

123 Independence Drive Residential Project

DRAFT ENVIROMENTAL IMPACT REPORT

SCH No. 2021010076
November 2022



Prepared for:

CITY OF MENLO PARK
701 Laurel Street
Menlo Park, California 94025

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Draft Environmental Impact Report

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Acronyms and Abbreviations

Acronym or Abbreviation	Definition
°C	degrees Celsius
°F	degrees Fahrenheit
µg/m ³	micrograms per cubic meter
1,1,1-TCA	1,1,1-Trichloroethane
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACC	Advanced Clean Cars
ACM	asbestos-containing material
ADA	Americans with Disabilities Act
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
AIA	Airport Influence Area
ANSI	American National Standards Institute
APN	Assessor's Parcel Number
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BAWSCA	Bay Area Water Supply and Conservation Agency
Bay	San Francisco Bay
BCDC	San Francisco Bay Conservation and Development Commission
bgs	below ground surface
BMP	best management practice
BMR	Below Market Rate
C/CAG	City/County Association of Governments of San Mateo County
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
C/CAG	City/County Association of Governments
CCR	California Code of Regulations
CC&Rs	Covenants, Conditions, and Restrictions
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act

Acronym or Abbreviation	Definition
CESA	California Environmental Species Act
CFC	chlorofluorocarbon
CGS	California Geological Survey
CH ₄	methane
City	City of Menlo Park
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO ₂	carbon dioxide
County	San Mateo County
CPCU	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted sound level
DOF	California Department of Finance
DPF	Diesel Particulate Filters
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances and Control
DU	dwelling unit
du/ac	dwelling units/acre
EIR	environmental impact report
EISA	Energy Independence and Security Act
EO	Executive Order
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
ESA	federal Endangered Species Act
ESA	Environmental Site Assessment
ESMP	Environmental Site Management Plan
EV	electric vehicle
FAR	floor area ratio
FDS	Flow Diversion Structure
FEMA	Federal Emergency Management Agency
FICON	Federal Interagency Committee on Noise
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
G&D Guidelines	Grading and Drainage Guidelines
GHG	greenhouse gas
GO 95	General Order 95

Acronym or Abbreviation	Definition
GWP	global warming potential
HAP	hazardous air pollutant
HARP2	Hotspots Analysis and Report Program Version 2
HCFC	hydrochlorofluorocarbons
HFC	hydrofluorocarbon
HNA	Housing Needs Assessment
HRA	Health Risk Assessment
HTWTP	Harry Tracy Water Treatment Plant
HVAC	heating, ventilation, and air conditioning
Hz	Hertz
in/sec	inches/second
IPCC	Intergovernmental Panel on Climate Change
ISO	Insurance Services Office
ITE	Institute of Transportation Engineers
kBTU	thousand British thermal units
kph	kilometers per hour
kWh	kilowatt-hour
LBP	lead-based paint
L_{dn}	day/night average noise level
LEED	Leadership in Energy and Environmental Design
L_{eq}	equivalent sound level
LHMP	Local Hazard Mitigation Plan
L_{max}	maximum noise level
L_{min}	minimum noise level
LOS	level of service
LRA	Local Responsibility Area
MERV 13	Minimum Efficiency Reporting Value 13
mgd	million gallons per day
MM	mitigation measure
MMT	million metric tons
MPFPD	Menlo Park Fire Protection District
mph	miles per hour
MPMW	Menlo Park Municipal Water
MPO	metropolitan planning organizations
MPPD	Menlo Park Police Department
MRP	Municipal Regional Stormwater Permit
MT	metric tons
MT CO _{2e}	metric tons of CO ₂ equivalent
MTC	Metropolitan Transportation Commission
MUTCD	Manual on Uniform Traffic Control Devices
MW	megawatt
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards

Acronym or Abbreviation	Definition
NAHC	Native American Heritage Commission
NEHRP	National Earthquake Hazards Reduction Program
NF ₃	nitrogen trifluoride
NHTSA	National Highway Traffic Safety Administration
NO ₂	nitrogen dioxide
NOP	Notice of Preparation
NO _x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRHP	National Register of Historic Places
O ₂	molecular oxygen
O ₃	ozone
OEHHA	Office of Environmental Health Hazards Assessment
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyl
PCE	Peninsula Clean Energy Authority
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric Company
PM ₁₀	coarse particulate matter
PM _{2.5}	fine particulate matter
ppm	parts per million
ppb	parts per billion
PRC	California Public Resources Code
ppv	peak particle velocity
project	123 Independence Drive Residential Project
Ravenswood CSD	Ravenswood City School District
RCRA	Resource Conservation and Recovery Act of 1976
REC	recognized environmental condition
RFS	Renewable Fuel Standard
RHNA	Regional Housing Needs Allocation
R-MU	Residential Mixed-Use
R-MU-B	Residential Mixed-Use Bonus
ROG	reactive organic gas
RPS	Renewables Portfolio Standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAFE I	Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF ₆	sulfur hexafluoride
SFBAAB	San Francisco Bay Area Air Basin
SFPUC	San Francisco Public Utilities Commission

Acronym or Abbreviation	Definition
SFRWQCB	San Francisco Regional Water Quality Control Board
SLM	sound level meter
SMCEHD	San Mateo County Environmental Health Division
SMCWPPP	San Mateo Countywide Water Pollution Prevention Program
SO ₂	sulfur dioxide
SORE	small off-road engines
SPCC	spill prevention, control, and countermeasure
SRA	State Responsibility Area
SUHSD	Sequoia Union High School District
SVCW	Silicon Valley Clean Water
SVWTP	Sunol Valley Water Treatment Plant
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAZ	transportation analysis zone
TDM	Transportation Demand Management
TIA	Transportation Impact Analysis
TIF	Transportation Impact Fee
TISG	Transportation Impact Study Guide
TMDL	total maximum daily load
TMP	Transportation Master Plan
TNM	Traffic Noise Model
TSF	thousand square feet
UNFCCC	United Nations Framework Convention on Climate Change
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
UWMP	Urban Water Management Plan
VMT	vehicle miles traveled
VOC	volatile organic compound
WBSD	West Bay Sanitary District
Wh	watt hours
WSCP	Water Shortage Contingency Plan
WTP	water treatment plant
WWTP	Wastewater Treatment Plant
ZEV	zero-emission vehicle

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1 Executive Summary

1.1 Introduction

The California Environmental Quality Act (CEQA) requires that local government agencies, before taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An environmental impact report (EIR) is a document designed to provide the public and local and state governmental agency decision makers an analysis of potential environmental consequences of a project to support informed decision making.

The City of Menlo Park (City) prepared this Draft EIR to provide the public and responsible agencies information about the potential adverse impacts on the local and regional environment associated with implementation of the 123 Independence Drive Residential Project (project or proposed project). This Draft EIR was prepared pursuant to CEQA, codified at California Public Resources Code Section 21000 et seq., and the CEQA Guidelines in the California Code of Regulations, Title 14, Section 15000 et seq.

CEQA requires EIRs to include a brief summary of a project and its environmental consequences. This section provides a summary of the Draft EIR for the project. The summary must include each significant impact with proposed mitigation measures and alternatives that would reduce or avoid that effect; areas of controversy known to the lead agency, including issues raised by agencies and the public; and issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects (14 CCR 15123). In accordance with these requirements, this section provides a summary of the project and project impacts, lists mitigation measures and alternatives, describes areas of known controversy, and discusses issues to be resolved.

1.2 Project Location

The approximately 8.15-acre project site (355,185 square feet on Assessor's Parcel Numbers [APNs] 055-236-140, 055-236-180, 055-236-240, 055-236-300, and 055-236-280) is located in the Bayfront Area of the City. The Bayfront Area is generally bounded by San Francisco Bay to the north; Redwood City to the west; East Palo Alto to the southeast; and Bay Road and the Menlo Park neighborhoods of Belle Haven, Flood Triangle, Suburban Park, and Lorelei Manor to the south. The Bayfront Area has historically been developed with industrial, warehousing, and office uses.

Locally, the project site extends northwest from the intersection at Independence Drive and Chrysler Drive, and a portion of the site is bound on the north by Constitution Drive. The site is north of US 101, south of Bayfront Expressway (State Route 84), and east of Marsh Road. Flood Slough is approximately 884 feet (270 meters) northwest of the project site; Ravenswood Slough is 0.5 miles (798 meters) east of the project site.

1.3 Project Objectives

The primary objectives sought by the project are as follows:

- Provide a mix of housing types.
- Help the City and region achieve a better jobs/housing ratio by replacing office space with housing.

- Provide a pedestrian connection between Constitution Drive and Independence Drive to improve pedestrian circulation in the area.
- Alleviate traffic by providing housing close to a jobs center and public transit such as buses and shuttles.
- Develop the site at a sufficient density and intensity to provide the City with community benefits, including affordable housing.
- Provide enough market-rate residential units to have an economically viable and feasible project.
- Provide for-rent and for-sale affordable housing, where the for-sale affordable housing is organized to permit the use of tax-exempt bond financing.
- Support the City's sustainability goals by complying with the Building Energy Efficiency Standards in the California Building Code (Title 24, Parts 6 and 11) and local energy efficiency requirements and contributing to reduced mobile emissions by siting residential uses in a job-rich area.
- Provide residential and recreational uses in the Bayfront Area consistent with the City's General Plan policies that promote residential development in the area.

1.4 Project Description

Project Summary

The proposed project would include demolition of five existing office and industrial buildings (a total of approximately 129,511 square feet of building space with a footprint of 103,900 square feet); alteration of the existing parcel boundaries to create five new lots, including four building lots (A, B, C, and D) and one open space lot (Lot 1); construction of 116 for-sale townhomes and 316 rental apartments, along with associated parking and landscaping; and provision of a wide pedestrian walkway (referred to in the site plans and throughout this EIR as a "paseo") from Constitution Drive to Independence Drive. The complete plan set for the proposed project is provided in Appendix B.

The townhomes would be constructed on the southern half of the project site, adjacent to Independence Drive, to be located on Lots B, C, and D. These lots would contain a total of 116 three-story townhomes with one- or two-car garages that would be oriented to public streets, internal streets, and internal pedestrian pathways. On Lot A, which would comprise the northern portion of the project site, a five-story apartment building would be constructed fronting on Constitution Drive. This building would include 316 apartments providing approximately 224,863 gross square feet of residential uses. The ground floor level of the apartment building would also include a leasing office, two mail rooms, a co-working space, a pet spa, and two lobbies. The second floor would include a fitness room and clubhouse. The third floor would include an approximately 648-square-foot amenity space, for which the specific use or function has not yet been defined. The fifth floor would include an approximately 588-square-foot lounge. Parking for residents would be provided in a parking structure located interior to the building, with one level of parking on the ground-floor level and one level below grade. Two interior courtyards would be placed at the second-floor level, above the parking structure. See Table 3-1 for a list of the proposed project land uses.

Project Construction

If approved, construction of the project is anticipated to begin in 2023 and would occur over a 50-month period in a single, continuous building phase. It is anticipated that the project would be under construction with simultaneous activity on each of the residential lots. Construction staging would take place within the confines of each respective

component; however, if a portion of the project is not under construction, that component would be used for staging, which would include material and equipment storage, and construction trailer parking.

Demolition activities are anticipated to occur over a 13-week period. Site preparation and grading would occur over a 10-week period. Exterior work, such as foundation installation, building construction, and architectural coating, is expected to occur over a 3.75-month period (which would be from September 2024 through May 2028 if demolition begins in September 2023). Paving of the entire site would occur over a 2-month period after the initial exterior work is completed and concurrent with early stages of building construction (generally between November 2024 and January 2025 based on the anticipated September 2023 start of demolition). Residential buildings would be occupied by the end of 2028.

Construction fencing would be installed around the perimeter of the entire project site during construction to prevent pedestrian and non-construction-related vehicle access. As aspects of the project are completed, the construction fencing may be reduced to encompass only the parts of the site that remain under construction.

1.5 Discretionary Actions and Use of This EIR

City Approvals

As lead agency for consideration of the proposed project, the City would be responsible for many of the approvals required for project development. As part of the approval process, the Menlo Park Planning Commission would be required to exercise its independent review to determine whether to certify this EIR as adequate under CEQA, adopt CEQA findings and a Mitigation Monitoring and Reporting Program, and to approve the requested Use Permit, Architectural Control, Below Market Rate Housing Agreement, and Heritage Tree Removal Permit. Approval of the Vesting Tentative Subdivision Map would be at the discretion of the City Council. Brief descriptions of each of these discretionary approvals are provided in Chapter 2.

In addition, a Housing Needs Assessment and a Fiscal Impact Analysis have been prepared for informational purposes. Finally, to qualify for bonus-level development within the R-MU-B zoning district, the proposed project would be required to complete an appraisal process to identify the required value of the community amenities and a financial analysis of the sponsor's proposed community amenities to determine the value of the amenities proposed.

Responsible, Trustee, and Reviewing Agencies

This EIR will be used by responsible agencies and trustee agencies and other reviewing agencies that may have some approval authority or non-approval input related to the proposed project (i.e., to issue a permit), as listed below. The project sponsor would obtain all permits, as required by law.

The project would require the following approvals from other agencies and service districts:

- **Bay Area Air Quality Management District:** Job Number (J) Permit for asbestos removal during demolition; permits for on-site generators, boilers, and other utility equipment
- **California Department of Transportation:** Review of traffic circulation effects and consultation on potential traffic improvements that may affect state highway facilities, ramps, and intersections
- **California Regional Water Quality Control Board/San Mateo Countywide Water Pollution Prevention Program:** Approval of National Pollutant Discharge Elimination System permit for stormwater discharge

- **City/County Association of Governments of San Mateo County:** Review of potential effects on Routes of Regional Significance
- **Menlo Park Fire Protection District:** Residential Site Plan Review
- **Menlo Park Municipal Water:** Approval of water hookups
- **PG&E:** Approval of connection permits
- **San Mateo County Environmental Health Services Division:** Review of on-site generators
- **San Mateo County Transportation Authority:** Review of potential effects on public transit
- **San Mateo County Water Pollution Prevention Program:** C.3 and C.6 Development Review Checklist
- **West Bay Sanitary District:** Approval of wastewater hookups

1.6 Summary of Impacts

Table 1-1 presents a summary of the environmental impacts that could result from the project, mitigation measures, and the level of significance of the impact after implementation of the mitigation measures.

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Aesthetics			
Impact 4.1-1: Would the project have a substantial adverse effect on a scenic vista?	No Impact	No mitigation measures are required.	N/A
Impact 4.1-2: Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact	No mitigation measures are required.	N/A
Impact 4.1-3: In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.1-4: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.1-5: Would the project have a cumulative effect on aesthetic resources?	No Impact	No mitigation measures are required.	N/A
Air Quality			
Impact 4.2-1: Would the project conflict with or obstruct implementation of the applicable air quality plan?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.2-2: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the Project	Potentially Significant	MM 4.2a Fugitive Dust Reduction The project shall implement the following during construction:	Less than Significant Impact with Mitigation Incorporated

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
region is non-attainment under an applicable federal or state ambient air quality standard?		<ol style="list-style-type: none"> 1. All exposed surfaces (e.g., parking/staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. 2. All haul trucks transporting soil, sand, or other loose material off site shall be covered. 3. All visible mud or dirt track-out onto local roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. 4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph). 5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. 6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. 7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. 	

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.	
Impact 4.2-3: Would the project expose sensitive receptors to substantial pollutant concentrations?	Potentially Significant	<p>MM 4.2b Construction Equipment Emissions Reductions</p> <p>To reduce the potential for TAC emissions, specifically diesel particulate matter (DPM) as a result of construction of the project, the applicant shall:</p> <p>a. Prior to the start of construction activities, the project applicant, or its designee, shall ensure that all 50-horsepower or greater diesel-powered equipment is powered with California Air Resources Board (CARB)-certified Tier 4 Final engines or better. Such equipment shall be outfitted with Best Available Control Technology (BACT) devices including, but not limited to, a CARB-certified Level 3 Diesel Particulate Filters (DPFs). Additionally, the City shall include this requirement in applicable bid documents, and successful contractor(s) must demonstrate the ability to supply compliant equipment prior to the commencement of the grading activity. A copy of each unit's certified tier specification and CARB or Bay Area Air Quality Management District (BAAQMD) operating permit (if applicable) should be available upon request at the time of mobilization of each applicable unit</p>	Less than Significant Impact with Mitigation Incorporated

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>of equipment. The City should require periodic reporting and provision of written documentation by contractors to ensure compliance, and conduct regular inspections to the maximum extent feasible to ensure compliance.</p> <p>In the event that the City finds that Tier 4 Final construction equipment is not feasible pursuant to California Environmental Quality Act Guidelines Section 15364, the project representatives or contractors must provide written documentation supported by substantial evidence that is reviewed and approved by the City before using other technologies/strategies. Before an exemption may be considered by the City, the applicant shall: (1) be required to demonstrate that two construction fleet owners/operators in the Bay Area region were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within the Bay Area region; and (2) the proposed replacement equipment has been evaluated using the California Emissions Estimator Model or other industry standard emission estimation method and documentation provided to the City to confirm the project-generated emissions do not exceed applicable BAAQMD mass daily thresholds of significance.</p> <p>Alternative applicable strategies may include, but would not be limited to, Tier 4 Interim construction equipment and/or reduction in the</p>	

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>number and/or horsepower rating of construction equipment, if appropriate.</p> <p>The construction contractor(s) shall maintain equipment maintenance records for the construction portion of the project. All construction equipment must be tuned and maintained in compliance with the manufacturer's recommended maintenance schedule and specifications. Upon request for inspection, construction contractor(s) shall make available all maintenance records for equipment used on site within one business day (either hardcopy or electronic versions).</p>	
Impact 4.2-4: Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.2-5: Would the project have a cumulative effect on air quality resources?	Potentially Significant	MM 4.2a MM 4.2b	Less than Significant Impact with Mitigation Incorporated
Biological Resources			
Impact 4.3-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Potentially Significant	MM 4.3a Pre-construction Surveys for Bat Roosts. To the extent practicable, demolition of existing structures should occur outside the bat maternity season when dependent young would be present, which generally occurs from April to September in California. Prior to the removal of trees or the demolition of buildings, a bat survey shall be performed by a qualified bat biologist no more than 3 days prior to the start of construction activities. A qualified bat biologist shall have at least 2 years of experience	Less than Significant Impact with Mitigation Incorporated

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>conducting bat surveys that resulted in detections for relevant species, such as pallid bat and Townsend's big-eared bat, with verified project names, dates, and references, and experience with relevant equipment used to conduct bat surveys. The survey should include a determination on whether active bat roosts are present on or within 50 feet of the project site. The survey shall include a visual inspection of potential roosting features (e.g., cavities, crevices in wood and bark, exfoliating bark, suitable canopy for foliage roosting species, attics, eaves).</p> <p>If no evidence of bat roosting is found, the project sponsor shall complete the following:</p> <ul style="list-style-type: none"> ▪ Submit a memorandum prepared by the biologist who completed the survey describing survey methods, conditions, and results of the survey. ▪ No further action is required if the trees and buildings are removed prior to the next breeding season (the following April). ▪ If demolition is not completed by the following April, a new bat survey shall be completed by a qualified biologist no more than three days prior to any further demolition or tree removal. <p>If the survey identifies active bat roosts, or buildings scheduled for demolition, or trees scheduled for removal as potential bat habitat, demolition and tree removal may not begin, or resume, and the project sponsor shall complete the following:</p>	

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<ul style="list-style-type: none"> Retain a qualified biologist to conduct an evening visual emergence survey of the source building(s) from 0.5 hours before to 1 or 2 hours after sunset for a minimum of 2 nights, using night-vision goggles and/or passive acoustic detectors/monitoring equipment to assist in species identification. If roosting is found to occur on site, the project sponsor and qualified biologist must prepare an appropriate bat eviction and exclusion plan which will recognize maternity and winter roosting seasons as vulnerable seasons for bats, and require exclusion outside of these times, for example, dates generally between March 1 and April 15 or September 1 and October 15 are suitable times for exclusion; identify suitable areas for excluded bats to disperse or require installation of appropriate dispersal habitat, such as artificial bat houses, prior to project activities, and include an associated management and monitoring plan with implementation and funding; and include a requirement that exclusion materials shall be re-evaluated for effectiveness by the qualified biologist up to 2 weeks prior to building demolition. Locations and procedures for the implementation of bat boxes shall be determined by a qualified biologist and consultation with the California Department of Fish and Wildlife to reduce the likelihood of mortality of the evicted bats. 	

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<ul style="list-style-type: none">▪ If maternity roosts are identified during the maternity roosting season (between the months of April and September), avoid all disturbance to such roosts until a qualified biologist has determined the young bats are no longer roosting.▪ If a female or maternity colony of bats is found on the project site, construction activities shall be conducted outside of the maternity roost season (after September 1 and before April 15), if feasible.▪ If an active maternity roost is documented on-site and the project cannot be conducted outside of the maternity roosting season, a qualified biologist shall implement a construction-free buffer zone around the active roost to ensure the continued success of the colony. Such buffer zones may include a construction-free barrier of 200 feet from the roost. If implementing a construction-free buffer during the maternity roosting season is not feasible for the project, then bats shall be excluded from the site after September 1 and before October 15, and/or after March 1 and before April 15, to prevent the formation of maternity colonies. Non-breeding bats shall be safely evicted under the direction of a qualified biologist.	

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<ul style="list-style-type: none"> - If the qualified biologist identifies potential bat habitat trees, then tree trimming and tree removal shall not proceed unless the following occurs: (1) a qualified biologist conducts night emergence surveys or completes visual examination of roost features that establishes absence of roosting bats or (2) tree trimming and tree removal occurs only during seasonal periods of non-breeding bat activity, from approximately March 1 through April 15 and September 1 through October 15, and tree removal occurs using the two-step removal process. Two-step tree removal shall be conducted over two consecutive days. The first day (in the afternoon), under the direct supervision and instruction by a qualified biologist with experience conducting two-step tree removal, limbs and branches shall be removed by a tree cutter using chainsaws only; limbs with cavities, crevices or deep bark fissures shall be avoided. The second day the entire tree shall be removed. 	
Impact 4.3-2: Would the project 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 California Department of Fish and Game or U.S. Fish and Wildlife Service?	No impact	No mitigation measures are required.	N/A
Impact 4.3-3: Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to,	No impact	No mitigation measures are required.	N/A

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			
Impact 4.3-4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Potentially Significant	MM 4.3b Pre-construction Survey for Nesting Birds. If project construction activities are scheduled to occur during the nesting season (March 1 to August 31), a pre-construction nesting bird survey should be conducted by a qualified biologist within 7 days prior to construction activities to determine if any native birds are nesting on or near the project site (including a 250-foot buffer for raptors). If any active nests are observed during surveys, a suitable avoidance buffer will be determined by the qualified biologist based on species, location and planned construction activity. These nests would be avoided until the chicks have fledged and the nests are no longer active as determined by the qualified biologist.	Less than Significant Impact with Mitigation Incorporated
Impact 4.3-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.3-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No Impact	No mitigation measures are required.	N/A
Impact 4.3-7: Would the project have a cumulative effect on biological resources?	No Impact	No mitigation measures are required.	N/A

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Cultural Resources			
Impact 4.4-1: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	No Impact	No mitigation measures are required.	N/A
Impact 4.4-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Potentially Significant	MM 4.4a Extended Phase I Investigation Prior to issuance of a demolition permit, the City shall verify that the project sponsor has retained a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, to develop and implement an Extended Phase I Archaeological Assessment of the project site to test for buried archaeological deposits to the depth of the project's grading, trenching, and excavation. This Extended Phase 1 Assessment shall include subsurface testing of the project site through mechanical trenching to allow the archaeologist to observe subsurface conditions and locate any buried cultural deposits, features or artifacts. Following demolition of existing buildings and removal of pavement and other impervious surfaces at the project site and prior to commencement of grading, trenching, and excavation, the Extended Phase I Assessment shall be completed, and the archaeologist shall document any findings and subsurface conditions in an Extended Phase 1 report which shall be submitted to the City. If the Extended Phase I Investigation identifies archaeological resources, the archaeologist shall evaluate the find to determine its significance under CEQA (14 CCR 15064.5[f]; Public Resources Code Section 21082), consistent with MM-4.4b.	Less than Significant Impact with Mitigation Incorporated

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>MM 4.4b Unanticipated Discovery of Archaeological Resources</p> <p>In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the proposed project, all construction work occurring within 50 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Construction activities may not resume in the area immediate to the discovery until authorized by the archaeologist. Depending upon the significance of the find under CEQA (14 CCR 15064.5[f]; Public Resources Code Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work such as preparation of an archaeological or tribal cultural treatment plan, testing, or data recovery would be warranted. Examples of treatment for archaeological resources, in no order of preference, may include, but are not limited to, any of the following: (1) avoiding the resource, (2) establishing a permanent conservation easement over the resource, (3) capping or covering archaeological site with a layer of soil before building on the site, and (4) having parks, greenspace, or other open space incorporate the archaeological site. Excavation and curation shall be the last considered treatment for archaeological resources.</p>	

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Impact 4.4-3: Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.4-4: Would the project have a cumulative effect on cultural resources?	Less than Significant	MMs 4.4a and 4.4b as listed above.	Less than Significant Impact with Mitigation Incorporated
Energy			
Impact 4.5-1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.5-2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.5-3: Would the project have a cumulative effect on energy resources?	Less than Significant	No mitigation measures are required.	N/A
Geology and Soils			
Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			
a. Impact 4.6-1: 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?	No Impact	No mitigation measures are required.	N/A
b. Impact 4.6-2: Strong seismic ground shaking?	Less than Significant	No mitigation measures are required.	N/A
c. Impact 4.6-3: Strong seismic-related ground failure, including liquefaction?	Less than Significant	No mitigation measures are required.	N/A
d. Impact 4.6-4: Landslides?	Less than Significant Impact	No mitigation measures are required.	N/A

