commonly found in office buildings include cleaning products, pesticides, paint, oil and batteries. The proposed project would routinely use limited amounts of cleaning and landscape maintenance materials and would not generate substantial hazardous emissions from hazardous materials use. The proposed office building would not use acutely or extremely hazardous materials. For these reasons, the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact HAZ-2:** | The project would not 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. **(Less than Significant Impact with Mitigation Incorporated)** |

**Project Construction**

As described in Section 4.9.1.2 Existing Conditions, soil vapor on-site is known to be impacted by PCE and other VOCs. Additionally, the groundwater beneath the project site also likely contains VOCs due to the project site's location within the COE Study Area. EKI noted that the depth of groundwater beneath the project site is estimated to range from 21 to 23 feet below ground surface (bgs). The project garage would extend to a depth of approximately 24 feet. Therefore, construction workers may encounter contaminated groundwater, i.e., VOCs from the COE Study Area, as well as contaminated soils and soil vapor during project excavation and grading.

**Impact HAZ-2:** Project construction may expose workers and the environment to contaminated groundwater, soils, and soil vapor.

Implementation of MM HAZ-2.1 and MM HAZ-2.2, described below, would reduce the risk of exposing construction workers and the environment to hazardous materials to a less than significant level and would ensure that contaminated soils and existing monitoring structures on-site are properly disposed of.

**MM HAZ-2.1:** Prior to conducting earthwork activities at the project site, a Site Management Plan (SMP) and Health and Safety Plan (HSP) shall be prepared. The purpose of these documents will be to establish appropriate management practices for handling impacted soil, soil vapor and groundwater that may be encountered during construction activities. Based on the history of the project vicinity, areas of impacted soil, soil vapor and/or groundwater likely will be encountered during construction activities, which may require special monitoring, handling and/or disposal. The SMP shall be submitted to the San Francisco Bay Regional Water Quality Control Board (RWQCB), or an equivalent oversight agency (e.g., the Santa Clara County Department of Environmental Health or Department of Toxic Substances Control) for review and approval prior to commencing earthwork activities at the project site.

**MM HAZ-2.2:** Prior to excavation of the proposed below grade parking garage, additional soil sampling will be required to profile the soil for landfill disposal and/or reuse at another construction project. Soil sampling shall also be required during project construction if visibly contaminated soil is discovered during earthmoving activities. Soil profiling shall be performed in accordance with the acceptance criteria of the selected receiving facilities and/or the Department of Toxic Substance Control (DTSC's) October 2001 Clean Fill Advisory. Prior to soil transfer, written approval shall be obtained from the selected receiving facility and a copy shall be provided to the Director of Planning and Development Services upon request.

With implementation of MM HAZ-2.1 and MM HAZ-2.2, the project would reduce the risk of exposing construction workers and soil receiving facility workers to hazardous materials.

**Project Operation**

As described under Impact HAZ-1, project operation would not involve the routine use of hazardous materials outside of typical cleaning and landscape maintenance materials. All hazardous materials would be properly stored on-site and would not pose a significant risk of releasing hazardous materials into the environment during upset and accident conditions. **(Less than Significant Impact with Mitigation Incorporated).**

| | |
|---|---|
| **Impact HAZ-3:** | The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. **(Less than Significant Impact)** |

The nearest school to the project site is a preschool called Casa dei Bambini School, located approximately 0.26 miles southwest of the project site. Thus, there are no schools within a quarter-mile of the project site. Additionally, as discussed under Impact HAZ-1, project operation would not involve the use of hazardous materials outside of typical cleaning and landscape maintenance materials. All hazardous materials would be properly stored on-site and would not pose a risk to any nearby schools. Construction impacts associated with encountering contaminated soil vapor and groundwater would be limited to workers on-site. As discussed in Section 4.3 Air Quality, TAC emission would be less than significant.

| | |
|---|---|
| **Impact HAZ-4:** | The project would not 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, create a significant hazard to the public or the environment. **(Less than Significant Impact with Mitigation Incorporated)** |

The project site is listed on the State Water Board's Geotracker database.[53] However, the project site is listed on Geotracker due to a voluntary agreement between the project applicant and the SCCDEH. The project site is not a hazardous waste generator and thus, is not considered to be on the Cortese List. The address at 123 Sherman Avenue is an open site under a Remedial Action Agreement with the SCCDEH. As previously described, the project site is within an area known to contain groundwater that is contaminated with VOCs. Investigation of the project site under the voluntary agreement would evaluate the extent that the project site has been impacted by nearby contamination and would potentially lead to implementation of measures (i.e., a passive vapor intrusion system) that would protect future occupants of the proposed office building. Environmental impacts on future project occupants are further discussed in Section 4.9.3 Non-CEQA Effects.

Additionally, the adjacent parcel at 2555 Park Boulevard is included on the Cortese List due to documented releases of VOCs associated with the former dry-cleaning operations. Additionally, the project site is within the COE Study Area, an active Cleanup Program Site. The project's potential to expose construction workers to hazardous materials within the on-site groundwater, soils, and soil vapor is discussed under Impact HAZ-2. Despite the fact that the project site is within the COE Study Area, listed on the Geotracker database, and is adjacent to a site on the Cortese List, the project would not create a significant hazard to the public or the environment because remediation would take place as necessary under the Remedial Action Agreement at 123 Sherman Avenue, and the project would implement MM HAZ-2.1 and MM HAZ-2.2 to ensure that soils on-site are properly handled during project construction so as to not cause a significant risk to construction workers or soil receiving facility workers. **(Less than Significant Impact with Mitigation Incorporated)**

| | |
|---|---|
| **Impact HAZ-5:** | The project would not be 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. The project would not result in a safety hazard or excessive noise for people residing or working in the project area. **(No Impact)** |

The project site is located approximately 2.3 miles from the Palo Alto Airport, outside of the AIA, safety zones, and noise contours. Therefore, the project would not result in a safety hazard or excessive noise for people working in the project area. **(No Impact)**

[53] California Environmental Protection Agency. "Cortese List Data Resources." Accessed October 3, 2022. https://calepa.ca.gov/sitecleanup/corteselist/.

| | |
|---|---|
| **Impact HAZ-6:** | The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. **(Less than Significant Impact)** |

The proposed project would not impair or interfere with the City's Emergency Operations Plan. The project would not result in roadway changes and would not substantially increase traffic or roadway congestion such that use of the evacuation route would be hindered. Therefore, impacts would be less than significant. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact HAZ-7:** | The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. **(No Impact)** |

The project site is located in an urbanized area of Palo Alto. There are no areas susceptible to wildfire in the project vicinity. Therefore, the project would not expose people or structures to substantial risk as a result of potential wildfires. **(No Impact)**

### 4.9.3 Non-CEQA Effects

Per *California Building Industry Association v. Bay Area Air Quality Management District,* 62 Cal. 4th 369 (BIA v. BAAQMD), effects of the environment on the project are not considered CEQA impacts. The following discussion is included for informational purposes because the City of Palo Alto has policies that address existing hazards and hazardous materials conditions affecting a proposed project.

**Vapor Intrusion**

As previously discussed, certain contaminants are present in the groundwater and soil vapor at the project site. Vapor intrusion occurs when VOCs migrate from contaminated groundwater or subsurface soils into the indoor air of an overlying structure. Vapor intrusion of VOCs could expose future workers and visitors of the proposed office building to potentially unacceptable health risks. Potential hazards impacts to new occupants would not be an impact under CEQA, therefore mitigation of vapor intrusion for future occupants is 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 as a standard condition of approval of the project:

> **VAPOR INTRUSION PREVENTION 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 San Francisco Bay Regional Water Quality Control Board (RWQCB), 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 Department of Toxic Substances Control (DTSC), RWQCB, or the County of Santa Clara

Department of Environmental Health 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 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.

## 4.10 HYDROLOGY AND WATER QUALITY

The discussion of site hydrology in this section is based on a preliminary hydrology memorandum prepared by BKF Engineers in May 2021. This report is included as Appendix D to this Initial Study.

### 4.10.1 Environmental Setting

#### 4.10.1.1 *Regulatory Framework*

**Federal and State**

The federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality in California. Regulations set forth by the Environmental Protection Agency (EPA) and the State Water Resources Control Board (SWRCB) have been developed to fulfill the requirements of this legislation. EPA regulations include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge pollutants into the waters of the United States (e.g., streams, lakes, bays, etc.). These regulations are implemented at the regional level by the Regional Water Quality Control Boards (RWQCBs). The project site is within the jurisdiction of the San Francisco Bay RWQCB.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) established the National Flood Insurance Program (NFIP) to reduce impacts of flooding on private and public properties. The program provides subsidized flood insurance to communities that comply with FEMA regulations protecting development in floodplains. As part of the program, FEMA publishes Flood Insurance Rate Maps (FIRMs) that identify Special Flood Hazard Areas (SFHAs). An SFHA is an area that would be inundated by the one-percent annual chance flood, which is also referred to as the base flood or 100-year flood.

Statewide Construction General Permit

The SWRCB has implemented a NPDES General Construction Permit for the State of California (Construction General Permit). For projects disturbing one acre or more of soil, a Notice of Intent (NOI) must be filed with the RWQCB by the project sponsor, and a Storm Water Pollution Prevention Plan (SWPPP) must be prepared by a qualified professional prior to commencement of construction and filed with the RWQCB by the project sponsor. The Construction General Permit includes requirements for training, inspections, record keeping, and, for projects of certain risk levels, monitoring. The general purpose of the requirements is to minimize the discharge of pollutants and to protect beneficial uses and receiving waters from the adverse effects of construction-related storm water discharges.

**Regional and Local**

San Francisco Bay Basin Plan

The San Francisco Bay RWQCB regulates water quality in accordance with the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). The Basin Plan lists the beneficial uses that the San Francisco Bay RWQCB has identified for local aquifers, streams, marshes, rivers, and

the San Francisco Bay, as well as the water quality objectives and criteria that must be met to protect these uses. The San Francisco Bay RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements, including permits for nonpoint sources such as the urban runoff discharged by a City's stormwater drainage system. The Basin Plan also describes watershed management programs and water quality attainment strategies.

Municipal Regional Permit Provision C.3

The San Francisco Bay RWQCB re-issued the Municipal Regional Stormwater NPDES Permit (MRP) in 2015 to regulate stormwater discharges from municipalities and local agencies (co-permittees) in Alameda, Contra Costa, San Mateo, and Santa Clara Counties, and the cities of Fairfield, Suisun City, and Vallejo.[54] Under Provision C.3 of the MRP, new and redevelopment projects that create or replace 10,000 square feet or more of impervious surface area are required to implement site design, source control, and Low Impact Development (LID)-based stormwater treatment controls to treat post-construction stormwater runoff. LID-based treatment controls are intended to maintain or restore the site's natural hydrologic functions, maximizing opportunities for infiltration and evapotranspiration, and using stormwater as a resource (e.g., rainwater harvesting for non-potable uses). The MRP also requires that stormwater treatment measures are properly installed, operated, and maintained.

In addition to water quality controls, the MRP requires new development and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation, or other impacts to local rivers, streams, and creeks. Projects may be deemed exempt from these requirements if they do not meet the minimized size threshold, drain into tidally influenced areas or directly into the Bay, or drain into hardened channels, or if they are infill projects in subwatersheds or catchment areas that are greater than or equal to 65 percent impervious.

Municipal Regional Permit Provision C.12.f

Provision C.12.f of the MRP requires co-permittee agencies to implement a control program for PCBs that reduces PCB loads by a specified amount during the term of the permit, thereby making substantial progress toward achieving the urban runoff PCBs wasteload allocation in the Basin Plan by March 2030.[55] Programs must include focused implementation of PCB control measures, such as source control, treatment control, and pollution prevention strategies. Municipalities throughout the Bay Area are updating their demolition permit processes to incorporate the management of PCBs in demolition building materials to ensure PCBs are not discharged to storm drains during demolition. Buildings constructed between 1955 and 1978 that are proposed for demolition must be screened for the presence of PCBs prior to the issuance of a demolition permit.

[54] MRP Number CAS612008
[55] San Francisco Bay Regional Water Quality Control Board. *Municipal Regional Stormwater Permit, Provision C.12.* November 19, 2015.

Water Resources Protection Ordinance and District Well Ordinance

Valley Water operates as the flood control agency for Santa Clara County. Their stewardship also includes creek restoration, pollution prevention efforts, and groundwater recharge. Permits for well construction and destruction work, most exploratory boring for groundwater exploration, and projects within Valley Water property or easements are required under Valley Water's Water Resources Protection Ordinance and District Well Ordinance.

2021 Groundwater Management Plan

The 2021 Groundwater Management Plan (GWMP) describes the Valley Water's comprehensive groundwater management framework, including existing and potential actions to achieve basin sustainability goals and ensure continued sustainable groundwater management. The GWMP covers the Santa Clara and Llagas subbasins, which are located entirely in Santa Clara County. Valley Water manages a diverse water supply portfolio, with sources including groundwater, local surface water, imported water, and recycled water. About half of the county's water supply comes from local sources and the other half comes from imported sources. Imported water includes the District's State Water Project and Central Valley contract supplies and supplies delivered by the San Francisco Public Utilities Commission (SFPUC) to cities in northern Santa Clara County. Local sources include natural groundwater recharge and surface water supplies. A small portion of the county's water supply is recycled water.

Local groundwater resources make up the foundation of the county's water supply, but they need to be augmented by the District's comprehensive water supply management activities to reliably meet the county's needs. These include the managed recharge of imported and local surface water and in-lieu groundwater recharge through the provision of treated surface water and raw water, acquisition of supplemental water supplies, and water conservation and recycling.[56]

Dam Safety

Since August 14, 1929, the State of California has regulated dams to prevent failure, safeguard life, and protect property. The California Water Code entrusts dam safety regulatory power to California Department of Water Resources, Division of Safety of Dams (DSOD). The DSOD provide oversight to the design, construction, and maintenance of over 1,200 jurisdictional sized dams in California.[57]

As part of its comprehensive dam safety program, Valley Water routinely monitors and studies the condition of each of its 10 dams. Valley Water also has its own Emergency Operations Center and a response team that inspects dams after significant earthquakes. These regulatory inspection programs reduce the potential for dam failure.

[56] Valley Water. *2021 Groundwater Management Plan, Santa Clara and Llagas Subbasins*. November 2021.
[57] California Department of Water Resources, Division of Safety of Dams. https://water.ca.gov/Programs/All-Programs/Division-of-Safety-of-Dams#:~:text=Since%20August%2014%2C%201929%2C%20the,Safety%20of%20Dams%20(DSOD). Accessed April 1, 2022.

Construction Dewatering Waste Discharge Requirements

Each of the RWQCBs regulate construction dewatering discharges to storm drains or surface waters within its Region under the NPDES program and Waste Discharge Requirements.

Palo Alto Municipal Code

Chapter 16.28 of the PAMC requires that projects prepare an interim erosion and sediment control and stormwater pollution prevention plan as part of the development review process before preparing a final version of the plan after the project has been completed. Chapter 16.28 also outlines the additional requirements for temporary construction dewatering. These requirements regulate the rate of discharge, the percolation location, and require a dewatering hydrogeological study. The Regulations for Groundwater Dewatering during Construction of Below Ground Structures document was updated by the City in February 2020. These regulations address the timing and amount of pumping and discharge of groundwater from basements or below-ground garages during construction, with a goal of minimizing discharge. The code provisions and guidelines also address settlement at adjacent properties and require development and monitoring plan by project applicants to assess dewatering effects on surrounding vegetation, trees, structures, and infrastructure. These dewatering provisions will be reviewed by the City as part of the Grading Permit process. The Grading Permit for a project will not be issued until all required submittals related to dewatering have been submitted, reviewed and approved by Public Works.

Palo Alto 2030 Comprehensive Plan

The Comprehensive Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the City. The following policies are specific to hydrology and water quality and are applicable to the proposed project.

| Policy/Program | Description |
|---|---|
| Policy N-4.6 | Retain and utilize rainwater on site to the extent possible. |
| Program N-4.8.1 | Research and promote new construction techniques and recharge strategies developed to reduce subsurface and surface water impacts and comply with City dewatering policies. |
| Program N-4.8.2 | Explore appropriate ways to monitor dewatering for all dewatering and excavation projects to encourage maintaining groundwater levels and recharging of the aquifer where needed. |
| Policy N-4.10 | Reduce pollution in urban runoff from residential, commercial, industrial, municipal, and transportation land uses and activities. |
| Program N-10.1 | Monitor and implement practices for reducing water pollution. Examples include state-of-the-art best management practices, land use planning approaches and construction of modern stormwater management facilities. |
| Policy N-4.12 | Promote sustainable low water and pesticide landscaping practices on both public and private property. |
| Policy N-4.13 | Encourage LID measures to limit the amount of pavement and impervious surface in new development and increase the retention, treatment and infiltration of urban |

| | |
|---|---|
| | stormwater runoff. Include LID measures in major remodels, public projects and recreation projects where practical. |
| Program N-4.13.1 | Promote the use of permeable paving materials or other design solutions that allow for natural percolation and site drainage through a Stormwater Rebate Program and other incentives. |
| Program N-4.13.3 | Mitigate flooding through improved surface permeability or paved areas, and stormwater capture and storage. |

#### 4.10.1.2 *Existing Conditions*

**Water Quality**

The project site is developed with a total of five existing buildings, surface parking lots, and small amounts of landscaping. Stormwater runoff from the project site enters the City's main storm drain system and eventually flows to the San Francisco Bay without treatment.

**Groundwater**

The City of Palo Alto is located within the Santa Clara Valley Groundwater Basin.[58] Hydrologically, the groundwater basin is separated into recharge and confined zones. Geological conditions in the recharge areas allow precipitation, stream flow, and water diverted into percolation areas to recharge the deeper aquifers. The confined zones include areas of the valley where low permeability clays and silts overlie the major groundwater aquifers which impedes the vertical flow of groundwater into the deeper aquifers. A majority of the City of Palo Alto, including the entirety of project site, lies within the area of the confined zone. [59]

The depth of groundwater beneath the project site is estimated to range from 21 to 23 feet bgs.[60] Fluctuations in the groundwater level may occur due to seasonal changes, variations in rainfall, and underground drainage patterns.

**Stormwater Drainage**

The storm drainage system that serves the project site is owned and maintained by the City of Palo Alto. The Palo Alto storm drain system is divided into three separate drainage areas, the San Francisquito drainage area, the Matadero drainage area, and the Adobe/Barron drainage area. The project site is located within the Matadero drainage area, which is the largest drainage area of the three, and generally drains east to Matadero Creek or north to San Francisquito Creek.[61] Currently, the project site consists of approximately 31,290 square feet (or 91 percent) of impervious surfaces and the remaining 3,094 square feet (or 9 percent) are pervious surfaces. The majority of the stormwater from the project site drains to Grant Avenue, and additional stormwater drains to Sherman Avenue and Park Boulevard.