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Impact 4.6-5: Would the project result in substantial soil erosion or the loss of topsoil?	Less than Significant Impact	No mitigation measures are required.	N/A
Impact 4.6-6: Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	Potentially Significant	<p>MM 4.6a</p> <p>Prior to issuance of a grading permit, the project developer shall submit to the City an analysis prepared by a qualified geotechnical consultant regarding the effects of dewatering on nearby buildings and the proposed design of the shoring and dewatering systems and confirming that the geotechnical aspects of the proposed shoring system meets the Geotechnical Investigation requirements. The analysis shall demonstrate that the shoring and dewatering systems minimize the amount of dewatering required and that dewatering will not result in structural damage to improvements on adjacent properties. If the estimated settlements are not acceptable, the dewatering and shoring system shall include measures to reduce settlement, such as installing a secant pile or continuous soil-cement mix wall to shore the excavation as well as cut off lateral groundwater flow, thus reducing the amount of dewatering required from within the excavation.</p> <p>MM 4.6b</p> <p>Prior to issuance of a grading permit, the City shall ensure that the proposed grading and construction schedule provides for fill placement to occur a minimum of 3 months prior to foundation installation, consistent with the recommendations provided in the Geotechnical Investigation prepared for the project by Rockridge Geotechnical.</p>	Less than Significant Impact with Mitigation Incorporated

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Impact 4.6-7: Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?	No Impact	No mitigation measures are required.	N/A
Impact 4.6-8: Would the project 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	No mitigation measures are required.	N/A
Impact 4.6-9: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially Significant	MM 4.6c In the event that fossils or fossil bearing deposits are discovered during ground-disturbing activities, excavations within a 50-foot radius of the find shall be temporarily halted or diverted. Ground disturbance work shall cease until a City-approved qualified paleontologist determines whether the resource requires further study. The paleontologist shall document the discovery as needed (in accordance with Society of Vertebrate Paleontology standards [Society of Vertebrate Paleontology 1995]), evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The excavation plan shall be submitted to the City of Menlo Park for review and approval prior to	Less than Significant Impact with Mitigation Incorporated

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		implementation, and all construction activity shall adhere to the recommendations in the excavation plan (ConnectMenlo EIR MM CULT-3).	
Impact 4.6-10: Would the project make a cumulatively considerable contribution to a significant cumulative impact related to geology, soils, seismicity, or paleontological resources?	Potentially Significant	MMs 4.6a, 4.6b, and 4.6c as listed above.	Less than Significant Impact with Mitigation Incorporated
Greenhouse Gas Emissions			
Impact 4.7-1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.7-2: Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.7-3: Would the project have a cumulative effect on greenhouse gas emissions?	Less than Significant	No mitigation measures are required.	N/A
Hazards and Hazardous Materials			
Impact 4.8-1: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.8-2: Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Potentially Significant	MM 4.8a Construction at the sites of any site in the City with known contamination, shall be conducted under a project-specific Environmental Site Management Plan (ESMP) that is prepared in consultation with the Regional Water Quality Control Board (RWQCB) or	Less than Significant Impact with Mitigation Incorporated

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>the Department of Toxic Substances Control (DTSC), as appropriate. The purpose of the ESMP is to protect construction workers, the general public, the environment, and future site occupants from subsurface hazardous materials previously identified at the site and to address the possibility of encountering unknown contamination or hazards in the subsurface. The ESMP shall summarize soil and groundwater analytical data collected on the project site during past investigations; identify management options for excavated soil and groundwater, if contaminated media are encountered during deep excavations; and identify monitoring, irrigation, or other wells requiring proper abandonment in compliance with local, State, and federal laws, policies, and regulations (ConnectMenlo EIR MM HAZ-4a) The ESMP shall include measures for identifying, testing, and managing soil and groundwater suspected of or known to contain hazardous materials.</p> <p>The ESMP shall: (1) provide procedures for evaluating, handling, storing, testing, and disposing of soil and groundwater during project excavation and dewatering activities, respectively; (2) describe required worker health and safety provisions for all workers potentially exposed to hazardous materials in accordance with State and federal worker safety regulations; and (3) designate personnel responsible for implementation of the ESMP.</p> <p>MM 4.8b</p> <p>For those sites throughout the city with potential residual contamination in soil, gas, or groundwater</p>	

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>that are planned for redevelopment with an overlying occupied building, a vapor intrusion assessment shall be performed by a licensed environmental professional. If the results of the vapor intrusion assessment indicate the potential for significant vapor intrusion into an occupied building, project design shall include vapor controls or source removal, as appropriate, in accordance with regulatory agency requirements. Soil vapor mitigations or controls could include vapor barriers, passive venting, and/or active venting. The vapor intrusion assessment and associated vapor controls or source removal can be incorporated into the ESMP required under MM 4.8a. (ConnectMenlo EIR MM HAZ-4b).</p> <p>MM 4.8c</p> <p>Prior to commencement of any demolition or construction activities, the project applicant shall prepare a Hazardous Materials Health and Safety Plan that identifies required practices and procedures to protect the general public and construction workers from potentially hazardous materials and accidental release of hazardous materials. The practices and procedures shall include spill prevention, cleanup and evacuation procedures as well as procedures to be followed in the event that previously undiscovered hazardous materials are encountered during construction. The Hazardous Materials Health and Safety Plan shall demonstrate compliance with California Code of Regulations, Title 8, Chapter 4: Subchapter 4: Construction Safety Orders; Subchapter 5: Electrical Safety Orders; and Subchapter 7: General Industry</p>	

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>Safety Orders as well as California Health and Safety Code, Section 25100 et seq.: Hazardous Waste Control Act.</p> <p>The Hazardous Materials Health and Safety Plan shall also include provisions for completion of a comprehensive survey within each existing building to identify asbestos-containing materials (ACM) and lead-based paints (LBP) prior to any demolition activities and shall define procedures for managing demolition activities such that ACM and LBP are not released into the air and worker exposure to ACM and LBP is avoided. These procedures shall be sufficient to ensure that demolition of buildings containing ACM and/or LBP and disposal of these materials will be conducted in accordance with local, state, and federal regulations, including the U.S. Environmental Protection Agency's (EPA's) Asbestos National Emissions Standards for Hazardous Air Pollutants, the California Occupational Safety and Health Administration's Construction Lead Standard (8 CCR 1532.1), California Department of Toxic Substances Control, EPA requirements for disposal of hazardous waste, and Bay Area Air Quality Management District (BAAQMD) Regulation 11, Hazardous Pollutants Rule 2: Asbestos Demolition, Renovation And Manufacturing. At least 10 days prior to demolition, the project applicant and/or construction contractor shall submit an Asbestos Notification to BAAQMD and obtain an Asbestos Demolition/Renovation job number. Disposal of any ACM and/or LBP found on the site shall be carried out by a contractor trained and qualified to conduct lead- or asbestos-related construction work and in</p>	

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		accordance with the appropriate state and federal standards to ensure that these materials are not released into the air in the project vicinity.	
Impact 4.8-3: Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Potentially Significant	MM 4.2b as listed above.	Less than Significant Impact with Mitigation Incorporated
Impact 4.8-4: Would the project be located on a site that 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?	No Impact	No mitigation measures are required.	N/A
Impact 4.8-5: 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, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact	No mitigation measures are required.	N/A
Impact 4.8-6: Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No Impact	No mitigation measures are required.	N/A
Impact 4.8-7: Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	No Impact	No mitigation measures are required.	N/A
Impact 4.8-8: Would the project have a cumulative effect on hazards or hazardous materials?	Less than Significant	No mitigation measures are required.	N/A

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Hydrology and Water Quality			
Impact 4.9-1: Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.9-2: Would the project 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	No mitigation measures are required.	N/A
Impact 4.9-3: Would the project 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?	No Impact	No mitigation measures are required.	N/A
Impact 4.9-4: Would the project 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	No Impact	No mitigation measures are required.	N/A
Impact 4.9-5: Would the project 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 create or contribute runoff water which would exceed the capacity of	No Impact	No mitigation measures are required.	N/A

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			
Impact 4.9-6: Would the project 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 impede or redirect flood flows?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.9-7: In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.9-8: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.9-9: Would the project have a cumulative effect on hydrology or water quality resources?	No Impact	No mitigation measures are required.	N/A
Land Use and Planning			
Impact 4.10-1: Would the project physically divide an established community?	No Impact	No mitigation measures are required.	N/A
Impact 4.10-2: Would the project 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	No mitigation measures are required.	N/A
Impact 4.10-3: Would the project make a cumulatively considerable contribution to a significant cumulative impact related to land use and planning?	Less than Significant	No mitigation measures are required.	N/A

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Noise			
Impact 4.11-1: Would the project 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?	Potentially Significant Impact	<p>MM 4.11a</p> <p>Project applicants shall minimize the exposure of nearby properties to excessive noise levels from construction related activity through CEQA review, conditions of approval and/or enforcement of the City's Noise Ordinance. Prior to issuance of demolition, grading, and/or building permits for development projects, a note shall be provided on development plans indicating that during ongoing grading, demolition, and construction, the property owner/developer shall be responsible for requiring contractors to implement the following measures to limit construction related noise:</p> <ul style="list-style-type: none"> Construction activity is limited to the daytime hours between 8:00 a.m. to 6:00 p.m. on Monday through Friday, as prescribed in the City's municipal code. All internal combustion engines on construction equipment and trucks are fitted with properly maintained mufflers, air intake silencers, and/or engine shrouds that are no less effective than as originally equipped by the manufacturer. Stationary equipment such as generators and air compressors shall be located as far as feasible from nearby noise-sensitive uses. Stockpiling is located as far as feasible from nearby noise-sensitive receptors. Limit unnecessary engine idling to the extent feasible. Limit the use of public address systems. 	Less than Significant Impact with Mitigation Incorporated

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<ul style="list-style-type: none"> Construction traffic shall be limited to the haul routes established by the City of Menlo Park. (Modified ConnectMenlo MM NOISE-1c) <p>MM 4.11b Construction Noise Control Plan</p> <p>The project sponsor shall develop a noise control plan for construction at the project site. The plan shall require compliance with Section 8.06 of the Menlo Park Municipal Code and include measures to ensure compliance with the 60 dBA L_{eq} limit during the hours of 7:00 a.m. to 8:00 a.m. and the 50 dBA L_{eq} limit during the hours of 10:00 p.m. to 7:00 a.m. In addition, the plan shall include measures to ensure that construction noise will not result in a 10 dB increase over the ambient noise level at nearby sensitive receptors (i.e., Hotel Nia).</p> <p>The plan shall specify the noise-reducing construction practices that will be employed to reduce noise from construction activities in Menlo Park and shall demonstrate that compliance with these standards will be achievable. The measures specified by the project sponsor shall be reviewed and approved by the City prior to issuance of building permits. Measures to reduce noise may include, but are not limited to, the following:</p> <ul style="list-style-type: none"> The noise control plan shall demonstrate that noise levels during construction on the project site will meet the standards of this mitigation measure at sensitive receptors while those receptors are in use. 	

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<ul style="list-style-type: none"> ▪ The noise control plan shall demonstrate that any construction activities taking place outside of normal construction hours of 8:00 a.m. to 6:00 p.m. Monday through Friday shall comply with the 60 dBA L_{eq} limit during the hours of 7:00 a.m. to 8:00 a.m. and the 50 dBA L_{eq} limit during the hours of 10:00 p.m. to 7:00 a.m. ▪ The plan shall demonstrate that that combined construction noise would not result in a 10 dBA increase over the ambient noise level at nearby sensitive receptors. ▪ The contractor shall ensure that construction equipment will be equipped with mufflers. In addition, construction equipment must use the best available noise control techniques (e.g., improved mufflers, intake silencers, ducts, engine enclosures, acoustically attenuating shields, shrouds) on equipment and trucks used for project construction. ▪ All construction activities shall be conducted only at an adequate distance, or otherwise shielded with sound barriers, as determined in the noise control plan, from noise- sensitive receptors when working outside the normal construction hours of 8:00 a.m. to 6:00 p.m. Monday through Friday to ensure compliance with the Menlo Park Municipal Code and this mitigation measure. 	

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<ul style="list-style-type: none"> Stationary construction noise source with the potential to generate noise levels exceeding the applicable thresholds, shall be located at an adequate distance, or otherwise shielded with temporary sound barriers, from sensitive receptors to ensure compliance with the Menlo Park Municipal Code and this mitigation measure. Temporary noise barriers (height to be determined) shall be installed around construction on the project site to reduce construction noise from equipment used outside the normal construction hours of 8:00 a.m. to 6:00 p.m. on weekdays. The installation of barriers would help reduce overall construction noise to less than 50 dBA L_{eq} for work occurring between 6:00 a.m. and 7:00 a.m. and 60 dBA L_{eq} for work occurring between 7:00 a.m. and 8:00 a.m., as measured at the applicable property lines of the adjacent uses, such that a 10 dB increase over ambient would not occur at nearby sensitive land uses. However, confirmation of the noise reduction would be required (per the last bullet of this measure, below). If the project sponsor can demonstrate, through an acoustical analysis, that construction noise would not exceed the allowable limits during non-exempt hours, as measured at the applicable property lines of the adjacent uses without barriers, then temporary noise barriers shall not be required. 	

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<ul style="list-style-type: none"> The effectiveness of noise attenuation measures shall be monitored by taking noise measurements at nearby noise-sensitive land uses during construction activities to ensure that the project is not causing an increase over ambient levels greater than 10 dB and compliance with the 50 and 60 dBA L_{eq} standards, which apply outside the construction exception hours of 8:00 a.m. and 6:00 p.m. Monday through Friday. 	
Impact 4.11-2: Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.11-3: Would the project result in cumulatively considerable noise impacts?	Potentially Significant	MMs 4.11a and 4.11b as listed above.	Less than Significant Impact with Mitigation Incorporated
Population and Housing			
Impact 4.12-1: Would the project 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	No mitigation measures are required.	N/A
Impact 4.12-2: Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact	No mitigation measures are required.	N/A
Impact 4.12-3: Would the project have a cumulative effect on housing and/or population resources?	Less than Significant	No mitigation measures are required.	N/A

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Public Services			
Impact 4.13-1: 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:			
Fire protection?	Less than Significant	No mitigation measures are required.	N/A
Police protection?	Less than Significant	No mitigation measures are required.	N/A
Schools?	Less than Significant	No mitigation measures are required.	N/A
Parks?	Less than Significant	No mitigation measures are required.	N/A
Other public facilities?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.13-2: Would the project increase the use of existing neighborhood or regional parks, or other recreational facilities requiring the construction of new parks?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.13-3: Would the project 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	No mitigation measures are required.	N/A
Impact 4.13-4: Would the project contribute to a cumulative increase in demand for fire services, which could result in the need to construct new fire facilities?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.13-5: Would the project contribute to a cumulative increase in demand for police services, which could result in the need to construct new police facilities?	No Impact	No mitigation measures are required.	N/A
Impact 4.13-6: Would the project contribute to a cumulative increase in demand for schools, which could result in the need to construct of new school facilities?	No Impact	No mitigation measures are required.	N/A

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Impact 4.13-7: Would the project contribute to a cumulative increase in demand for parks or other recreational/public facilities, which could result in the need to construct new parks or facilities?	No Impact	No mitigation measures are required.	N/A
Transportation			
Impact 4.14-1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.14-2: Would the project exceed an applicable VMT threshold of significance?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.14-3: Would the project 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	No mitigation measures are required.	N/A
Impact 4.14-4: Would the project result in inadequate emergency access?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.14-5: Would the project have a cumulative effect on transportation resources?	Less than Significant	No mitigation measures are required.	N/A
Tribal Cultural Resources			
Impact 4.15-1: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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	Potentially Significant	MM 4.15a Unanticipated Discovery of Tribal Cultural Resources. In the event that resources with potential to meet the definition of a “Tribal Cultural Resource” (archaeological sites, features, or artifacts of Native American origin or association) are exposed during construction activities, the City shall be immediately	Less than Significant Impact with Mitigation Incorporated

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
<p>object with cultural value to a California Native American tribe, and that is:</p> <ul style="list-style-type: none"> • Listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code Section 5020.1(k); or • 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. 		<p>notified and all construction work occurring within 50 feet of the find shall immediately stop until the find is assessed by a qualified archaeologist. A report documenting the resource assessment shall be submitted to the City. The City shall review this information to assess if the resource has potential to meet the definition of a Tribal Cultural Resource and, if appropriate, contact and/or provide a designated individual the authority to notify traditionally and culturally affiliated Native American tribes. The tribes shall be provided a reasonable time to provide comment and recommend treatment of the find. The City shall review these recommendations and, if they are confirmed to be reasonable and appropriate, they shall be implemented by the contractor. All management strategies shall occur in compliance with cultural resources mitigation and pertinent regulatory conditions. Treatment for tribal cultural resources would be consistent with PRC Section 21084.3(b), which recommends: (1) avoidance and preservation of the resources in place, including planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria; (2) treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including the following: (a) protecting the cultural character and integrity of the resource, (b) protecting the traditional use of the resource, and (c) protecting the confidentiality of the resource;</p>	

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		(3) permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places; or (4) protecting the resource.	
Impact 4.15-2: Would the project make a cumulatively considerable contribution to a significant cumulative impact related to tribal cultural resources?	Less than Significant	No mitigation measures are required.	N/A
Utilities and Service Systems			
Impact 4.16-1: Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects for the following resources?			
Water treatment?	Less than Significant	No mitigation measures are required.	N/A
Wastewater conveyance and treatment?	Less than Significant	No mitigation measures are required.	N/A
Stormwater management	Less than Significant	No mitigation measures are required.	N/A
Electrical supply?	No Impact	No mitigation measures are required.	N/A
Telecommunications?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.16-2: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.16-3: Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Less than Significant	No mitigation measures are required.	N/A

Table 1-1. Summary of Project Impacts

Impacts	Level of Significance Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Impact 4.16-4: Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Less than Significant	No mitigation measures are required.	N/A
Impact 4.16-5: Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No Impact	No mitigation measures are required.	N/A
Impact 4.16-6: Would the project have a cumulative effect on utilities and/or service systems resources?	Less than Significant	No mitigation measures are required.	N/A

1.7 Alternatives to the Project

Section 15126.6(a) of the CEQA Guidelines states that an EIR shall describe “a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project,” as well as provide an evaluation of “the comparative merits of the alternatives.” Under CEQA Guidelines Section 15126.6(a), an EIR does not need to consider alternatives that are not feasible, nor does it need to address every conceivable alternative to the project. The range of alternatives “is governed by the ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice” (14 CCR 15126.6[f]).

A brief overview of each alternative selected for analysis is provided below. Chapter 7, Alternatives, provides additional description of each alternative and presents analysis comparing the impacts of each alternative to those of the proposed project.

1. **Alternative 1: No Project/No Development Alternative.** This alternative assumes no development would occur, and the site would remain in its current condition. The existing commercial buildings would remain untouched and multi-use residential buildings would not be constructed.
2. **Alternative 2: Mixed-Use Alternative.** The Mixed-Use Alternative (Alternative 2) would be similar to the originally proposed project design but would modify the original project design to introduce a retail land use component within the project site and increase the number of dwelling units. This alternative would include demolishing existing site buildings and constructing 316 rental apartments within one 5-story building, 67 3-story townhomes, approximately 81,500 square feet of office space and 8,500 square feet of retail, a neighborhood park, common areas, and associated parking.
3. **Alternative 3: Base-level Development Alternative.** The Base-level Development Alternative would involve reduced development compared to the proposed project. This alternative would include demolition of existing site buildings, and construction of both residential apartments and townhomes with a reduced number of residential units. With less developed building space, this alternative would also allow for increased open space compared to the proposed project.

Environmentally Superior Alternative

Each alternative is compared to the proposed project and discussed in terms of its potential adverse effects on the environment. This analysis demonstrates that the Base-Level Alternative (Alternative 3) would result in similar and/or less adverse impacts associated with construction and operation compared to the proposed project. Thus, Alternative 3 is identified as the environmentally superior alternative. Specifically, this alternative would reduce construction-related air quality impacts, would slightly reduce the potential to uncover cultural resources during construction, would generate less noise during construction and operation, and would reduce demands for public services, recreation, and utilities. However, this alternative would not fully achieve the project objectives to provide a sufficient density and intensity of housing in order to best achieve a better jobs/housing ratio at the project site; would provide fewer affordable housing units than the proposed project, both in terms of absolute numbers of units as well as the percentage of affordable units relative to the total development; and would be less effective at helping to alleviate traffic because it would provide fewer residential units close to a jobs center.

1.8 Areas of Controversy/Issues to Be Resolved

As discussed in Chapter 2, Introduction, and Section 4.0, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this EIR, one in January and February 2021, and one in September and October 2021. Written comments received in response to each NOP identify the potential areas of controversy and project issues to be resolved. Both NOPs and the comments received in response to them are provided in Appendix A of this EIR. A summary of these written comment letters is provided in Table 1-2.

Table 1-2. Summary of Notice of Preparation Comments

Commenter	Date	Summary of Environmental Issues Raised
State Agency		
California Department of Fish and Wildlife	February 2, 2021	<ul style="list-style-type: none"> A complete project description is necessary to adequately evaluate potential impacts to fish and wildlife resources, including building heights/widths, sources of light and glare, stormwater or effluent drainage outlet systems, and fencing details. Existing vegetation and buildings within the project site could support nesting birds and bats, specific recommendations for mitigation measures are provided.
California Department of Transportation	February 8, 2021, and October 8, 2021	<ul style="list-style-type: none"> Potential increases in vehicle miles traveled (VMT) could occur. If a significant increase in VMT occurs, mitigation should support use of transit and active transportation modes and should include a Transportation Demand Management Program. Potential adverse effects to pedestrian, bicycle, and transit travel modes could occur. Project-generated travel demand may warrant new transit facilities.
Native American Heritage Commission	January 11, 2021, and September 13, 2021	<ul style="list-style-type: none"> A cultural resources assessment, records search, and Native American notification is warranted.
Local Agency		
Sequoia Union High School District	February 8, 2021, and October 11, 2021	<ul style="list-style-type: none"> Potential air quality impacts to local schools could occur. Potential noise impacts to local schools could occur. Potential adverse effects to pedestrian and bicycle safety, particularly for school-related travel, could occur. Potential adverse effects to school bus routes and safety of students traveling by vehicle and bus could occur. District's ability to serve project-specific and cumulative population increases and potential need for expanded or new school facilities is a concern. The potential for project-specific and cumulative growth to adversely affect public infrastructure that serves local schools is a concern.
Matthew Zeto, Chief Officer for Sequoia Union	January 25, 2021	<ul style="list-style-type: none"> Potential project-specific and cumulative air quality, noise, and transportation effects on students at local schools could occur.

Table 1-2. Summary of Notice of Preparation Comments

Commenter	Date	Summary of Environmental Issues Raised
High School District		
Individuals		
Conroy, Dorothy	January 25, 2001	<ul style="list-style-type: none"> ▪ Potential contribution to greenhouse gas emissions, which can be reduced with on-site solar generation, could occur. ▪ Adverse air quality effects due to tree removal could occur. ▪ Adverse effects due to increased water consumption, particularly in drought conditions, could occur. ▪ The need for meaningful green space should be addressed.
DeCardy	January 25, 2021	<ul style="list-style-type: none"> ▪ Potential adverse cumulative transportation effects could occur.
Fry, Patti	September 16, 2021	<ul style="list-style-type: none"> ▪ Potential for light, noise, windows, and household pets to affect wildlife in the Baylands and Bedwell Bayfront Park is a concern.
Jones, Pam	January 25, 2001, and September 27, 2021	<ul style="list-style-type: none"> ▪ Potential effects to Native American resources could occur. ▪ Potential adverse cumulative transportation effects on residential neighborhoods could occur. ▪ The Housing Needs Assessment should reflect consideration of SB 1000 Environment Justice Element and the Investment/Disinvestment Facebook Housing Study. ▪ The Housing Needs Assessment should consider potential displacement of existing residents. ▪ Appropriate numbers of Below Market Rate (BMR) units should be provided.
Novello, Kim	January 25, 2021	<ul style="list-style-type: none"> ▪ The need for adequate open space and vegetation should be addressed.

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2 Introduction

2.1 Purpose of the California Environmental Quality Act Process

This draft environmental impact report (EIR) was prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental effects associated with implementation of the 123 Independence Drive Residential Project (proposed project or project). The Draft EIR was prepared in accordance with all criteria, standards, and procedures of CEQA as defined in the California Public Resources Code (PRC Section 21000 et seq.); the CEQA Guidelines provided in Title 14 of the California Code of Regulations (14 CCR 15000 et seq.); and the rules, regulations, and procedures for implementing CEQA as adopted by the City of Menlo Park (City). As the lead agency for the project, the City must complete an environmental review to determine whether the project could potentially result in significant adverse environmental effects.

CEQA Guidelines Section 15002 states that the basic purposes of CEQA are to:

- Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Consistent with Section 15161 of the CEQA Guidelines, this document is a project-level EIR because it evaluates the potential environmental impacts associated with a specific project. In addition, the level of impact analysis in this Draft EIR corresponds to the degree of specificity deemed appropriate in accordance with CEQA Guidelines Section 15146. Specifically, this Draft EIR addresses the potentially significant environmental impacts that could occur as a result of construction and operation of the project; identifies appropriate and feasible mitigation measures, where necessary; and considers project alternatives that could reduce or avoid potential significant environmental effects.

This Draft EIR is an informational document for public agencies and members of the public, allowing informed decisions to be made regarding the purpose, objectives, and components of the proposed project. This Draft EIR is the primary reference document for the formulation and implementation of a Mitigation Monitoring and Reporting Program for the project, in compliance with CEQA (PRC Section 21081.6).