[58] USGS. "Groundwater Quality in the San Francisco Bay Groundwater Basins, California". March 2013. Accessed April 8, 2022. https://pubs.usgs.gov/fs/2012/3111/pdf/fs20123111.pdf.
[59] Santa Clara Valley Water District. 2021 Groundwater Management Plan. Accessed April 8, 2022. https://s3.us-west-2.amazonaws.com/assets.valleywater.org/2021_GWMP_web_version.pdf
[60] EKI Environment & Water. *Phase I Environmental Site Assessment and Results of Soil Vapor Sampling Survey.* March 2020.
[61] City of Palo Alto. *Storm Drain Master Plan.* Page 4-8. June 2015.

### Flooding

The project site is not located within a 100-year flood hazard area. According to the FEMA, the project site is in Zone X with 0.2 percent annual chance of flood.[62]

### Other Inundation Hazards

A seiche is a standing wave oscillating in a body of water that can produce flooding along the shoreline under certain natural conditions.[63] There are no bodies of water such as lakes, harbors, or reservoirs near the project site that would affect the site in the event of a seiche. The project site is not close enough to San Francisco Bay to be affected in the event of a tsunami.[64]

## 4.10.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 1) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | ☐ | ☒ | ☐ | ☐ |
| 2) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | ☐ | ☐ | ☒ | ☐ |
| 3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: | ☐ | ☐ | ☒ | ☐ |
| – result in substantial erosion or siltation on- or off-site; | ☐ | ☐ | ☒ | ☐ |
| – substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; | ☐ | ☐ | ☒ | ☐ |
| – 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; or | ☐ | ☐ | ☒ | ☐ |
| – impede or redirect flood flows? | ☐ | ☐ | ☒ | ☐ |

[62] FEMA. "FEMA Flood Map Service Center". Accessed April 11, 2022. https://msc.fema.gov/portal/search?AddressQuery=123%20sherman%20ave%20palo%20alto%20ca
[63] National Ocean Service. *What is a Seiche?* Accessed April 11, 2021. https://oceanservice.noaa.gov/facts/seiche.html
[64] Association of Bay Area Governments. *Tsunami & Additional Hazards.* Accessed April 11. 2021. https://abag.ca.gov/our-work/resilience/data-research/tsunami-additional-hazards

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 4) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | ☐ | ☐ | ☒ | ☐ |
| 5) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | ☐ | ☐ | ☒ | ☐ |

**Impact HYD-1:** The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. **(Less than Significant Impact with Mitigation Incorporated)**

### Construction Activities

Implementation of the proposed project would require demolition, excavation, grading, and paving of the project site, which can result in temporary impacts to surface water quality. These construction activities could increase erosion and sedimentation once the disturbed soil is exposed to water and wind. This would increase the potential for soil, sediment, and pollutants to be carried by runoff into local waterways and the San Francisco Bay.

Chapter 16.28 of the PAMC requires that projects prepare an interim erosion and sediment control and stormwater pollution prevention plan as part of the development review process. This plan would be required to illustrate the stormwater control measures planned for the construction phase, including any sediment detention basins and traps, silt fences, straw bales, and stabilized construction entrances. The Manual of Standards provided by the City outlines the minimum best management practices required to limit stormwater pollution from construction activities. Adherence to these requirements would limit water quality impacts during project construction to a less than significant level. **(Less than Significant Impact)**

### Post-Construction

The project would result in 30,899 square feet of impervious surfaces on the project site. Under Provision C.3 of the RWQCB's Municipal Regional Stormwater NPDES Permit (MRP), redevelopment projects that add and/or replace more than 10,000 square feet of impervious surface are required to design and construct stormwater treatment controls to treat post-construction stormwater runoff. The MRP requires that all post-construction runoff be treated by using Low Impact Development (LID) treatment controls (e.g., biotreatment facilities).

### Dewatering

Groundwater beneath the site is at a depth of approximately 21 to 23 feet. The project garage would extend approximately 24 feet below grade. Therefore, dewatering may be needed during construction.

The Public Works Department would review and approve the dewatering permitting package prior to commencement of dewatering consistent with the City's regulations for groundwater dewatering during construction (PAMC 16.28.155-6). In the case of controlled groundwater pumping, a street work permit application, a dewatering plan and a groundwater use plan will be prepared and submitted to the City Engineer. The Groundwater Use Plan must show how the groundwater will be used to the maximum extent practicable. The Dewatering Plan shall identify avoidance measures to minimize the flow rate and duration of the pumping, even when off-site effects are not specifically identified. Prior to commencement of dewatering, the applicant will notify occupants of neighboring properties and install a groundwater monitoring well to measure the dropping water table levels. The applicant will also contact the City's Watershed Protection Group for guidance on sampling, treatment, and disposal requirements for temporary construction-related groundwater. As described in Section 4.9 Hazards and Hazardous Materials, groundwater beneath the project site is likely to be contaminated with VOCs. With adherence to the City's policies regarding dewatering and MM HAZ-2.1 and MM HAZ-2.2, contaminated groundwater would be properly handled and would not enter the stormwater system. It is not anticipated that operational dewatering of the underground parking garage (once complete) would be required.

With adherence to requirements listed above and MM HAZ-2.1 and MM HAZ-2.2, the project would not violate water quality standards, waste discharge requirements, or degrade water quality. **(Less than Significant Impact with Mitigation Incorporated)**

| | |
|---|---|
| **Impact HYD-2:** | The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. **(Less than Significant Impact)** |

Groundwater recharge occurs when surface water percolates through the soil to recharge groundwater aquifers. As shown in Table 4.10-1, the proposed project would decrease the amount of impervious surface on-site from 91 percent to 90 percent. Therefore, implementation of the project would not interfere with groundwater recharge by reducing the level of surface water that is allowed to percolate on-site. In addition, the project site is not located in a recharge area as identified by the 2021 GWMP.[65]

**Table 4.10-1: Impervious Surface Square Footage On-Site**

| | Square Footage | Percent |
|---|---|---|
| Existing Conditions | 31,290 | 91 |
| Project Conditions | 30,899 | 90 |
| *Net Difference* | *-391* | *-1* |

Implementation of the project would require dewatering during the construction phase; however, the amount of groundwater expected to be pumped on-site is not expected to be a significant amount. Based on the above discussion, implementation of the proposed project would not substantially

[65] Valley Water. *2021 Groundwater Management Plan for the Santa Clara and Llagas Subbasins*. November 2021. Page 2-5.

deplete groundwater supplies or interfere substantially with groundwater recharge. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact HYD-3:** | The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; 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; or impede or redirect flood flows. **(Less than Significant Impact)** |

There are no streams or rivers on-site, therefore, the proposed project would not affect the existing drainage pattern of any streams or rivers. As discussed in HYD-2, the proposed project would decrease the amount of impervious surfaces on-site from 91 to 90 percent, thereby reducing the amount of surface runoff compared to existing conditions by approximately 0.20 percent.[66] The existing storm drain system, therefore, would continue to adequately serve the project site under project conditions.

As discussed under Impact HYD-1, the project would be required to design and construct stormwater treatment controls to treat post-construction stormwater runoff. The MRP requires that all post-construction runoff be treated by using Low Impact Development (LID) treatment controls (e.g., biotreatment facilities). Based on this discussion, the proposed project would not substantially alter the existing drainage pattern of the site or create or contribute runoff which would exceed existing stormwater drainage capacity, provide substantial additional sources of polluted runoff, or result in flooding on- or off-site. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact HYD-4:** | The project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. **(Less than Significant Impact)** |

The proposed office building would not use or store substantial quantities of hazardous materials on-site. As discussed in Section 4.10.1.2, the project site is not located within a 100-year flood hazard area. According to the FEMA, the project site is in Zone X with 0.2 percent annual chance of flood.[67] San Francisco Bay presents an inundation risk to sections of the coastline during a tsunami. The project site is not located near enough to San Francisco Bay to be affected in the event of a tsunami.[68] As discussed previously, there are no bodies of water such as lakes, harbors, or reservoirs near the project site that would affect the site in the event of a seiche.

Based on the above discussion, implementation of the proposed project would not risk release of pollutants due to inundation in flood hazard, tsunami or seiche zones. **(Less than Significant Impact)**

[66] BKF Engineers. *123 Sherman Avenue Preliminary Hydrology Memorandum.* May 2021.
[67] FEMA. "FEMA Flood Map Service Center". Accessed April 11, 2022. https://msc.fema.gov/portal/search?AddressQuery=123%20sherman%20ave%20palo%20alto%20ca
[68] Association of Bay Area Governments. *Tsunami & Additional Hazards.* Accessed April 11. 2021. https://abag.ca.gov/our-work/resilience/data-research/tsunami-additional-hazards

| | |
|---|---|
| **Impact HYD-5:** | The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. **(Less than Significant Impact)** |

The San Francisco Basin Plan provides a framework for state and local governments to meet water quality objectives and criteria to protect the beneficial uses of local aquifers, streams, marshes, and San Francisco Bay. Consistent with the San Francisco Basin Plan, the proposed project would comply with the MRP requirement to install LID treatment controls to treat stormwater runoff. In addition, the project would increase pervious surfaces on-site which would increase the amount of water allowed to permeate the soil. Therefore, the project would not interfere with implementation of the 2021 Groundwater Management Plan.

For these reasons, the project would not conflict with water quality control plans or sustainable groundwater management plans. **(Less than Significant Impact)**

## 4.11 LAND USE AND PLANNING

### 4.11.1 Environmental Setting

#### 4.11.1.1 *Regulatory Framework*

**Regional and Local**

Palo Alto Airport Comprehensive Land Use Plan

The Santa Clara County Comprehensive Land Use Plan (CLUP) for the Palo Alto Airport, adopted by the Santa Clara County Airport Land Use Commission, is intended to safeguard the general welfare of the inhabitants within the vicinity of the airport, as well as aircraft occupants.[69] The CLUP is also intended to ensure that surrounding new land uses do not affect airfield operations. The CLUP identifies the Airport's Airport Influence Area (AIA). The AIA is a composite of areas surrounding the Airfield that are affected by noise, height, and safety considerations. Within the AIA, the CLUP establishes a (1) noise restriction area, (2) height restriction area, and (3) safety restriction area.

City of Palo Alto Comprehensive Plan

The City of Palo Alto Comprehensive Plan guides future development within the City. The Comprehensive Plan includes goals, policies, and programs related to land use, the natural environment, business and economics, and community services. The Comprehensive Plan land use map identifies land use designations for properties within the City. The type of development and uses allowed within each land use designation is described in the Land Use and Community Design Element. The Comprehensive Plan land uses are further detailed and implemented through the city's Municipal Code and Zoning Ordinance.

The following policies are contained within the Comprehensive Plan and are relevant to the proposed project.

| Policy/Program | Description |
|---|---|
| Policy L-1.2 | Limit future urban development to currently developed lands within the urban service area. The boundary of the urban service area is otherwise known as the urban growth boundary. Retain undeveloped land west of Foothill Expressway and Junipero Serra as open space, with allowances made for very low-intensity development consistent with the open space character of the area. Retain undeveloped land northeast of Highway 101 as open space. |
| Policy L-1.3 | Infill development in the urban service area should be compatible with its surroundings and the overall scale and character of the city to ensure a compact, efficient development pattern. |
| Policy L-1.11 | 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. |
| Policy L-6.1 | Promote high-quality design and site planning that is compatible with surrounding development and public spaces. |

[69] Santa Clara County Airport Land Use Commission. *Palo Alto Airport Comprehensive Land Use Plan.* November 16, 2016.

Palo Alto Municipal Code

Title 18 (Zoning) of the PAMC defines the various zoning districts and allowable land uses within the City and provides development standards (i.e., building height limits, building density, sign regulations, etc.) to enhance the visual appeal of new development. Chapter 2.21 of the PAMC establishes the Architectural Review Board, which is comprised of five members appointed by the City Council. The Architectural Review Board is tasked with reviewing aspects of proposed development plans and then providing project feedback to the Planning Commission regarding individual development proposals.

#### 4.11.1.2 *Existing Conditions*

The project site has a Comprehensive Plan land use designation of Regional/Community Commercial and is zoned Community Commercial Subdistrict Retail Combining District (CC[2][R]). The Regional/Community Commercial Comprehensive Plan land use designation is used for larger shopping centers and districts that have a wider variety of goods and services than neighborhood shopping areas.

The CC zoning district is intended to create and maintain major commercial centers accommodating a broad range of office, retail sales, and other commercial activities of community-wide or regional significance. The CC(2) subdistrict is intended to modify the site development regulations of the CC district, to allow site specific variations to the community commercial uses and development requirements in the CC district. The retail shopping combining district is intended to modify the uses allowed in a commercial district, to allow only retail, eating, and service-oriented commercial development on the ground floors.

The project site is not within the airport influence area, noise restriction area, height restriction area, or the safety restriction area of the Palo Alto Airport.[70]

### 4.11.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 1) Physically divide an established community? | ☐ | ☐ | ☒ | ☐ |
| 2) 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? | ☐ | ☐ | ☒ | ☐ |

[70] Santa Clara County Airport Land Use Commission. *Palo Alto Airport Comprehensive Land Use Plan.* November 16, 2016.

| | |
|---|---|
| **Impact LU-1:** | The project would not physically divide an established community. **(Less than Significant Impact)** |

The project site is currently comprised of three parcels developed with a total of 15,523 square feet of building area. The proposed project would redevelop the site with a three-story, approximately 68,763 square-foot office building with two levels of below-grade parking. The building would also include approximately 4,301 square-feet of retail uses on the ground floor. The proposed project would intensify the level of development on-site, but this change would not involve the construction of substantial infrastructure, such as highways, freeways, or major arterial streets that would physically divide the existing community. Movement of residents to and from the project area would not be inhibited by the proposed project. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact LU-2:** | The project would not 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. **(Less than Significant Impact)** |

### Palo Alto Airport CLUP

The closest airport to the project site is Palo Alto Airport, which is located approximately 2.3 miles to the northeast. As discussed in Section 4.11.1.2 Existing Conditions, the project site is not within the airport influence area, noise restriction area, height restriction area, or the safety restriction area of the Palo Alto Airport. **(No Impact)**

### Comprehensive Plan

The project site is in an area designated as Regional/Community Commercial by the City's Comprehensive Plan, which is primarily used to designate areas with larger shopping centers and districts that have a wider variety of goods and services than neighborhood shopping areas. The Comprehensive Plan establishes an acceptable floor-area-ratio (FAR) range of 0.35 to 2.0. The proposed three-story office development would result in a FAR of 2.0, which falls within the range established by the Comprehensive Plan. The project would be consistent with the allowed standards and uses specified in the Comprehensive Plan, therefore, it would result in a less than significant impact. **(Less than Significant Impact)**

### Palo Alto Municipal Code

As discussed in Section 4.11.1.2 Existing Conditions, the project site is zoned Community Commercial Subdistrict Retail Combining District (CC[2][R]). The CC zoning district is intended to create and maintain major commercial centers accommodating a broad range of office, retail sales, and other commercial activities. The CC(2) subdistrict allows site specific variations to the community commercial uses and development requirements in the CC district. The Retail Shopping (R) Combining District allows only retail, eating, and service-oriented commercial development on the ground floors of buildings included in the combining district.

The proposed project would redevelop the site with a three-story, approximately 68,763 square-foot office building that would include approximately 4,301 square-feet of retail uses on the ground floor.

Per the standards listed in Chapter 18.16 of the PAMC, professional and general business offices and retail uses are permitted in the CC(2) zoning district. The project would comply with all development standards in the CC(2) zoning district, including the maximum FAR ratio of 2.0:1 and the maximum allowable height of 37 feet as measured to the peak of the roof. The project would also comply with the requirements of the Retail Shopping (R) Combining District by incorporating 4,301 square feet of ground-floor retail into the site design. The project would be consistent with the allowed standards and uses specified in the PAMC, therefore, it would result in a less than significant impact. **(Less than Significant Impact)**

## 4.12 MINERAL RESOURCES

### 4.12.1 Environmental Setting

#### 4.12.1.1 *Regulatory Framework*

**State**

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act (SMARA) was enacted by the California legislature in 1975 to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property, and the environment. As mandated under SMARA, the State Geologist has designated mineral land classifications in order to help identify and protect mineral resources in areas within the state subject to urban expansion or other irreversible land uses which would preclude mineral extraction. SMARA also allowed the State Mining and Geology Board (SMGB), after receiving classification information from the State Geologist, to designate lands containing mineral deposits of regional or statewide significance.

#### 4.12.1.2 *Existing Conditions*

According to the Comprehensive Plan, the City of Palo Alto does not contain any mineral deposits of regional significance.[71]

### 4.12.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 1) 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? | ☐ | ☐ | ☐ | ☒ |
| 2) 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? | ☐ | ☐ | ☐ | ☒ |

| | |
|---|---|
| **Impact MIN-1:** | The project would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. **(No Impact)** |

There are no known mineral resources on-site, nor are there any in the immediate vicinity of the project area. The proposed project, therefore, would not result in impacts to mineral resources. **(No Impact)**

[71] City of Palo Alto. *2030 Comprehensive Plan*. November 2013. Page 100.

| | |
|---|---|
| **Impact MIN-2:** | The project would not 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. **(No Impact)** |

The City's Comprehensive Plan states that the City, including the project site, does not have any mineral deposits of local regional significance. The project, therefore, would not result in impacts to locally important mineral resource recovery sites. **(No Impact)**

## 4.13 NOISE

The following discussion is based, in part, on a Construction Noise and Vibration Assessment prepared for the project by Illingworth & Rodkin, Inc., dated June 2022. A copy of this report is included in Appendix E of this Initial Study.

### 4.13.1 Environmental Setting

#### 4.13.1.1 *Background Information*

**Noise**

Factors that influence sound as it is perceived by the human ear, include the actual level of sound, period of exposure, frequencies involved, and fluctuation in the noise level during exposure. Noise is measured on a decibel scale, which serves as an index of loudness. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness. Because the human ear cannot hear all pitches or frequencies, sound levels are frequently adjusted or weighted to correspond to human hearing. This adjusted unit is known as the A-weighted decibel, or dBA.

Since excessive noise levels can adversely affect human activities and human health, federal, state, and local governmental agencies have set forth criteria or planning goals to minimize or avoid these effects. Noise guidelines are generally expressed using one of several noise averaging methods, including $L_{eq}$, DNL, or CNEL.[72] These descriptors are used to measure a location's overall noise exposure, given that there are times when noise levels are higher (e.g., when a jet is taking off from an airport or when a leaf blower is operating) and times when noise levels are lower (e.g., during lulls in traffic flows on freeways or in the middle of the night). $L_{max}$ is the maximum A-weighted noise level during a measurement period.