2.2 Legal Authority and Lead Agency

Pursuant to CEQA Section 21067 and CEQA Guidelines Section 15367, the City is the lead agency under whose authority this EIR has been prepared. “Lead agency” refers to the public agency that has the principal responsibility for carrying out or approving a project. Serving as the lead agency and before taking action to approve the project, the City has the obligation to (1) ensure that this EIR was completed in accordance with CEQA; (2) review and consider the information contained in this EIR as part of its decision-making process; (3) make a statement that

this EIR reflects the City's independent judgment; (4) ensure that all significant impacts on the environment are eliminated or substantially lessened, where feasible; and, if necessary, (5) make written findings for each unavoidable significant environmental effect stating the reasons why mitigation measures or project alternatives identified in this EIR are infeasible and citing the specific benefits of the project that outweigh its unavoidable adverse effects (14 CCR 15090–15093).

Pursuant to CEQA Guidelines Sections 15040 through 15043, and upon completion of the CEQA review process, the City will have the legal authority to do any of the following:

- Approve the project
- Require feasible changes in any or all activities involved in the project to substantially lessen or avoid significant effects on the environment
- Disapprove the project, if necessary, to avoid one or more significant effects on the environment that would occur if the project was approved as proposed
- Approve the project even though the project would cause a significant effect on the environment if the City makes a fully informed and publicly disclosed decision that (1) there is no feasible way to lessen the effect or avoid the significant effect and (2) expected benefits from the project will outweigh significant environmental impacts of the project

This EIR fulfills the CEQA environmental review requirements for the proposed Use Permit, Tentative Subdivision Map, and all other governmental discretionary actions related to the project, which are listed in Section 2.4.1, Requested Approvals and Reviews.

This document is an informational document intended for use by City decision makers, responsible agencies, and members of the public in evaluating the physical environmental impacts of the project. This Draft EIR is the primary reference document for the formulation and implementation of a Mitigation Monitoring and Reporting Program for the project, in compliance with California Public Resources Code (PRC) Section 21081.6. As demonstrated throughout Section 4, Environmental Analysis, the proposed project was not found to result in any significant and unavoidable impacts. All significant and potentially significant impacts would be mitigated to a level considered less than significant. Thus, “a statement of overriding considerations” as defined in Section 15093(b) of the CEQA Guidelines, is not required for this project.

2.3 Responsible and Trustee Agencies

Section 21104 of the California PRC requires that all EIRs be reviewed by state responsible and trustee agencies (see also 14 CCR 15082 and 15086[a]). As defined by CEQA Guidelines Section 15381, “the term ‘Responsible Agency’ includes all public agencies other than the Lead Agency which have discretionary approval power over the project.” A trustee agency is defined in CEQA Guidelines Section 15386 as “a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California.” There are no such resources that could be affected by this project and thus there are no applicable trustee agencies.

2.4 Summary of Project Analyzed in This Environmental Impact Report

As discussed in Chapter 3, Project Description, the proposed project would involve demolition of five existing office and industrial buildings on the project site and construction of 316 residential apartments and 116 residential townhomes. The apartment building would be located in the northern portion of the project site, accessed from Constitution Drive. It would consist of five stories of apartment units, a landscaped courtyard in the center of the apartment building, and a parking structure providing 336 parking spaces with a single level below grade and a single level at grade. The townhomes would be constructed in the southern and eastern portions of the site, accessed from Independence Drive and Chrysler Drive. A wide pedestrian walkway (paseo) would be created extending between Constitution Drive and Independence Drive, providing pedestrian connection across the site and providing access to an approximately 14,022-square-foot park near the middle of the site. A pedestrian pathway would also extend from this park to Chrysler Drive.

The project is proposed under the provisions of Senate Bill (SB) 330, the Housing Crisis Act of 2019, and is a “housing development project” within the meaning of the Housing Accountability Act. In adopting SB 330, the California Legislature found that the lack of housing throughout the state is a critical problem that threatens the economic, environmental, and social quality of life and that the housing crisis has particularly exacerbated the need for affordable homes at prices below market rates. SB 330, as codified in Government Code Section 65905.5, directs that the City may hold no more than five public hearings for a project that complies with applicable, objective general plan and zoning standards that were in effect at the time a complete preliminary application was submitted (although for this project the applicant has agreed that the City may hold up to six public hearings to account for an additional CEQA scoping meeting held following changes in the project design). Further, the Housing Accountability Act requires that those development standards, conditions, and policies shall be applied to a project in a way that facilitates and accommodates development at the density permitted on the site and proposed by the individual project. The Housing Accountability Act also directs that such a project may not be disapproved or conditioned on reducing the density without making specific findings required by the Housing Accountability Act.

2.4.1 Requested Approvals and Reviews

The project would require a range of discretionary and ministerial actions under the jurisdiction of the City, as well as approvals from other agencies, as described below. This Draft EIR covers all state and local government and quasi-government approvals that may be needed to implement the project, whether or not they are explicitly listed in this section or elsewhere in this Draft EIR (14 CCR 15124[d]).

City of Menlo Park Planning Commission

- **Certification of Environmental Impact Report.** The Planning Commission will review the Draft EIR and determine whether to certify or reject this Draft EIR, along with appropriate CEQA Findings and the Mitigation Monitoring and Reporting Program.
- **Use Permit.** Project implementation would require approval of a Use Permit by the Planning Commission. Additionally, in considering approval of the Use Permit that would authorize the proposed bonus-level development within the Residential Mixed-Use Bonus (R-MU-B) zoning district, the Planning Commission will review the project’s appraisal identifying the value of the community amenities to be provided in exchange for the opportunity to develop at the bonus level.

- **Architectural Control.** Project implementation would require approval of the Architectural Control by the Planning Commission to authorize construction of the proposed buildings, landscaping, and design of access to parking facilities. When determining whether to approve Architectural Control, the Planning Commission must find that project's general appearance is compatible with the aesthetic character of the surrounding area and that the project would not be detrimental to the harmonious and orderly growth of the city, would not impair the desirability of investment or occupation in the neighborhood, and would provide adequate parking.
- **BMR Housing Agreement.** Project implementation would require approval of a Below Market Rate (BMR) Housing Agreement, which details the plans for participation in the BMR program. For development projects of 20 or more units, the developer shall provide not less than 15 percent of the units at below market rates to very-low-, low-, and moderate-income households. The Planning Commission must approve the project's BMR Housing Agreement prior to issuance of a building permit or granting of other land use authorizations.
- **Heritage Tree Removal Permits.** The proposed project would include the removal of 29 trees that meet the City's definition of Heritage Trees. In considering whether to approve a Heritage Tree Removal Permit, the Planning Commission would review the proposed landscape plan/replacement tree plan, tree inventory and tree appraisal values, and construction plans and costs, and would consider whether any alternative designs that would preserve Heritage Trees are feasible.

City of Menlo Park City Council

- **Vesting Tentative Subdivision Map.** Project implementation would require processing of a Tentative Subdivision Map (TPM 20257) to reconfigure the existing five parcels that compose the project site (Assessor Parcel Numbers 055-236-140, 055-236-180, 055-236-240, 055-236-300, and 055-236-280). Covenants, Conditions, and Restrictions (CC&Rs) would be recorded with the subdivision map to establish the basis for the ownership of individual buildings on the parcel and the operation and maintenance of the common on-site improvements.

City of Menlo Park Ministerial Approvals

- Approvals for water, sewer, and storm drain infrastructure
- Demolition permits
- Grading permits
- Building permits
- Encroachment permits

Additional Agency Approvals or Review

- **Bay Area Air Quality Management District.** Job Number (J) Permit for asbestos removal during demolition; permit for on-site generator for emergency power supply to apartment building
- **California Department of Transportation.** Review of traffic circulation effects and consultation on potential traffic improvements that may affect state highway facilities, ramps, and intersections
- **California Regional Water Quality Control Board/San Mateo Countywide Water Pollution Prevention Program.** Approval of National Pollutant Discharge Elimination System permit for stormwater discharge
- **City/County Association of Governments.** Review of potential effects on Routes of Regional Significance
- **Menlo Park Fire Protection District.** Residential Site Plan review

- **Pacific Gas and Electric Company.** Approval of electrical improvements, including undergrounding of electrical infrastructure, and connection permits
- **San Mateo County Transportation Authority.** Review of potential effect on public transit
- **San Mateo County Environmental Health Division.** Review of on-site generator
- **West Bay Sanitary District.** Approval of wastewater hookups

2.5 Scope of This Environmental Impact Report

2.5.1 Notice of Preparation Scoping Process

The purpose of this Draft EIR is to evaluate the potential environmental impacts associated with implementation of the project. The City concluded that the project could have potential direct or indirect adverse effects on the environment. Accordingly, the City determined the need for preparation of an EIR for the project and as required under CEQA Guidelines Section 15082, the City prepared a Notice of Preparation (NOP) of the EIR to afford the public and other agencies the opportunity to comment on the scope of the Draft EIR. An NOP was initially circulated for public review from January 8, 2021, through February 8, 2021, based on the original project applications, which proposed development of a mixture of residential and office land uses. A scoping session was held by the Planning Commission on January 25, 2021. After that initial NOP circulation and scoping meeting, the project application was amended to eliminate the proposed office land uses and increase the number of dwelling units proposed. A revised NOP was then circulated for public review from September 11, 2021, through October 11, 2021, and a second scoping session was held by the Planning Commission on September 27, 2021. A summary of the agency and public comments received in response to both NOPs and during both scoping meetings is provided in Table 2-1. The written comments and both NOPs are included as Appendix A of this Draft EIR.

Table 2-1. Summary of Initial Study/Notice of Preparation Comments

Commenter	Date	Summary of Environmental Issues Raised
State Agency		
California Department of Fish and Wildlife	February 2, 2021	<ul style="list-style-type: none"> ▪ A complete project description is necessary to adequately evaluate potential impacts to fish and wildlife resources, including building heights/widths, sources of light and glare, stormwater or effluent drainage outlet systems, and fencing details. ▪ Existing vegetation and buildings within the project site could support nesting birds and bats, specific recommendations for mitigation measures are provided.
California Department of Transportation	February 8, 2021, and October 8, 2021	<ul style="list-style-type: none"> ▪ Potential increases in vehicle miles traveled (VMT) could occur. ▪ If a significant increase in VMT occurs, mitigation should support use of transit and active transportation modes and should include a Transportation Demand Management Program. ▪ Potential adverse effects to pedestrian, bicycle, and transit travel modes could occur. ▪ Project-generated travel demand may warrant new transit facilities.

Table 2-1. Summary of Initial Study/Notice of Preparation Comments

Commenter	Date	Summary of Environmental Issues Raised
Native American Heritage Commission	January 11, 2021, and September 13, 2021	<ul style="list-style-type: none"> A cultural resources assessment, records search, and Native American notification is warranted.
Local Agency		
Sequoia Union High School District	February 8, 2021, and October 11, 2021	<ul style="list-style-type: none"> Potential air quality impacts to local schools could occur. Potential noise impacts to local schools could occur. Potential adverse effects to pedestrian and bicycle safety, particularly for school-related travel, could occur. Potential adverse effects to school bus routes and safety of students traveling by vehicle and bus could occur. District's ability to serve project-specific and cumulative population increases and potential need for expanded or new school facilities is a concern. The potential for project-specific and cumulative growth to adversely affect public infrastructure that serves local schools is a concern.
Matthew Zeto, Chief Officer for Sequoia Union High School District	January 25, 2021	<ul style="list-style-type: none"> Potential project-specific and cumulative air quality, noise, and transportation effects on students at local schools could occur.
Individuals		
Conroy, Dorothy	January 25, 2001	<ul style="list-style-type: none"> Potential contribution to greenhouse gas emissions, which can be reduced with on-site solar generation, could occur. Adverse air quality effects due to tree removal could occur. Adverse effects due to increased water consumption, particularly in drought conditions, could occur. The need for meaningful green space should be addressed.
DeCardy	January 25, 2021	<ul style="list-style-type: none"> Potential adverse cumulative transportation effects could occur.
Fry, Patti	September 16, 2021	<ul style="list-style-type: none"> Potential for light, noise, windows, and household pets to affect wildlife in the Baylands and Bedwell Bayfront Park is a concern.
Jones, Pam	January 25, 2001, and September 27, 2021	<ul style="list-style-type: none"> Potential effects to Native American resources could occur. Potential adverse cumulative transportation effects on residential neighborhoods could occur. The Housing Needs Assessment should reflect consideration of SB 1000 Environment Justice Element and the Investment/Disinvestment Facebook Housing Study. The Housing Needs Assessment should consider potential displacement of existing residents. Appropriate numbers of Below Market Rate (BMR) units should be provided.
Novello, Kim	January 25, 2021	<ul style="list-style-type: none"> The need for adequate open space and vegetation should be addressed.

2.5.2 Environmental Issues Determined Not to Be Significant

Pursuant to CEQA, the discussion of potential environmental impacts is focused on those impacts that could be significant or potentially significant. CEQA allows the lead agency to limit the detail of discussion of the environmental impacts that are not considered potentially significant (PRC Section 21100; 14 CCR 15126.2[a] and 15128). CEQA requires that the discussion of any significant environmental effect be limited to substantial, or potentially substantial, adverse changes in physical conditions that exist within the affected area, as defined in PRC Section 21060.5. In accordance with CEQA Guidelines Section 15143, environmental impacts dismissed in an analysis as clearly insignificant and unlikely to occur need not be discussed further in the EIR unless the lead agency subsequently receives information inconsistent with the finding.

As discussed further in Chapter 5, Effects Found Not to Be Significant, the proposed project is not anticipated to result in significant environmental effects in the following areas:

- Agriculture and Forestry Resources
- Mineral Resources
- Wildfire

The project site is fully developed in an urbanized area and is located between State Route 84 and US 101. As such, there are no agriculture and forestry or mineral resources on or adjacent to the site and the proposed project would have no adverse effects associated with such resources. Further, wildfires are not a concern because there are no areas of substantial vegetation in proximity to the project site and there are no mapped Fire Hazard Severity Zones near the site. Thus, as stated in the NOP, this EIR does not include analysis of these topics.

In addition, Chapter 5 provides a summary of the environmental resource topics for which the impact analysis presented throughout Chapter 4 demonstrates that the project would have no impact or a less than significant impact without implementation of mitigation measures.

2.5.3 Environmental Issues Determined to Be Potentially Significant

Pursuant to CEQA and CEQA Guidelines Section 15064, in this Draft EIR the discussion of potentially significant environmental impacts is focused on those impacts that the lead agency has determined could be potentially significant. A determination of those environmental impacts that would be potentially significant was made for the project based on a review of comments received as part of the NOP scoping process and additional research and analysis of relevant information during preparation of this Draft EIR.

The project site is within the ConnectMenlo General Plan Update EIR study area. The ConnectMenlo General Plan Update (City of Menlo Park 2016), which updated the City's General Plan Land Use and Circulation Elements and rezoned the land in the M-2 Area (now referred to as the Bayfront Area), was approved on November 29, 2016.

The City has determined that the project warrants a full EIR, with the exception of the three topics listed in Section 2.5.2, and thus has elected not to prepare an initial study. The EIR is anticipated to include most of the environmental resource topics addressed in CEQA Guidelines Appendix G; specifically, the following:

- | | |
|---------------|------------------------|
| ▪ Aesthetics | ▪ Biological Resources |
| ▪ Air Quality | ▪ Cultural Resources |

- Energy
- Geology, Soils, Seismicity, and Paleontological Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems

Under a 2017 settlement agreement between the Cities of Menlo Park and East Palo Alto, the City of Menlo Park is required to prepare an EIR for projects like this one that request bonus-level development within the R-MU-B zoning district. The agreement establishes requirements for transportation impact analysis and mitigation and for preparation of a Housing Needs Assessment, both of which are included in this EIR. The analysis in Sections 4.1 through 4.16 demonstrates that for all resource areas, the project would either have no impact, less than significant impacts, or less than significant impacts with implementation of mitigation measures. The project would not result in any significant and unavoidable impacts.

2.6 Organization of This Environmental Impact Report

This Draft EIR contains all of the information required to be included in an EIR, as specified by CEQA and the CEQA Guidelines (PRC Section 21000 et seq.; 14 CCR 15000 et seq.). The following provides a quick reference in locating the CEQA-required sections within this document:

- **Chapter 1: Executive Summary.** The Executive Summary provides a summary of the project and project alternatives, including a summary of the project and cumulative impacts, recommended mitigation measures, and the level of significance after mitigation for each environmental issue.
- **Chapter 2: Introduction.** This Introduction provides an overview of the project and the CEQA process, and describes the purpose, scope, and components of this Draft EIR.
- **Chapter 3: Project Description.** The Project Description provides a detailed description of the project, including the location and project characteristics. The intended uses of this Draft EIR, project background, project objectives, and required project approvals are also identified.
- **Chapter 4: Environmental Analysis.** The Environmental Analysis chapter analyzes the environmental impacts of the project. Impacts are organized into major environmental topic areas. Each topic area includes a description of the environmental setting, regulatory framework, thresholds of significance, individual and cumulative impacts, mitigation measures, and level of significance after mitigation. The proposed project's potential contribution to cumulative impacts is also discussed. The following specific environmental areas are addressed in Chapter 4:
 - Section 4.1 – Aesthetics
 - Section 4.2 – Air Quality
 - Section 4.3 – Biological Resources
 - Section 4.4 – Cultural Resources
 - Section 4.5 – Energy
 - Section 4.6 – Geology, Soils, Seismicity, and Paleontological Resources
 - Section 4.7 – Greenhouse Gas Emissions

- Section 4.8 – Hazards and Hazardous Materials
- Section 4.9 – Hydrology and Water Quality
- Section 4.10 – Land Use and Planning
- Section 4.11 – Noise
- Section 4.12 – Population and Housing
- Section 4.13 – Public Services and Recreation
- Section 4.14 – Transportation
- Section 4.15 – Tribal Cultural Resources
- Section 4.16 – Utilities and Service Systems
- **Chapter 5: Effects Found Not to Be Significant.** The Effects Found Not to Be Significant chapter provides a summary of environmental topic areas where preparation of the NOP indicated that the project would have no impact and therefore no additional discussion in this EIR is warranted as well as summaries of the discrete CEQA Guidelines thresholds for which the EIR analysis demonstrates that the project would have no impact or impacts would remain less than significant without implementation of mitigation measures.
- **Chapter 6: Other CEQA Considerations.** The Other CEQA Considerations chapter provides a summary of significant environmental impacts, including unavoidable, irreversible, and growth-inducing impacts.
- **Chapter 7: Alternatives.** The Alternatives chapter provides a comparison between the project impacts and three project alternatives: (1) the No Project/No Development Alternative, (2) the Mixed Use Alternative, and (3) the Base-Level Development Alternative.
- **Chapter 8: List of Preparers.** The List of Preparers chapter provides a list of the organizations, persons consulted, and various individuals who contributed to the preparation of this Draft EIR. This section also includes a list of the lead agency personnel and technical consultants who helped prepare this Draft EIR.
- **Appendices.** The technical appendices contain the NOPs (including public comments), site plans, and technical studies prepared to support the analyses and conclusions in this Draft EIR.

The Final EIR will be prepared after the public review period for this Draft EIR has been completed. The Final EIR will include comments and recommendations received on the Draft EIR during the public review period; a list of persons, organizations, and public agencies commenting on the Draft EIR; written responses to significant environmental issues identified in the comments received; and any other relevant information added by the City.

2.7 Documents Incorporated by Reference

Pursuant to CEQA Guidelines Section 15150, this Draft EIR has referenced several technical studies, analyses, and previously certified environmental documents. Information from these documents, incorporated by reference, is briefly summarized in the appropriate chapters and sections. CEQA Guidelines Section 15150(b) requires that when documents are incorporated by reference, the EIR identify where such documents are available for public review. The documents incorporated by reference and the locations where they are available for public review are:

- City of Menlo Park ConnectMenlo: General Plan Land Use and Circulation Elements and M-2 Area Zoning Update, Public Review Draft Environmental Impact Report, SCH No. 2015062054
 - <https://beta.menlopark.org/Government/Departments/Community-Development/Planning-Division/Comprehensive-planning/ConnectMenlo/Environmental-Impact-Report#section-3>

- City of Menlo Park ConnectMenlo: General Plan Land Use and Circulation Element and M-2 Area Zoning Update, Response to Comments Document, SCH No. 2015062054
 - <https://beta.menlopark.org/Government/Departments/Community-Development/Planning-Division/Comprehensive-planning/ConnectMenlo/Environmental-Impact-Report#section-3>

2.8 Documents Referenced Throughout this EIR

In addition to the documents incorporated by reference, this EIR relies on the following documents for background information regarding the environmental setting and regulatory framework applicable to the proposed Project:

- City of Menlo Park General Plan (2016)
 - <https://www.menlopark.org/146/General-Plan>
- City of Menlo Park Municipal Code (2021)
 - <https://www.codepublishing.com/CA/MenloPark/>

2.9 Documents Prepared for the Project

The following documents and technical studies and analyses were prepared for the project and project site and are included as appendices of this Draft EIR:

- Appendix A: NOPs and Scoping Comments
- Appendix B: Project Plans (September 7, 2022)
- Appendix C1: Air Quality Modeling Data
- Appendix C2: Construction Health Risk Assessment
- Appendix D1: Special Status Plants Potential to Occur
- Appendix D2: Special Status Wildlife Potential to Occur
- Appendix D3: Menlo Park Heritage Tree Ordinance (March 30, 2004)
- Appendix D4: Arborist Inventory and Report
- Appendix E1: Phase 1 Archaeological Assessment
- Appendix E2: Historical Resources Technical Report
- Appendix F1: Geotechnical Investigation
- Appendix F2: Phase I Environmental Site Assessment
- Appendix G1: Hydrology Report
- Appendix G2: Stormwater Management Plan
- Appendix H: Noise Calculations
- Appendix I1: Housing Needs Assessment
- Appendix I2: Housing Needs Assessment Supplemental Memorandum
- Appendix J1: Transportation Impact Analysis
- Appendix J2: Transportation Demand Management Program
- Appendix K1: 123 Independence Water Budget
- Appendix K2: Townhome Parcel Zero Waste Management Plan
- Appendix K3: Apartments Zero Waste Management Plan

2.10 Review of the Draft Environmental Impact Report

Upon completion of this Draft EIR, the City prepared and filed a Notice of Completion with the Governor's Office of Planning and Research, State Clearinghouse to start the public review period (as specified in PRC Section 21161). Concurrent with the Notice of Completion, the City distributed a Notice of Availability in accordance with CEQA Guidelines Section 15087. The Notice of Availability was mailed to the agencies, organizations, and individuals who had previously requested a copy in writing. This Draft EIR was distributed to responsible and trustee agencies, other affected agencies, surrounding cities and municipalities, and all interested parties requesting a copy of this document in accordance with PRC Section 21092(b)(3). The public review period for this Draft EIR is Monday, November 28, 2022, through Tuesday, January 17, 2023. During the public review period, this Draft EIR, including the appendices, is available for review at the following locations:

In Person

Menlo Park Main Library
800 Alma Street
Menlo Park, California 94025

Belle Haven Branch Library
413 Ivy Drive
Menlo Park, California 94025

Online

<https://www.menlopark.org/1695/123-Independence-Drive>

Agencies, organizations, individuals, and all other interested parties who were not previously contacted or who did not respond to the NOP currently have the opportunity to comment on this Draft EIR during the public review period. Written or email comments on this Draft EIR should be addressed to:

Payal Bhagat, Contract Principal Planner
City of Menlo Park
701 Laurel Street
Menlo Park, California 94025
Phone: 650.330.6702
Email: PBhagat@menlopark.org

Upon completion of the public review period, written responses to all substantive environmental comments will be prepared and made available prior to the public hearing on the project before the Planning Commission, at which a determination will be made regarding certification of the Final EIR and approval of most of the requested entitlements and a recommendation will be made regarding the Vesting Tentative Subdivision Map. Following the Planning Commission's determination, a public hearing on the project will be held by the City Council, at which a determination will be made on the proposed Vesting Tentative Subdivision Map. The comments received and the responses to those comments will be included as part of the record for consideration for the project.

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3 Project Description

3.1 Introduction

The Sobrato Organization has submitted an application to the City of Menlo Park (City) requesting approval of various discretionary entitlements in support of the proposed 123 Independence Drive Residential Project (proposed project). As described in more detail in Section 3.4, Proposed Project, the project would include the demolition of existing office and industrial buildings on the project site and construction of 316 residential apartments and 116 residential townhomes. The reasonably foreseeable and potentially significant adverse environmental effects of the proposed project are evaluated in this environmental impact report (EIR). Consistent with the California Environmental Quality Act (CEQA) Guidelines Section 15124, the project description provided in this chapter includes the location and boundaries of the proposed project site, as shown on a project location map and regional map; a statement of the objectives sought under the proposed project; a general description of the project site's environmental characteristics and supporting public utilities facilities; a statement briefly describing the intended uses of this EIR, including a list of the agencies that are expected to use the EIR in their decision making; and a list of permits and other approvals required to implement the project.

Information has been provided by The Sobrato Organization as the project sponsor and by City planning staff. The following project description serves as the basis for the environmental analysis contained in this EIR. As discussed in Chapter 2, Introduction, the City will serve as the lead agency with final decision-making authority relative to the proposed project and certification of the EIR.

3.2 Project Site

Location and Surrounding Land Uses

The approximately 8.15-acre project site (355,185 square feet on Assessor's Parcel Numbers [APNs] 055-236-140, 055-236-180, 055-236-240, 055-236-300, and 055-236-280) is located in the Bayfront Area of the City, as shown in Figure 3-1, Project Location. The Bayfront Area is generally bounded by San Francisco Bay to the north; Redwood City to the west; East Palo Alto to the southeast; and Bay Road and the Menlo Park neighborhoods of Belle Haven, Flood Triangle, Suburban Park, and Lorelei Manor to the south. The Bayfront Area has historically been developed with industrial, warehousing, and office uses.

The project site extends northwest from the intersection at Independence Drive and Chrysler Drive, and a portion of the site is bounded on the north by Constitution Drive. The site is north of US 101, south of Bayfront Expressway (State Route 84), and east of Marsh Road. Flood Slough is approximately 884 feet northwest of the project site; Ravenswood Slough is 0.5 miles east of the project site.