**Vibration**

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Vibration amplitude can be quantified using Peak Particle Velocity (PPV), which is defined as the maximum instantaneous positive or negative peak of the vibration wave. PPV has been routinely used to measure and assess ground-borne construction vibration. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 inches/second (in/sec) PPV.

[72] $L_{eq}$ is a measurement of average energy level intensity of noise over a given period of time. Day-Night Level (DNL) is a 24-hour average of noise levels, with a 10 dB penalty applied to noise occurring between 10:00 PM and 7:00 AM. Community Noise Equivalent Level (CNEL) includes an additional five dB applied to noise occurring between 7:00 PM and 10:00 PM. Where traffic noise predominates, the CNEL and DNL are typically within two dBA of the peak-hour $L_{eq}$.

#### 4.13.1.2 *Regulatory Framework*

**Federal**

Federal Transit Administration Vibration Limits

The Federal Transit Administration (FTA) has developed vibration impact assessment criteria for evaluating vibration impacts associated with transit projects. The FTA has proposed vibration impact criteria based on maximum overall levels for a single event. The impact criteria for groundborne vibration are shown in Table 4.13-1 below. These criteria can be applied to development projects in jurisdictions that lack vibration impact standards.

**Table 4.13-1: Groundborne Vibration Impact Criteria**

| Land Use Category | Groundborne Vibration Impact Levels (VdB inch/sec) | | |
|---|---|---|---|
| | Frequent Event | Occasional Events | Infrequent Events |
| **Category 1:** Buildings where vibration would interfere with interior operations | 65 | 65 | 65 |
| **Category 2:** Residences and buildings where people normally sleep | 72 | 75 | 80 |
| **Category 3:** Institutional land uses with primarily daytime use | 75 | 78 | 83 |

Source: Federal Transit Administration. *Transit Noise and Vibration Assessment Manual.* September 2018.

**State and Local**

California Green Building Standards Code

For commercial uses, CalGreen (Section 5.507.4.1 and 5.507.4.2) requires that wall and roof-ceiling assemblies exposed to the adjacent roadways have a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 when the commercial property falls within the 65 dBA $L_{dn}$ or greater noise contour for a freeway or expressway, railroad, or industrial or stationary noise source. The state requires interior noise levels to be maintained at 50 dBA $L_{eq(1\text{-}hr)}$ or less during hours of operation at a proposed commercial use.

2030 Comprehensive Plan

The Comprehensive Plan includes the following policies that are specific to noise and vibration and that are applicable to the proposed project:

| Policies/Programs | Description |
|---|---|
| Policy N-6.1 | Encourage the location of land uses in areas with compatible noise environments. Use the guidelines in Table N-1 to evaluate the compatibility of proposed land |

uses with existing noise environments when preparing, revising, or reviewing development proposals. Acceptable exterior, interior and ways to discern noise exposure include:

- The guideline for maximum outdoor noise levels in residential areas is a $L_{dn}$ of 60 dB. This level is a guideline for the design and location of future development and a goal for the reduction of noise in existing development. However, 60 $L_{dn}$ is a guideline which cannot necessarily be reached in all residential areas within the constraints of economic or aesthetic feasibility. This guideline will be primarily applied where outdoor use is a major consideration (e.g., backyards in single-family housing developments, and recreational areas in multiple family housing projects). Where the City determines that providing a $L_{dn}$ of 60 dB or lower outdoors is not feasible, the noise level in outdoor areas intended for recreational use should be reduced to as close to the standard as feasible through project design.
- Interior noise, per the requirements of the State of California Building Standards Code (Title 24) and Noise Insulation Standards (Title 25), must not exceed a $L_{dn}$ of 45 dB in all habitable rooms of all new dwelling units.

Policy N-6.3 Protect the overall community and especially sensitive noise receptors, including schools, hospitals, convalescent homes, senior and childcare facilities and public conservation land from unacceptable noise levels from both existing and future noise sources, including construction noise.

Policy N-6.6 Apply site planning and architectural design techniques that reduce overall noise pollution and reduce noise impacts on proposed and existing projects within Palo Alto and surrounding communities.

Policy N-6.8 The City may require measures to reduce noise impacts of new development on adjacent properties through appropriate means including, but not limited to, the following:

- Orient buildings to shield noise sensitive outdoor spaces from sources of noise.
- Construct noise walls when other methods to reduce noise are not practical and when these walls will not shift similar noise impacts to another adjacent property.
- Screen and control noise sources such as parking lots, outdoor activities and mechanical equipment, including HVAC equipment.
- Increase setbacks to serve as a buffer between noise sources and adjacent dwellings.
- Whenever possible, retain fences, walls or landscaping that serve as noise buffer while considering design, safety and other impacts.
- Use soundproofing materials, noise reduction construction techniques, and/or acoustically rated windows/doors.
- Include auxiliary power sources at loading docks to minimize truck engine idling.
- Control hours of operation, including deliveries and trash pickup, to minimize noise impacts.

Policy N-6.9 Continue to require applicants for new projects or new mechanical equipment in the Multifamily, Commercial, Manufacturing or Planned Community districts to

submit an acoustical analysis demonstrating compliance with the Noise Ordinance prior to receiving a building permit.

As shown in Table 4.13-2, the Comprehensive Plan defines acceptable, conditionally acceptable, and unacceptable noise levels for uses in the City.

**Table 4.13-2: Land Use Compatibility Guidelines for Noise**

| Land Use Category | Exterior DNL Value in Decibels |
|---|---|
| | 55 60 65 70 75 80 |
| Residential, Hotels and Motels, | |
| Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds | |
| Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, and Churches | |
| Office Buildings, Business Commercial, and Professional | |
| Auditoriums, Concert Halls, and Amphitheaters | |
| Industrial, Manufacturing, Utilities, and Agriculture | |

**Normally Acceptable:**
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

**Conditionally Acceptable:**
Specified land use may be permitted only after detailed analysis of the noise reduction requirements and noise mitigation features included in the design.

**Unacceptable:**
New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies.

Palo Alto Municipal Code

Title 9, Chapter 9.10, Noise, of the PAMC addresses noise levels from stationary sources, as well as construction noise for adjacent residential properties. Portions of the noise code that are applicable to the proposed project follow:

> **9.10.030 Residential Property Noise Limits:** (a) 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 dB above the local ambient at any point outside of the property plane. (b) 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 dB 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.

**9.10.040 Commercial and Industrial Property Noise Limits:** No person shall produce, suffer, or allow to be produced by any machine or device, or any combination of same, on commercial or industrial property, a noise level more than eight dB above the local ambient at any point outside of the property plane.

**9.10.060 Special Provisions:** The special exceptions listed in this section shall apply, only to the extent and during the hours specified in each of the following enumerated exceptions.[73]

a. **General Daytime Exception.** Any noise source which does not produce a noise level exceeding seventy dBA at a distance of twenty-five feet under its most noisy condition of use shall be exempt from the provisions of Sections 9.10.030(a), 9.10.040, and 9.10.050(a) between the hours of eight a.m. and eight p.m. Monday through Friday, nine a.m. and eight p.m. on Saturday, except Sundays and holidays, when the exemption herein shall apply between ten a.m. and six p.m.

b. **Construction.** Except for construction on residential property as described in subsection (c) of this section, construction, alteration, and repair activities which are authorized by valid city building permit shall be prohibited on Sundays and holidays and shall be prohibited except between the hours of eight a.m. and six p.m. Monday through Friday, [and] nine a.m. and six p.m. on Saturday provided that the construction, demolition, or repair activities during those hours meet the following standards:

    1. No individual piece of equipment shall produce a noise level exceeding 110 dBA at a distance of twenty-five 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 twenty-five feet from the equipment as possible.
    2. The noise level at any point outside of the property plane of the project shall not exceed 110 dBA.
    3. 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, material [personnel], and all other persons at the construction site, of the basic requirements of this chapter.

j. **Emergencies.** Emergencies are exempt from this chapter

### 4.13.1.3 *Existing Conditions*

The project site is located within a highly urbanized area of Palo Alto. The primary noise sources in the project vicinity would be the Caltrain line located approximately 290 feet north of the project site and vehicular traffic along Oregon Expressway and the surrounding local streets. According to the Comprehensive Plan, ambient noise from transportation is generally at 60 dBA CNEL or lower at the project site.[74]

[73] Exceptions c through i, k, and l are not applicable to the proposed project.
[74] City of Palo Alto. Comprehensive Plan 2030. Map N-5 and Map N-6.

Noise sensitive receptors within the project vicinity include residences and commercial properties. The residences are located approximately 65 feet north of the "acoustic center" of the project site, while the nearest commercial property is located approximately 40 feet to the southeast of the acoustic center of the project site (see Figure 4.13-1).

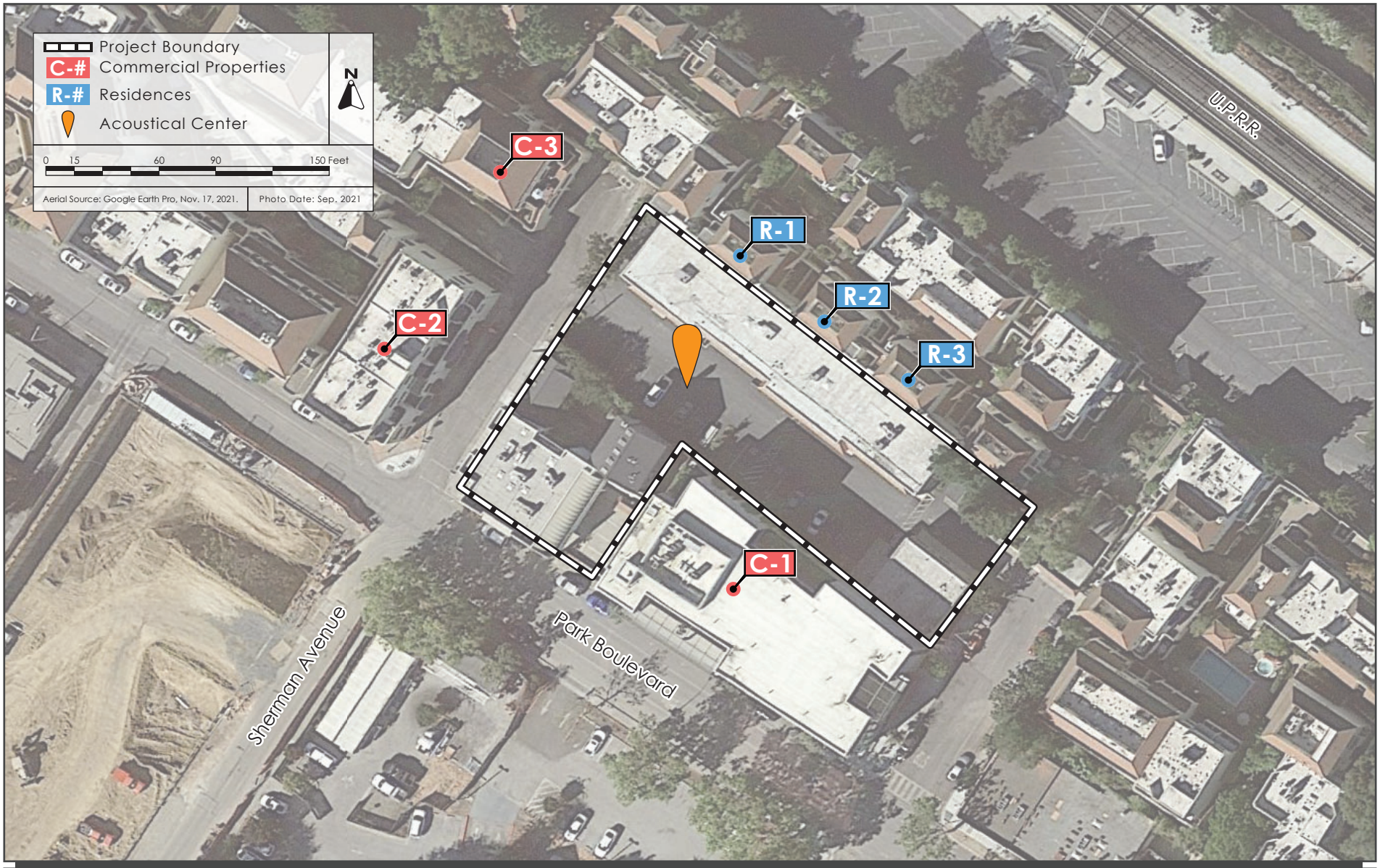
### 4.13.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project result in: | | | | |
| 1) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | ☐ | ☐ | ☒ | ☐ |
| 2) Generation of excessive groundborne vibration or groundborne noise levels? | ☐ | ☒ | ☐ | ☐ |
| 3) 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? | ☐ | ☐ | ☒ | ☐ |

| | |
|---|---|
| **Impact NOI-1:** | The project would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. **(Less than Significant Impact)** |

#### Construction Noise

Construction activities generate varying levels of noise throughout the construction period. The project would be built over a period of approximately 16 months. The construction of the proposed project would involve demolition, excavation, site preparation, grading, trenching, building exterior, architectural coating/building interior and paving as per the supplied construction data sheet. During each stage of construction, there would be a different mix of equipment operating, and noise levels at nearby properties would vary by stage and vary within stages, based on the amount of equipment in operation and the location at which the equipment is operating. The anticipated noise levels during the various construction phases at a distance of 25 feet are shown below in Table 4.13-2.




LOCATIONS OF NOISE SENSITIVE RECEPTORS | FIGURE 4.13-1

| Table 4.13-2: Calculated Construction Noise Levels at 25 Feet | | | |
|---|---|---|---|
| **Construction Phase** | **Equipment** | **Calculated Noise Levels (dBA) at 25 feet** | |
| | | **$L_{max}$*** | **$L_{eq}$** |
| Demolition | Concrete/industrial saw, excavator, rubber tired dozer, tractor/loader/backhoe | 96 | 92 |
| Site Preparation | Grader, rubber tired dozer | 91 | 89 |
| Grading/Excavation | Excavator, grader, tractor/loader/backhoe | 91 | 90 |
| Trenching/Foundation | Tractor/loader/backhoe, excavator, crane | 90 | 88 |
| Building – Exterior | Crane, forklift, tractor/loader/backhoe, welder, aerial lifts (2) | 90 | 88 |
| Building – Interior/Architectural Coating | Air compressor, crane | 87 | 82 |
| Paving | Cement and mortar mixer, paver, paving equipment, roller, tractor/loader/backhoe | 90 | 89 |
| *Total $L_{max}$ is the value for the loudest piece of equipment | | | |

Based on calculated maximum and hourly average noise levels for construction equipment in each phase as shown in Table 4.13-2, noise levels for the proposed construction would range from 87 to 96 dBA $L_{max}$ and from 82 to 92 dBA $L_{eq}$ at 25 feet from the center of the construction activities, assuming that all the equipment could be operated simultaneously. Construction-generated noise levels drop off at a rate of about six dBA per doubling of the distance between the source and receptor. Shielding by buildings or terrain can provide an additional five to 10 dBA noise reduction at distant receptors.

Noise levels at the residences (approximately 65 feet away) would range from a maximum level of 78 to 87 dBA $L_{max}$ and 74 to 84 dBA $L_{eq}$. At the closest commercial property (approximately 40 feet away), noise levels are anticipated to reach maximum levels of 83 to 92 dBA $L_{max}$ and 78 to 88 dBA $L_{eq}$ at 40 feet from the acoustical center of the construction activities at the project site.

No individual piece of equipment would exceed the 110 dBA noise threshold at a distance of 25 feet from the project site. Theoretically, noise levels could reach a maximum level of about 104 dBA $L_{max}$ and 100 dBA $L_{eq}$ at a distance of 10 feet from the edge of the property plane assuming all equipment were operating at this position. However, construction equipment would typically not all be placed directly at the property plane, which would result in noise levels well below the 110 dBA threshold at any point beyond the property plane of the construction site. Therefore, the project's construction noise impacts would be considered less than significant. Additionally, the project would be required to implement the following construction BMPs as standard conditions of approval that would further decrease the project's noise impacts during construction:

- Construction will be limited to the hours of 8:00 a.m. to 6:00 p.m. Monday through Friday and between 9:00 a.m. and 6:00 p.m. on Saturdays.
- The contractor shall use "new technology" power construction equipment with state-of the-art noise shielding and muffling devices. All internal combustion engines used on the project site shall be equipped with adequate mufflers and shall be in good mechanical condition to minimize noise created by faulty or poorly maintained engines or other components.
- Temporary noise barriers shall be constructed, where feasible, to screen adjoining land uses. Temporary noise barrier fences would provide a five dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and receptor and if the barrier is constructed in a manner that eliminates any cracks or gaps.
- The unnecessary idling of internal combustion engines shall be prohibited.
- Staging areas and stationary noise-generating equipment shall be located as far as possible from noise-sensitive receptors, such as residential uses (a minimum of 200 feet).
- Generators, compressors, and pumps shall be housed in acoustical enclosures.
- Cranes shall be located as far from adjoining noise-sensitive receptors as possible.
- During final grading, graders shall be substituted for bulldozers, where feasible. Wheeled heavy equipment are quieter than track equipment and should be used where feasible.
- Nail guns shall be substituted for manual hammering, where feasible.
- Electrically powered tools shall be substituted for noisier pneumatic tools, where feasible.
- The surrounding neighborhood shall be notified early and frequently of the construction activities.
- A "noise disturbance coordinator" shall be designated to respond to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaints (e.g., beginning work too early, bad muffler, etc.) and institute reasonable measures warranted to correct the problem. A telephone number for the disturbance coordinator would be conspicuously posted at the construction site.