As shown on Figure 3-2, Project Vicinity, adjacent land uses include a variety of offices, commercial business parks, and public facilities along Constitution Drive and Chrysler Drive. A mix of commercial business, including several Meta buildings, are located south of the project site along Independence Drive. At the time the environmental review for the 123 Independence Drive project began, several commercial buildings and hotels were under construction west of Chrysler Drive between Constitution Drive and Bayfront Expressway.

As shown on Figure 3-3, Project Site Existing Conditions, the project site spans five existing adjacent parcels bounded by Chrysler, Independence, and Constitution Drives. The five parcels describe a T-shaped site oriented with the top of the T along Independence Drive and the leg of the T extending northward to Constitution Drive. The parcels consist of the following:

- APN 055-236-180 contains the building at 119 Independence Drive and includes approximately 1.07 acres (46,669 square feet). This parcel forms the western boundary of the project site.
- APN 055-236-140 contains the building at 123 and 125 Independence Drive and includes approximately 0.94 acres (41,052 square feet).
- APN 055-236-240 contains the building at 127 Independence Drive and includes approximately 1.10 acres (47,842 square feet).
- APN 055-236-300 contains the building at 1205 Chrysler Drive and includes approximately 2.41 acres (104,911 square feet). This parcel forms the southwestern boundary of the project site.
- APN 055-236-280 contains the building at 130 Constitution Drive and includes approximately 2.63 acres (114,710 square feet). This parcel forms the northern leg of the project site.

The San Francisco Bay is located north of the project site, with the entrance to Bedwell Bayfront Park located approximately 0.3 miles north of the project site. Bedwell Bayfront Park consists of approximately 160 acres and is surrounded on three sides by the Don Edwards San Francisco Bay National Wildlife Refuge. Other land uses in the vicinity of the project site include Hotel Nia, approximately 0.08 miles to the south; TIDE Academy (Sequoia Union High School District), approximately 0.20 miles to the east; Boys and Girls Club and Belle Haven Branch Library, approximately 1 mile to the east; Belle Haven School, approximately 1 mile to the southeast; Flood Park, approximately 0.7 miles to the southeast; and Kelly Park and Beechwood School approximately 0.5 miles to the southeast. The site of the Menlo Park Community Campus is also located approximately 0.5 miles to the southeast.

City of Menlo Park General Plan and Zoning Designations

The Menlo Park City Council adopted an update to the Menlo Park General Plan that modified the Land Use and Circulation Elements (referred to herein as ConnectMenlo) (City of Menlo Park 2016a) and certified the ConnectMenlo Final EIR on November 29, 2016 (City of Menlo Park 2016b). ConnectMenlo included changes to the City's zoning map that rezoned specific properties to reflect the General Plan updates, including the new land uses within the Bayfront Area. ConnectMenlo identifies new development potential within the Bayfront Area of up to 2.3 million square feet of non-residential space, 400 hotel rooms, 4,500 residential units, 11,570 residents, and 5,500 employees. It also recognizes the potential for development of 150 additional residential units in areas that were not affected by the zoning changes adopted under ConnectMenlo. The ConnectMenlo EIR analyzed the potential development of a total of 4,650 residential units, with an assumption that these would include 150 residential units as the potential development that remained under the existing General Plan plus 3,000 new residential units and 1,500 corporate campus units. Prior to submittal of the 123 Independence Drive project applications, the City had already received applications for projects that would construct 2,816 residential units. The 123 Independence Drive project would increase the total number of proposed residential units to 3,248, which would exceed the maximum residential unit development potential evaluated in the ConnectMenlo EIR. The ConnectMenlo EIR also identified that the buildout potential for future development was expected to occur over a 24-year buildout horizon (from approximately 2016 to 2040) (City of Menlo Park 2016b); however, the City is currently processing applications that would result in a much faster buildout of the anticipated maximum number of residential units.

As shown in Figure 3-4, General Plan and Zoning Designations, the project site is designated as Mixed-Use Residential on the ConnectMenlo land use map presented in Figure 5 of the ConnectMenlo General Plan Update (City of Menlo Park 2016a). The purpose of this land use designation is to create live/work/play environments by encouraging office, research and development, residential, commercial uses, and hotels in proximity to or integrated with one another in the Bayfront Area.

Figure 3-4 also shows that the project site is within the Residential Mixed-Use Bonus (R-MU-B) zoning district (City of Menlo Park 2016c). Thus, development of the project site is subject to the requirements of the Menlo Park Municipal Code Chapter 16.45, R-MU Residential Mixed-Use District. The maximum base residential density is 30 units per acre, a floor area ratio (FAR)¹ of up to 90 percent for residential uses, and a building height of up to 40 feet. The bonus-level zoning standard allows for a density of up to 100 dwelling units per acre, a FAR of up to 225 percent for residential uses, and a building height of up to 85 feet in exchange for providing community amenities. The project proposes to use the bonus-level development provisions in exchange for community amenities.

The General Plan and zoning designations applied to the project site extend to all properties in the same block as the project site (bounded by Independence Drive on the south and west, Constitution Drive on the north, and Chrysler Drive on the east). These designations also extend to the properties on the east side of Chrysler Drive and north of Jefferson Drive. Properties to the north and south of the project site are designated as Light Industrial under the General Plan and zoned Commercial Business Park (M3-X). Surrounding areas predominantly carry the General Plan Office designation, with zoning designations that include Office-Bonus (O-B), Office-Hotel (O-H), and Public Facility (PF) (City of Menlo Park 2016a).

Project Site Characteristics

Existing Uses and On-Site Characteristics

The 8.15-acre site is currently developed with five existing single-story office and light industrial buildings totaling 103,983 square feet of building space. The buildings were all built between 1961 and 1968. The westernmost building on Independence Drive, 119 Independence Drive, is a concrete building approximately 16 feet in height and 12,996 square feet. To the west, at 123 and 125 Independence Drive is a concrete building that is approximately 20 feet in height and approximately 12,335 square feet. The building at 127 Independence Drive is approximately 19 feet in height and approximately 13,822 square feet. To the west of 127 Independence Drive, at the corner of Independence Drive and Chrysler Drive, is 1205 Chrysler Drive. The building at this address is approximately 17 feet in height and approximately 39,302 square feet. Finally, 130 Constitution Drive is located to the north of 127 Independence Drive. This building is approximately 25 feet in height and approximately 25,528 square feet.

In addition, there are three public light poles at the boundaries of the existing project site—one each on Independence Drive, Chrysler Drive, and Constitution Drive—and a fourth light pole set back several feet from the public right-of-way lighting the parking lot entrance/exit on Independence Drive near Chrysler Drive. Additional lighting is provided around building entrances and perimeters and in landscaped areas. The existing project site contains several decorative landscape areas along each parcel's frontage on the adjacent public street and around building perimeters. A total of 47,859 square feet of landscaping is present on the existing project site, including 85 trees. Of these trees, 56 are non-heritage trees and 29 are heritage trees as defined within Menlo Park Municipal Code Chapter 13.24, Heritage

¹ Floor area ratio is the ratio of residential square footage of the gross floor area of all buildings on a lot to the square footage of the lot.

Trees (Appendix D3). The interior of the existing site is almost exclusively hardscape, consisting of 307,326 square feet of impervious surfaces, including parking lots, streets, and walkways (Appendix G2).

The topography of the project site is generally flat and approximately 7 to 9 feet above mean sea level. The project site is currently within the Federal Emergency Management Agency (FEMA) Zone AE (FEMA 2019), indicating it is likely to be subject to inundation during a 100-year flood.

Circulation and Parking

The five parcels within the project site currently contain approximately 280 existing parking spaces, with vehicle access from Independence, Chrysler, and Constitution Drives. There is limited pedestrian infrastructure in the project area. Sidewalks exist on the east side of Chrysler Drive, but on the west side a sidewalk is present only along the southern portion of 1205 Chrysler Drive. Similarly, there are sidewalks along the south side of Independence Drive, but none are present on the north side, adjacent to the project site. A short segment of sidewalk is present along the frontage of 110 and 120 Constitution Drive, but no sidewalks are present at 130 Constitution Drive or farther east along Constitution Drive.

Utilities and Services

Water, Sewer, Storm Drainage

Potable water service to the project site is provided by Menlo Park Municipal Water and sewage collection and conveyance is provided by West Bay Sanitary District. There are existing water lines, sewer lines, and storm drain lines located in Constitution Drive (adjacent to the northern boundary of the project site), Independence Drive (adjacent to the southern boundary of the project site), and Chrysler Drive (adjacent to the eastern boundary of the project site). Additionally, the project site contains an existing drainage system that collects runoff from the parking areas, roof, and hardscape areas and discharges directly to existing storm drain mains.

Electrical and Communication Utilities

There are existing overhead telecommunications and Pacific Gas and Electric Company (PG&E) power lines that run through the middle of the project site, starting at Chrysler Drive and running northwest. When viewed from Independence Drive and Constitution Drive, the lines are located at the rear of those properties and within an existing public easement.

3.3 Project Objectives

CEQA requires an EIR to include a statement of objectives for the proposed project, including the underlying purpose of the project. As noted in the CEQA Guidelines, these objectives help the lead agency to determine which project alternatives to evaluate in the EIR (14 CCR 15124[a]). The overarching intention of the proposed project is to deliver a mix of housing types that would enhance the environment of the Bayfront Area and balance the existing office uses as set forth in the City's General Plan. More specifically, the objectives for the proposed project are to do the following:

- Provide a mix of housing types.
- Help the City and region achieve a better jobs/housing ratio by replacing office space with housing.
- Provide a pedestrian connection between Constitution Drive and Independence Drive to improve pedestrian circulation in the area.

- Alleviate traffic by providing housing close to a jobs center and public transit such as buses and shuttles.
- Develop the site at a sufficient density and intensity to provide the City with community benefits, including affordable housing.
- Provide enough market-rate residential units to have an economically viable and feasible project.
- Provide for-rent and for-sale affordable housing, where the for-sale affordable housing is organized to permit the use of tax-exempt bond financing.
- Support the City's sustainability goals by complying with the Building Energy Efficiency Standards in the California Building Code (Title 24, Parts 6 and 11) and local energy efficiency requirements and contributing to reduced mobile emissions by siting residential uses in a job-rich area.
- Provide residential and recreational uses in the Bayfront area consistent with the City's General Plan policies that promote residential development in the area.

3.4 Proposed Project

The proposed project would include demolition of five existing office and industrial buildings (a total of approximately 103,983 square feet of building space); alteration of the existing parcel boundaries to create five new lots, including four building lots (A, B, C, and D) and one open space lot (Lot 1); construction of 116 for-sale townhomes and 316 rental apartments, along with associated parking and landscaping; and provision of a wide pedestrian walkway (referred to in the site plans and throughout this EIR as a "paseo") from Constitution Drive to Independence Drive, as shown on Figure 3-5, Proposed Site Plan. The complete plan set for the proposed project is provided in Appendix B.

The townhomes would be constructed on the southern half of the project site, adjacent to Independence Drive, to be located on Lots B, C, and D. These lots would contain a total of 116 three-story townhomes with one or two-car garages that would be oriented to public streets, internal streets, and internal pedestrian pathways. On Lot A, which would comprise the northern portion of the project site, the proposed project would construct a five-story apartment building fronting on Constitution Drive. This building would include 316 apartments providing approximately 224,863 gross square feet of residential uses. The ground floor level of the apartment building would also include a leasing office, two mail rooms, a co-working space, a pet spa, and two lobbies. The second floor would include a fitness room and clubhouse. The third floor would include an approximately 648-square-foot amenity space, for which the specific use or function has not yet been defined. The fifth floor would include an approximately 588-square-foot lounge. The total size of the building, excluding parking, would be 289,223 square feet. Parking for residents would be provided in a parking structure located interior to the building, with one level of parking on the ground-floor level and one level below grade. Two interior courtyards would be placed at the second-floor level, above the parking structure. The parking structure would contain 128,880 square feet of vehicular parking space and have a total of 151,626 square feet (inclusive of bicycle parking, trash enclosures, fans, and other mechanical space). See Table 3-1 for a list of the proposed project land uses and Sheet A002 of Appendix B for the breakdown of square footage in the apartment and townhome buildings.

Table 3-1. Project Land Uses, Acreage, and Size

Project Parcels	Number of Residential Units	Type of Unit or Lot	Approximate Acreage	Total Residential Unit Gross Square Footage ¹	Building Gross Square Footage ²
Lot A	316 units	Apartments	2.55 +/-	224,863	289,223
	N/A	Parking Structure		N/A	151,626
Lot B	26 units	Townhomes	1.27 +/-	44,102	44,249
	N/A	Parking Garages		N/A	12,097
Lot C	18 units	Townhomes	0.61 +/-	25,281	25,369
	N/A	Parking Garages		N/A	5,013
Lot D	72 units	Townhomes	3.13 +/-	117,685	118,121
	N/A	Parking Garages		N/A	33,787
Lot 1	0 units	Open Space	0.59 +/-	N/A	N/A
Total	432 dwelling units	N/A	8.15	411,931	679,485³

Source: Appendix B.

Notes:

¹ Total residential building space included in the Floor Area Ratio.

² Total building space, including common areas, decks and other elements not included in the Floor Area Ratio.

³ The total gross square footage includes 476,962 square feet in the residential structures and 202,523 square feet within the parking structure and garages.

N/A = not applicable.

Roof heights for the townhouse buildings would reach approximately 43 feet and 7 inches, while the apartment building roof would be 68 feet at the top of the ridge and approximately 67 feet around the perimeter, with rooftop elevator overruns reaching 73 feet and penthouse stairways reaching 75 feet. The proposed buildings and vehicle circulation improvements would result in approximately 64.16 percent lot coverage for Lots A, B, C, and D. Building footprints would total approximately 151,554 square feet (Appendix G2), with a total of approximately 679,485 square feet of building space, including the apartment parking structure consisting of approximately 151,626 square feet, the townhouse garages consisting of approximately 50,897 square feet, and townhouse decks consisting of approximately 9,143 square feet (Appendix B). Of this total, approximately 476,962 square feet would be counted toward the project's FAR, resulting in a FAR of 134 percent. With building heights greater than 40 feet, the project requires approval of bonus-level development allowed by the Zoning Ordinance, which provides for an increase in density, gross floor area, and/or height in exchange for the provision of community amenities.

The project would include approximately 61,454 square feet of vehicle circulation and parking facilities and approximately 87,579 square feet of paths and patios. There would be a total of approximately 300,587 square feet of impervious surfaces on site, representing a 6,739-square-foot decrease compared to existing impervious surfaces (Appendix B, Sheet C5.1, and Appendix G2).

Residential Uses

The proposed project would include 316 for-rent apartments and 116 for-sale townhomes. As shown in Table 3-2, Proposed Residential Unit Breakdown: Lot A Apartments, the apartments would consist of 88 studio units with an average size of 539 square feet, 185 one-bedroom units with an average size of 725 square feet, and 43 two-bedroom units with an average size of 1,006 square feet. As shown in Table 3-3, Proposed Residential Unit

Breakdown: Lots B, C, and D Townhomes, the townhomes would all be a mix of two-, three-, and four-bedroom units ranging in size from 958 to 2,052 square feet and an average size of 1,613 square feet (Appendix B).

Because the project site is designated under the R-MU-B zoning district, development of the project site is subject to the requirements of the Menlo Park Municipal Code Chapter 16.45. Section 16.45.070 of the Menlo Park Municipal Code requires that community amenities be provided in exchange for bonus-level development that includes increased density, FAR, and/or building height. A project sponsor requesting bonus-level development must provide the City with a proposal indicating the specific amount of bonus development sought, the specific proposed amenities, and the value of both the bonus-level development and the amenities. The Municipal Code requires that the value of the community amenities must be equal to 50 percent of the fair market value of the bonus-level development portion of the project, as demonstrated by an appraisal performed by a licensed appraisal firm.

To meet the requirements of Municipal Code Chapter 16.96, Below Market Housing Program, the proposed project would designate 15 percent of the residential units (48 units) as Below Market Rate (BMR) housing, and would provide an additional 8 BMR units as a community amenity. As outlined in Tables 3-2 and 3-3, the BMR units would include both the for-sale townhomes and for-rent apartments, resulting in 74 BMR units consisting of 18 BMR townhomes and 56 BMR apartments. All BMR units would be affordable to low income households. The apartment BMR units would be mixed in throughout the apartment building, indistinguishable from the exterior, and would contain standard appliances common to new units. All of the affordable townhome units are proposed to be located in Lot C. The applicant has requested deviations from the City's BMR Program Guidelines to place all of the affordable townhomes on a single parcel to allow a non-profit affordable housing developer with expertise in affordable, for-sale housing to oversee that portion of the project, and allow the BMR townhomes to be developed on their own schedule. Construction of the apartment BMR units would be phased commensurate with the phasing of the overall project construction, such that for every 20 residential units constructed in a given phase, at least 15 percent of those units shall be BMR units. Pursuant to State Density Bonus Law, the project applicant has requested concessions and waivers from the City's BMR Guidelines that allow the affordable housing developer to provide the BMR townhomes. If approved, the BMR townhome units would proceed on their own construction schedule and would have a comparable average size to the market-rate units. However, the BMR townhomes are designed to include more bedrooms for larger families, and have some other differences from the market-rate townhomes. The BMR units would be open to income-qualified households as defined in the City's Below Market Rate Housing Program Guidelines (City of Menlo Park 2018).

Table 3-2. Proposed Residential Unit Breakdown: Lot A Apartments

Residential Unit Type	Average Square Footage	Total Number of Unit Type	Total Number of Below Market Rate Units
Studio	539	88	16
One-Bedroom	725	185	33
Two-Bedroom	1,006	43	7
Total/Weighted Average	712	316	56

Table 3-3. Proposed Residential Unit Breakdown: Lot B, C, and D Townhomes

Lot	Residential Unit Type	Number of Bedrooms	Average Square Footage	Total Number of Unit Type	Total Number of Below Market Rate Units
B and D	TH 1	3	1,749	34	0
B and D	TH 2	2	1,199	34	0
B and D	TH 3	3	2,052	10	0
B and D	TH 3.1	3	2,052	20	0
C	TH 4	4	1,480	6	6
C	TH 4.1	4	1,514	3	3
C	TH 4.2	4	1,416	3	3
C	TH 4.3	2	958	3	3
C	TH 5	4	1,581	3	3
Total/Weighted Average		N/A	1,613	116	18

Note: TH = townhome; N/A = not applicable.

As discussed further in Section 4.1, Aesthetics, the architectural language of the apartments and townhomes would be a warm color scheme and a modern architectural style. Building orientation would create an urban relationship to the street, as envisioned in the City's General Plan, with more than 60 percent of build-to-area for all street frontages.

Vehicle Circulation

The proposed project would provide for vehicular circulation system within each of the four proposed building lots, as shown on Figure 3-6, Proposed Circulation. Lot B would be accessed from Independence Drive and streets within this lot would not be connected with the adjacent Lot C other than by an emergency vehicle access route crossing the paseo. Lot C and Lot D would share one 26-foot-wide access driveway off Independence Drive and Lot D would have one 26-foot-wide access driveway off Chrysler Drive. Streets within Lots C and D would be interconnected. Lot A would have a single driveway off Constitution Drive providing access into the parking garage. Emergency vehicles would have access through the project site from Constitution Drive into the site, then along Street A located at the northern end of Lots C and D, connecting to Chrysler Drive. Internal streets that would provide emergency vehicle access would be 26 feet wide; the westernmost internal street would be 23 feet wide to accommodate surface parking in addition to access to townhome garages; all other internal streets and driveways would be 20 feet wide.

Parking

The project would include a total of 552 parking spaces; 510 spaces for residents and 42 spaces for guests. Lot A would be developed with 316 apartments and would offer 336 parking spaces (330 residential spaces and 6 guest spaces) in a parking structure with a single level below grade and a single level at grade. Eight of the residential spaces and one guest space would be Americans with Disabilities Act (ADA) accessible. At the time of construction, 15 percent of the parking stalls in the apartment garage would be equipped with an electric vehicle (EV) charging station and one parking stall per residential unit would be "EV Ready," meaning that conduits would be installed to facilitate adding a charging station in the future.

Each townhome unit would have either a one- or two-car garage. Lot B would be developed with 26 townhomes and would include 73 total parking spaces, 8 of which would be tandem spaces and therefore are not counted toward

the number of parking spaces required under the Municipal Code. There would be 44 non-tandem residential parking spaces and 21 guest spaces. The guest spaces would be provided as surface parking along the western site boundary and south of buildings 1 and 2. Lot C would be developed with 18 townhomes and would offer 24 parking spaces (18 residential spaces and 6 guest spaces provided as surface parking within and adjacent to buildings 6 and 7). Lot D would be developed with 72 townhomes and would offer a total of 153 parking spaces (118 residential non-tandem spaces, 26 residential tandem spaces, and 9 guest spaces). Guest spaces would be provided as surface parking in the northeast corner of this lot and north of building 14 as well as the southeast corner of this lot across from building 20 (Appendix B). Under Menlo Park Municipal Code Section 12.18.050, each townhome would be required to be prewired for one EV charger and EV charging stations must be installed in 15 percent of the required parking spaces. The City's requirements are more stringent than the EV requirements under 2022 Title 24 for low-rise multifamily developments. Specifically, 2022 Title 24 requires that 10 percent of parking spaces "EV Capable" by including conduit, breaker space, and a junction box and that 25 percent of total parking spaces be "EV Ready" by including electrical infrastructure and a wired outlet receptacle.

Landscaping and Lighting

The project site currently contains 47,859 square feet of existing landscaping. The proposed project would include approximately 25,580 square feet of landscape zones, approximately 23,577 square feet of landscaped areas along street frontages, approximately 15,518 square feet of common green spaces between townhomes, and an approximately 23,360 square-foot common landscape area in the apartment building courtyard (Appendix B). The proposed project would also include approximately 2,125 square feet of pervious (permeable, specifically to water and other liquids) paving. This would represent an increase of approximately 6,739 square feet in pervious surfaces (Appendix G2).

As shown on Figure 3-7, Proposed Open Space, a publicly accessible paseo (approximately 14,209 square feet) and park (approximately 11,945 square feet) would be provided within Lot 1, which would include approximately 0.60 acres located generally between Lots A, B, and C. The park would provide opportunities for passive recreation and would serve as a community gathering space. The paseo would be at least 20 feet wide and would extend between Independence Drive and Constitution Drive along the west side of the park and apartment building. Landscape zones would be placed along the western and southern edges of the apartment building, between the building and Lot 1, and along the eastern edge of the apartment building. The park would be located south of the southwest corner of the apartment building, between the northern portions of Lots B and D and north of Lot C.

The northern leg of Lot 1, west of the apartment building, would have a total width of 26 feet and would serve as an emergency vehicle access. A second 26-foot-wide emergency vehicle easement would extend east from the park to Chrysler Drive along the northern edge of Lot D. This emergency vehicle easement would also serve as a pedestrian pathway. The paseo extending across Lot 1 and additional pathways would establish pedestrian connections to the greater neighborhood network and to the publicly accessible open space within Lot 1. The project proposes a total of approximately 135,385 square feet of open space, including the landscape and common green space areas noted previously as well as approximately 26,154 square feet of public open space within the paseo and park, and approximately 21,196 square feet of private open space within balconies, decks, and patios (Appendix B). All public frontages would be improved with sidewalks and would include residential stoops, lobbies, the apartment building leasing office (located at the northeast corner of the ground floor), and residential amenities. The public frontages, paseo, and pedestrian pathways would incorporate bioswales to capture and filter stormwater before discharging to the storm drain system.

Project site landscaping is required to comply with the City's Landscape Design Standards ordinance (Municipal Code Section 16.45.120) for the R-MU District. The design standards provide criteria for landscape and hardscape within the site. The proposed landscaping is shown in Figure 3-8, Schematic Landscape Plan. Additionally, project site lighting is required to comply with the City's Lighting Design Standards (Municipal Code Section 16.45.120), which require that lighting be designed to a pedestrian scale, that light fixtures be placed no more than 40 feet apart, that parking areas be well lit for safety, and that lighting fixtures and sources be energy efficient.

The project arborist's report presents an inventory of 85 trees, 29 of which meet the definition of "protected" trees under the City's Heritage Tree Ordinance (Municipal Code Chapter 13.24, Heritage Trees). Trees identified as heritage trees include coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), bottlebrush (*Callistemon* spp.), sweetgum (*Liquidambar styraciflua*), coast redwood "Aptos blue" (*Sequoia sempervirens*), coast redwood "Soquel" (*S. sempervirens*), Italian stone pine (*Pinus pinea*), camphortree (*Cinnamomum camphora*), and Chinese elm (*Ulmus parvifolia*) (Appendix D3). As discussed further in Section 4.3, Biological Resources, the project is proposed under the Housing Crisis Act of 2019, which provides that the standards and regulations to which the project is subject are those that were adopted at the time that the Preliminary Application for this project was submitted, which was February 26, 2020. Thus, this project is subject to the City's Heritage Tree Ordinance as it existed on at that time, which is provided in Appendix D3. Under that version of the ordinance, the project is required to replace each heritage tree that is removed due to project development at a 1:1 ratio. The proposed project would involve removal of all 85 existing trees located within the project's landscape area and proposes planting 353 new trees, as shown in Figure 3-9, Tree Planting Plan.

Public Infrastructure and Services

The project site is located in an urban area with existing utilities and infrastructure. The proposed project would be required to install utility connections in compliance with City and provider specifications to serve the residential development with water, wastewater, stormwater drainage, natural gas, electricity, and telecommunications services. Connections to existing infrastructure would extend from the public right-of-way to the proposed private drive aisles and open space areas within the project site. Additional discussion of public infrastructure and services is provided in Section 4.16, Utilities and Service Systems.