**Operational Noise**

Onsite noise generation would include typical noise from office use and would be consistent with nearby commercial and office land uses. Permanent noise from the project would be generated by mechanical equipment or an increase in traffic noise and could increase noise levels at nearby residences. In accordance with state requirements, City of Palo Alto Comprehensive Plan Policies N-6.2 and N-6.7.1, thresholds identified in the Comprehensive Plan EIR, and City of Palo Alto Municipal Code 9.10.030(a), onsite operational noise would be significant if it would cause the following:

- Cause interior noise levels at nearby residential development to exceed 45 dBA $L_{dn}$ (Uniform Building Code; City of Palo Alto Comprehensive Plan Policy N-6.1)
- Cause the average 24-hour noise level ($L_{dn}$) to increase by five decibels (dB) or more in an existing residential area, even if the $L_{dn}$ would remain below 60 dB (City of Palo Alto Comprehensive Plan EIR)
- Cause the $L_{dn}$ to increase by three dB or more in an existing residential area, thereby causing the $L_{dn}$ in the area to exceed 60dB (City of Palo Alto Comprehensive Plan EIR)

- Cause an increase of three dB or more in an existing residential area where the $L_{dn}$ currently exceeds 60dB (City of Palo Alto Comprehensive Plan EIR)
- Produce, suffer or allow to be produced by any machine, animal or device, or any combination of same, on commercial property, a noise level more than eight dB above the local ambient at any point outside of the property plane (PAMC Section 9.10.030[a])

A significant impact would occur if the project would increase the existing noise environment of existing noise-sensitive receptors (in this case, nearby residential uses) by three dBA $L_{dn}$. For reference, a three dBA $L_{dn}$ noise increase would be expected if the project would double existing traffic volumes along a roadway. The project would not double the existing traffic along the surrounding roadways (see Appendix F, Transportation Analysis). The proposed office building would include mechanical rooftop equipment for heating, ventilation, and air conditioning (HVAC), as well as rooftop solar panels. While solar power equipment would be audible within a few feet, the noise is typically a low hum, and would not be audible from the ground level of the building, let alone at the nearest receptors. The rooftop HVAC equipment would be comparable to the existing rooftop equipment of neighboring buildings. The project would also include an emergency stand-by generator on the rooftop. The generator would be powered by a diesel engine. The generator would be tested periodically and would power the buildings in the event of a power failure. The generator would be operated primarily for testing and maintenance purposes. During testing periods, the engine would typically be run for less than one hour. Therefore, the proposed emergency generator would only have temporary, intermittent impacts and would not permanently increase the existing ambient noise environment. Additionally, in compliance with PAMC Section 18.23.060, the applicant would submit an acoustical analysis by an acoustical engineer demonstrating the equipment's compliance with the Noise Ordinance standards. Therefore, the project would not result in the generation of a substantial permanent noise increase. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact NOI-2:** | The project would not result in generation of excessive groundborne vibration or groundborne noise levels. **(Less than Significant Impact with Mitigation Incorporated)** |

Proposed construction phases would include demolition, grading/excavation, trenching/foundation, paving, and new building framing and finishing. Perceptible vibration may occur when heavy equipment or impact tools are used. However, the proposed project would not require pile driving, which can cause excessive vibration.

The City of Palo Alto does not specify a construction vibration limit. For structural damage, CalTrans recommends a vibration limit of 0.5 in/sec PPV for buildings structurally sound and designed to modern engineering standards, 0.3 in/sec PPV for buildings that are found to be structurally sound but where structural damage is a major concern, and a conservative limit of 0.25 in/sec PPV for historic and some old buildings. A review of the City of Palo Alto Master List of Structures on the Historic Inventory indicates that there are no historic or old buildings near the project site. Therefore, the 0.3 in/sec PPV vibration limit would be applicable to properties in the immediate vicinity of the project site.

Vibration levels would vary depending on soil conditions, construction methods, and equipment used. Table 4.13-3 presents typical vibration levels that could be expected from construction equipment at 25 feet and summarizes the minimum distances needed from each equipment to meet the 0.3 in/sec PPV vibration threshold.

**Table 4.13-3: Construction Vibration Levels at Nearby Buildings**

| Equipment | | Vibration Level at 25 feet (in/sec PPV) | Vibration Level at 10 feet (in/sec PPV) | Vibration Level at 5 feet (in/sec PPV) | Minimum Distance to Meet 0.3 in/sec PPV Threshold (feet) |
|---|---|---|---|---|---|
| Clam shovel drop | | 0.202 | **0.553** | **1.186** | 20 |
| Hydromill (slurry wall) | In soil | 0.008 | 0.022 | 0.047 | <5 |
| | In rock | 0.017 | 0.047 | 0.100 | <5 |
| Vibratory roller | | 0.210 | **0.575** | **1.233** | 20 |
| Hoe ram | | 0.089 | 0.244 | **0.523** | 10 |
| Large bulldozer | | 0.089 | 0.244 | **0.523** | 10 |
| Caisson drilling | | 0.089 | 0.244 | **0.523** | 10 |
| Loaded trucks | | 0.076 | 0.208 | **0.446** | 10 |
| Jackhammer | | 0.035 | 0.096 | 0.206 | <5 |
| Small bulldozer | | 0.003 | 0.008 | 0.018 | <5 |

Source: Transit Noise and Vibration Impact Assessment Manual, Federal Transit Administration, Office of Planning and Environment, U.S. Department of Transportation, FTA Report No. 0123, September 2018, as modified by Illingworth & Rodkin, Inc., June 2022.

Residences and commercial properties surround the project site with the closest property located at a distance of five feet (2555 Park Boulevard). Other properties are located at a distance of 10 feet or greater. Based on the calculated distances to meet vibration damage thresholds in Table 4.13-3 above, vibration due to project construction would exceed the 0.3 in/sec PPV threshold at all surrounding sites, assuming that each piece of equipment would operate along the nearest boundary of the site for a worst-case scenario. At 10 feet, vibration levels are calculated to reach up to 0.553 in/sec PPV for a clam shovel drop and up to 0.575 in/sec PPV for a vibratory roller. Vibration levels could reach a maximum of 1.186 in/sec PPV for a clam shovel drop and 1.233 in/sec PPV for a vibratory roller for the closest receptor at a distance of five feet away.

Construction vibration received at off-site buildings would be dependent on the distance between individual pieces of equipment on the project site and the off-site building. For example, a vibratory roller operating near the project site boundary would generate the worst-case vibration levels for the building sharing that property line. Construction vibration impacts are assessed based on the potential for damage to buildings on receiving land uses, not at receptors at the nearest property lines. Therefore, the distance used to propagate construction vibration levels (as shown in Table 4.13-3)

was estimated under the assumption that each piece of equipment could operate along the nearest boundary of the project site representing the worst-case scenario.

**Impact NOI-2:** Project construction would exceed the 0.3 in/sec PPV threshold at surrounding buildings.

The project shall implement the following measures, in addition to the standard conditions specified under Impact NOI-1, to minimize the impacts of groundborne vibration.

**MM NOI-2.1:** *Construction Vibration Monitoring, Treatment, and Reporting Plan:* The project proponent shall implement a construction vibration monitoring plan to document conditions prior to, during, and after vibration generating construction activities for all properties within 20 feet of the project site. All plan tasks shall be undertaken under the direction of a licensed Professional Structural Engineer in the State of California and be in accordance with industry-accepted standard methods.

The construction vibration monitoring plan shall be submitted to the City prior to issuance of a Grading or Building Permit and shall include, but not be limited to, the following measures:

- The report shall include a description of measurement methods, equipment used, calibration certificates, and graphics as required to clearly identify vibration-monitoring locations.
- A list of all heavy construction equipment to be used for this project and the anticipated time duration of using the equipment that is known to produce high vibration levels (clam shovel drops, vibratory rollers, hoe rams, large bulldozers, caisson drillings, loaded trucks, jackhammers, etc.) shall be submitted to the Director of Planning and Development Services or Director's designee of the Department of Planning & Development by the contractor. This list shall be used to identify equipment and activities that could exceed the 0.3 PPV threshold adjacent residents or 0.5 PPV threshold adjacent to 2555 Park based on the planned equipment, location, and duration of use. Where project construction activities may be anticipated to exceed the threshold, the applicant shall provide a plan to show how levels would be reduced by phasing activities that are known to cause excessive vibration, utilizing alternative equipment, and/or reducing the time period that the equipment is being used.
- Where possible, use of the heavy vibration-generating construction equipment shall be prohibited within 20 feet of any adjacent building.
    - Smaller equipment to minimize vibration levels to below 0.5 in/sec PPV at the property lines adjacent to the building at 2555 Park Boulevard or 0.3 in/sec PPV at all other property lines. For example, a smaller vibratory roller, such as the Caterpillar model CP433E vibratory compactor, shall be used

when compacting materials within 25 feet of the adjacent conventional building.

- Avoid using vibratory rollers and clam shovel drops within 25 feet of sensitive areas.
- Select demolition methods not involving impact tools.
- Avoid dropping heavy equipment and use alternative methods for breaking up existing pavement, such as a pavement grinder, instead of dropping heavy objects, within 25 feet of the adjacent conventional buildings.

- Document conditions at all structures located within 50 feet of construction prior to, during, and after vibration generating construction activities. All plan tasks shall be undertaken under the direction of a licensed Professional Structural Engineer in the State of California and be in accordance with industry-accepted standard methods. Specifically:
  - Vibration limits shall be applied to vibration-sensitive structures located within 20 feet of construction activities identified as sources of high vibration levels.
  - Performance of a photo survey, elevation survey, and crack monitoring survey for each structure of normal construction within 20 feet of construction activities identified as sources of high vibration levels. Surveys shall be performed prior to any construction activity, in regular intervals during construction, and after project completion, and should include internal and external crack monitoring in structures, settlement, and distress, and shall document the condition of foundations, walls and other structural elements in the interior and exterior of said structures.
- Develop a vibration monitoring and construction contingency plan to identify structures where monitoring would be conducted, set up a vibration monitoring schedule, define structure-specific vibration limits, and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions. Construction contingencies shall be identified for when vibration levels approach the limits of 0.5 in/sec PPV at the adjacent building at 2555 Park Boulevard or 0.3 in/sec PPV at all other surrounding buildings.
- At a minimum, vibration monitoring shall be conducted during demolition and excavation activities.
- If vibration levels approach limits, suspend construction and implement contingency measures to either lower vibration levels or secure the affected structures.
- Designate a person responsible for registering and investigating claims of excessive vibration. The contact information of such person shall be clearly posted on the construction site.

- Conduct a post-construction survey on structures where either monitoring has indicated high vibration levels or complaints of damage has been made. Make appropriate repairs or compensation where damage has occurred as a result of construction activities.

Although project construction has the potential to exceed the 0.3 in/sec PPV threshold at surrounding buildings, implementation of MM NOI-2.1 would ensure that no substantial damage occurs to existing buildings in the project vicinity. Therefore, the project would not result in generation of excessive groundborne vibration or groundborne noise levels. **(Less than Significant Impact with Mitigation Incorporated)**

| | |
|---|---|
| **Impact NOI-3:** | The project would not be 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. The project would not expose people residing or working in the project area to excessive noise levels. **(Less than Significant Impact)** |

The project site is located approximately 2.3 miles from the Palo Alto Airport, outside of the AIA, safety zones, and noise contours. Therefore, the project would not expose people working in the project area to excessive noise levels. **(Less than Significant Impact)**

## 4.14 POPULATION AND HOUSING

### 4.14.1 Environmental Setting

#### 4.14.1.1 *Regulatory Framework*

**State**

Housing-Element Law

State requirements mandating that housing be included as an element of each jurisdiction's general plan is known as housing-element law. The Regional Housing Need Allocation (RHNA) is the state-mandated process to identify the total number of housing units (by affordability level) that each jurisdiction must accommodate in its housing element. California housing-element law requires cities to: 1) zone adequate lands to accommodate its RHNA; 2) produce an inventory of sites that can accommodate its share of the RHNA; 3) identify governmental and non-governmental constraints to residential development; 4) develop strategies and a work plan to mitigate or eliminate those constraints; and 5) adopt a housing element and update it on a regular basis.[75] The City of Palo Alto Housing Element and related land use policies were last updated in January 2015.

**Regional and Local**

Plan Bay Area 2050

Plan Bay Area 2050 is a long-range plan for the nine-county San Francisco Bay Area that provides strategies that increase the availability of affordable housing, support a more equitable and efficient economy, improve the transportation network, and enhance the region's environmental resilience. Plan Bay Area 2050 promotes the development of a variety of housing types and densities within identified Priority Development Areas (PDAs). PDAs are areas generally near existing job centers or frequent transit that are locally identified for housing and job growth.[76]

ABAG allocates regional housing needs to each city and county within the San Francisco Bay Area, based on statewide goals. These allocations are designed to lay the foundation for Plan Bay Area 2050's long-term envisioned growth pattern for the region. ABAG also develops a series of forecasts and models to project the growth of population, housing units, and jobs in the Bay Area. ABAG, MTC, and local jurisdiction planning staff created the Forecasting and Modeling Report, which is a technical overview of the of the growth forecasts and land use models upon which Plan Bay Area 2050 is based.

[75] California Department of Housing and Community Development. "Regional Housing Needs Allocation and Housing Elements" Accessed April 1, 2022. http://hcd.ca.gov/community-development/housing-element/index.shtml.
[76] Association of Bay Area Governments and Metropolitan Transportation Commission. *Plan Bay Area 2050*. April 1, 2022. Page 20.

### 4.14.1.2 *Existing Conditions*

According to a May 2022 estimate by the California Department of Finance, Palo Alto has a total population of approximately 67,473 people.[77] According to ABAG projections, Palo Alto's population is expected to grow to a total of approximately 86,510 people by 2040.[78] According to ABAG projections, Palo Alto had approximately 121,740 jobs in 2020 and is expected to have a total of 126,510 jobs by 2040.[79]

As discussed in the City's Comprehensive Plan 2015-2023 Housing Element (adopted November 2014), the City has a jobs/housing imbalance skewed to the jobs side of the ratio. Recent estimates put the current jobs/housing balance at 3.05 jobs per employed resident (City of Palo Alto 2014). This trend requires the City to import most of its workers to meet the needs of business and industry, indicating an unmet need for housing in the City.

## 4.14.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 1) Induce substantial unplanned 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)? | ☐ | ☐ | ☒ | ☐ |
| 2) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☒ |
| 3) Contribute to the jobs/housing imbalance? | ☐ | ☐ | ☒ | ☐ |

| | |
|---|---|
| **Impact POP-1:** | The project would not induce substantial unplanned 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). **(Less than Significant Impact)** |

The project does not include any residential components. Operation of the project would conservatively generate approximately 240 employees. The project is replacing two existing office buildings and the site is zoned for commercial uses. Therefore, the project would not generate substantial unplanned growth by proposing a new office building that would generate more space for businesses. Therefore, population growth associated with the project would not be unplanned and would be consistent with the City's projected growth in jobs. **(Less than Significant Impact)**

[77] California Department of Finance. *E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2021-2022 with 2020 Benchmark.* Accessed May 17, 2022. Available at: http://dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.
[78] Association of Bay Area Governments. "Projections 2040." Accessed May 17, 2022. Available at: http://projections.planbayarea.org/.
[79] Ibid.

| | |
|---|---|
| **Impact POP-2:** | The project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. **(No Impact)** |

The existing project site is developed with one single-family residence, two office buildings and two garage/storage buildings. The single house is the only housing provided on-site; however, it is currently vacant. Therefore, the project would not displace existing residents or require replacement housing to be constructed. **(No Impact)**

| | |
|---|---|
| **Impact POP-3:** | Create a substantial imbalance between employed residents and jobs **(Less than Significant Impact)** |

As discussed in the City's Comprehensive Plan 2015-2023 Housing Element (adopted November 2014), the City has a jobs/housing imbalance skewed to the jobs side of the ratio. Recent estimates put the current jobs/housing balance at 3.05 jobs per employed resident (City of Palo Alto 2014b). This trend requires the City to import most of its workers to meet the needs of business and industry, indicating an unmet need for housing in the City. The proposed project includes new office development, which would further the jobs/housing imbalance. The proposed project estimates approximately 170-220 office employees and 10-20 retail employees. However, the Comprehensive Plan anticipated job growth within this zone district, particularly in close proximity to this major transit stop. Therefore, the proposed increase in jobs associated with the proposed project is planned and would not constitute a significant impact due to a substantial imbalance between residents and jobs. **(Less than Significant Impact)**

## 4.15 PUBLIC SERVICES

### 4.15.1 Environmental Setting

#### 4.15.1.1 *Regulatory Framework*

**State**

Government Code Section 66477

The Quimby Act (included within Government Code Section 66477) requires local governments to set aside parkland and open space for recreational purposes. It provides provisions for the dedication of parkland and/or payment of fees in lieu of parkland dedication to help mitigate the impacts from new residential developments. The Quimby Act authorizes local governments to establish ordinances requiring developers of new residential subdivisions to dedicate parks, pay a fee in lieu of parkland dedication, or perform a combination of the two.

Government Code Section 65995 through 65998

California Government Code Section 65996 specifies that an acceptable method of offsetting a project's effect on the adequacy of school facilities is the payment of a school impact fee prior to the issuance of a building permit. Government Code Sections 65995 through 65998 set forth provisions for the payment of school impact fees by new development by "mitigating impacts on school facilities that occur (as a result of the planning, use, or development of real property" (Section 65996[a]). The legislation states that the payment of school impact fees "are hereby deemed to provide full and complete school facilities mitigation" under CEQA (Section 65996[b]).

Developers are required to pay a school impact fee to the school district to offset the increased demands on school facilities caused by the proposed residential development project. The school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

**Regional and Local**

Countywide Trails Master Plan

The Santa Clara County Trails Master Plan Update is a regional trails plan approved by the Santa Clara County Board of Supervisors. It provides a framework for implementing the County's vision of providing a contiguous trail network that connects cities to one another, cities to the county's regional open space resources, County parks to other County parks, and the northern and southern urbanized regions of the County. The plan identifies regional trail routes, sub-regional trail routes, connector trail routes, and historic trails.

Palo Alto 2030 Comprehensive Plan

The Comprehensive Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the City. The following policies are specific to public services and are applicable to the proposed project.

| Policy/Program | Description |
|---|---|
| Policy S-1.3 | Deter criminal behavior in Palo Alto through a multidisciplinary approach that includes a safe built environment, effective social services, functional administrative processes and PAPD review of site plans for major development proposals, as needed. |
| Policy S-2.15 | Provide emergency fire and medical services consistent with the response time standards set forth in the Fire Department's annual budget. |

City of Palo Alto Municipal Code

Section 16.58 of the PAMC states that Impact Fees are to be borne by new development to pay proportionately for Parks, Community Centers, Libraries, Public Safety Facilities, Schools, General Government Facilities, Housing, Traffic and Public Art. The project would be subject to payment of these fees prior to issuance of a building permit. Section 15.04 of the PAMC adopts the California Fire Code and outlines the review process required for new construction to ensure appropriate fire safety measures are implemented.

### 4.15.1.2 *Existing Conditions*

#### Fire Services

Fire service for the project site is provided by Palo Alto Fire Department (PAFD). The PAFD is located at City Hall at 250 Hamilton Avenue, and there are six full-time fire stations located throughout the City. The nearest fire station to the project site is the Mayfield Station, Fire Station #2, approximately 0.8-mile southwest of the project site. The PAFD has a first-due response time goal of six minutes and 30 seconds 90 percent of the time for priority calls in an urban zone and a first-due response time goal of 20 minutes 90 percent of the time for priority calls in a rural zone.[80]

#### Police Services

The Palo Alto Police Department (PAPD) provides law enforcement services within the City limits. The offices for the PAPD are located adjacent to City Hall at 275 Forest Avenue, approximately 1.5 miles northwest of the project site.

#### Public Schools

All public schools in Palo Alto are operated by the Palo Alto Unified School District (PAUSD). PAUSD operates a total of 17 schools for Kindergarten through 12th Grade, and five additional schools throughout the City. The nearest public school to the project site is El Carmelo Elementary, located at 3024 Bryant Street, approximately 0.6-mile southeast of the project site.

#### Parks

The City of Palo Alto has almost 4,000 acres of open space, including 162 acres of developed urban parks throughout the City.[81] The nearest park to the project site is Jerry Bowden Park, located at

[80] Palo Alto Fire Department. *Community Risk Assessment Standards of Cover*. January 6, 2018.
[81] City of Palo Alto. Open Space & Parks. Accessed April 6, 2022. https://www.cityofpaloalto.org/Departments/Community-Services/Open-Space-Parks

2380 High Street, approximately 500 feet north of the project site. Jerry Bowden Park is a 2.0-acre neighborhood park that features playgrounds, walking trails, benches, and picnic tables.

**Libraries**

The City of Palo Alto has five public libraries located throughout the City, including the Rinconada Library, the Mitchell Park Library, the Downtown Library, the College Terrace Library, and the Children's Library. The library facility closest to the project site is the College Terrace Library, located at 2300 Wellesley Street, which is approximately 0.5 mile southwest of the site.

## 4.15.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered 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: | | | | |
| 1) Fire Protection? | ☐ | ☐ | ☒ | ☐ |
| 2) Police Protection? | ☐ | ☐ | ☒ | ☐ |
| 3) Schools? | ☐ | ☐ | ☐ | ☒ |
| 4) Parks? | ☐ | ☐ | ☒ | ☐ |
| 5) Other Public Facilities? | ☐ | ☐ | ☒ | ☐ |

| | |
|---|---|
| **Impact PS-1:** | The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 fire protection services. **(Less than Significant Impact)** |

Implementation of the proposed project would intensify the level of development on-site and increase the demand for fire protection services compared to the existing conditions. However, the project is consistent with the Comprehensive Plan adopted by the City, and the EIR for the 2030 Comprehensive Plan determined that implementation of the plan would not result in the need to construct any additional fire stations in the City.[82] In addition, the project would be required to meet current California Building Standards Code and requirements in PAMC Section 15.04 that ensure future developments include adequate design and infrastructure for fire protection. As discussed in Section 4.15.1.1 Regulatory Framework, the Fire Chief or their designee would be responsible for reviewing the construction plans for this project to ensure that fire safety concerns are addressed in

[82] City of Palo Alto. *Comprehensive Plan Update Environmental Impact Report.* SCH # 2014052101. Page 4.12-22. February 2016.

the site design. Pursuant to Section 16.58.080 of the PAMC, the project would also pay a public safety and government facility fee which would provide funding for fire protection services in the City. Consistent with Comprehensive Plan Policy S-2.15, the PAFD would continue to be responsible for meeting the response time standards in their annual budget. For those reasons, development of the proposed project would not result in a significant impact to fire protection services in the City or require the construction of new or expanded fire protection facilities. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact PS-2:** | The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 police protection services. **(Less than Significant Impact)** |

As discussed under Impact PS-1, the development of this project would intensify the level of office development on-site and incrementally increase the demand for police protection services compared to existing conditions. The proposed project alone would not require the construction of additional police protection facilities; however, the EIR for the 2030 Comprehensive Plan disclosed that the PAPD had already begun the planning process to construct a new police facility in the City to provide adequate services for future growth.[83] This potential new police facility would be subject to project-level environmental review.

Pursuant to Section 16.58.080 of the PAMC, the proposed office project would be required to pay a public safety and government facility fee which would provide funding for police protection services in the City. In addition, consistent with Comprehensive Plan Policy S-1.3, the PAPD would reserve the right to review the proposed site plans and require certain conditions of approval as needed to reduce potential impacts to police services. For those reasons, development of the proposed project would not result in a significant impact to police protection services in the City or require the construction of new or expanded police protection facilities. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact PS-3:** | The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 schools. **(No Impact)** |

The proposed project does not include any residential units and, therefore, would not generate any new students that could increase demand on public schools in the project area. The project would not impact existing school services or result in the need for new schools in the project area. **(No Impact)**

[83] City of Palo Alto. *Comprehensive Plan Update Environmental Impact Report.* SCH # 2014052101. Page 4.12-29. February 2016.

| | |
|---|---|
| **Impact PS-4:** | The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 parks. **(Less than Significant Impact)** |

The proposed project would not generate new residents that could increase demand on local parks. While some of the new employees may use nearby parks such as Jerry Bowden Park and Sarah Wallis Park, this would not be substantial enough to require the construction of any new or expanded parks. In addition, Section 16.58 of the PAMC requires that new development projects pay a park development fee to fund acquisition of land and improvements for neighborhood and district parks which would offset the project's demand on park/recreational facilities. Therefore, the proposed project would not result in the need for new or physically altered parks in the project area. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact PS-5:** | The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 other public facilities. **(Less than Significant)** |

The proposed project does not include any residential development and would not increase the number of residents in the area. Employees of the proposed office building may use other public facilities in the project vicinity, such as libraries or community centers. However, this would be an incremental increase in demand on these facilities and would not require the construction of new facilities. In addition, Section 16.58 of the PAMC requires that new development projects pay a library development fee to fund development and improvements to libraries. Therefore, the proposed project would result in a less than significant impact on other public facilities such as libraries. **(Less than Significant Impact)**

## 4.16 RECREATION

### 4.16.1 Environmental Setting

#### 4.16.1.1 *Regulatory Framework*

**State**

Government Code Section 66477

The Quimby Act (included within Government Code Section 66477) requires local governments to set aside parkland and open space for recreational purposes. It provides provisions for the dedication of parkland and/or payment of fees in lieu of parkland dedication to help mitigate the impacts from new residential developments. The Quimby Act authorizes local governments to establish ordinances requiring developers of new residential subdivisions to dedicate parks, pay a fee in lieu of parkland dedication, or perform a combination of the two.

**Local**

Palo Alto Parks, Trails, Natural Open Space & Recreation Master Plan

The Palo Alto Parks, Trails, Natural Open Space & Recreation Master Plan was adopted by the City in September 2017 to provide guidance for the next 20 years of park and open space development in the City. The Master Plan includes direction on the prioritization of future improvements, provides potential opportunities for expansion, outlines funding requirements and strategies, and presents a variety of different programmatic offerings that the City can provide.

City of Palo Alto Municipal Code

Section 16.58.080 of the PAMC requires that new development projects pay a park development fee to fund acquisition of land and improvements for neighborhood and district parks. The project would be subject to payment of these fees prior to issuance of a building permit.

#### 4.16.1.2 *Existing Conditions*

The City of Palo Alto has almost 4,000 acres of open space, including 162 acres of developed urban parks throughout the City.[84] Open space in the City includes the Baylands Preserve, the Pearson-Arastradero Preserve, the Esther Clark Nature Preserve, and the Foothills Nature Preserve. The nearest park to the project site is Jerry Bowden Park, located at 2380 High Street, approximately 500 feet north of the project site. Jerry Bowden Park is a 2.0-acre neighborhood park that features playgrounds, walking trails, benches, and picnic tables. The City's parkland total includes other recreational facilities such as the Mayfield Soccer Complex, the Baylands Athletic Center, Lucie Stern Community Center, and Cubberley Community Center. The nearest recreational facility to the project site is Mayfield Soccer Complex, which is located 0.3-mile southwest of the project site.

[84] City of Palo Alto. Open Space & Parks. Accessed April 6, 2022. https://www.cityofpaloalto.org/Departments/Community-Services/Open-Space-Parks

### 4.16.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 1) 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? | ☐ | ☐ | ☒ | ☐ |
| 2) 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? | ☐ | ☐ | ☒ | ☐ |

| | |
|---|---|
| **Impact REC-1:** | The project would not 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. **(Less than Significant Impact)** |

Unlike a residential development project, which increases City population and associated demand on City parks, the development of the proposed office space would not substantially increase the use of existing parks or other recreational facilities. While some of the employees may visit nearby recreational facilities or parks, the incremental increase in use would not result in substantial physical deterioration of those facilities. In addition, pursuant to Section 16.58 of the PAMC, the development would be required to pay a park development fee to fund development and improvement of parks in the City. Therefore, the proposed project would result in less than significant impacts to existing recreational facilities. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact REC-2:** | The project does not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. **(Less than Significant)** |

The proposed office building does not include recreational facilities. As discussed above under Impact REC-1, employees may use nearby recreational facilities but the usage would not be substantial and would not necessitate the construction or expansion of new recreational facilities. Based on this discussion, the project would result in less than significant impacts to recreational facilities. **(Less than Significant Impact)**

## 4.17 TRANSPORTATION

The following discussion is based, in part, on a Transportation Analysis prepared for the project by Hexagon Transportation Consultants, Inc., dated May 2022. A copy of this report is included in Appendix F of this Initial Study.

### 4.17.1 Environmental Setting

#### 4.17.1.1 *Regulatory Framework*

**State**

Regional Transportation Plan

MTC is the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area, including Santa Clara County. MTC is charged with regularly updating the Regional Transportation Plan, a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities in the region. MTC and ABAG adopted Plan Bay Area 2040 in July 2017, which includes a Regional Transportation Plan to guide regional transportation investment for revenues from federal, state, regional and local sources through 2040.

Senate Bill 743

SB 743 establishes criteria for determining the significance of transportation impacts using a vehicle miles traveled (VMT) metric intended to promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses. Specifically, SB 743 requires analysis of VMT in determining the significance of transportation impacts. Local jurisdictions were required by Governor's Office of Planning and Research (OPR) to implement a VMT policy by July 1, 2020.

SB 743 did not authorize OPR to set specific VMT impact thresholds, but it did direct OPR to develop guidelines for jurisdictions to utilize. CEQA Guidelines Section 15064.3(b)(1) describes factors that might indicate whether a development project's VMT may be significant. Notably, projects located within 0.50 mile of transit should be considered to have a less than significant transportation impact based on OPR guidance.

**Regional and Local**

Congestion Management Program

The Santa Clara Valley Transportation Authority (VTA) oversees the Congestion Management Program (CMP), which is aimed at reducing regional traffic congestion. The relevant state legislation requires that urbanized counties in California prepare a CMP in order to obtain each county's share of gas tax revenues. State legislation requires that each CMP define traffic LOS standards, transit service standards, a trip reduction and transportation demand management plan, a land use impact analysis program, and a capital improvement element. VTA has review responsibility for proposed development projects that are expected to affect CMP-designated intersections.

Palo Alto Transportation Analysis Policy

The Palo Alto VMT Policy establishes screening criteria for projects that are expected to cause a less-than-significant transportation impact under CEQA based on the land use and/or location. Projects that meet the screening criteria are not required to prepare further VMT analysis. The proximity to major transit stop screening criterion applies to projects that are located within a half mile of an existing or planned high-quality transit corridor or major transit stations and meet the following additional criteria for office projects: (1) is high density (minimum FAR of 0.75), (2) does not exceed parking requirements, and (3) is consistent with Plan Bay Area 2040. A high-quality transit corridor means a corridor with fixed-route bus service with service intervals no longer than 15 minutes during peak commute hours.

For a project that does not meet the screening criteria, a project's VMT impact is determined by comparing the project VMT to the appropriate thresholds of significance based on the type of development. For office developments, the threshold of significance is the regional average VMT per worker minus 15 percent. If a project is found to have a significant impact on VMT, the impact must be reduced by modifying the project to reduce its VMT to an acceptable level (below the established thresholds of significance applicable to the project) and/or mitigating the impact through multimodal transportation improvements or establishing a trip cap.

The City's Transportation Analysis Policy also continues to require projects to prepare a Local Transportation Analysis (LTA) to analyze non-CEQA transportation issues, including local transportation operations and intersection LOS.

Palo Alto Bicycle & Pedestrian Transportation Plan

The Palo Alto Bicycle & Pedestrian Transportation Plan (adopted in July 2012) identifies objectives for the expansion of bicycle and pedestrian access within the City. The plan was developed through collaboration with the City, Palo Alto Bicycle Advisory Committee, City/School Traffic Safety Committee, and the community. It identifies a network for bicycle travel and recommends improvements to make bicycling and walking a viable option for more people, with a goal of accommodating new growth, maintaining mobility, and reducing overall environmental impacts.

Palo Alto 2030 Comprehensive Plan

The Comprehensive Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the City. The following policies are specific to transportation and are applicable to the proposed project.

| Policy/Program | Description |
|---|---|
| Program T-1.2.3 | Formalize TDM requirements by ordinance and require new developments above a certain size threshold to prepare and implement a TDM Plan to meet specific performance standards. Require regular monitoring/reporting and provide for enforcement with meaningful penalties for non-compliance. The ordinance should also:<br>• Establish a list of effective TDM measures that include transit promotion, prepaid transit |

- passes, commuter checks, car sharing, carpooling, parking cash-out, bicycle lockers and showers, shuttles to Caltrain, requiring TMA membership and education and outreach to support the use of these modes.
- Allow property owners to achieve reductions by contributing to citywide or employment district shuttles or other proven transportation programs that are not directly under the property owner's control.
- Provide a system for incorporating alternative measures as new ideas for TDM are developed.
- Establish a mechanism to monitor the success of TDM measures and track the cumulative reduction of peak hour motor vehicle trips. TDM measures should at a minimum achieve the following reduction in peak hour motor vehicle trips, with a focus on single-occupant vehicle trips. Reductions should be based on the rates included in the Institute of Transportation Engineers' Trip Generation Manual for the appropriate land use category and size:
    - 45 percent reduction in the Downtown district
    - 35 percent reduction in the California Avenue area
    - 30 percent reduction in the Stanford Research Park
    - 30 percent reduction in the El Camino Real Corridor
    - 20 percent reduction in other areas of the city
- Require new development projects to pay a Transportation Impact Fee for all those peak-hour motor vehicle trips that cannot be reduced via TDM measures. Fees collected would be used for capital improvements aimed at reducing vehicle trips and traffic congestion.
- Ensure a stable, sustained funding source to support implementation of TDM measures.

| | |
|---|---|
| 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. |
| 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. |
| Policy T-2.3 | Use motor vehicle LOS at signalized intersections to evaluate the potential impact of proposed projects, including contributions to cumulative congestion. Use signal warrants and other metrics to evaluate impacts at unsignalized intersections. |
| Policy T-5.1 | All new development projects should manage parking demand generated by the project, without the use of on-street parking, consistent with the established parking regulations. As demonstrated parking demand decreases over time, parking requirements for new construction should decrease. |
| Policy T-5.6 | Strongly encourage the use of below-grade or structured parking, and explore mechanized parking instead of surface parking for new developments of all types while minimizing negative impacts including on groundwater and landscaping where feasible. |
| Policy T-5.7 | Require new or redesigned parking lots to optimize pedestrian and bicycle safety. |

| | |
|---|---|
| Policy T-5.8 | Promote vehicle parking areas designed to reduce stormwater runoff, increase compatibility with street trees and add visual interest to streets and other public locations. Encourage the use of photovoltaic panel or tree canopies in parking lots or on top of parking structures to provide cover, consistent with the Urban Forest Master Plan. |

#### 4.17.1.2 *Existing Conditions*

**Roadways**

Regional access to the project site is provided by US 101 and I-280. Local access to the project site is provided via El Camino Real, Page Mill Road/Oregon Expressway, Park Boulevard, California Avenue, Sherman Avenue, and Grant Avenue. For the purposes of this study, US 101, I-280, El Camino Real, and all parallel streets are considered to run north-south, and cross streets, such as Page Mill Road, are considered to run east-west.

**Transit**

Existing transit service to the study area is provided by VTA, Caltrain, and the Stanford Research Park Shuttle. Transit services in the project area are described below and shown in Figure 4.17-1.

Bus Service

The project area is served by several VTA bus lines, including Frequent Route 22, Local Route 89, and Rapid Route 522. These bus lines are described in more detail in Table 4.17-1, below.

**Table 4.17-1: Existing Transit Services**

| Route | Route Description | Weekday Hours of Operation | Headways* (minutes) | Nearest Bus Stops | Walking Distance from Project Site (feet) |
|---|---|---|---|---|---|
| Frequent Route 22 | Palo Alto Transit Center – Eastridge Transit Center | 4:30 AM – 2:30 AM | 15 | El Camino Real at California Avenue | 1,875 (0.35 miles) |
| Local Route 89 | California Avenue Caltrain – Palo Alto VA Hospital | 6:30 AM – 4:30 PM (southbound), 9:00 AM – 6:30 PM (northbound) | 20 (southbound AM, northbound PM), 60 (northbound AM, southbound PM) | California Avenue Caltrain Station | 725 (0.14 miles) |
| Rapid Route 522 | Palo Alto Transit Center – Eastridge Transit Center | 5:30 AM – 11:00 PM | 15 | El Camino Real at California Avenue | 1,875 (0.35 miles) |

Note: Information based on transit services as of April 2022.
*Headways during weekday peak periods in the project area.


Source: Hexagon Transportation Consultants, Inc., April 28, 2022.

EXISTING TRANSIT SERVICES

FIGURE 4.17-1

Caltrain Service

Commuter rail service between San Francisco and Gilroy is provided by Caltrain, which currently operates 92 weekday trains. The California Avenue Caltrain station is located approximately 0.14-mile north of the project site. Trains stop frequently at the California Avenue station between 4:57 AM and 11:41 PM in the northbound direction, and between 5:56 AM and 1:09 AM in the southbound direction. Caltrain provides passenger train service seven days a week and provides extended service to Morgan Hill and Gilroy during commute hours.

Stanford Research Park Shuttle

The Stanford Research Park shuttle provides service from the Palo Alto Transit Center to the Research Park during the AM commute hours and from the Research Park to the Palo Alto Transit Center during the PM commute hours. Stops for the shuttle are located approximately 1,000 feet from the project site along El Camino Real.