Water Supply

The project site is currently served by Menlo Park Municipal Water. The proposed project would tie into existing 8-inch water lines located in Constitution Drive adjacent to the northern boundary of the project site and located in Independence Drive adjacent to the southern boundary of the project site. Potential environmental effects associated with providing water supply to the proposed residences are evaluated in Section 4.16 of this EIR.

Wastewater Service

The West Bay Sanitary District provides wastewater service to the City and would convey sewage from the project to the Silicon Valley Clean Water wastewater treatment plant for treatment and discharge to the San Francisco Bay. Collection and conveyance of stormwater drainage would be provided by the City. The proposed project would connect to existing 8-inch sanitary sewer lines located in Constitution Drive and Independence Drive and an existing 10-inch sanitary sewer line in Chrysler Drive. Potential environmental effects associated with wastewater collection and treatment for the proposed residences are evaluated in Section 4.16 of this EIR.

Storm Drainage and Stormwater Quality

The City provides stormwater drainage and management services in the project area. The redeveloped site would be drained by a new on-site storm drain system, which is required to meet stormwater quality control requirements outlined in the C.3 Regulated Projects Guide of the San Mateo County Water Pollution Prevention Program. The system would collect runoff from the parking, roof, and hardscape areas and convey it to biotreatment ponds/planters for stormwater treatment (Appendix G2). After treatment, stormwater would be routed to the existing storm drain network at the associated project frontages in Independence Drive, Constitution Drive, and Chrysler Drive. The existing mains that would receive stormwater runoff from the project site are a 24-inch-diameter line on Constitution Drive, an 18-inch-diameter line on Independence Drive, and a 54-inch-diameter line on Chrysler Drive. As discussed further in Section 4.9, Hydrology and Water Quality, and in Section 4.16, the proposed project would reduce the amount of impervious surfaces within the project site and thus would slightly reduce stormwater runoff.

Electricity

There are existing overhead electrical lines that run through the middle of the project site, within an existing public easement that starts at Chrysler Drive and runs northwest. When viewed from Independence Drive and Constitution Drive, the lines are located at the rear of those properties. The project would include relocating existing overhead electrical lines within the project limits underground. The lines would remain within a public easement and continue to serve the properties beyond the project site to the northwest. The joint pole lines beyond the project site's property limits would remain in their current condition. Potential environmental effects associated with providing electrical service to the proposed residences are evaluated in Section 4.16 of this EIR.

Solid Waste Disposal

Most residents in the City are served by Recology San Mateo County for solid waste, recyclables, and composting collection, and businesses may also elect to contract with Recology, although other providers are available for business contracts. Solid waste generated in the City is disposed of at a number of local landfills.

Police and Fire Services

The project site would be served by the City of Menlo Park Police Department from the Menlo Park Police Station, approximately 3.2 miles south of the project site, at 701 Laurel Street in Menlo Park. Fire protection would be provided by the Menlo Park Fire Protection District. The closest fire station to the project site is Station 77, approximately 1.2 miles east, at 1467 Chilco Street in Menlo Park. The fire district will review the proposed residential site plan, including fire hydrant placement and emergency vehicle access, prior to issuance of building permits. Potential environmental effects associated with providing police and fire services to the proposed residences are evaluated in Section 4.13, Public Services and Recreation.

Schools

The project site is located within the Menlo Park City School District. The closest schools to the project site are TIDE Academy Sequoia Union High School, Beechwood School, Encinal School, Laurel Lower Campus, Mid-Peninsula High School, and Peninsula School. Potential environmental effects associated with providing public education services to the proposed residences are evaluated in Section 4.13 of this EIR.

Sustainable Project Features

The project would comply with Section 16.45.130 of the City's Zoning Ordinance, which requires development projects within the R-MU zone district to attain the following green building requirements:

- 100 percent of the project's energy demand be met through on-site generation and/or renewable energy sources or be offset through the purchase of certified renewable energy credits;
- Construction of at least 100,001 square feet meet Leadership in Energy and Environmental Design (LEED) Gold standards;
- Construction of at least 100,001 square feet enroll in EPA Energy Star Building Portfolio Manager and submit documentation of compliance;
- Attain indoor and outdoor water use efficiency standards and be dual plumbed for the internal use of recycled water; and
- Prepare and implement a zero-waste management plan.

In addition, the following sustainable features would be included in the project design:

Apartments

- All electric buildings to reduce greenhouse gas emissions
- On-site solar photovoltaic arrays to offset energy use and cost
- Electric vehicle charging stations
- Bike facilities for residents and visitors
- Water use reduction through efficient plumbing fixtures
- Use of native/adapted species to reduce irrigation needs
- Dual plumbing for recycled water reuse for building
- Recycled water reuse for irrigation
- Enhanced ventilation and carbon dioxide monitors for better indoor air quality
- Enhanced combustion ventilation and garage pollutant protection

Townhomes

- All electric buildings to reduce greenhouse gas emissions
- On-site solar photovoltaic arrays to offset energy use and cost
- Electric vehicle charging stations
- Water use reduction through efficient plumbing fixtures
- Use of native/adapted species to reduce irrigation needs
- Recycled water reuse for irrigation
- Enhanced ventilation and carbon dioxide monitors for better indoor air quality
- Enhanced combustion ventilation and garage pollutant protection

Construction Details, Phasing, and Timeline

The proposed site design accommodates sea-level rise, and all proposed ground-level residential units would be raised 2 feet above the 5-foot FEMA floodplain, per the requirements of Menlo Park Municipal Code Section 16.45.130(4).

Demolition, Grading, and Construction

All five existing buildings on the project site would be demolished, and the entire 8.15-acre project site would be graded. Construction debris, such as building foundations, pavements, and structures, would be collected and hauled off site for disposal. It is estimated that project demolition would require approximately 200 total one-way hauling trips to remove demolition waste from the approximately 103,983 square feet of existing buildings, approximately 193,784 square feet of asphalt and concrete from streets and parking, and approximately 9,559 square feet of patios and walkways (Appendix C).

Up to 32,000 cubic yards of soils would be removed from the project site for excavation, utility trenching, and foundations. A total of 5,260 cubic yards of soils would be imported to the project site to raise the building grade to meet FEMA requirements. Excavation depths would be a maximum of 3.5 feet below grade for the proposed buildings, parking garage, and bioretention areas. Foundation footings may extend up to 42 inches below grade, with up to an additional 5 feet for an elevator pit. Impact pile driving would not be required because a mat slab foundation would be used.

Construction Phasing and Timeline

If approved, construction of the project is anticipated to begin in 2023 and would occur over a 50-month period in a single, continuous building phase. It is anticipated that the project would be under construction with simultaneous activity on each of the residential lots. Construction staging would take place within the confines of each respective component; however, if a portion of the project is not under construction, that component would be used for staging, which would include material and equipment storage, and construction trailer parking.

Demolition activities are anticipated to occur over a 13-week period. Site preparation and grading would occur over a 10-week period. Exterior work, such as foundation installation, building construction, and architectural coating, is expected to occur over a 3.75-month period (which would be from September 2024 through May 2028 if demolition begins in September 2023). Paving of the entire site would occur over a 2-month period after the initial exterior work is completed and concurrent with early stages of building construction (generally between November 2024 and January 2025 based on the anticipated September 2023 start of demolition). Residential buildings would be occupied by the end of 2028.

Construction fencing would be installed around the perimeter of the entire project site during construction to prevent pedestrian and non-construction-related vehicle access. As aspects of the project are completed, the construction fencing may be reduced to encompass only the parts of the site that remain under construction.

3.5 Discretionary Actions and Use of This EIR

City Approvals

As lead agency for consideration of the proposed project, the City would be responsible for many of the approvals required for project development. As part of the approval process, the Menlo Park Planning Commission would be

required to exercise its independent review to determine whether to certify this EIR as adequate under CEQA, adopt CEQA findings and a Mitigation Monitoring and Reporting Program, and to approve the requested Use Permit, Architectural Control, Below Market Rate Housing Agreement, and Heritage Tree Removal Permit. Approval of the Vesting Tentative Subdivision Map would be at the discretion of the City Council. Brief descriptions of each of these discretionary approvals are provided in Chapter 2.

In addition, a Housing Needs Assessment (Appendix I) and a Fiscal Impact Analysis have been prepared for informational purposes. Finally, to qualify for bonus-level development within the R-MU-B zoning district, the proposed project would be required to complete an appraisal process to identify the required value of the community amenities and a financial analysis of the sponsor's proposed community amenities to determine the value of the amenities proposed.

Responsible, Trustee, and Reviewing Agencies

This EIR will be used by responsible agencies and trustee agencies and other reviewing agencies that may have some approval authority or non-approval input related to the proposed project (i.e., to issue a permit), as listed below. The project sponsor would obtain all permits, as required by law.

The project would require the following approvals from other agencies and service districts:

- **Bay Area Air Quality Management District:** Job Number (J) Permit for asbestos removal during demolition; permits for on-site generators, boilers, and other utility equipment
- **California Department of Transportation:** Review of traffic circulation effects and consultation on potential traffic improvements that may affect state highway facilities, ramps, and intersections
- **California Regional Water Quality Control Board/San Mateo Countywide Water Pollution Prevention Program:** Approval of National Pollutant Discharge Elimination System permit for stormwater discharge
- **City/County Association of Governments of San Mateo County:** Review of potential effects on Routes of Regional Significance
- **Menlo Park Fire Protection District:** Residential Site Plan Review
- **Menlo Park Municipal Water:** Approval of water hookups
- **PG&E:** Approval of connection permits
- **San Mateo County Environmental Health Services Division:** Review of on-site generators
- **San Mateo County Transportation Authority:** Review of potential effects on public transit
- **San Mateo County Water Pollution Prevention Program:** C.3 and C.6 Development Review Checklist
- **West Bay Sanitary District:** Approval of wastewater hookups

3.6 References Cited

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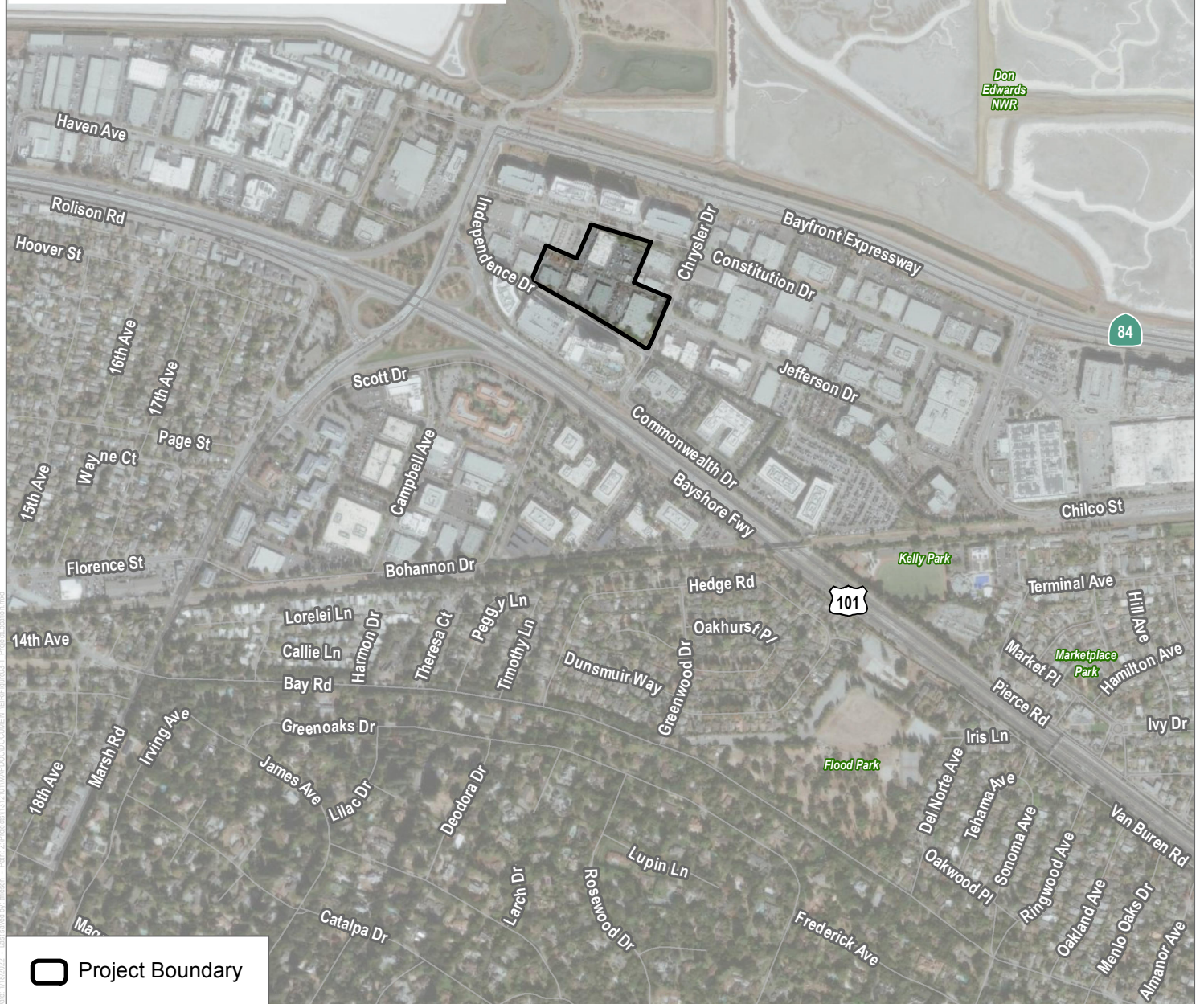
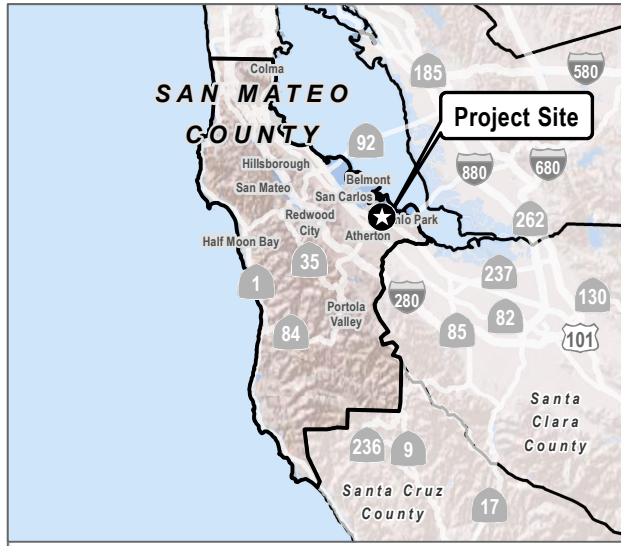
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SOURCE: ESRI Basemap 2022, San Mateo County 2020

FIGURE 3-1

Project Location

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SOURCE: ESRI Basemap 2022, San Mateo County 2020

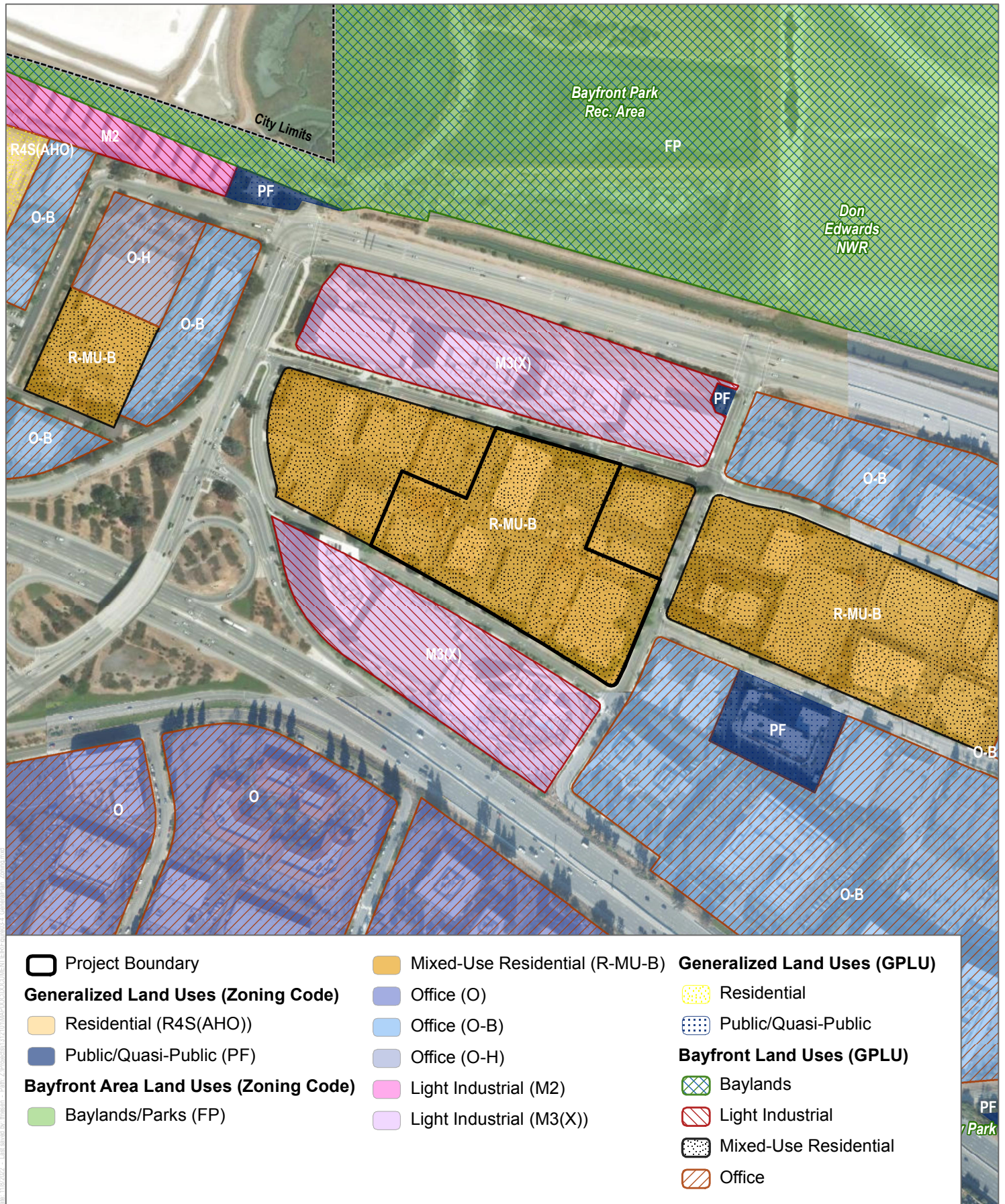
FIGURE 3-2
Project Vicinity

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SOURCE: ESRI 2022, San Mateo County 2020

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SOURCE: ESRI Basemap 2022, City of Menlo Park 2022

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SOURCE: T Square Studios 2022

DUDEK

FIGURE 3-8
Schematic Landscape Plan
 123 Independence Drive Residential Project

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PLANT PALETTE						
TREES						
KEY	SIZE	BOTANICAL NAME	COMMON NAME	SPACING/ COMMENTS	WUCOLS*	NATIVE (Y/N)
ACE PAL	See Plan	Acer palmatum "Bloodgood"	Bloodgood Japanese Maple		Medium	N
AES CAL	See Plan	Aesculus californica	California Buckeye		Very Low	Y
ALD HER	See Plan	Aloe "Hercules"	Hercules Aloe		Low	N
CER OCC	See Plan	Cercis occidentalis	Western Redbud		Very Low	Y
GIN BL	See Plan	Ginkgo biloba "Princeton Sentry"	Columnar Ginkgo		Medium	N
GLE TRI	See Plan	Gleditsia triacanthos "Shademaster"	Shademaster Honeylocust		Low	N
JAC MM	See Plan	Jacaranda mimosifolia	Jacaranda Tree		Medium	N
KOE BP	See Plan	Koeleruteria bignonioides	Chinese Flame Tree		Medium	N
LAG TUS	See Plan	Lagerströmia "Luskegus"	Crape Myrtle		Low	N
LAG MUS	See Plan	Lagerströmia "Muscoega"	Crape Myrtle		Low	N
LYO FLO	See Plan	Lyonothamnus floribundus	Catalina Ironwood		Low	Y
MEL NES	See Plan	Melaleuca nesophila	Pink Melaleuca		Low	N
PLA ACE	See Plan	Platanus acerifolia	London Plane		Medium	Y
POD GRA	See Plan	Podocarpus gracilior	Fern Podocarpus		Medium	N
QUE AGR	See Plan	Quercus agrifolia	Coast Live Oak		Very Low	Y
TIL COR	See Plan	Tilia cordata "June Bride"	Little Leaf Linden		Medium	N
ULM DAV	See Plan	Ulmus davidiana var. japonica "Morton"	Morton/ Accolade Elm		Medium	N
ULM PAR	See Plan	Ulmus parvifolia "Dymasty"	Evergreen Elm		Low	N
WAS ROB	See Plan	Washingtonia robusta	Mexican Fan Palm		Low	N
SHRUBS						
KEY	SIZE	BOTANICAL NAME	COMMON NAME	SPACING/ COMMENTS	WUCOLS*	
ACC	5 gal	Acacia s. "Cousins III"	Little River Wattle	36" o.c.	Low	Y
ARU	5 gal	Arbutus unedo compacta	Strawberry Bush	36" o.c.	Low	N
BAA	15 gal	Bambusa m. "Alphonse Karr"	Bamboo "Alphonse Karr"	48" o.c.	Low	N
BUF	5 gal	Buddleia frutescens	Yellow Staked Buddleia	30" o.c.	Low	N
CAS	1 gal	Calandrinia spectabilis	Rock Purslane	36" o.c.	Low	N
CAL	5 gal	Callistemon "Little John"	Dwarf Callistemon	42" o.c.	Low	N
CIS	5 gal	Cistus x skinbergii	Pink Rockrose	36" o.c.	Low	Y
DM**	5 gal	Dietes vegeta	Fortnight Lily	30" o.c.	Low	N
EPI	3 gal	Epilobium caeruleum "Catalina"	California Fuchsia	24" o.c.	Low	Y
ILV	5 gal	Ilex vomitoria "Nana"	Dwarf Yaupon	30" o.c.	Low	N
IRD**	1 gal	Iris douglasiana	Pacific Coast Iris	24" o.c.	Low	Y
LAD**	1 gal	Lardulula x intermedia "Grosso"	Hedge Lavender	24" o.c.	Low	N
LM	1 gal	Liriodendron muscari "Majestic"	Lily Turf	18" o.c.	Medium	N
LOR	5 gal	Loropetalum chinense "Rubrum"	Ruby Chinese Fringe	30" o.c.	Low	N
PEH	3 gal	Pentstemon heterophyllus	Footbell Pentstemon	36" o.c.	Low	Y
PIT	5 gal	Pittosporum tobira "Wheeler's Dwarf"	Pittosporum "Wheeler's Dwarf"	36" o.c.	Medium	N
PHA	5 gal	Phormium "Amazing Red"	New Zealand Flax cns	24" o.c.	Low	N
POM	1 gal	Polystichum munifolium	Western Sward Fern	24" o.c.	Medium	Y
PRC	5 gal	Prunus caroliniana "Bright & Tight"	Carolina Laurel Cherry	60" o.c.	Low	N
RHM	5 gal	Rhamnus c. "Bound San Bruno"	Coffeeberry	42" o.c.	Low	Y
RHI	5 gal	Rhipsalis indica "Pink Lady"	Indian Hawthorn	36" o.c.	Low	N
ROC	5 gal	Rosa californica	California Rose	36" o.c.	Low	Y
SAC	1 gal	Salvia clevelandii "Woodford Glen"	Cleveland Sage	30" o.c.	Low	Y
SAL**	3 gal	Salvia leucantha	Mexican Sage	36" o.c.	Low	Y
SAS	1 gal	Salvia leucantha "Santa Barbara"	Compact Mexican Sage	36" o.c.	Low	Y
SAR	5 gal	Sarcococca nuxifolia	Sweet Box	36" o.c.	Low	N
GRASSES						
KEY	SIZE	BOTANICAL NAME	COMMON NAME	SPACING/ COMMENTS	WUCOLS*	
CNU	1 gal	Calamagrostis nutkanensis	Reed Grass	24" o.c.	Low	Y
CAD**	1 gal	Carex divisa	Berkley Sedge	24" o.c.	Low	N
CHT**	1 gal	Chondropetalum leucostachyum	Cape Rush	30" o.c.	Low	N
DEC**	1 gal	Deschampsia cespitosa	Tufted Hairgrass	24" o.c.	Low	Y
FES**	1 gal	Festuca californica "Serpentine Blue"	California Fescue	18" o.c.	Low	Y
JUP**	1 gal	Juncus patens "Elk Blue"	California Gray Rush	24" o.c.	Low	Y
MUH**	1 gal	Muhlenbergia "Regal Mist"	Purple Deer Grass	24" o.c.	Low	Y
MUR	1 gal	Muhlenbergia rigens	Deer Grass	36" o.c.	Low	Y
NMP**	1 gal	Nassella pulchra	Purple Needlegrass	24" o.c.	Very Low	Y
GROUNDCOVERS						
KEY	SIZE	BOTANICAL NAME	COMMON NAME	SPACING/ COMMENTS	WUCOLS*	
ACR	1 gal	Acacia redolens	Acacia	48" o.c.	Very Low	N
ARP	1 gal	Arctostaphylos "Pacific Mist"	Pacific Mist Manzanita	30" o.c.	Low	Y
CEG	1 gal	Ceanothus s. h. "Yankee Point"	Yankee Point Ceanothus	48" o.c.	Low	Y
COK	1 gal	Coprosma kirkii "Variegata"	Variegated Mirror Plant	36" o.c.	Low	Y
GEI	1 gal	Geranium incanum	Geranium	24" o.c.	Low	N
MAA	5 gal	Mahonia aquifolium	Oregon Grape	30" o.c.	Low	Y
MAC	5 gal	Mahonia aquifolium "Compacta"	Oregon Grape	30" o.c.	Low	Y
MYP**	1 gal	Myoporum parvifolium "Putah Creek"	Creeping Myoporum	36" o.c.	Low	N
SES	4" pot	Sedum spuriolum "John Creech"	John Creech Stonecrop	9" o.c.	Low	N
VINES						
KEY	SIZE	BOTANICAL NAME	COMMON NAME	SPACING/ COMMENTS	WUCOLS*	
BOS	1 gal	Bougainvillea "San Diego Red"	Violet Trumpet Vine	See Plan	Low	N
CLA	5 gal	Clematis armandii	Evergreen Clematis	See Plan	Medium	N
FIP	1 gal	Ficus pumila	Creeping Fig	See Plan	Medium	N
MAU	1 gal	Macfadyena unguis-cati	Cat's Claw	See Plan	Medium	N
Native plant designation based on WUCOLS and Western Garden Book						
* WUCOLS (WATER USE CLASSIFICATION OF LANDSCAPE SPECIES) WATER USE RATING						
** Stormwater Treatment Area Plant						

SOURCE: T Square Studios 2022

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4 Environmental Analysis

The purpose of this draft environmental impact report (EIR) is to evaluate the potential environmental effects of the 123 Independence Drive Residential Project (project; proposed project). The City of Menlo Park (City) circulated a Notice of Preparation (NOP) beginning on January 8, 2021, with the public review period ending on February 8, 2021. A public scoping session based on the original project application was held as part of the Planning Commission meeting on January 25, 2021. The January NOP reflected the original project application, which proposed development of a mixture of residential and office uses. In July and August 2021, the project applicant submitted revised project plans that omit the office component and include additional residential units. The City circulated a revised NOP based on those revised plans, which was circulated for public review between September 11, 2021, and October 11, 2021. A second scoping session based on the revised project application was held as part of the Planning Commission meeting on September 27, 2021.

Both NOPs were transmitted to the State Clearinghouse, responsible agencies, other affected agencies, and other public and private potential stakeholders to solicit feedback regarding the scope of the environmental analysis to be addressed in the project's Draft EIR. The NOPs and comment letters received are contained in Appendix A of this Draft EIR.

Sections 4.1 through 4.15 of this Draft EIR contain the potential environmental impacts analysis associated with implementation of the project, and focus on the following issues:

- Section 4.1 – Aesthetics
- Section 4.2 – Air Quality
- Section 4.3 – Biological Resources
- Section 4.4 – Cultural and Tribal Cultural Resources
- Section 4.5 – Energy
- Section 4.6 – Geology, Soils, Seismicity, and Paleontological Resources
- Section 4.7 – Greenhouse Gas Emissions
- Section 4.8 – Hazards and Hazardous Materials
- Section 4.9 – Hydrology and Water Quality
- Section 4.10 – Land Use and Planning
- Section 4.11 – Noise
- Section 4.12 – Population and Housing
- Section 4.13 – Public Services and Recreation
- Section 4.14 – Transportation
- Section 4.15 – Tribal Cultural Resources
- Section 4.16 – Utilities and Service Systems

Cumulative Scenario

Each of the environmental impact analysis sections includes consideration of the project's potential contribution to significant cumulative impacts to the environmental resources addressed in that section. **Cumulative impacts** refer to two or more individual effects which, when considered together, are considerable or which compound or increase

other environmental impacts. The individual effects may be changes resulting from a single project or several separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

The cumulative impacts analysis in each of the environmental impact analysis sections includes a definition of the geographic range in which cumulative impacts are considered, a summary of applicable cumulative impacts analysis and conclusions from the ConnectMenlo EIR and other prior environmental impact analyses documents, and a discussion of the project's contribution to cumulative impacts.

The geographic range for consideration of cumulative impacts varies by resource area. In many cases the consideration of cumulative impacts is limited to the City limits, or may be limited to just the Bayfront area of the City. In other cases, the geographic range may include other surrounding areas, such as the remainder of San Mateo County and nearby portions of Santa Clara County. The specific geographic range for consideration of cumulative impacts is stated in the cumulative impact analysis for each environmental resource topic.

Citywide Buildout

Where the geographic range for cumulative impacts is defined as the City limits or the Bayfront Area, the cumulative development scenario is considered to be buildout of the City's General Plan, as described in the ConnectMenlo EIR and with consideration of specific projects within the City including those that are under construction, have been recently approved, and are currently undergoing environmental review. The ConnectMenlo EIR evaluated a General Plan buildout scenario that included development of potential new development that would only occur in the Bayfront Area as reflected in the ConnectMenlo General Plan Update in combination with the remaining and previously approved buildout potential in the prior General Plan that was reaffirmed and included in the cumulative development scenario under the ConnectMenlo General Plan Update. Specifically, the ConnectMenlo EIR defined the cumulative 2040 buildout horizon to include the following new development, as shown in Table 4-2 of the ConnectMenlo EIR:

- 5.6 million square feet of non-residential space
- 920 hotel rooms
- 6,780 residential units (within the Bayfront Area, this included 780 multi-family units that were already pending, approved, or under construction, 3,000 additional multi-family units anticipated under the ConnectMenlo General Plan Update, and 1,500 new units of corporate campus residential anticipated under the ConnectMenlo General Plan Update)
- 17,450 residents (based on an average of 2.57 persons per household, as reflected in the Association of Bay Area Governments (ABAG) *Projections 2013, Subregional Study Area Table*); and
- 22,350 employees

Project Consistency with ConnectMenlo EIR

While the proposed project is consistent with the land use designation for the project site and the proposed density is consistent with the zoning designation, including use of a density bonus, the project would result in more multi-family dwelling units in the Bayfront Area compared to the development projections evaluated in the ConnectMenlo EIR. Specifically, the Land Use Element identified the potential for 4,500 new residential units in the Bayfront Area

and recognized that there was a remaining potential under the prior General Plan for development of 150 multi-family units. The ConnectMenlo EIR assumed that 1,500 of the new residential units would be corporate campus units, which, on average, are smaller than average multi-family units, and thus may result in lower population and associated demands for public services and utilities, and that 3,150 units would be multi-family.

The City has received several applications for development in the Bayfront Area since adoption of the ConnectMenlo General Plan Update. At the time that the development applications for the proposed project were submitted, the City had received applications for development of 2,816 multi-family units within the Bayfront Area. The proposed project, in combination with those previously submitted applications, would result in 3,248 multi-family units, which is within the maximum number of units permitted under the General Plan but 98 units greater than the development projections for multi-family units evaluated in the ConnectMenlo EIR. The project-level cumulative impact analysis in this EIR includes consideration of these additional 98 multi-family units. Where relevant, the cumulative impact analysis also discusses whether the increased rate of buildout that has been occurring compared to the assumed rate in the ConnectMenlo EIR would affect the extent and level of significance of cumulative impacts. Refer to the individual cumulative impact evaluation in each of the environmental resource sections for further discussion of the cumulative development assumptions relevant to each topic.

Buildout Horizon

In addition, the ConnectMenlo Final EIR assumed a buildout horizon of 2040. Given the development applications that the City has already received, it is likely that buildout of the residential uses anticipated under the General Plan will be reached prior to 2040. The environmental impact analysis presented in the ConnectMenlo Final EIR evaluated the maximum development potential that could occur and did not consider phased buildout of the development potential; therefore, no new or additional impacts are anticipated as a result of the expedited buildout. Other regional planning efforts undertaken after adoption of ConnectMenlo, such as Plan Bay Area 2050 and the Menlo Park Municipal Water Urban Water Management Plan 2020, have reflected both the current pace of development and full buildout of ConnectMenlo where relevant to each planning document.

Specific Menlo Park Projects

In some cases, the cumulative impact analysis in this EIR also considers the following specific projects within the City that are under construction, have been recently approved, and are currently undergoing environmental review:

Menlo Gateway – office and hotel development on 15.9 acres on Independence Drive and Constitution Drive;

Facebook campus expansion – redevelopment of two parcels on Constitution Drive with two new office buildings and publicly-accessible open space;

Menlo Park Community Campus – redevelopment of the Onetta Harris Community Center, Menlo Park Senior Center, and Belle Haven Youth Center with a multi-generational community center and library;

Middle Plaza at 500 El Camino Real – mixed-use residential/office/retail on El Camino Real;

Springline – redevelopment of a 6.4-acre site on El Camino Real and Oak Grove Avenue with approximately 220,000 square feet of commercial uses and 183 dwelling units;

O'Brien Drive projects – two proposed five-story research and development buildings, each with approximately 120,000 square feet, on O'Brien Drive and Willow Road;

1704 El Camino Real – proposed replacement of a 28-room hotel with a 70-room hotel;

1350 Adams Court - proposed five-story research and development building with up to 260,400 square feet

Commonwealth Building 3 – proposed 249,500 square-foot office building on Jefferson Drive;

CSBio 3 – proposed seven-story office and research and development building;

Hotel Moxy – proposed demolition of a non-medical office building and construction of a 163-room hotel;

Menlo Flats – proposed redevelopment of three parcels totaling 1.38 acres with approximately 158 multi-family dwelling units, 13,400 square feet of office space, and 1,600 square feet of commercial space;

Parkline – proposed updates to SRI International’s research campus, including development of a mixed-use neighborhood with a range of housing units, located adjacent to the City’s Downtown Area and Caltrain Station;

Willow Village – proposed redevelopment of the former Menlo Science and Technology Park with up to 200,00 square feet of retail, 1,729 housing units, a 193-room hotel, 1,250,000 square feet of offices, and 350,000 square feet of accessory, meeting, and conference space.

City of East Palo Alto Projects

At the time that the ConnectMenlo EIR was prepared, there was a moratorium on new or expanded water service connections in the City of East Palo Alto due to water supply constraints. For that reason, the ConnectMenlo EIR did not consider East Palo Alto projects in the cumulative scenario. However, in 2018, the City of East Palo Alto secured a permanent additional water supply via an agreement with the City of Palo Alto, which allowed the City of East Palo Alto to lift the water connection moratorium and proceed with processing development applications. Thus, for environmental resource areas where the geographic range for cumulative impacts includes nearby portions of Santa Clara County, development projects that are under construction, approved, or pending in East Palo Alto are considered in the cumulative impact analysis. These projects include:

KIPP School – an approved elementary charter school located at 1039 and 1063 Garden Street;

Woodland Park Euclid Improvements – development of 444 residential units located at 1960 Tate Street;

Glory Mobile Home Park Conversion – an approved redevelopment project that will remove 30 residential units at this existing mobile home community;

Small Residential Developments – development of a total of 95 residential units across several project sites located at 807 E Bayshore Road, 717 Donohoe Street, 2340 Cooley Avenue, 547 Runnymede, 1062 Runnymede, 1201 Runnymede Street, 760 Weeks Street, 120-126 Maple Lane, and 990 Garden Street;

University Corner - a 47,594 square foot four-story mixed-use building with retail space and parking on the ground level and 33 residential units on upper floors;

865 Weeks Street - 136 units of multi-family housing for low-income households;

East Palo Alto Waterfront Project - a mixed-use development including 750,000 square feet of office space, 50,000 square feet of retail/commercial space, 550,000 square feet of research and development/light industrial space, 40,000 square feet of other non-residential uses, and 260 residential units, located on Tara and Demeter Streets;

Four Corners - a mixed-use development at 1675 Bay Road that would develop 40,000 square feet of retail/commercial space, 500,000 square feet of research and development/light industrial space, and 180 residential units;

1804 Bay Road - a mixed-use development that would construct 1,903 square feet of retail/commercial space, 5,936 square feet of research and development/light industrial space, and 75 residential units;

2020 Bay Road - a mixed-use development that would construct approximately 1.4 million square feet of office space, 3,500 square feet of retail/commercial space, and 18,000 square feet of other non-residential uses;

The Landing at EPA - Harvest Properties - a mixed-use development that would replace 15,000 square feet of industrial space located on Bay Road and Weeks Street with approximately 880,000 square feet of office space, 23,500 square feet of retail/commercial space, and 23,500 square feet of other non-residential uses;

The Sobrato Office Project - a project to construct 65,000 square feet of office space on Pulgas Avenue;

JobTrain Office Project - redevelopment to replace 4,500 square feet of research and development/light industrial space on Pulgas Avenue with approximately 102,500 square feet of office space; and

University Circle Phase II - a project to construction 18,000 square feet of office space on University Avenue.

Technical Studies

Technical studies were prepared to analyze air quality and greenhouse gas emissions, health risks, biological resources, cultural resources, energy consumption, hazards and hazardous materials, noise, and traffic, and were used in the preparation of this Draft EIR. These documents are identified in the discussions for the individual environmental issues and are included as technical appendices on a flash drive attached to the Draft EIR and available at the City.

Analysis Format

The Draft EIR assesses how the project would impact each of the above-listed resource areas. Each environmental issue addressed in this Draft EIR is presented in terms of the following subsections:

- **Environmental Setting:** Provides information describing the existing setting on and/or surrounding the project site that may be subject to change as a result of implementation of the project. This setting discussion describes the conditions that existed when the NOP was sent to responsible agencies and the State Clearinghouse.
- **Regulatory Framework:** Provides a discussion of federal, state, regional, and local regulations, plans, policies, and ordinances applicable to the project.
- **Thresholds of Significance:** Provides criteria for determining the significance of project impacts for each environmental issue.
- **Impacts and Mitigation Measures:** Provides a discussion of the characteristics of the project that may have an impact on the environment, analyzes the nature and extent to which the project is expected to change

the existing environment, analyzes the nature and extent to which the project may contribute to cumulative environmental effects, indicates whether the project's impacts would meet or exceed the levels of significance thresholds, identifies mitigation measures to reduce significant adverse impacts to the extent feasible, and identifies the level of impact significance after implementation of mitigation measures.

- **References Cited:** Lists the sources cited during preparation of the Draft EIR.

4.1 Aesthetics

This section of the environmental impact report (EIR) evaluates the potential changes to the existing visual characteristics of the project site and vicinity that could result from implementation of the proposed 123 Independence Drive Residential Project (project; proposed project). The analysis focuses on potential impacts on existing visual conditions, including scenic views, scenic resources, and lighting associated with the proposed project.

As discussed in Chapter 2, Introduction, and Chapter 4, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this EIR, one in January and February 2021, and one in September and October 2021. None of the written or verbal comments received in response to the NOPs address aesthetics. Both NOPs and the comments received in response to them are provided in Appendix A of this EIR.

The primary sources reviewed to prepare this section include the ConnectMenlo General Plan Update (City of Menlo Park 2016a), the ConnectMenlo General Plan Update EIR (City of Menlo Park 2016b), and the City of Menlo Park Municipal Code (City of Menlo Park 2021).

4.1.1 Environmental Setting

The project site is located on the northwest side of the intersection at Independence Drive and Chrysler Drive in Menlo Park. The site is bounded on the north side by Constitution Drive and Marsh Road is 560 feet northwest of the parcels.

Existing Development

The approximately 8.15-acre site is currently developed with five existing single-story office and industrial buildings totaling approximately 103,983 square feet of building space. The buildings were all built between 1961 and 1968. Representative photographs of the existing development on site are shown in Figures 4.1-1a and 4.1-1b, Site Photos. The westernmost building on Independence Drive, 119 Independence Drive, is approximately 16 feet in height and 12,996 square feet. To the west, the building at 123 and 125 Independence Drive is approximately 20 feet in height and approximately 12,335 square feet. The building at 127 Independence Drive is approximately 19 feet in height and approximately 13,822 square feet. To the west of 127 Independence Drive, at the corner of Independence Drive and Chrysler Drive, is 1205 Chrysler Drive. The building at this address is approximately 17 feet in height and approximately 39,302 square feet. Finally, 130 Constitution Drive is located to the north of 127 Independence Drive. This building is approximately 25 feet in height and approximately 25,528 square feet.

Landscaping

The project site contains several decorative landscape areas along each parcel's frontage on the adjacent public street and around building perimeters. Typical views of these areas are shown in photos 2 and 3 in Figure 4.1-1a. A total of 47,859 square feet of landscaping exists on the project site, including 85 existing trees. Of these trees, 56 are non-heritage trees and 29 are protected heritage trees (Appendix D4), as defined within Menlo Park Municipal Code Chapter 13.24, Heritage Trees (City of Menlo Park 2021 and Appendix D3). The interior of the site is almost exclusively hardscape, consisting of 307,326 square feet of impervious surfaces, including parking lots, streets, and walkways (Appendix G2).

Lighting and Utility Lines

There are three public light poles at the boundaries of the existing project site, one each on Independence Drive, Chrysler Drive, and Constitution Drive, and a fourth pole setback several feet from the public right-of-way lighting the parking lot entrance/exit on Independence Drive near Chrysler Drive. Additional lighting is provided around building entrances and perimeters and in landscaped areas.

There are existing overhead telecommunications and Pacific Gas and Electric Company power lines that run through the middle of the project site, starting at Chrysler Drive and running northwest within an existing public easement. A typical view of these lines is provided in Photo 1 of Figure 4.1-1a. When viewing the site from Independence Drive and Constitution Drive, the lines are located at the rear of those properties.

Scenic Vistas and Corridors

The City of Menlo Park (City) has not designated any scenic vistas or corridors within the project vicinity; however, as discussed in the ConnectMenlo EIR, views of the Santa Cruz Mountain Range, views to the San Francisco Bay (Bay), and views of the foothills and San Francisquito Creek are considered to be scenic vistas (City of Menlo Park 2016b). The ConnectMenlo EIR also identified that developed parcels in the Bayfront Area, such as those proposed by the project, are not considered public Bay-viewing destination points and found that the existing level of development throughout the Bayfront Area generally limits the opportunity for views of scenic vistas from street-level public viewing areas.

Adjacent to the project site, views to the north along Chrysler Drive include a long-range view of a slight topographic rise and trees that are immediately north of State Route 84, which is also known as the Bayfront Expressway. There are no views directly of the Bay, but this topographic rise and trees represent the natural landscape adjacent to the edge of the Bay. Along the project site's northern boundary, most views northward from Constitution Drive are blocked by multi-story buildings on the north side of the street. However, views similar to those from Chrysler Drive are available between buildings, such as the view across the parking lot driveway approximately one block west of Chrysler Drive, at 135 Constitution Drive. Northward views along Independence Drive are blocked by existing development and do not include any features associated with the Bay.

4.1.2 Regulatory Framework

Federal Regulations

There are no federal regulations pertaining to visual quality or aesthetics relevant to the project.

State Regulations

State Scenic Highway Program

The California Department of Transportation manages the State Scenic Highway Program detailed in Streets and Highways Code Section 260. A highway may be designated as scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. There are no highways or roads in the vicinity of the project site that are eligible for inclusion in the State Scenic Highway Program (Caltrans 2022). A segment of Interstate 280

(I-280), which is designated as a State Scenic Highway, is adjacent to the western City boundary. This segment of I-280 is approximately 4.8 miles southwest of the project site.

California Building Code

The State of California provides a minimum standard for building design through Title 24 of the California Code of Regulations (CCR), commonly referred to as the “California Building Code” (CBC). The CBC is located in Part 2 of Title 24. The CBC is updated every 3 years. The current code is the 2019 California Building Code; however, the 2022 California Building Code was adopted in December 2021 and will be effective January 1, 2023. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. The 2019 CBC has been adopted for use by the City of Menlo Park, according to Section 12.04.010 of the Menlo Park Municipal Code.

Plans for construction of proposed commercial and residential buildings are reviewed by City of Menlo Park planners and building officials for compliance with the CBC.

Regional and Local Regulations

Menlo Park General Plan

The City of Menlo Park General Plan includes goals, policies, and programs relevant to the aesthetic factors potentially affected by the proposed project. The Menlo Park General Plan includes the following policies relevant to aesthetics, light, and glare (City of Menlo Park 2016a).

Goal LU-1: Promote the orderly development of Menlo Park and its surrounding area.

Policy LU-1.1: Land Use Patterns. Cooperate with the appropriate agencies to help assure a coordinated land use pattern in Menlo Park and the surrounding area.

Policy LU-2.2: Open Space. Require accessible, attractive open space that is well maintained and uses sustainable practices and materials in all new multiple dwelling and mixed-use development.

Goal LU-6: Preserve open-space lands for recreation; protect natural resources and air and water quality; and protect and enhance scenic qualities

Policy LU-6.2: Open Space in New Development. Require new nonresidential, mixed use, and multiple dwelling development of a certain minimum scale to provide ample open space in the form of plazas, greens, community gardens, and parks whose frequent use is encouraged through thoughtful placement and design.

Policy LU-6.8: Landscaping in Development. Encourage extensive and appropriate landscaping in public and private development to maintain the City’s tree canopy and to promote sustainability and healthy living, particularly through increased trees and water-efficient landscaping in large parking areas and in the public right-of-way.

Goal OSC-1: Maintain, protect and enhance open space and natural resources.

Policy OSC-1.11: Sustainable Landscape Practices. Encourage the enhancement of boulevards, plazas and other urban open spaces in high-density and mixed-use residential developments, commercial and industrial areas with landscaping practices that minimize water usage.

Policy OSC-1.13: Yard and Open Space Requirements in New Development. Ensure that required yard and open spaces are provided for as part of new multi-family residential, mixed-use, commercial and industrial development.

Policy OSC-1.15: Heritage Trees. Protect Heritage Trees, including during construction activities through enforcement of the Heritage Tree Ordinance (Chapter 13.24 of the Municipal Code).

Menlo Park Municipal Code

The City of Menlo Park Municipal Code includes specific requirements for parking lot landscaping and lighting. The portions of the City’s Municipal Code relevant to consideration of the potential aesthetic impacts of the proposed project are summarized below (City of Menlo Park 2021).

Chapter 13.24 Heritage Trees

This chapter provides requirements and criteria for removal and replacement of heritage trees, with the intent of “promoting the preservation and development of a healthy, diverse tree canopy in Menlo Park, which is highly valued by the community and is vital to the character and health of the city.”

This chapter defines Heritage Trees as follows:

- (A) All trees other than oaks which have a trunk with a circumference of 47.1 inches (diameter of fifteen (15) inches) or more, measured fifty-four (54) inches above natural grade.
- (B) An oak tree (*Quercus*) which is native to California and has a trunk with a circumference of 31.4 inches (diameter of ten (10) inches) or more, measured at fifty-four (54) inches above natural grade.
- (C) A tree or group of trees of historical significance, special character or community benefit, specifically designated by resolution of the city council.

As discussed further in Section 4.3, Biological Resources, the project is proposed under the Housing Crisis Act of 2019, which provides that the standards and regulations to which the project is subject are those that were adopted at the time that a complete Preliminary Application was submitted. Thus, this project is subject to the City’s Heritage Tree Ordinance as it existed when the Preliminary Application was submitted on February 26, 2020. Under the Heritage Tree Ordinance amendment No. 928 adopted in 2004 (provided in Appendix D3), removal of any heritage tree must be authorized by the City through issuance of a Heritage Tree Removal permit and heritage trees that are removed must be replaced on site at a 1:1 ratio. It further provides that such permits may only be issued for land development projects when “the heritage tree interferes with proposed development, repair, alteration or improvement of a site or the heritage tree is causing/contributing to structural damage to a habitable building (excluding amenities, such as walkways, patios, pools and fire pits); and there is no financially feasible and reasonable design alternative that would permit preservation of the heritage tree while achieving the applicant’s reasonable development objectives or reasonable economic enjoyment of the property using the methodology established in the administrative guidelines.”

Chapter 16.45 R-MU Residential Mixed Use District

Chapter 16.45 regulates land uses within the Residential Mixed Use (R-MU) zone district. It identifies permitted and conditionally permitted uses, development standards (such as maximum building height and lot coverage), provisions for bonus level development, parking standards, transportation demand management requirements, street improvements, design standards, and requirements for green and sustainable building. Specific to the consideration of potential aesthetic impacts from the proposed project, the following standards are applicable:

- Setbacks from property lines adjacent to public street frontages may range between 0 and 25 feet.
- Setbacks from interior and rear property lines must be at least 10 feet.
- Residential density may range between 20 and 30 dwelling units per acre (du/ac) under base level development and may increase to between 30 and 100 du/ac under bonus level development provided that a percentage of total dwelling units are affordable.
- The maximum residential floor area ratio (FAR) for bonus level development at the proposed 53 du/ac is 134.37 percent.
- Building heights, mass, and scale:
 - For bonus level development on properties subject to sea level rise may range between 52.5 and 70 feet, increasing to a maximum of 85 feet on Constitution Drive and Independence Drive. Rooftop mechanical equipment may extend an additional 14 feet in height beyond the applicable maximum, and elevator towers and associated equipment may extend an additional 20 feet in height beyond the applicable maximum.
 - Along the street frontage for the portion of the building within the minimum setback distance, the maximum building height for bonus level development on properties subject to sea level rise shall be 45 feet
- A minimum of 25 percent of the total lot area must be in open space, which may include common open space and private open space, with at least 25 percent of the total required open space being accessible to the public.
- Overhead electric distribution lines of less than sixty (60) kilovolts and communication lines shall be placed underground along the property frontage.
- Building Relationship to the Street
 - a minimum of 40 percent of the ground floor building frontage must be located within the build-to area, which is the area of the lot between the minimum and maximum setback lines
 - a minimum of 40 percent of the area between the property line and the face of the building shall be devoted to ground cover and vegetation
 - a maximum of 35 percent of the street frontage may be used for surface parking, which must be setback at least 20 feet from the property line
- Lighting within paseos
 - Must be designed to a pedestrian-scale,
 - Light fixtures must be placed no more than 40 feet apart and at least 20 feet away from trees,

- Parking areas must be well-lit for safety, and
- Lighting fixtures and sources must be energy efficient.

Chapter 16.68.020 Architectural Control

Chapter 16.68.020 requires that when an application is made for a building permit for the construction, alteration or remodeling of any building other than a single-family dwelling, duplex and accessory building, or for any structure, dwelling or duplex on land designated as a historic landmark site, it shall be accompanied by architectural drawings. These drawings would be reviewed by the planning commission, architectural committee, or community development director. The following findings must be made for approval:

1. That the general appearance of the structures is in keeping with character of the neighborhood;
2. That the development will not be detrimental to the harmonious and orderly growth of the city;
3. That the development will not impair the desirability of investment or occupation in the neighborhood;
4. That the development provides adequate parking as required in all applicable city ordinances and has made adequate provisions for access to such parking; and
5. That the development is consistent with any applicable specific plan.