## Pedestrian Facilities

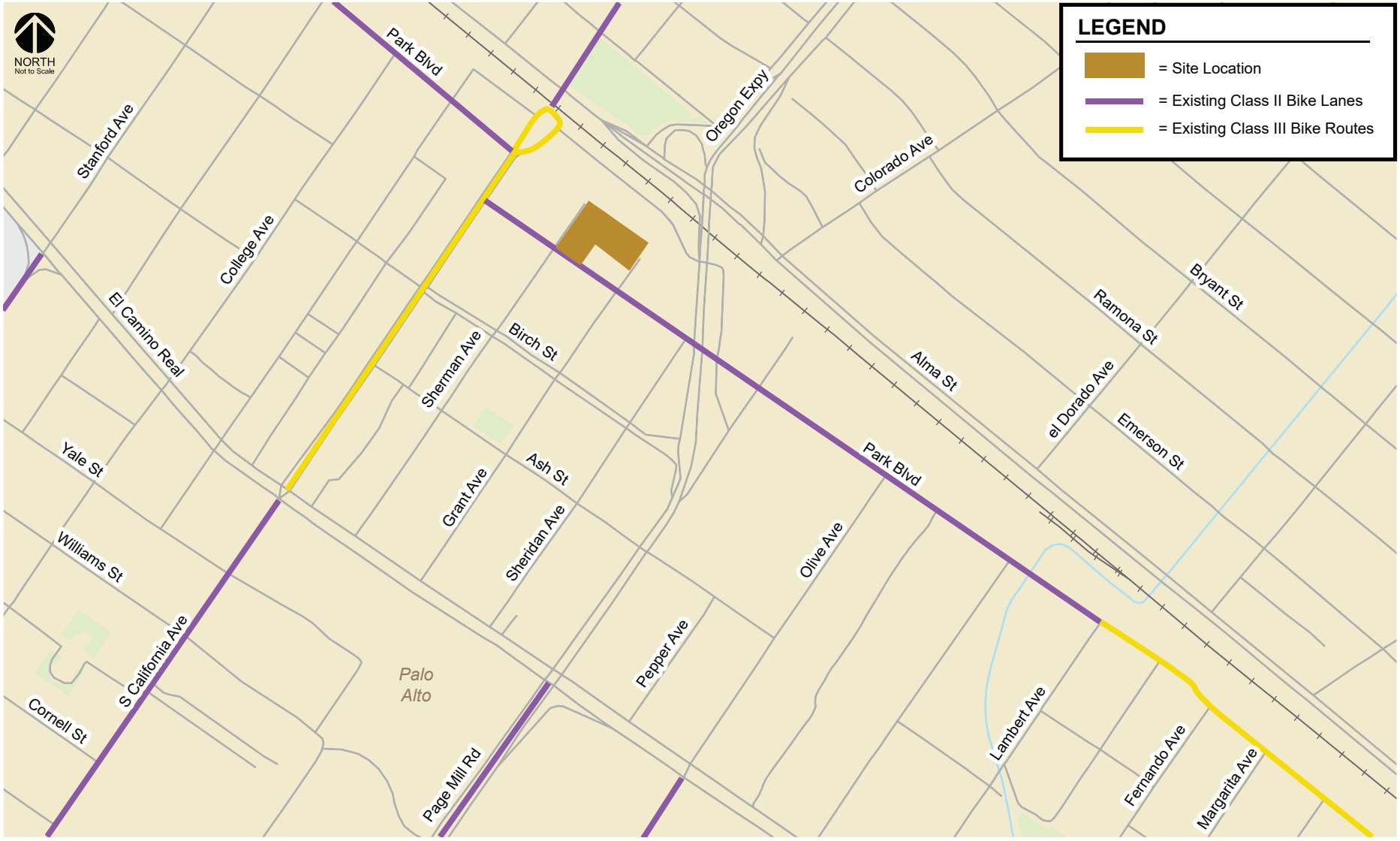
Pedestrian facilities consist of sidewalks and crosswalks, which are present along all study area roadways and at signalized intersections. Pedestrian signal heads and push buttons are present at all signalized study intersections. Additionally, marked crosswalks are present along all legs of the Park Boulevard/California Avenue intersection and the east and south legs of the Park Boulevard/Sherman Avenue intersection. High visibility ladder-style crosswalks are present along the north and east legs of the Park Boulevard/Grant Avenue intersection with a flashing pedestrian beacon for pedestrians crossing Park Boulevard. Continuous sidewalks connect the project site to surrounding land uses, including restaurants, retail stores, and transit in the area. Overall, the existing sidewalks provide good pedestrian connectivity and safe routes to transit, nearby pedestrian destinations, and other points of interest in the project vicinity.

## Bicycle Facilities

The bicycle facilities that exist in the project vicinity (see Figure 4.17-2) include striped bike lanes (Class II bikeway) and shared bike routes (Class III bikeway). Bike lanes are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Bike routes are signed bike routes where bicyclists share a travel lane with motorists.

Striped bike lanes are present along the following street segments:

- Park Boulevard, between California Avenue and Lambert Avenue
- Park Boulevard, north of California Avenue
- Stanford Avenue, west of El Camino Real
- California Avenue, between Hanover Street and El Camino Real
- California Avenue, east of the California Avenue Caltrain Station
- Page Mill Road, between El Camino Real and the I-280 underpass
- Hansen Way, between Page Mill Road and El Camino Real




Source: Hexagon Transportation Consultants, Inc., April 28, 2022.

EXISTING BICYCLE FACILITIES

FIGURE 4.17-2

Bike routes are typically designated with sharrows (shared-lane pavement markings), and bikes may take the travel lane. Bike routes are appropriate for low-volume streets with slow travel speeds, especially those on which motorist volumes are low enough that passing maneuvers can use the full street width, on roadways with bicycle demand but without adequate space for bike lanes, and as "gap fillers" where there are short breaks in bike lanes due to right-of-way constraints. Bike routes are present along the following street segments:

- California Avenue, between El Camino Real and the California Avenue Caltrain Station
- Park Boulevard, south of Lambert Avenue

A bicycle undercrossing is present at the California Avenue Caltrain Station that connects bicyclists from the project area to bicycle facilities east of the rail tracks. It should be noted that since the COVID pandemic, California Avenue, between El Camino Real and Birch Street, has been closed to vehicular traffic and has been converted into a pedestrian street. The closure has been extended to the end of 2023 and will go to City Council for consideration of a permanent closure.

### 4.17.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 1) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities? | ☐ | ☐ | ☒ | ☐ |
| 2) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)? | ☐ | ☐ | ☒ | ☐ |
| 3) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | ☐ | ☐ | ☒ | ☐ |
| 4) Result in inadequate emergency access? | ☐ | ☐ | ☒ | ☐ |

**Impact TRN-1:** The project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities. **(Less than Significant Impact)**

#### Circulation System

The VMT analysis and LTA were conducted for the project, consistent with the City's Transportation Analysis Policy. These analyses are discussed in further detail under Impact TRN-2 and the non-CEQA discussion found below TRN-4, respectively. As discussed under Impact TRN-3 and TRN-4, the project would be consistent with the City's Zoning Code and other policies that pertain to on-site circulation.

Vehicle Parking

The Zoning Code requires one parking space per 250 square-feet of office space and one parking space per 200 square-feet of retail space. Therefore, the project would be required to provide a total of 213 vehicle parking spaces. However, the project proposes to implement a Transportation Demand Management (TDM) Plan that would include a 20 percent reduction in parking spaces in order to encourage the use of transit, bicycle, and pedestrian facilities. A 20 percent reduction in parking spaces required would be equal to 171 parking spaces. The project proposes to exceed this reduced requirement with a total of 175 parking spaces. Therefore, with approval of requested Director's Adjustment to parking as allowed in accordance with the municipal code, the project would be consistent with the parking requirements of the Zoning Code. **(Less than Significant Impact)**

**Transit**

The project site is served by VTA Routes 22, 89, and 522 with bus stops located at the California Avenue Caltrain station and along El Camino Real. The site is also served by Caltrain, which is an approximately 725-foot walk from the project site.

It is expected that the project would generate some transit trips to residential areas and other nearby commercial destinations. According to the 2019 American Community Survey for the Census, approximately eight percent of commute trips in Palo Alto use public transit to get to work. Applying an eight percent transit mode share equates to six to seven new transit riders during the AM and PM peak hours. This new ridership generated by the project could be accommodated by the existing services. Due to the relatively small number of new vehicle trips generated by the project, the project would not cause a noticeable change in transit travel time and vehicle delay for the bus routes in the study area. **(Less than Significant Impact)**

**Bicycle Facilities**

There are bike lanes on Park Boulevard that connect cyclists from the project site to the surrounding areas. California Avenue, between the Caltrain station and El Camino Real, is a designated bike route. According to the Palo Alto Bike and Pedestrian Transportation Plan, a bicycle boulevard is planned along Park Boulevard. Additional planned bicycle facilities include a Class I multi-use path along California Avenue, between the Caltrain station and El Camino Real, an enhanced bikeway along California Avenue, west of El Camino Real and east of the Caltrain station, and Class II bike lanes along El Camino Real between Page Mill Road and Maybell Avenue. The project design is consistent with the planned bicycle boulevard on Park Boulevard as the project does not plan to make changes to the roadway along the project frontage on Park Boulevard.

The Zoning Code requires one secure bicycle parking space per 2,500 square-feet of office space and one space per 2,000 square-feet of retail space. Of the total number of bicycle parking spaces, 80 percent must be long-term spaces and 20 percent of the spaces are required to be short-term spaces. The project would be required to provide a minimum of 22 bicycle spaces consisting of 17 long-term spaces and five short-term spaces. The project proposes to exceed the required minimum number of bicycle parking spaces by providing 40 total bicycle parking spaces consisting of 24 long-term spaces and 16 short-term spaces. Thus, the project would be consistent with the City's bicycle parking requirements. **(Less than Significant Impact)**

### Pedestrian Facilities

Pedestrian access to the project site would be provided via sidewalks on Sherman Avenue, Park Boulevard, Grant Avenue, and surrounding streets. The project would provide a seven to 8.5-foot sidewalk/paseo along its frontage on Sherman Avenue. The sidewalk would continue to provide adequate space for ADA access. The sidewalks along Park Boulevard and Grant Avenue measure four feet in width, providing adequate space for ADA access. The project would add street trees and landscaping to both frontages, which would increase pedestrian comfort.

According to the 2030 Comprehensive Plan, a neighborhood is walkable when an area is designed and constructed in such a way to provide and encourage pleasant, easy, and efficient pedestrian movement. Convenient walking distance is considered to be a half mile to a mile, a walk that would take 10 to 20 minutes. Within a half mile of the project site there are many restaurants, retail stores, and bus stops along California Avenue and El Camino Real. Similarly, the California Avenue Caltrain station is a 725-foot walk from the project site. ADA curb ramps are present along all the intersections between the project site and California Avenue. Continuous sidewalks and ADA curb ramps are present at all intersections along California Avenue between the Caltrain Station and El Camino Real. Therefore, the project would be consistent with the Comprehensive Plan's goals and policies for pedestrian facilities. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact TRN-2:** | The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). **(Less than Significant Impact)** |

The Palo Alto VMT Policy establishes screening criteria for developments that are expected to cause a less-than-significant transportation impact under CEQA and are not required to prepare further VMT analysis. The proximity to major transit stop screening criterion applies to projects that are located within a half mile of an existing or planned high-quality transit corridor or major transit station and meet the following additional criteria for office projects: 1) is high density (minimum floor area ratio [FAR] of 0.75), 2) does not exceed parking requirements, and 3) is consistent with Plan Bay Area.

The project is located within a half mile of the California Avenue Caltrain Station, which is considered a major transit station. The project would have a FAR of 1.98, which is greater than the required FAR of 0.75. The project would provide fewer parking spaces than required by the Palo Alto code in accordance with a requested Director's adjustment. The project would not conflict with the strategies described in Plan Bay Area. Therefore, the project meets the proximity to transit screening criterion, and further VMT analysis is not required. The project's impact on VMT would be less than significant. **(Less than Significant Impact)**

| | |
|---|---|
| **Impact TRN-3:** | The project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). **(Less than Significant Impact)** |

### Vehicle Site Access

Vehicle access to and from the project site would be provided via a full access driveway on Sherman Avenue. The project driveway would measure 24 feet wide which meets the City's minimum width

requirement of 20 feet, as described in the City of Palo Alto's Zoning Ordinance, Section 36.32.80(e).

Sight Distance at Project Driveway

The project driveway would be located approximately 30 feet west of the dead end on Sherman Avenue and approximately 130 feet east of the Park Boulevard/Sherman Avenue intersection. 130 feet of sight distance is adequate for roadway speeds up to 20 mph. Vehicles turning from Park Boulevard would be traveling at slow speeds. Vehicles from Sherman Avenue, north of Park Boulevard would be stopped at the intersection before proceeding through. Therefore, sight distance would be adequate for exiting drivers.

**Vehicle On-Site Circulation**

The proposed parking garage was evaluated to identify whether there are dead-end aisles. Dead-end aisles are undesirable because drivers can enter the aisle, and upon discovering that there is no available parking, must back out or conduct three-point turns. The site plan shows dead-end aisles within the basement levels of the parking garage. However, adequate turnaround space has been provided at the end of each aisle. As a condition of approval, signage and instructions shall be posted outside of the stackers with contact information in case of malfunction

Parking spaces are shown to be a minimum of 18 feet long by 8.5 feet wide. According to the City of Palo Alto Zoning Code all standard parking stalls should be at least 8.5 feet in width by 17.5 feet in length. The proposed parking space dimensions would meet the City requirements.

Truck Access and Circulation

Emergency response vehicles would access the project site along its frontages on Park Boulevard, Sherman Avenue, and Grant Avenue. The project would include a loading space off of Grant Avenue for truck access.

| | |
|---|---|
| **Impact TRN-4:** | The project would not result in inadequate emergency access. **(Less than Significant Impact)** |

The project would be required to conform to the City's traffic and safety regulations that specify adequate emergency access measures. In addition, the project site would be required to meet the standards set forth by the Palo Alto Fire Department. Adherence to existing state and federal regulations and City of Palo Alto requirements would reduce impacts. As a result, the proposed project would not create an operational safety hazard or impede emergency access. **(Less than Significant Impact)**

### 4.17.3 Non-CEQA Effects

While the evaluation of project CEQA impacts on the transportation system is based on VMT, in accordance with City of Palo Alto's Transportation Policy, the following discussion is included for informational purposes because Comprehensive Plan Policy T-2.3 requires preparation of a LTA to analyze non-CEQA transportation issues, including local transportation operations and intersection LOS.

## Trip Generation

The number of vehicle trips expected to be generated by the project was calculated using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. Trips that would be generated by the proposed office were estimated using the ITE trip rates for "General Office" (Land Use 710) and "Strip Retail Plaza" (Land Use 822). Strip Retail Plaza is defined by a retail use with less than 40,000 square-feet of space. Trip credits were taken for the existing office space on-site. Trip reductions for mixed-use development and proximity to transit were applied based on the guidelines provided in the 2014 VTA Transportation Impact Analysis Guidelines. The project is estimated to generate a net new 511 daily trips, including 50 net new trips (43 inbound and 7 outbound) in the AM peak hour and 66 net new trips (18 inbound and 48 outbound) in the PM peak hour, as shown in Table 4.17-2.

**Table 4.17-2: Project Trip Generation Estimates**

| Land Use | Size (square-feet) | Daily | | AM Peak Hour | | | | PM Peak Hour | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Trip Rate | Trips | Trip Rate | Trips | | | Trip Rate | Trips | | |
| | | | | | In | Out | Total | | In | Out | Total |
| Office (Land Use 710) | 48,074 | 10.84 | 521 | 1.52 | 64 | 9 | 73 | 1.44 | 12 | 57 | 69 |
| *Employment & Retail Reduction (3%)[1]* | -- | -- | *-16* | -- | *-2* | *0* | *-2* | -- | *0* | *-2* | *-2* |
| *Employment Near Transit Reduction (6%)[1]* | -- | -- | *-31* | -- | *-4* | *-1* | *-5* | -- | *-1* | *-3* | *-4* |
| Retail (Land Use 822) | 3,871 | 54.45 | 211 | 2.36 | 5 | 4 | 9 | 6.59 | 13 | 13 | 26 |
| *Employment & Retail Reduction (3%)[1]* | -- | -- | *-16* | -- | *0* | *-2* | *-2* | -- | *-2* | *0* | *-2* |
| Total Project Trips | -- | -- | 669 | -- | 63 | 10 | 73 | -- | 22 | 65 | 87 |
| Existing Land Uses | | | | | | | | | | | |
| Office (Land Use 710) | 15,523 | 10.84 | 168 | 1.52 | 21 | 3 | 24 | 1.44 | 4 | 18 | 22 |
| *Employment Near Transit* | -- | -- | *-10* | -- | *-1* | *0* | *-1* | -- | *0* | *-1* | *-1* |

| Table 4.17-2: Project Trip Generation Estimates | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Land Use** | **Size (square-feet)** | **Daily** | | **AM Peak Hour** | | | | **PM Peak Hour** | | | |
| | | **Trip Rate** | **Trips** | **Trip Rate** | **Trips** | | | **Trip Rate** | **Trips** | | |
| | | | | | **In** | **Out** | **Total** | | **In** | **Out** | **Total** |
| *Reduction (6%)*[1] | | | | | | | | | | | |
| **Net Project Trips** | **--** | **--** | **511** | **--** | **43** | **7** | **50** | **--** | **18** | **48** | **66** |

Source: ITE Trip Generation Manual, 11th Edition 2021.

[1] The following trip reductions are prescribed by the VTA Transportation Impact Analysis Guidelines (October 2014).

Mixed-Used Development Project

with employment and employee-serving retail - 3% off employment component

Location Within 2,000=Foot Walk of Transit Facility

Employment near LRT, BRT, or Caltrain Station - 6%

### Intersection Levels of Service

The following intersections were analyzed as part of the LTA prepared for the project:

- Park Boulevard and California Avenue
- Park Boulevard and Sherman Avenue
- Park Boulevard and Grant Avenue
- Birch Street and Sheridan Avenue
- Park Boulevard and Page Mill Road
- El Camino Real and California Avenue
- El Camino Real and Page Mill Road

Existing peak-hour traffic volumes at the study intersections were based on available pre-pandemic traffic counts for nearby studies, the VTA CMP, and new traffic counts at the study intersections where pre-pandemic traffic counts were not available. Background traffic volumes were estimated by adding to the existing traffic volumes the trips generated by nearby approved projects that have not yet been constructed or occupied. The cumulative no project traffic volumes were estimated using the Palo Alto Travel Demand Forecasting model for Year 2040. A summary of the project's impacts on the study intersections' levels of service is summarized in Table 4.17-3.

It should be noted that since the COVID pandemic, California Avenue has been closed to vehicular traffic. The closure has been extended to the end of 2023 and will go to City Council for consideration of a permanent closure. The existing and proposed project vehicles would need to utilize adjacent streets (Cambridge Avenue, Sherman Avenue, and Grant Avenue) to access the Evergreen Park area and the project vicinity. Due to the relatively small existing traffic volume and

small number of project-generated trips that utilize California Avenue, these adjacent streets (and their respective intersections at El Camino Real) can easily accommodate the rerouted project traffic.