4.1.3 Thresholds of Significance

The significance criteria used to evaluate the proposed project's impacts to aesthetics are based on the recommendations provided in Appendix G of the California Environmental Quality Act (CEQA) Guidelines. In accordance with Appendix G of the CEQA Guidelines, the project would have a significant impact on aesthetics if it would do any of the following (14 CCR 15000 et seq.):

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. 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.
5. Make a cumulatively considerable contribution to a significant cumulative impact related to aesthetics.

4.1.4 Impacts and Mitigation Measures

Methodology

The value attached to changes in visual character is largely subjective. In determining whether the project would result in a significant environmental impact related to aesthetics, the analysis in this section evaluates whether the project would result in a "substantial adverse effect," as defined below, based on the thresholds of significance listed in Section 4.1.3 and the regulations and policies summarized in Section 4.1.2.

The descriptions of the project site and the surrounding area provided above are derived from a site visit and photographs (Figures 4.1-1a and 4.1-1b as well as images in the project plan set in Appendix B). The Menlo Park

General Plan was reviewed to determine what visual elements have been deemed valuable by the community. The impact analysis focuses on the manner in which development could alter the visual elements or features that exist in or near the project area and whether the project design complies with the Menlo Park Municipal Code provisions related to scenic quality.

This analysis assumes that development of the project site would comply with the City's General Plan goals and policies, improvement standards, and design standards; therefore, such policies and standards are not specifically identified as mitigation. Where specific design details are not available from which to verify compliance with City standards, the impact analysis notes the specific standards that would be applicable and identifies the mechanisms by which compliance with those standards would be verified by City staff prior to issuance of building permits.

Project Impacts

Impact 4.1-1 Would the project have a substantial adverse effect on a scenic vista?

As described above in Section 4.1.1, the City has not designated any scenic vistas or corridors within the project vicinity. According to the ConnectMenlo EIR, views of the Santa Cruz Mountain Range and foothills, the Bay, and San Francisquito Creek are considered to be scenic vistas (City of Menlo Park 2016b). However, there are no views from the Bayfront Area to the Santa Cruz Mountain Range and foothills to the south or of San Francisquito Creek to the west. The ConnectMenlo EIR also found that the existing level of development throughout the Bayfront Area, where the project is located, generally limits the opportunity for views of scenic vistas from street-level public viewing areas.

As described in Section 4.1.1, Environmental Setting, developed parcels in the Bayfront Area are not considered public Bay-viewing points, and there are no views from the Bayfront Area to the Santa Cruz Mountain Range and foothills to the south or of San Francisquito Creek to the west. Views in the project area include a long-range view north along Chrysler Drive of a slight topographic rise and trees that are adjacent to the edge of the Bay. Along the project site's northern boundary, most views northward from Constitution Drive are blocked by multi-story office buildings on the north side of the street. Northward views along Independence Drive are also blocked by existing development and do not include any features associated with the Bay. Because there are no scenic vistas in the area, the presence of equipment, construction workers, and materials during construction and the replacement of the existing one and two story buildings at the site with the proposed three and five story buildings would result in **no impacts** associated with scenic vistas.

Mitigation Measures

No mitigation measures are required.

Impact 4.1-2 Would the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

There are no eligible or officially designated state scenic highways in the immediate project area. The closest designated state scenic highway, the segment of I-280 from the Town of Portola Valley to the City of San Bruno, is approximately 4.8 miles southwest of the project site (Caltrans 2022). The project would not be visible from I-280 due to its distance and intervening urban development and vegetation. Because the project site is not visible from the designated scenic segment of I-280, the project would have **no impact** on scenic resources within a state scenic highway.

While this impact specifically addresses scenic resources within view of a state scenic highway, the potential for the project to affect other scenic resources is considered here for informational purposes. The approximately 8.15-acre site is currently developed with five existing single-story office and industrial buildings totaling approximately 103,983 square feet of building space. There is ornamental landscaping around the perimeter of the site and the perimeter of existing buildings, with a total of 47,859 square feet of existing landscaping, including 85 trees. Representative photographs of the existing development provided in Figures 4.1-1a and 4.1-1b demonstrate that the project site is urbanized and does not provide significant scenic resources or values. All of the existing landscaping and trees would be removed as part of project development and replaced with new landscaping and trees. The proposed project would include approximately 23,577 square feet of landscaped areas along street frontages and approximately 15,518 square feet of common green spaces between townhomes, and proposes planting 353 new trees, as shown in Figure 3-9, Tree Planting Plan.

Mitigation Measures

No mitigation measures are required.

Impact 4.1-3 Would the project conflict with applicable zoning and other regulations governing scenic quality?

Construction of the project is anticipated to occur over an approximately 50-month timeline and would include demolition, grading, tree removal, landscape installation, installation of below-grade infrastructure for public services and utilities, and construction of the proposed apartment building and parking garage, townhouses, publicly-accessible open space, on-site pedestrian and vehicle circulation improvements, and landscaping. Construction vehicles, equipment, and personnel would be a regular presence on site and on nearby streets through the duration of construction. Construction activities would gradually change the aesthetics of the site through tree removal, grading, installation of new surfaces and landscaping, and construction of new structures, fencing and lighting. However, construction activities and effects would be temporary and would not result in any conflicts with regulations governing scenic quality.

As described in Section 3.2 of the Project Description, the project site is within the City's Residential Mixed-Use Bonus (R-MU-B) zoning district. Thus, development of the project site is subject to the requirements of the Menlo Park Municipal Code Chapter 16.45, R-MU Residential Mixed-Use District. All of the three streets on which the project site fronts are designated as Mixed Use Collectors in the Menlo Park General Plan Circulation Element, Figure 2, Street Classifications. Further, the project proposes bonus-level development in exchange for provision of community amenities, and the site is subject to sea level rise.

As stated in Municipal Code Section 16.45.050, the base maximum building height is 40 feet which is increased to 85 feet along the project site frontages on Constitution Drive and Independence Drive when bonus-level development is proposed in exchange for providing community amenities, and the height limit for the project site is further increased to 95 feet because the site is in an area subject to sea level rise. The apartment building would be located along Constitution Drive while the townhouse buildings would be located along Independence Drive and Chrysler Drive. Roof heights for the project's proposed townhouse buildings would reach approximately 44 feet, while the apartment building roof would be approximately 70 feet at the top of the ridge and approximately 67 feet around the perimeter, with rooftop elevator overruns reaching 73 feet and penthouse stairways reaching 75 feet, as shown in Figure 4.1-2, Site Sections, which shows the same image as Appendix B Sheet A102. Thus, the building would not exceed the 95-foot height maximum standard for buildings located on Constitution Drive per the R-MU zoning district bonus-level development provision and sea level rise provision. The average height of project

buildings would be 58 feet, which would comply with the City’s required maximum average of 62.5 feet for bonus level development on sites subject to sea level rise.

The project would also comply with the City’s zoning standards related to setbacks (25-foot maximum streetside and 10 foot minimum interior and rear per Municipal Code Section 16.45.050) as shown in Appendix B Sheets A101 and A401. Between the ground floor level and the fourth floor, the apartment building would be setback from Constitution Drive by between 11 feet 4 inches and 17 feet 7 inches. The fifth floor and roofline of the apartment building would be stepped back from the building façade of the fourth floor by between 10 feet 7 inches and 12 feet as shown in Image 1, Constitution Stepback Wall Section, on Appendix B Sheet A321 and Image 2, Constitution Drive, on Appendix B Sheet A401. The townhome buildings would be setback from Independence Drive by 12 feet and from Chrysler Drive by between 13 feet and 14 feet 2 inches.

The project would meet the zoning ordinance requirement to provide open space on at least 25 percent of the lot area. The project proposes a total of approximately 135,385 square feet of open space, which is 38 percent of the total lot area. This would include 26,154 square feet of public open space within the paseo and park, 25,580 square feet of publicly accessible open space within landscape zones, 23,577 square feet of publicly accessible open space along street frontages, approximately 38,878 square feet of common area landscaping and green spaces, and 21,196 square feet of private open space within balconies, decks, and patios as shown on Figure 3-7 and Appendix B Sheet A103.

As previously described under Section 4.1.2, Regulatory Setting, residential density under the R-MU zoning district may range between 20 and 30 dwelling units per acre (du/ac) under base level development and may increase to between 30 and 100 du/ac under bonus level development provided that a percentage of total dwelling units are affordable. As discussed in Chapter 2, “Project Description,” the proposed project includes development of 432 dwelling units over approximately 8.15 acres (an estimated 53 du/ac), 15 percent of which (48 units) would be designated for Below Market Rate (i.e., affordable housing).

As indicated in Chapter 2, Project Description, building footprints would total approximately 151,554 square feet (Appendix G2), with a total of approximately 679,485 square feet of building space, including the apartment parking structure consisting of approximately 151,626 square feet, the townhouse garages consisting of approximately 50,897 square feet, and townhouse decks consisting of approximately 9,143 square feet (Appendix B). Of this total, approximately 476,962 square feet would be counted toward the project’s floor area ratio, resulting in a floor area ratio of 134 percent, which is consistent with R-MU zoning district standards.

Table 4.1-1 identifies additional requirements under Municipal Code Section 16.45.120 applicable to the analysis of the proposed project’s effects related to scenic quality and the EIR figures and Appendix B plan set sheets on which compliance with those requirements is demonstrated.

Table 4.1-1. Project Consistency with Municipal Code Section 16.45.120

Zoning Section	Regulation	Proposed Project Details and Sheets
16.45.120 (1) Relationship to the Street	Build-To Area – at least 60 percent of the building façade along the street frontage must be located less than the maximum setback distance from the street.	All buildings: At least 60 percent of building frontage is located between the minimum and maximum setback lines (Appendix B Sheets A101 and L6.01).
	Frontage landscaping – a minimum of 25 percent of the setback area shall be landscaped and half of the frontage	All buildings: Frontage landscape zones extend along most of Constitution Drive, Chrysler Drive, and Independence Drive (Appendix B

Table 4.1-1. Project Consistency with Municipal Code Section 16.45.120

Zoning Section	Regulation	Proposed Project Details and Sheets
	landscaping shall provide for on-site stormwater infiltration.	Sheets A101, A103, L6.01, C4.0, and C4.1) and meet minimum frontage landscaping requirements.
	Frontage uses – setback areas parallel to the street and not used for landscaping must provide pedestrian circulation, other publicly accessible open space, access to parking, and/or bicycle parking	All buildings: Setback areas along public streets include landscaping and pedestrian and vehicle circulation improvements (Appendix B Sheets A101 and A103).
	Surface parking may be located along street frontage with minimum surface parking setback	All buildings: No surface parking along street frontage is proposed (Appendix B Sheet A101).
16.45.120 (2) Building Mass and Scale	Base height – a building may have a maximum height of 55 feet before a minimum horizontal setback distance must be met (none of the proposed buildings would be placed at the minimum setback from street)	Apartment building: Top of fourth floor is at approximately 55 feet, fifth floor includes at least 10-foot setback (Appendix B Sheets A321 and A401). Townhome buildings: Townhomes heights would generally be between 40 and 44 feet but in some places would reach as much as approximately 50 feet thus no setback is required (Appendix B Sheets A501, through A504).
	Minimum setback – a least 75 percent of the building façade above the base height and along a public street shall be stepped back (horizontally) at least 10 feet	Apartment building: Fifth floor and roofline are stepped back at least 10 feet along 75 percent of the building façade on the upper stories (Appendix B Sheet 401). Townhome buildings: Not applicable because townhomes do not meet the maximum base height and thus no setback is required.
	Building projections – building projections (e.g., balconies and bay windows) above the ground floor and within the setback area may be a maximum depth of 6 feet	Apartment building: All building projections above ground floor are within 6 feet from required setback (Appendix B Sheet A401). Townhome buildings: Not applicable because townhomes do not meet the maximum base height and thus no setback is required.
	Major building modulations – there must be at least one recess that is 15 feet wide and 10 feet deep and extends between the ground floor and the top of the building’s base height for every 200 feet of façade length	Apartment building: At least one major building recess is provided every 200 feet along the Constitution Drive façade, the west elevation, and the south elevation (Appendix B Sheet A402). Townhome buildings: This applies only to Building 7, which is the only building with a façade length of at least 200 feet. One major building recess is provided (Appendix B Sheet A701).
	Minor building modulation – there must be at least one recess that is 5 feet wide	All buildings: At least one building recess is provided every 50 feet along all building façades fronting on public streets and the

Table 4.1-1. Project Consistency with Municipal Code Section 16.45.120

Zoning Section	Regulation	Proposed Project Details and Sheets
	and 5 feet deep for every 50 feet of façade length	proposed paseo (Appendix B Sheets A403 and A702).
16.45.120(3) Ground Floor Exterior	Building entrances – there must be at least one building entrance every 100 feet of building length along a public street or paseo	All buildings: At least one entrance is provided every 100 feet along all building façades fronting on public streets and the proposed paseo (Appendix B Sheets A404, A703, and L6.01).
	Ground floor transparency – at least 30 percent of the ground floor façade shall provide visual transparency (e.g., clear glass windows and doors)	All buildings: Visual transparency is provided for at least 30 percent of the ground floor facades (Appendix B Sheets A405 and A704).
	Minimum ground floor height along street frontage – the distance between the ground-level finished floor and the second-level finished floor along street frontages must be at least 10 feet	Apartment building: Ground floor height is 12 feet (Figure 4.1-3, Street Frontage Elevations, and Appendix B Sheets A102, A304, A305, A310, and A321). Townhome buildings: Ground floor height is 10 feet (Appendix B Sheets A102, A601, A602, A603, A604, A605, A621, A622, A623, and A704).
	Garage entrances – garage entrances facing a street frontage shall be a maximum of 12 feet wide for a one-way access and a maximum of 24 feet wide for a two-way access	Apartment building: The parking garage ramp is 24 feet wide. In addition, a 12-foot wide building recess is proposed adjacent to the ramp which widens the visual open space (Appendix B Sheets A201 and A404). Townhome buildings: Not applicable because no garages face public street frontages.
	Awnings, signs and canopies that project horizontally from the building façade may be a maximum depth of 7 feet and must maintain a vertical clearance from the finished grade to the bottom of the projection of at least 8 feet.	Apartment building: awnings and canopies are typically either 2 feet or 3 feet in depth; the awning at the leasing office and above the parking garage entrance is 5 feet in depth and more than 8 feet above grade (Appendix B Sheet A407). Townhome buildings: awnings and canopies are typically either 1 foot or 2 feet in depth (Appendix B Sheet A706).
16.45.120(4) Open Space	At least 25 percent of the site shall be open space, with at least 25 percent of the required amount of open space being publicly accessible, which must be at the ground floor or podium level, include site furnishings, art, or landscaping, be at least partially visible from a public right-of-way, and have a direct accessible pedestrian connection to a public right-of-way or easement	Full site: Landscaping would be provided on 38 percent of the project site. The project is required to provide 22,188 square feet of publicly accessible open space and proposes to provide 75,311 square feet, (a 11,945 square-foot park, a 14,209 square-foot paseo, 25,580 square feet within landscape zones and 23,577 square feet within street frontages) (Appendix B Sheet A103).
	Each residential unit shall have either 100 square feet of common open space, or 80 square feet of private open space with a	Full site: The project includes private balconies, decks, and patios with minimum dimensions of 6 feet on any side for each

Table 4.1-1. Project Consistency with Municipal Code Section 16.45.120

Zoning Section	Regulation	Proposed Project Details and Sheets
	<p>minimum dimension of 6 feet on any side, or a combination of common and private open space where common open space is provided at a ratio equal to 1.25 square feet for each square foot of private open space that is not provided</p>	<p>residential unit. The project also includes common open space on each parcel. The total private and common open space on each parcel meets or exceeds the minimum required amount of common and private open space (Appendix B Sheet A103).</p>
	<p>The project proposes more than 101 units, thus it shall include at least one common open space area with a minimum of 1,600 square feet</p>	<p>Full site: The project includes a 11,945 square-foot park and a 14,209 square-foot paseo, for a total of 26,154 square feet of public open space. (Appendix B Sheet A103).</p>
	<p>Open space shall:</p> <ul style="list-style-type: none"> i. Interface with adjacent buildings via direct connections through doors, windows, and entryways; ii. Be integrated as part of building modulation and articulation to enhance building facade and should be sited and designed to be appropriate for the size of the development and accommodate different activities, groups and both active and passive uses; iii. Incorporate landscaping design that includes: <ul style="list-style-type: none"> a. Sustainable stormwater features; b. A minimum landscaping bed no less than three (3) feet in length or width and five (5) feet in depth for infiltration planting; c. Native species able to grow to their maximum size without shearing 	<p>Full site: The proposed buildings provide direct access to proposed public, common, and private open space areas, the open space areas are integrated with building modulation and articulation, and the design of the open space areas can accommodate a range of active and passive uses (Appendix B Sheets A101, A103, L2.01, L2.11, L2.21, L2.41, L6.01, C4.0, and C4.1).</p>
<p>16.45.120(5) Paseos</p>	<p>Paseos must be publicly accessible via a public access easement and count as publicly accessible open space, but remain private property</p>	<p>Full site: the proposed paseo would be publicly accessible. The paseo and public open space would be placed on a separate lot, Lot 1 (Appendix B Sheet A100) and a public access easement would be recorded at the time of recordation of the final map.</p>
	<p>Paseos must have a minimum width of 20 feet, with the hardscape pathway within the paseo being between 10 and 14 feet wide and shall be connected to building entrances with hardscaped pathways. Pathways may be used for emergency vehicle access use and allowed a maximum paved width exemption to accommodate standards of the Menlo</p>	<p>Full site: the proposed paseo width varies along with building modulation and ranges from approximately 33 feet to 20 feet. The paseo would include an emergency vehicle access. The hardscaped pathway would be 10 feet wide (Appendix B Sheets A101, A103, A104, L7.01).</p>

Table 4.1-1. Project Consistency with Municipal Code Section 16.45.120

Zoning Section	Regulation	Proposed Project Details and Sheets
	Park Fire Protection District with prior approval by transportation manager	
	Furnishing zones within a paseo must be a minimum of 5 feet wide by 20 feet long and must be provided at a minimum interval of 100 feet and shall include seating and pedestrian-scaled lighting	Full site: the proposed paseo includes furnishing zones meeting these size requirements and providing seating and lighting (Appendix B Sheets L2.11, L2.21, L7.01, and L9.01).
	Adjacent buildings shall be setback at least 5 feet from the edge of the paseo, with at least 50 percent of that setback areas landscaped and 50 percent of that landscaped area providing on-site stormwater infiltration	Full site: buildings adjacent to the proposed paseo are setback at least 5 feet from the paseo with landscaping including stormwater infiltration placed within the setback area (Appendix B Sheets L2.11, L2.21, L7.01, C4.0, and C4.1).
	Paseos shall contain trees with a maximum mature height of 40 feet and canopy diameter of 25 feet planted at maximum intervals of 40 feet	Full site: the proposed paseo includes trees meeting these size and spacing requirements (Appendix B Sheets L2.11, L2.21, L4.00, L4.01, and L7.01).
	At least 20 percent of the paseo must be landscaped and on-site infiltration of stormwater runoff must be provided	Landscaping is provided along all portions of the paseo covering 20 percent of the paseo. Stormwater infiltration is provided for 50.4 percent of the landscaped area (Appendix B Sheets L2.11, L4.00, L7.01, C4.0, and C4.1).
	One light fixture shall be placed every 40 feet and shall be at least 20 feet from trees	Full site: the proposed paseo includes lighting placed 40 feet apart and at least 20 feet from tree trunks (Appendix B Sheets L2.11, L2.21, L7.01, and L9.01).
16.45.120(6) Building Design	Main building entrances shall face the street or a publicly accessible courtyard. Building and/or frontage landscaping shall bring the human scale to the edges of the street. Retail building frontage shall be parallel to the street	Apartment building: main entrances to the apartment building are proposed along Constitution Drive and facing the open space near the center of the site (Appendix B Sheets A101, A321, L2.01, and L2.41) Townhome buildings: townhome buildings located along public street frontages have main entrances that face the public street. Townhome buildings interior to the site have main entrances that face common open spaces and courtyards (Appendix B Sheets A101, A621, A622, A623, L2.01, L2.11, and L2.41).
	Utilities, including meters, backflow prevention devices, etc., shall be concealed or integrated into the building design to the extent feasible, as determined by the public works director; Projects shall include dedicated, screened, and easily accessible space for recycling, compost, and solid waste storage and collection;	Full site: utilities as well as facilities for recycling, compost, and solid waste are integrated into the building and site design and screened. Facilities for recycling, compost, and solid waste are easily accessible; materials and colors for screening and storage enclosures are compatible with the overall project materials and colors (Appendix B Sheets A104, A110 through A115, A200)

Table 4.1-1. Project Consistency with Municipal Code Section 16.45.120

Zoning Section	Regulation	Proposed Project Details and Sheets
	<p>Trash and storage shall be enclosed and attractively screened from public view; and</p> <p>Materials and colors of utility, trash, and storage enclosures shall match or be compatible with the primary building</p> <p>Building materials shall be durable and high quality to ensure adaptability and reuse over time. Glass paneling and windows shall be used to invite outdoor views and introduce natural light into interior spaces. Stucco shall not be used on more than fifty percent (50 percent) of the building facade. When stucco is used, it must be smooth troweled</p> <p>Roofline - roof lines and eaves adjacent to street-facing facade shall vary across a building, including a four-foot minimum height modulation to break visual monotony and create a visually interesting skyline as seen from public street;</p> <p>Rooftop elements, including stair and elevator towers, shall be concealed in a manner that incorporates building color and architectural and structural design; and</p> <p>Roof-mounted equipment shall meet the requirements of Section 16.08.095, which requires that equipment be screened from view as observed at an eye level horizontal to the top of the roof-mounted equipment, and all sounds emitted by such equipment shall not exceed 50 decibels at a distance of 50 feet</p>	<p>through A205, A301, A302, A801, A802, L2.51, and TR1.0 through TR4.0).</p> <p>Apartment building: Building materials include cement plaster, fiber cement panels, and vinyl windows. Use of stucco is less than 50 percent of the building façade and would be smooth (Appendix B Sheets A301 through A305, A406, and A801).</p> <p>Townhome buildings: Building materials include cement plaster, fiber cement siding, metal seamed roof, and asphalt shingle roof tiles. Use of stucco is less than 50 percent of the building façade and would be smooth (Appendix B Sheet A705 and A802).</p> <p>Apartment building: Roof line varies across the building, including a 4-foot minimum height modulation; rooftop elements are concealed and roof-mounted equipment is shielded from view by mechanical screens and rooftop parapets or on dedicated decks for the outdoor units at the second and third floors of the affordable townhomes. As discussed in Section 4.11, Noise, the rooftop equipment would generate noise levels of approximately 39.6 dBA L_{eq} at a distance of 50 feet. (Appendix B Sheets A206 and A407).</p> <p>Townhome buildings: Roofline varies across each building, including minimum 4-foot height modulations. Rooftop equipment would be placed generally near the center of the roof area and would be screened from view. As discussed in Section 4.11, the rooftop equipment would generate noise levels of approximately 39.6 dBA L_{eq} at a distance of 50 feet. (Appendix B Sheets A501 through A504 and A706).</p>
(7) Access and Parking	<p>Shared entrances to parking for nonresidential and residential uses shall be used where possible</p> <p>Service access and loading docks shall be located on local or interior access streets and to the rear of buildings, and shall not be located along a publicly accessible open space</p> <p>Aboveground garages shall be screened</p>	<p><i>Not applicable</i> – no non-residential uses; no service access and loading docks, no aboveground garages not attached to townhome buildings.</p>

Table 4.1-1. Project Consistency with Municipal Code Section 16.45.120

Zoning Section	Regulation	Proposed Project Details and Sheets
	Garage and surface parking access shall be screened or set behind buildings located along a publicly accessible open space and paseos	Apartment building: garage entrance is located on Constitution Drive (Appendix B Sheet A101). Townhome buildings: small areas of surface parking are located interior to the site (Appendix B Sheets A101 and A104).
	Surface parking lots shall be buffered from adjacent buildings by a minimum 6 feet of paved pathway or landscaped area	Apartment building: Not applicable, no surface parking. Townhome buildings: small areas of surface parking are located interior to the site at least 6 feet from adjacent buildings and separated from those buildings by paved pathways or landscaping (Appendix B Sheets A101 and A104).
	Surface parking lots shall be screened with landscaping features such as trees, planters, and vegetation, including a 20 foot deep landscaped area along sidewalks, as measured from the property line or public access easement adjacent to the street or paseos The portion of this area not devoted to driveways shall be landscaped. Trees shall be planted at a ratio of 1 per 400 square feet of required setback area for surface parking. Surface parking lots shall be planted with at least 1 tree with a minimum size of a 24 inch box for every 8 parking spaces	Apartment building: Not applicable, no surface parking. Townhome buildings: small areas of surface parking are located interior to the site and would be landscaped (Appendix B Sheets A101, A104, L2.01, L4.00, and L4.01).
	Surface parking can be located along a paseo for a maximum of 40 percent of a paseo's length	Full site: No surface parking is located along the proposed paseo.
	Short-term bicycle parking shall be located within 50 feet of lobby or main entrance. Long-term bicycle parking facilities shall protect against theft and inclement weather, and consist of a fully enclosed, weather-resistant locker with key locking mechanism or an interior locked room or enclosure. Long-term parking shall be provided in locations that are convenient and functional for cyclists. Bicycle parking shall be: Consistent with the latest edition of the Association of Pedestrian and Bicycle Professionals Bicycle Parking Guide;	Full site: Short-term bicycle parking is located throughout the project site. Long-term bicycle parking is located in the apartment building parking garage (Appendix B Sheets A101, A200, A201, A210, and L3.01).