According to the City of Palo Alto and CMP level of service standards, a development is said to create an adverse operations effect on traffic conditions at a signalized intersection if for either peak hour, either of the following conditions occurs:

1) The LOS at the intersection drops below its respective LOS standard (LOS D or better for local intersections and LOS E or better for CMP intersections) when project traffic is added, or;

2) An intersection that operates below its level of service standard under no-project conditions experiences an increase in critical-movement delay of four (4) or more seconds, and an increase in critical volume-to-capacity ratio (v/c) of one percent (0.01) or more when project traffic is added.

As shown in Table 4.17-3, the study intersections would continue to operate at acceptable levels under existing and background conditions with and without the project, other than the intersection of El Camino Real/Page Mill Road, which would operate at a substandard level of service under existing, background, and cumulative conditions. However, the intersection would already be operating at LOS E under existing and background and LOS F under cumulative without the project. The project would not increase the critical movement delay by more than four seconds or cause an increase in critical volume-to-capacity ratio (v/c) of one percent (0.01) or more (see Appendix F); therefore, the addition of project traffic would not cause an adverse effect on traffic operations.

| Table 4.17-3: Intersection Levels of Service | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Intersection** | **Peak Hour** | **Existing** | | | | **Background** | | | | **Cumulative (2030)** | | | |
| | | **No Project** | | **With Project** | | **No Project** | | **With Project** | | **No Project** | | **With Project** | |
| | | **Avg. Delay (sec)** | **LOS** | **Avg. Delay (sec)** | **LOS** | **Avg. Delay (sec)** | **LOS** | **Delay (sec)** | **LOS** | **Delay (sec)** | **LOS** | **Delay (sec)** | **LOS** |
| Park Blvd & California Ave | AM | 7.5 | A | 7.5 | A | 7.5 | A | 7.5 | A | 7.7 | A | 7.7 | A |
| | PM | 8.1 | A | 8.2 | A | 8.2 | A | 8.2 | A | 8.6 | A | 8.7 | A |
| Park Blvd & Sherman Ave* | AM | 10.8 | B | 11.3 | B | 10.8 | B | 11.3 | B | 11.5 | B | 12.0 | B |
| | PM | 10.8 | B | 14.0 | B | 13.8 | B | 14.0 | B | 15.1 | C | 15.4 | C |
| Park Blvd & Grant Ave* | AM | 10.8 | B | 11.0 | B | 10.8 | B | 11.0 | B | 11.2 | B | 11.5 | B |
| | PM | 13.6 | B | 14.3 | B | 13.7 | B | 14.3 | B | 15.1 | C | 15.9 | C |
| Birch St & Sheridan Ave* | AM | 28.3 | D | 29.6 | D | 28.9 | D | 30.4 | D | 36.7 | E | 39.1 | E |
| | PM | 21.7 | C | 23.0 | C | 21.8 | C | 23.2 | C | 25.5 | D | 27.5 | D |
| Park Blvd & Page Mill Rd | AM | 14.9 | B | 15.4 | B | 15.0 | B | 15.5 | B | 18.7 | B | 19.1 | B |
| | PM | 15.9 | B | 16.6 | B | 15.9 | B | 16.6 | B | 21.2 | C | 21.6 | C |
| El Camino Real & California Ave (CMP) | AM | 33.7 | C | 34.1 | D | 35.5 | D | 36.1 | D | 33.5 | C | 34.2 | C |
| | PM | 30.1 | C | 30.5 | C | 31.2 | C | 31.7 | C | 30.8 | C | 31.2 | C |

| Table 4.17-3: Intersection Levels of Service | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Intersection** | **Peak Hour** | **Existing** | | | | **Background** | | | | **Cumulative (2030)** | | | |
| | | **No Project** | | **With Project** | | **No Project** | | **With Project** | | **No Project** | | **With Project** | |
| | | **Avg. Delay (sec)** | **LOS** | **Avg. Delay (sec)** | **LOS** | **Avg. Delay (sec)** | **LOS** | **Delay (sec)** | **LOS** | **Delay (sec)** | **LOS** | **Delay (sec)** | **LOS** |
| El Camino Real & Page Mill Rd (CMP) | AM | 64.4 | E | 64.4 | E | 64.7 | E | 64.9 | E | **96.8** | **F** | **97.5** | **F** |
| | PM | 49.1 | D | 49.1 | D | 49.5 | D | 49.7 | D | **86.7** | **F** | **87.4** | **F** |

**Bold** indicates a substandard level of service

*Denotes two-way stop-controlled intersection. The worst leg delay is reported.

## 4.18 TRIBAL CULTURAL RESOURCES

### 4.18.1 Environmental Setting

#### 4.18.1.1 *Regulatory Framework*

**State**

Assembly Bill 52

AB 52, effective July 2015, established a new category of resources for consideration by public agencies called Tribal Cultural Resources (TCRs). AB 52 requires lead agencies to provide notice of projects to tribes that are traditionally and culturally affiliated with the geographic area if they have requested to be notified. Where a project may have a significant impact on a tribal cultural resource, consultation is required until the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource or until it is concluded that mutual agreement cannot be reached.

Under AB 52, TCRs are defined as follows:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are also either:
  - Included or determined to be eligible for inclusion in the California Register of Historic Resources, or
  - Included in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).
- A resource determined by the lead agency to be a TCR.

**Local**

Palo Alto 2030 Comprehensive Plan

The Comprehensive Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the City. The following policies are specific to tribal cultural resources and are applicable to the proposed project.

| Policy/Program | Description |
|---|---|
| Policy L-7.16 | Continue to consult with tribes as required by California Government Code Section 65352.3. In doing so, use appropriate procedures to accommodate tribal concerns when a tribe has a religious prohibition against revealing precise information about the location or previous practice at a particular sacred site. |

#### 4.18.1.2 *Existing Conditions*

In March of 2022, Archaeological/Historical Consultants sent a Sacred Lands File search request to the NAHC. The Sacred Lands File search was positive and the NAHC sent a list of local Native American tribes who may have further information. In April of 2022, the City of Palo Alto sent letters to the Native American tribes identified by NAHC requesting consultation on the proposed project. This consultation effort included Tamien Nation, the only tribe that has formally requested

consultation with the City under AB 52. However, no responses were received from any of the tribes contacted.

As discussed in Section 4.5 Cultural Resources, despite the positive Sacred Lands File Search results, the project site has a low sensitivity for prehistoric or Native American resources due to its distance from freshwater sources.

### 4.18.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, 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: | | | | |
| 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)? | ☐ | ☒ | ☐ | ☐ |
| 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 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. | ☐ | ☒ | ☐ | ☐ |

**Impact TCR-1:** The project would not cause a substantial adverse change in the significance of a tribal cultural resource 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). **(Less than Significant Impact with Mitigation Incorporated)**

There are no known TCRs within or adjacent to the project site. As previously discussed, the project site has a low sensitivity to TCRs due to its distance from freshwater sources. Because the project includes development at depths beyond what has previously been excavated, it is possible that undiscovered buried TCRs exist on-site and could be disturbed during project construction. Implementation of MM CUL-2.1 through MM CUL-3.1 (refer to Section 4.5 Cultural Resources) would ensure that any TCRs encountered during project construction would be properly handled and

any impacts would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

| | |
|---|---|
| **Impact TCR-2:** | The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is 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. **(Less than Significant Impact with Mitigation Incorporated)** |

Please see response to TCR-1, above. **(Less than Significant Impact with Mitigation Incorporated)**

## 4.19 UTILITIES AND SERVICE SYSTEMS

The following discussion in this section is based, in part, on a Domestic Water and Sanitary Sewer Demand Memorandum, prepared by BKF Engineers, dated May 2021. A copy of this report is included as Appendix G of this Initial Study.

### 4.19.1 Environmental Setting

#### 4.19.1.1 *Regulatory Framework*

**State**

State Water Code

Pursuant to the State Water Code, water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (approximately 980 million gallons) of water annually must prepare and adopt an urban water management plan (UWMP) and update it every five years. As part of a UWMP, water agencies are required to evaluate and describe their water resource supplies and projected needs over a 20-year planning horizon, water conservation, water service reliability, water recycling, opportunities for water transfers, and contingency plans for drought events. The City of Palo Alto adopted its most recent UWMP in June 2021.

Assembly Bill 939

The California Integrated Waste Management Act of 1989, or AB 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans, and mandated that local jurisdictions divert at least 50 percent of solid waste generated (from 1990 levels), beginning January 1, 2000, and divert at least 75 percent by 2010. Projects that would have an adverse effect on waste diversion goals are required to include waste diversion mitigation measures.

Assembly Bill 341

AB 341 sets forth the requirements of the statewide mandatory commercial recycling program. Businesses that generate four or more cubic yards of garbage per week and multi-family dwellings with five or more units in California are required to recycle. AB 341 sets a statewide goal for 75 percent disposal reduction by the year 2020.

Senate Bill 610

SB 610 amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 requires preparation of a WSA containing detailed information regarding water availability to be provided to the decision-makers prior to approval of specified large development projects that also require a General Plan Amendment. This WSA must be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects. Under SB 610, WSAs must be furnished to local governments for inclusion in any environmental documentation for certain projects subject to CEQA. Pursuant to the California Water Code (Section 10912[a]), projects that require a WSA include any of the following:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A proposed hotel or motel, or both, having more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- A mixed-use project that includes one or more of the projects identified in this list; or
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

Senate Bill 1383

SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The bill grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that at least 20 percent of currently disposed edible food is recovered for human consumption by 2025.

California Green Building Standards Code

In January 2010, the State of California adopted the California Green Building Standards Code, establishing mandatory green building standards for all buildings in California. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resources efficiency, and indoor environmental quality. These standards include the following mandatory set of measures, as well as more rigorous voluntary guidelines, for new construction projects to achieve specific green building performance levels:

- Reducing indoor water use by 20 percent;
- Reducing wastewater by 20 percent;
- Recycling and/or salvaging 50 percent of nonhazardous construction and demolition debris; and
- Providing readily accessible areas for recycling by occupants.

**Local**

Palo Alto 2030 Comprehensive Plan

The Comprehensive Plan includes policies for the purpose of avoiding or mitigating impacts resulting from development projects within the City. The following policies are specific to utilities and service systems and are applicable to the proposed project.

| Policy/Program | Description |
|---|---|
| Policy N-4.1 | Maintain a safe, clean and reliable long-term supply of water for Palo Alto. |
| Policy N-4.2 | Maintain cost-effective citywide water conservation and efficiency programs for all customers, including low income customers, through education, rebates, assistance programs and building requirements. |
| Policy N-4.6 | Retain and utilize rainwater on site to the extent possible. |
| Policy N-4.7 | Ensure regulation of groundwater use to protect it as a natural resource and to preserve it as a potential water supply in the event of water scarcity. |
| Program N-4.14.1 | Establish a standardized process for evaluating the impacts of development on the storm drainage system, including point source discharge, base flow and peak flow. |
| Policy L-9.11 | Provide utilities and service systems to serve all urbanized areas of Palo Alto and plan infrastructure maintenance and improvements to adequately serve existing and planned development. |
| Policy S-3.8 | Strive for 95 percent landfill diversion by 2030, and ultimately zero waste, by enhancing policies and programs for waste reduction, recycling, composting and reuse. |

Palo Alto Urban Water Management Plan (2020)

The UWMP includes an assessment of the reliability of the City's water sources, an analysis of water demand, identification of alternative water supply sources, a description of water conservation efforts, and a water shortage contingency plan. Every five years, a UWMP is prepared and submitted as required to the California Department of Water Resources (DWR), per the Urban Water Management Planning Act.

Palo Alto Zero Waste Plan (2018)

The City of Palo Alto has a Zero Waste goal of virtually eliminating waste from being burned or buried, and to protect the environment and public health in a cost-effective manner by safely, legally, and sustainably managing Palo Alto's solid and hazardous waste. Zero Waste Palo Alto seeks to eliminate waste wherever possible first and foremost, and then managing the remaining discards through recycling and composting. The 2018 update to Palo Alto's Zero Waste Plan adopted a goal of 95 percent diversion of materials from landfills by 2030.

#### 4.19.1.2 *Existing Conditions*

The project site is located in a developed area within the City of Palo Alto and is currently served by existing wastewater/sanitary sewer, water, stormwater, and solid waste service systems.

## Wastewater Treatment and Sanitary Sewer System

Wastewater Treatment

Wastewater within the City is treated at the Regional Water Quality Control Plant (RWQCP), which is owned and operated by the City and treats wastewater from Los Altos, Los Altos Hills, Mountain View, Palo Alto, Stanford University, and the East Palo Alto Sanitary District.[85] Treated effluent from the RWQCP is discharged at two locations, one effluent pipe near the Palo Alto Airport discharges directly into the San Francisco Bay and the other discharges into Matadero Creek, which eventually drains into the San Francisco Bay.

The RWQCP's average dry weather flow (ADWF) design capacity is 39 million gallons per day (mgd). The amount of influent wastewater handled by the RWQCP varies within the time of day and within seasonal changes in demand.[86] In 2020, the ADWF was approximately 17.24 mgd and the maximum daily flow was 22.21 mgd.[87]

Sanitary Sewer

The existing development on-site has a sewer flow of 1,634 gallons per day (gpd) based on the current land use and density.[88] Sewage generated on-site flows to an existing six-inch sewer line in Grant Avenue and a six-inch sewer line in Sherman Avenue. These lines connect to the 12-inch main line along Park Boulevard.

## Water Supply and Demand

Water service is provided to the project site by the Palo Alto municipal water system. Potable water supply in the City is sourced entirely from the San Francisco Public Utilities Commission (SFPUC). The City also produces a small amount of recycled water at the Regional Water Quality Control Plant (RWQCP) to be used for irrigation and other minor applications.[89] The City's Urban Water Management Plan projects the water demand (water sales) at the time of the buildout of the 2030 Comprehensive Plan to be approximately 10,597 acre-feet (AF) of water per year. The total supply available to the City is projected to be 11,710 AF, which exceeds the demand and results in a surplus of available water. Projections from the 2020 UWMP indicate that the City would face a substantial shortfall in potable water supply during single-dry year, and multiple consecutive dry-year conditions.

Water demand at the project site is currently estimated to be approximately 1,720 gpd based on the existing buildings and landscaping on-site.[90]

[85] City of Palo Alto. "Regional Water Quality Control Plant." Accessed April 18, 2022. Available at: https://cleanbay.org/our-programs/regional-water-quality-control-plant/#RWQCP.
[86] City of Palo Alto. Annual NPDES Report – 2018. January 2019.
[87] City of Palo Alto. *2020 Urban Water Management Plan and Water Shortage Contingency Plan.* June 2021
[88] BKF Engineers. *Domestic Water and Sanitary Sewer Demand Memorandum.* May 2021.
[89] City of Palo Alto. *2020 Urban Water Management Plan and Water Shortage Contingency Plan.* June 2021
[90] BKF Engineers. *Domestic Water and Sanitary Sewer Demand Memorandum.* May 2021.

### Water System

The State Water Resources Control Board Division of Drinking Water (DDW) requires cities to store enough water to meet eight hours of Maximum Day Demand (MDD) in addition to four hours of fire flow volume. The City maintains eight wells and a storage reservoir to meet these needs. The well system can provide a minimum of eight hours of normal water use at the maximum day demand level and four hours of fire suppression at the design fire duration level.[91] The City has the capacity to store up to 13 million gallons of water with this infrastructure.

### Storm Drain System

The City stormwater system is divided into three separate drainage areas: the San Francisquito drainage area, the Matadero drainage area, and the Adobe/Barron drainage area. These three drainage areas contain approximately 95.1 miles of storm drainpipes greater than 12 inches in diameter and nine pump stations that primarily convey water to four separate waterways that lead to San Francisco Bay. These waterways are the San Francisquito Creek, the Matadero Creek, the Adobe Creek, and the Barron Creek.[92]

The project site is comprised of approximately 31,290 square feet (or 91 percent) of impervious surfaces and the remaining 3,094 square feet (or 9 percent) are pervious surfaces. Runoff from the project site flows into the nearest drainage inlets on Sherman Avenue, Park Boulevard, and Grant Avenue. The storm drain lines in the immediate vicinity of the project site are part of the Matadero drainage area.

### Solid Waste

Solid waste collected in the City is transported to the Sunnyvale Materials Recovery and Transfer Station (SMaRT Station®). The SMaRT Station currently serves the cities of Mountain View, Palo Alto, and Sunnyvale. In 2021, the SMaRT Station processed an average peak tonnage of 962 tons of materials, with a permitted peak capacity of 1,500 tons of material each day.[93] The SMaRT Station receives municipal solid waste, recyclables, and yard trimmings. The SMaRT Station diverts approximately 41 percent of the materials delivered from being landfilled.[94] Diverted materials primarily include compostable organics, concrete, dirt, carpet, mattresses, and yard trimmings. The remaining waste is disposed of at Kirby Canyon Landfill in south San José. Kirby Canyon Landfill has a capacity of 36.4 million cubic yards and is permitted to receive 2,600 tons of waste per day.[95] As of January 1, 2021, the landfill has a remaining Phase 1 capacity of 14.67 million cubic yards. Based on the current remaining capacity available and projected volumes, Kirby Canyon Landfill is projected to close its Phase 1 section in 2060.[96] There are additional phases available that are also accepting waste, but the remaining capacity for those future phases is currently unknown.

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[91] City of Palo Alto. *2020 Urban Water Management Plan and Water Shortage Contingency Plan.* June 2021
[92] City of Palo Alto. *2015 Storm Drain Master Plan*. June 2015.
[93] CalRecycle. "Sunnyvale MRF & Transfer Station (43-AA-0009)." Accessed April 15, 2022. Available at: https://www2.calrecycle.ca.gov/SolidWaste/SiteInspection/Index/3376. This average was calculated using the average peak tonnage measured during each of the monthly inspections for 2021.
[94] City of Sunnyvale, Environmental Services Department. "SMaRT Station Annual Report 2018-2019." Accessed: April 15, 2022. Available at: https://sunnyvale.ca.gov/civicax/filebank/blobdload.aspx?blobid=25741.
[95] CalRecycle. "Kirby Canyon Recycle & Disposal Facility (43-AN-0008)." Accessed April 15, 2022. Available at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1370?siteID=3393.
[96] Azevedo, Becky. Technical Manager, Waste Management, Inc. Personal Communication. December 27, 2021.

### 4.19.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the project: | | | | |
| 1) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | ☐ | ☐ | ☒ | ☐ |
| 2) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? | ☐ | ☐ | ☒ | ☐ |
| 3) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | ☐ | ☐ | ☒ | ☐ |
| 4) 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? | ☐ | ☐ | ☒ | ☐ |
| 5) Be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste? | ☐ | ☐ | ☒ | ☐ |

| | |
|---|---|
| **Impact UTL-1:** | The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. **(Less than Significant Impact)** |

The project would connect to the existing utility lines located in the Park Boulevard and Grant Avenue right-of-ways.

#### Water

The proposed project would demand approximately 6,050 gallons per day,[97] which represents a net demand of 4,330 gallons per day compared to existing conditions. Water would be used during project operation for landscape irrigation and employee restrooms and kitchens. The project would include a six-inch domestic water lateral and a 1.5-inch irrigation lateral that stem off the 12-inch

[97]BKF Engineers. *Domestic Water and Sanitary Sewer Demand Memorandum.* May 2021.

water main along Park Boulevard. The project would not generate water flow demands exceeding the capacity of the existing water system and thus, would not require substantial water facility construction or relocation. The project is well below the threshold definition (i.e., 250,000 square feet) of a 'water demand project' for a commercial office use under CEQA Guidelines section 15155.

### Storm Drainage

As described in Section 4.10 Hydrology and Water Quality, the project would create a net decrease of impervious surfaces on-site. Therefore, the project would result in a net decrease of stormwater runoff on-site and would not exceed existing stormwater collection and treatment facilities. The project would not require substantial stormwater facility construction or relocation.

### Wastewater

The project would generate wastewater (refer to UTL-3 for specific forecast daily amounts and available capacity) from employee restrooms and kitchens. The project would not generate a substantial amount of wastewater and would not require substantial wastewater facility construction or relocation.

### Electric Power

The proposed office building and associated parking garage and surface parking lot would use approximately 1,284,461 kilowatt-hours of electricity per year according to CalEEMod.[98] The project proposes to include one stand-by 375-kW generator powered by a 503-HP natural gas engine in the southwest corner of the underground garage. The generator would be operated for testing and maintenance purposes, with a maximum of 50 hours per year of non-emergency operation under normal conditions. The project would not require substantial construction or relocation of existing electric power facilities.

### Natural Gas

The project would be 100 percent electric and would not use any natural gas.

### Telecommunication Facilities

The project would result in an increase in telecommunications on-site. However, the project would not require substantial construction or relocation of telecommunication facilities. **(Less than Significant Impact)**

[98] Illingworth & Rodkin, Inc. *123 Sherman Avenue Office Project Air Quality and Greenhouse Gas Assessment. Attachment 2: CalEEMod Modeling Inputs and Outputs.* May 20, 2022.

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|---|---|
| **Impact UTL-2:** | The project would not have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. **(Less than Significant Impact)** |

The proposed project would generate a net new demand of approximately 4,330 gallons per day,[99] or approximately 4.85 acre-feet of water per year.[100] The City is projected to have a water supply of 10,597 AFY at the time of the buildout of the 2030 Comprehensive Plan and the total water supply available to the City is projected to be 11,710 AFY.[101] This would leave a surplus of approximately 1,113 AFY. Therefore, sufficient water supplies would be available to serve the project. In the event of drought, the City would enact its Water Shortage Contingency Plan and could use local groundwater as a supplemental source of supply. There would be sufficient water supplies available to serve the project during normal, dry, and multiple-dry years. **(Less than Significant Impact)**

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| **Impact UTL-3:** | The project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. **(Less than Significant Impact)** |

The RWQCP is designed to have an average dry weather flow (ADWF) capacity of 39 million gallons per day (MGD).[102] Current average flows are approximately 17 MGD. Therefore, the current average unused capacity of the RWQCP is approximately 22 MGD. The project would generate approximately 5,747 gallons of wastewater per day. This would be a net new demand of approximately 4,113 gallons of wastewater per day (or approximately 0.004 MGD) factoring the wastewater demand of the existing uses on-site. The net new wastewater demand of the project would be a small amount in comparison to the unused capacity of RWQCP. Therefore, there would be sufficient wastewater treatment capacity to serve the project site. **(Less than Significant Impact)**

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| **Impact UTL-4:** | The project would not 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. **(Less than Significant Impact)** |

The project would generate approximately 45 tons of solid waste per year.[103] The proposed project would be required to comply with PAMC Chapter 16.14, Section A4.408.1, which requires a minimum of 80 percent of non-hazardous construction debris to be recycled or salvaged. In addition, the project would be required to prepare a Waste Management Plan for on-site sorting of construction debris to ensure that the project meets the diversion requirement for reused or recycled construction and demolition debris. With implementation of Comprehensive Plan polices, the PAMC, and the Zero Waste Plan, the Comprehensive Plan Update EIR concluded that solid waste generated by future development under the Comprehensive Plan would not exceed the permitted or actual capacity

[99] BKF Engineers. *Domestic Water and Sanitary Sewer Demand Memorandum.* May 2021.
[100] 4,330 gallons/day x $3.0689e^{-6}$ acre-feet/gallon x 365 days/year = 4.850 acre-feet per year
[101] City of Palo Alto. *2020 Urban Water Management Plan and Water Shortage Contingency Plan.* June 2021
[102] City of Palo Alto. "Regional Water Quality Control Plant." Accessed April 18, 2022. Available at: https://cleanbay.org/our-programs/regional-water-quality-control-plant/#RWQCP.
[103] Illingworth & Rodkin, Inc. *123 Sherman Avenue Office Project Air Quality and Greenhouse Gas Assessment. Attachment 2: CalEEMod Modeling Inputs and Outputs.* May 20, 2022.

of existing landfills. For these reasons, the incremental increase in solid waste generated by the proposed project would be accommodated by a landfill with sufficient permitted capacity. **(Less than Significant Impact)**

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| **Impact UTL-5:** | The project would not be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste. **(Less than Significant Impact)** |

See response to Impact UTL-4. **(Less than Significant Impact)**

## 4.20 WILDFIRE

### 4.20.1 Environmental Setting

#### 4.20.1.1 *Regulatory Framework*

#### 4.20.1.2 *Existing Conditions*

The proposed project site is in an urban area surrounded by existing development. The site is not located within an identified Very High Fire Hazard Severity Zone in a State Responsibility Area (SRA) or a Local Responsibility (LRA).[104,105] The project site is not located near wildlands that could present a fire hazard.

### 4.20.2 Impact Discussion

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project: | | | | |
| 1) Substantially impair an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☐ | ☒ |
| 2) 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? | ☐ | ☐ | ☐ | ☒ |
| 3) 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? | ☐ | ☐ | ☐ | ☒ |
| 4) 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? | ☐ | ☐ | ☐ | ☒ |

The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; therefore, the project would not result in wildfire impacts. **(No Impact)**

[104] CAL FIRE. *Santa Clara County Fire Hazard Safety Zone Map – State Responsibility Area.* November 2007.
[105] CAL FIRE. *Santa Clara County Fire Hazard Safety Zone Map – Local Responsibility Area.* October 2008.

## 4.21 MANDATORY FINDINGS OF SIGNIFICANCE

| | Potentially Significant Impact | Less than Significant with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 1) Does 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, substantially 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? | ☐ | ☒ | ☐ | ☐ |
| 2) Does 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.) | ☐ | ☒ | ☐ | ☐ |
| 3) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | ☐ | ☒ | ☐ | ☐ |

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|---|---|
| **Impact MFS-1:** | The project does not 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, substantially 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. **(Less than Significant Impact with Mitigation Incorporated)** |

The project could result in impacts to nesting migratory birds if they are present in trees located on or immediately adjacent to the project site. The project could also result in impacts to buried cultural resources, should they be discovered on site. However, with the implementation of MM BIO-1.1, MM CUL-2.1, MM CUL-2.2, MM CUL-2.3, and MM CUL-3.1 as well as compliance with City ordinance requirements included in the project and described in Section 4 Environmental Setting, Checklist, and Discussion of Impacts, the proposed project would not result in significant environmental impacts to biological and cultural resources. **(Less than Significant Impact with Mitigation Incorporated)**

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| **Impact MFS-2:** | The project does not have impacts that are individually limited, but cumulatively considerable. **(Less than Significant Impact with Mitigation Incorporated)** |

Under Section 15065(a)(3) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has potential environmental effects "that are individually limited, but cumulatively considerable." As defined in Section 15065(a)(3) of the CEQA Guidelines, cumulatively considerable means "that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." In addition, under Section 15152(f) of the CEQA Guidelines, where a lead agency has determined that a cumulative effect has been adequately addressed in a prior EIR, the effect is not treated as significant for purposes of later environmental review and need not be discussed in detail.

The project would not impact agricultural, forestry, or mineral resources. Therefore, the project would not contribute to cumulative impacts to these resources.

The project's geology and soils and hazardous materials impacts are specific to the project site and would not contribute to cumulative impacts elsewhere. Given the nature of the proposed commercial building, the project would have a minimal impact on population and housing, public services, and recreational facilities and would not make a considerable contribution towards a cumulative impact, and the project's impacts have been accounted for in the General Plan EIR given the proposed development is consistent with growth projections for the site.

The project would have the potential to result in cumulative hydrology and water quality impacts and noise impacts. As noted in Hydrology and Water Quality, the project would slightly decrease impervious surfaces on site and provide stormwater retention facilities, which together would reduce the site's contribution to cumulative water quality and urban runoff volume impacts. With implementation of BMPs and compliance with City policies pertaining to stormwater and drainage as well as noise-related conditions of approval, the project would have less than significant impacts and not contribute to significant cumulative impact for those resource areas.

The project would increase tree planting on the site but would remove existing trees and has the potential to impact avian nesting activity. Other projects in Palo Alto and surrounding jurisdictions would be required to comply with state and federal requirements (and MM BIO-1.1) for the protection of nesting birds. Thus, a cumulative impact would not occur.

The project would not impact any historic structures and has a low sensitivity for archaeological resources. Other projects in the vicinity would have a similar low sensitivity for archaeological resources, though projects closer to freshwater sources would have a higher sensitivity. All cumulative projects would be required to implement mitigation measures similar to MM CUL-2.1, MM CUL-2.2, MM CUL-2.3, and MM CUL-3.1. Thus, a cumulative cultural resources impact would not occur.

The project would not be expected to have a significant VMT impact, per the screening criteria in the City's VMT Policy. Other projects in the vicinity of the project site would also have access to the high-quality transit available in the area and thus, would also have less than significant VMT

impacts. As a result, the project would not contribute to a significant cumulative transportation impact.

As previously described in Section 4,19 Utilities and Service Systems, the City would have sufficient water supply, wastewater treatment capacity, and landfill capacity to accommodate the project and further anticipated growth within the City. Any construction, relocation, or modifications of utility lines by cumulative projects would be subject to standard construction-related conditions of approval and would not result in a significant environmental effect. Therefore, the project would not contribute to significant utility and service systems impacts and the project's impacts have been accounted for in the General Plan EIR given the proposed development is consistent with growth projections for the site.

The project would emit criteria air pollutants and GHG emissions and contribute to the overall regional and global emissions of such pollutants. By its very nature, air pollution and GHG emissions are largely a cumulative impact. The project-level air quality thresholds identified by BAAQMD (which the project's impacts were compared to in Section 4.3) are the basis for determining whether a project's individual impact is cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. As discussed in Section 4.3, the project would have a less than significant impact on air quality. Cumulative community health risk impacts were evaluated as part of this project in Section 4.3 and were found to be less than significant. For this reason, the project would have a less than significant cumulative impact on air quality overall. As discussed in Section 4.8, the project would have a less than significant impact on greenhouse gas emissions and climate change. For this reason, the project would have a less than significant cumulative impact on climate change overall. **(Less than Significant Impact with Mitigation Incorporated)**

| | |
|---|---|
| **Impact MFS-3:** | The project does not have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly. **(Less than Significant Impact with Mitigation Incorporated)** |

Consistent with Section 15065(a)(4) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to cause substantial adverse effects on human beings, either directly or indirectly. Under this standard, a change to the physical environment that might otherwise be minor must be treated as significant if people would be significantly affected. This factor relates to adverse changes to the environment of human beings generally, and not to effects on particular individuals. While changes to the environment that could indirectly affect human beings would be represented by all of the designated CEQA issue areas, those that could directly affect human beings include construction air quality, hazardous materials (groundwater and soil vapor with VOCs that could be released into the environment due to earth-disturbing activities) and noise. Implementation of mitigation measures and City policies would, however, reduce these impacts to a less than significant level. No other direct or indirect adverse effects on human beings have been identified. **(Less than Significant Impact with Mitigation Incorporated)**

# SECTION 5.0 REFERENCES

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# SECTION 6.0 LEAD AGENCY AND CONSULTANTS

## 6.1 LEAD AGENCY

**City of Palo Alto**
***Planning and Development Services***
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# SECTION 7.0 ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ABAG | Association of Bay Area Governments |
| ACM | Asbestos-containing material |
| ADWF | Average dry weather flow |
| AFY | Acre-feet per year |
| AIA | Airport Influence Area |
| ATCM | Airborne Toxics Control Measure |
| BAAQMD | Bay Area Air Quality Management District |
| Bgs | Below ground surface |
| BMPs | Best Management Practices |
| Btu | British thermal units |
| CalARP | California Accidental Release Program |
| CalEPA | California Environmental Protection Agency |
| CAL FIRE | California Department of Forestry and Fire Protection |
| CALGreen | California Green Building Standards Code |
| Cal/OSHA | California Department of Industrial Relations, Division of Occupational Safety and Health |
| CalTrans | California Department of Transportation |
| CAP | Clean Air Plan |
| CARB | California Air Resources Board |
| CBC | California Building Code |
| CDFW | California Department of Fish and Wildlife |
| CEC | California Energy Commission |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CEQA | California Environmental Quality Act |
| CFCs | Chlorofluorocarbons |
| CGS | California Geological Survey |
| $CH_4$ | Methane |
| CMP | Congestion Management Plan |
| CNEL | Community noise level equivalent |
| CO | Carbon monoxide |

| | |
|---|---|
| COE | California-Olive-Emerson |
| $CO_2$ | Carbon dioxide |
| $CO_2e$ | Carbon dioxide equivalent |
| CPAU | City of Palo Alto Utilities |
| CRHR | California Register of Historical Resources |
| CUPA | Certified Unified Program Agency |
| DBCP | 1,2-dibromo-3-chloropropane |
| DIPE | Diisopropyl ether |
| DNL | Day-night level |
| DPM | Diesel particulate matter |
| DSOD | Department of Water Resource, Division of Safety of Dams |
| DTSC | Department of Toxic Substances Control |
| DWR | Department of Water Resources |
| EIR | Environmental Impact Report |
| EO | Executive Order |
| EPA | Environmental Protection Agency |
| ESA | Environmental Site Assessment |
| EV | Electric vehicle |
| FAA | Federal Aviation Administration |
| FAR | Federal Aviation Regulations |
| FAR | Floor area ratio |
| FEMA | Federal Emergency Management Agency |
| FHSZ | Fire Hazard Severity Zones |
| FIRM | Flood Insurance Rate Map |
| FMMP | Farmland Mapping and Monitoring Program |
| FTA | Federal Transit Administration |
| GHGs | Greenhouse gases |
| GWh | Gigawatt hours |
| GWP | Global warming potential |
| HFCs | Hydrofluorocarbons |
| HI | Hazard Index |
| HP | horsepower |
| HSWA | Federal Hazardous and Solid Waste Amendments |
| HSP | Health and Safety Plan |

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|---|---|
| HVAC | Heating, ventilation, and air conditioning |
| I-280 | Interstate 280 |
| In./sec | Inches/second |
| ITE | Institute of Transportation Engineers |
| kW | kilowatt |
| LID | Low-impact development |
| LOS | Level of service |
| LRA | Local Responsibility Area |
| LTA | Local transportation analysis |
| MBTA | Migratory Bird Treaty Act |
| MEI | Maximally exposed individual |
| MGD | Million gallons per day |
| $MMTCO_2e$ | Million metric tons of $CO_2E$ |
| MND | Mitigated Negative Declaration |
| Mpg | Miles per gallon |
| Mph | Miles per hour |
| MRP | Municipal Regional Stormwater NPDES Permit |
| MTC | Metropolitan Transportation Commission |
| NAHC | Native American Heritage Commission |
| NCP | National Contingency Plan |
| NESHAP | National Emission Standards for Hazardous Air Pollutants |
| NFIP | National Flood Insurance Program |
| NHPA | National Historic Preservation Act |
| $N_2O$ | Nitrous oxide |
| NOAA | National Ocean and Atmospheric Administration |
| NOD | Notice of Determination |
| NOI | Notice of Intent |
| $NO_2$ | Nitrogen dioxide |
| $NO_x$ | Nitrogen oxide |
| NPDES | National Pollutant Discharge Elimination System |
| NRHP | National Register of Historic Places |
| $O_3$ | Ground-level ozone |
| OCP | Organochlorine pesticides |
| OMMP | Operations, Maintenance, and Monitoring Plan |

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|---|---|
| OPR | Office of Planning and Research |
| PAFD | Palo Alto Fire Department |
| PAMC | Palo Alto Municipal Code |
| PAPD | Palo Alto Police Department |
| PCBs | Polychlorinated biphenyls |
| PDAs | Priority Development Areas |
| PFCs | Perfluorocarbons |
| PM | Particulate matter |
| PPV | Peak particle velocity |
| RCRA | Resource Conservation and Recovery Act |
| R&D | Research and development |
| RHNA | Regional Housing Need Allocation |
| RP | Research Park |
| RWQCB | Regional Water Quality Control Board |
| RWQCP | Regional Water Quality Control Plant |
| SB | Senate Bill |
| S/CAP | Sustainability and Climate Action Plan |
| SCS | Sustainable Communities Strategy |
| Sf | Square feet |
| $SF_6$ | Sulfur hexafluoride |
| SFHA | Special Flood Hazard Area |
| SFPUC | San Francisco Public Utilities Commission |
| SHMA | Seismic Hazards Mapping Act |
| SMARA | Surface Mining and Reclamation Act |
| SMaRT | Sunnyvale Materials Recovery and Transfer |
| SMGB | State Mining and Geology Board |
| SMP | Site Management Plan |
| $SO_x$ | Sulfur oxide |
| SR | State Route |
| SRA | State Responsibility Area |
| SWPPP | Storm Water Pollution Prevention Plan |
| SWRCB | State Water Resources Control Board |
| TAC | Toxic air contaminant |
| TCRs | Tribal Cultural Resources |

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|---|---|
| TDM | Transportation Demand Management |
| TDS | Tree Disclosure Statement |
| TPHd | Total petroleum hydrocarbon diesel range organics |
| TPHg | Total petroleum hydrocarbon gasoline range |
| TPHmo | Total petroleum hydrocarbon motor oil organics |
| TSCA | Toxic Substances Control Act |
| USACE | United States Army Corps of Engineers |
| USFWS | United States Fish and Wildlife Service |
| UWMP | Urban water management plan |
| VMT | Vehicle miles traveled |
| VOC | Volatile organic compound |