Table 4.1-1. Project Consistency with Municipal Code Section 16.45.120

Zoning Section	Regulation	Proposed Project Details and Sheets
	<p>Designed to accommodate standard 6 foot bicycles;</p> <p>Paved or hardscaped;</p> <p>Accessed by an aisle in the front or rear of parked bicycles of at least 5 feet;</p> <p>At least 5 feet from vehicle parking spaces;</p> <p>At least 30 inches of clearance in all directions from any obstruction;</p> <p>Lit with no less than 1 foot candle of illumination at ground level;</p> <p>Space-efficient bicycle parking such as double-decker lift-assist and vertical bicycle racks are also permitted.</p>	
	Pedestrian access shall be provided, with a minimum hardscape width of 6 feet, from sidewalks to all building entries, parking areas, and publicly accessible open spaces, and shall be clearly marked with signage directing pedestrians to common destinations	Full site: pedestrian access is provided to all building entries, parking areas, and publicly accessible open spaces (Appendix B Sheets A101, A104, A201, and L2.01).
	Entries to parking areas and other important destinations shall be clearly identified for all travel modes with such wayfinding features as marked crossings, lighting, and clear signage.	Full site: Entries to each lot and throughout the project site are clearly identified (Appendix B Sheets A101 and A104).

The proposed project would also be required to comply with the City’s existing architectural control process in accordance with Chapter 16.68.020 of the City’s Municipal Code. Adherence to this process would ensure the project would be designed to fit the character of the existing neighborhood. The proposed project would comply with applicable zoning regulations related to scenic quality and would have a **less-than-significant** impact.

Mitigation Measures

No mitigation measures are required.

Impact 4.1-4 Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The proposed project is in an urban area with significant daytime and nighttime lighting. The proposed project requires lighting to provide proper site visibility, guide movement at and around the project site, provide security, emphasize signage, and enhance architectural and landscape features. Outdoor lighting sources create the greatest potential for light and glare impacts on adjacent properties. Direct glare is caused by a light source such as a light fixture or the sun. Sources of glare can also be surfaces that, after being illuminated by direct lighting or

other indirect sources, have measurable luminance and, in turn, become light sources themselves. Potential sources of light and glare at nighttime would be lights and structural building features made of glass, metallic, painted surfaces, and vehicles accessing the site. Light would be emitted from the proposed buildings and surface parking lot during non-daylight hours. Demolition and construction under the project would occur during daylight hours; nighttime construction and use of nighttime lights during the 50-month construction period would not occur.

There are three existing public light poles at the boundaries of the project site—one each on Independence Drive, Chrysler Drive, and Constitution Drive—and one light pole set back several feet from the public right-of-way lighting the parking lot entrance/exit on Independence Drive near Chrysler Drive. Additional lighting is proposed as part of the project around building entrances and perimeters and in landscaped areas. Landscape lighting includes recessed LED wall lights, LED pole lights, bollard lights of various heights, and park area lights. Landscape and building lighting would have full or partial cut-off shades to reduce light pollution and glare.

Appendix B Sheets PM-1 through PM-5 include a photometrics plan that identifies the existing lighting levels along public streets adjacent to the project site. These plan sheets indicate that light levels along Independence Drive, Constitution Drive, and Chrysler Drive are 1.86 average foot-candles, 1.73 average foot-candles, and 0.24 average foot-candles, respectively. Appendix B, Sheet L9.01 includes a landscape lighting plan that identifies new proposed lighting fixtures and their locations within the project site. Most new lighting closest to the boundary of the project site would consist of LED pole lights to illuminate main pathways between buildings. No new lighting is proposed directly adjacent to Independence Drive, Constitution Drive, or Chrysler Drive. Therefore, the project would not substantially increase existing lighting levels along public streets adjacent to the project site.

The project would be required to comply with General Plan policies that ensure new land uses do not generate excessive spill over light levels; Policy LU-2.3 of the General Plan requires that new residential development address light spillover. Project site lighting is required to comply with the City's Lighting Design Standards (Municipal Code Section 16.45.120), which require that lighting be designed to a pedestrian scale, that light fixtures be placed no more than 40 feet apart, that parking areas be well lit for safety, and that lighting fixtures and sources be energy efficient. Furthermore, the project would also be required to obtain approval through the City's architectural control process outlined in Chapter 16.68.020 of the City's Municipal Code. Through this process, the City would review proposed project lighting and building materials to ensure they would not generate substantial light spillover or glare and this impact would remain **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

This analysis of potential cumulative impacts to aesthetics considers the effects of buildout under the City's General Plan, specifically within the Bayfront Area, as described in Section 4.0 Environmental Analysis. This geographic area is appropriate for consideration of cumulative impacts to aesthetics because the area in which the aesthetic impacts of a particular project can be observed is limited to viewsheds that include that project location. This analysis defines the cumulative scenario as buildout of the General Plan; because projects within the Bayfront Area would be subject to the City's aesthetic regulations, policies, and development standards, it is not necessary to consider the list of reasonably foreseeable projects to evaluate potential cumulative aesthetic impacts.

Impact 4.1-5 Would the project make a cumulatively considerable contribution to a significant cumulative impact related to scenic vistas, scenic resources, or the existing visual character of the area, including the introduction of light and glare?

The analysis in the ConnectMenlo EIR recognizes that developed parcels in the Bayfront Area, such as those proposed by the project, are not considered public Bay-viewing destination points and found that the existing level of development throughout the Bayfront Area generally limits the opportunity for views of scenic vistas from street-level public viewing areas. Additionally, the analysis in the ConnectMenlo EIR found that compliance with development regulations and design standards contained in the Municipal Code, such as requiring connectivity through street and paseo requirements, building mass and scale (including upper-story stepbacks), public and private open space, screening of utilities, trash, and storage areas, and control of light spillover, would ensure a consistent and high-quality design throughout the Bayfront Area that would not result in any significant cumulative impacts to scenic views, scenic resources, visual character and compatibility with surrounding land uses, or light and glare. Thus, there would be no significant cumulative impacts to which the project would contribute. Further, as discussed in Impacts 4.1-3 and 4.1-4, the project would be consistent with the City's development regulations and design standards and thus would not combine with other existing project and foreseeable future projects to create a new significant cumulative impact related to aesthetics.

Mitigation Measures

No mitigation measures are required.

4.1.5 References Cited

Caltrans (California Department of Transportation). 2022. "California State Scenic Highways." Accessed February 2022. <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>.

City of Menlo Park. 2016a. General Plan: *ConnectMenlo, Menlo Park Land Use and Mobility Update*. November 29, 2016.

City of Menlo Park. 2016b. *ConnectMenlo: General Plan Land Use & Circulation Elements and M-2 Area Zoning Update EIR*. SCH No. 2015062054. Prepared by PlaceWorks for the City of Menlo Park. June 1, 2016. <https://beta.menlopark.org/Government/Departments/Community-Development/Planning-Division/Comprehensive-planning/ConnectMenlo/Environmental-Impact-Report>.

City of Menlo Park. 2021. Menlo Park Municipal Code. Last amended through Ordinance 1079. November 16, 2021.



FIGURE 4.1-1a

Site Photos

123 Independence Drive Residential Project

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Photo 5: Existing building on the project site. Facing northwest.



Photo 6: Trees and building along the southern boundary of the project site. Facing northwest.



Photo 7: Building and parking area adjacent to the project site. Facing southwest.



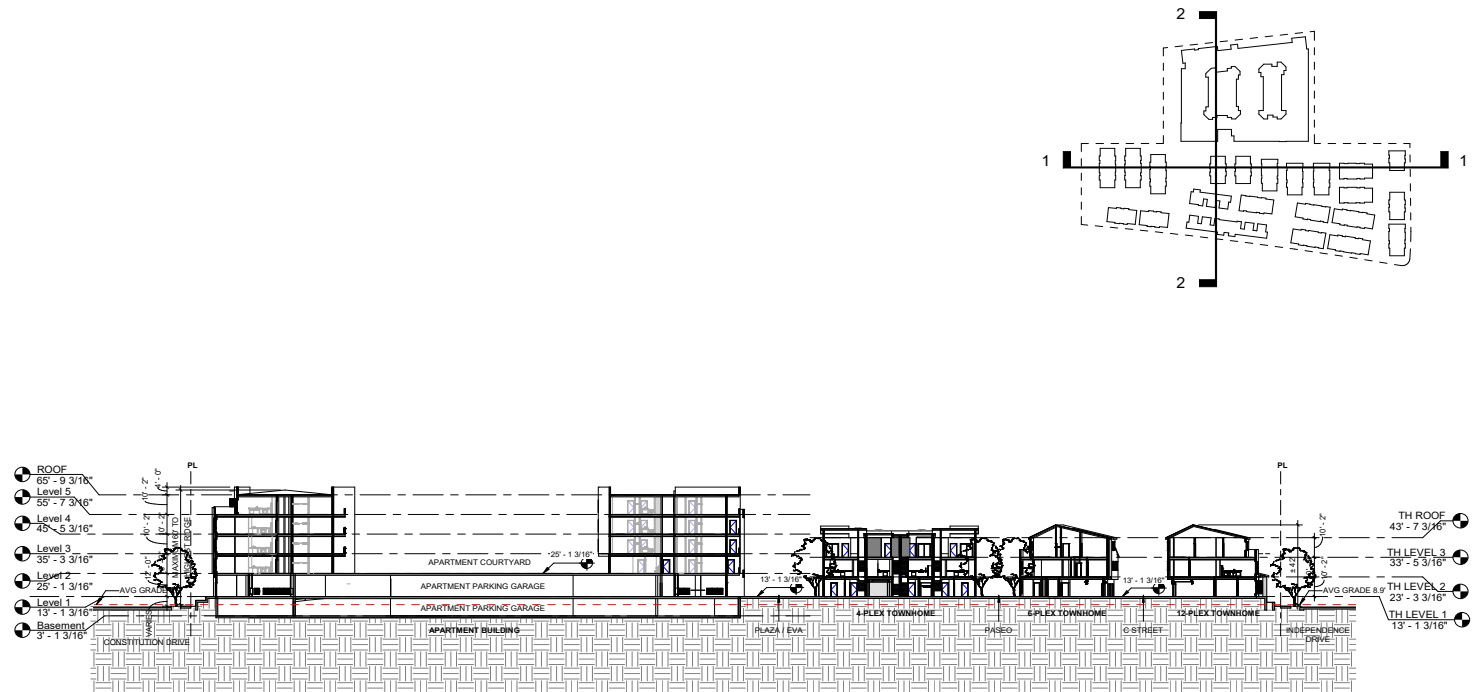
Photo 8: Existing parking, driveways, and fence structures surrounding existing buildings of the project site. Facing south.

FIGURE 4.1-1b

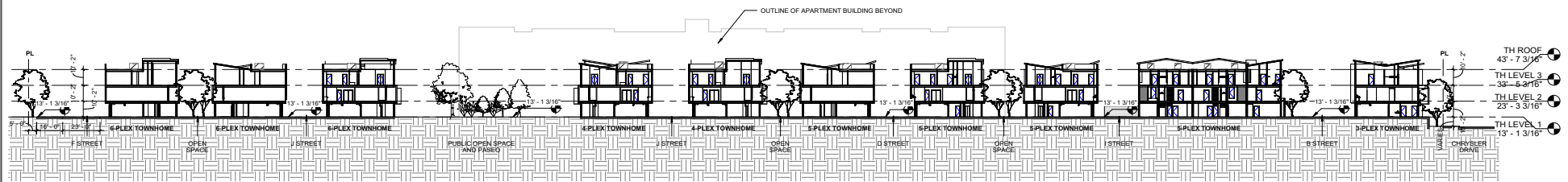
Site Photos

123 Independence Drive Residential Project

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OVERALL SITE SECTION NORTH TO SOUTH 1" = 30'-0" 2



OVERALL SITE SECTION WEST TO EAST 1" = 30'-0" 1

SOURCE: T Square Studios 2022

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CONSTITUTION DRIVE COMPOSITE ELEVATION



CHRYSLER DRIVE COMPOSITE ELEVATION



INDEPENDENCE DRIVE COMPOSITE ELEVATION
(EAST OF PASEO)



INDEPENDENCE DRIVE COMPOSITE ELEVATION
(WEST OF PASEO)

SOURCE: T Square Studios 2022

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4.2 Air Quality

This section describes the existing air quality conditions of the 123 Independence Drive Residential Project (project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures (MMS) to minimize impacts from implementation of the project.

As discussed in Chapter 2, Introduction, and Chapter 4, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this environmental impact report (EIR), one in January and February 2021, and one in September and October 2021. The Sequoia Union High School District submitted written comments in response to both NOPs identifying concerns with project-specific and cumulative air quality impacts on TIDE Academy, located approximately 0.20 miles east of the project site, and Menlo-Atherton High School, located approximately 1.7 miles south of the site, due to construction activities and the potential increase in traffic volumes within the project area. Both NOPs and the comments received in response to them are provided in Appendix A of this EIR. Information in this chapter addresses the air quality concerns raised in response to the project NOPs.

Information contained in this section is based on the latest version of California Emissions Estimator Model (CalEEMod), Version 2020.4.0, to estimate the project's criteria air pollutant emissions from both construction and operations. In addition, a Health Risk Assessment (HRA) was performed to determine the potential cancer risk and non-cancer health impacts to existing sensitive receptors in proximity to the project due to toxic air contaminant (TAC) emissions from construction and operational activities using the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) Version 21112 and the Hotspots Analysis and Reporting Program Version 2 (HARP2). For the relevant data, refer to Appendix C1, Air Quality, Greenhouse Gas Emissions, and Energy Calculations (prepared by Dudek in September 2022), and Appendix C2, Health Risk Assessment Data (prepared by Dudek in September 2022).

Additional sources reviewed to prepare this section include the Transportation Impact Analysis, included as Appendix J, the Bay Area Air Quality Management District (BAAQMD) California Environmental Quality Act (CEQA) Air Quality Guidelines, the BAAQMD 2017 Clean Air Plan, and the Office of Environmental Health Hazards Assessment's (OEHHA) 2015 Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Other sources consulted are listed in Section 4.2.5, References Cited.

4.2.1 Environmental Setting

The project site is located within the boundaries of the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB encompasses all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties, as well as the southern portions of Solano and Sonoma Counties.

Climate and Meteorology

Air quality is a function of the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features that influence pollutant movement and dispersal. Atmospheric conditions such as wind speed, wind direction, atmospheric stability, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, and consequently affect air quality.

The climate of the SFBAAB is determined largely by a high-pressure system that is usually present over the eastern Pacific Ocean off the west coast of North America. During winter, the Pacific high-pressure system shifts southward, allowing more storms to pass through the region. During summer and early fall, when few storms pass through the region, emissions generated within the San Francisco Bay Area can combine with abundant sunshine under the restraining influences of topography and subsidence inversions to create conditions that are conducive to the formation of photochemical pollutants, such as ozone (O₃), and secondary particulates, such as nitrates and sulfates.

In the SFBAAB, temperature inversions can often occur during the summer and winter months. An inversion is a layer of warmer air over a layer of cooler air that traps and concentrates pollutants near the ground. As such, the highest air pollutant concentrations in the SFBAAB generally occur during inversions (BAAQMD 2017a). The project site is located in the Santa Clara Valley climatological subregion. Specific conditions for the subregion are described in the BAAQMD CEQA Air Quality Guidelines (BAAQMD 2017a). The air pollution potential of the Santa Clara Valley is high. Warm summer temperatures, stable air, and mountains surrounding the valley combine to promote O₃ formation. In addition to the many local sources of pollution, O₃ precursors from San Francisco, San Mateo, and Alameda Counties are carried by prevailing winds into the Santa Clara Valley. The valley tends to channel pollutants to the southeast. In addition, on summer days with low level inversions, O₃ can be recirculated by southerly drainage flows in the late evening and early morning and by the prevailing northwesterlies in the afternoon. A similar recirculation pattern occurs in the winter, affecting levels of CO and particulate matter. This movement of the air up and down the valley significantly increases the impact of the pollutants (BAAQMD 2017a).

Site-Specific Meteorological Conditions

The local climate in San Mateo County is characterized as cool and foggy which is prevalent along the western coast of the peninsula, particularly during the summer. Summertime average daily temperatures are moderate along the west coast and warm in the county's east side. In the winter, average daily temperatures across the county range from mild to moderate. Winds are mild, with the highest wind speeds focused along the western coast. Rainfall averages approximately 20 to 25 inches per year at lower elevations (BAAQMD 2019).

Pollutants and Effects

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The national and California standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O₃, nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM₁₀), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns (PM_{2.5}), and lead. In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants. These pollutants, as well as toxic air contaminants (TACs), are discussed in the following paragraphs.¹

Ozone. O₃ is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O₃

¹ The descriptions of the criteria air pollutants and associated health effects are based on the U.S. Environmental Protection Agency's "Criteria Air Pollutants" (EPA 2021a), as well as the California Air Resources Board's "Glossary" (CARB 2019a) and "Fact Sheet: Air Pollution Sources, Effects and Control" (CARB 2009).

precursors. These precursors are mainly oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) (also termed reactive organic gas [ROG]). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere O_3 layer (stratospheric O_3) and at the Earth's surface in the troposphere (ground-level O_3).² The O_3 that the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered “bad” O_3 . Stratospheric, or “good,” O_3 occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2013).

Inhalation of O_3 causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms. Exposure to O_3 can reduce the volume of air that the lungs breathe in, thereby causing shortness of breath. O_3 in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. The occurrence and severity of health effects from O_3 exposure vary widely among individuals, even when the dose and the duration of exposure are the same. Research shows adults and children who spend more time outdoors participating in vigorous physical activities are at greater risk from the harmful health effects of O_3 exposure. While there are relatively few studies on the effects of O_3 on children, the available studies show that children are no more or less likely to suffer harmful effects than adults. However, there are a number of reasons why children may be more susceptible to O_3 and other pollutants. Children and teens spend nearly twice as much time outdoors and engaged in vigorous activities as adults. Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults. Also, children are less likely than adults to notice their own symptoms and avoid harmful exposures. Further research may be able to better distinguish between health effects in children and adults. Children, adolescents, and adults who exercise or work outdoors, where O_3 concentrations are the highest, are at the greatest risk of harm from this pollutant (CARB 2019b).

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO), which is a colorless, odorless gas. NO_x plays a major role, together with VOCs, in the atmospheric reactions that produce O_3 . NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers. NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections (EPA 2016b).

A large body of health science literature indicates that exposure to NO_2 can induce adverse health effects. The strongest health evidence, and the health basis for the ambient air quality standards for NO_2 , results from controlled human exposure studies that show that NO_2 exposure can intensify responses to allergens in allergic asthmatics. In

² The troposphere is the layer of the Earth's atmosphere nearest to the surface of the Earth. The troposphere extends outward about 5 miles at the poles and about 10 miles at the equator.

addition, a number of epidemiological studies have demonstrated associations between NO₂ exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses. Infants and children are particularly at risk because they have disproportionately higher exposure to NO₂ than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration. Several studies have shown that long-term NO₂ exposure during childhood, the period of rapid lung growth, can lead to smaller lungs at maturity in children with higher levels of exposure compared to children with lower exposure levels. In addition, children with asthma have a greater degree of airway responsiveness compared with adult asthmatics. In adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB 2019c).

Carbon Monoxide. CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the Project location, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

CO is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion and reduced mental alertness, light-headedness, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB 2019d).

Sulfur Dioxide. SO₂ is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO₂ are coal and oil used in power plants and industries; as such, the highest levels of SO₂ are generally found near large industrial complexes. In recent years, SO₂ concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO₂ and limits on the sulfur content of fuels.

Controlled human exposure and epidemiological studies show that children and adults with asthma are more likely to experience adverse responses with SO₂ exposure, compared with the non-asthmatic population. Effects at levels near the 1-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath, and chest tightness, especially during exercise or physical activity. Also, exposure at elevated levels of SO₂ (above 1 parts per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality. Older people and people with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most likely to experience these adverse effects (CARB 2019e).

SO₂ is of concern both because it is a direct respiratory irritant and because it contributes to the formation of sulfate and sulfuric acid in particulate matter (NRC 2005). People with asthma are of particular concern, both because they have increased baseline airflow resistance and because their SO₂-induced increase in airflow resistance is greater than in healthy people, and it increases with the severity of their asthma (NRC 2005). SO₂ is thought to induce airway constriction via neural reflexes involving irritant receptors in the airways (NRC 2005).

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. PM_{2.5} and PM₁₀ represent fractions of particulate matter. Coarse particulate matter (PM₁₀) consists of particulate matter that is 10 microns or less in diameter, which is about 1/7 the thickness of a human hair. Major sources of PM₁₀ include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter (PM_{2.5}) consists of particulate matter that is 2.5 microns or less in diameter, which is roughly 1/28 the diameter of a human hair. PM_{2.5} results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, PM_{2.5} can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOCs.

PM_{2.5} and PM₁₀ pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. PM_{2.5} and PM₁₀ can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM₁₀ tends to collect in the upper portion of the respiratory system, PM_{2.5} is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

A number of adverse health effects have been associated with exposure to both PM_{2.5} and PM₁₀. For PM_{2.5}, short-term exposures (up to 24-hour duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all of the common air pollutants, PM_{2.5} is associated with the greatest proportion of adverse health effects related to air pollution, both in the United States and worldwide based on the World Health Organization's Global Burden of Disease Project. Short-term exposures to PM₁₀ have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits (CARB 2022).

Long-term exposure (months to years) to PM_{2.5} has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. The effects of long-term exposure to PM₁₀ are less clear, although several studies suggest a link between long-term PM₁₀ exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer (CARB 2022).

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978,

mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95 percent. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including IQ performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO₂ in the atmosphere and can result in respiratory impairment, as well as reduced visibility.

Vinyl Chloride. Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen Sulfide. Hydrogen sulfide is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of hydrogen sulfide include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants. Exposure to hydrogen sulfide can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

Visibility-Reducing Particles. Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Effects of reduced visibility can include obscuring the viewshed of natural scenery, reducing airport safety, and discouraging tourism. Sources of visibility-reducing particles are the same as for PM_{2.5}.

Volatile Organic Compounds. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O₃ are referred to and regulated as VOCs (also referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O₃ and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate ambient air quality standards for VOCs as a group.

Non-Criteria Air Pollutants

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the state of California, TACs are identified through a two-step process

that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics “Hot Spots” Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and non-carcinogenic effects. Non-carcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90 percent of DPM is less than 1 micrometer in diameter (about 1/70 the diameter of a human hair), and thus is a subset of PM_{2.5} (CARB 2019f). DPM is typically composed of carbon particles (“soot,” also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2019f). The CARB classified “particulate emissions from diesel-fueled engines” (i.e., DPM) (17 CCR 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines, including trucks, buses, and cars, and off-road diesel engines, including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70 percent of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of PM_{2.5}, DPM also contributes to the same non-cancer health effects as PM_{2.5} exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2019f). Those most vulnerable to non-cancer health effects are children, whose lungs are still developing, and older people, who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person’s reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., roasting coffee). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. In a phenomenon known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved in the land use. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air-pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air-pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residences (sensitive sites or sensitive land uses) (CARB 2005).

The nearest existing sensitive receptors are students and staff at TIDE Academy, approximately 400 feet east of the project site, and the multi-family and single-family residential uses located to the west and south, approximately 1,390 feet and 1,760 feet from the project site, respectively.

4.2.2 Regulatory Framework

Federal Regulations

Criteria Air Pollutants

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the Clean Air Act, including setting National Ambient Air Quality Standards (NAAQS) for major air pollutants; setting hazardous air pollutant (HAP) standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric O₃ protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for the following criteria pollutants: O₃, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O₃, NO₂, SO₂, PM₁₀, PM_{2.5}, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O₃, NO₂, SO₂, PM₁₀, and PM_{2.5} are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a state implementation plan that demonstrates how those areas will attain the NAAQS within mandated time frames. The Clean Air Act identifies two types of national ambient air quality standards. Primary standards provide public health protection, including protecting the health of sensitive receptors. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

Hazardous Air Pollutants

The 1977 federal Clean Air Act amendments required the EPA to identify National Emission Standards for Hazardous Air Pollutants to protect public health and welfare. HAPs include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 federal Clean Air Act Amendments, which expanded the control program for HAPs, 187 substances and chemical families were identified as HAPs.

Corporate Average Fuel Economy Standards

In October 2012, the EPA and the National Highway Traffic Safety Administration (NHTSA), on behalf of the Department of Transportation, issued final rules to further reduce greenhouse gas (GHG) emissions and improve corporate average fuel economy (CAFE) standards for light-duty vehicles for model years 2017 and beyond (77 Federal Register [FR] 62624). NHTSA's CAFE standards have been enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. This program would increase fuel economy to the equivalent of 54.5 miles per gallon (mpg) limiting vehicle emissions to 163 grams of carbon dioxide (CO₂) per mile for the fleet of cars and light-duty trucks by model year 2025. In August 2022, NHTSA announced that it intends to prepare an environmental impact statement to analyze the potential environmental impacts of new CAFE standards for model years 2027 and beyond for passenger cars and light trucks, and new fuel efficiency standards for model years 2029 and beyond for heavy-duty pickup trucks and vans.

State Regulations

Criteria Air Pollutants

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established California Ambient Air Quality Standards (CAAQS), which are generally more restrictive than the NAAQS. As stated previously, an ambient air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harm to the public's health. For each pollutant, concentrations must be below the relevant CAAQS before a basin can attain the corresponding CAAQS. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O₃, CO, SO₂ (1-hour and 24-hour), NO₂, PM₁₀, and PM_{2.5} and visibility-reducing particles are values that are not to be exceeded.

California air districts have based their thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the air basin can accommodate, accounting for existing background pollution, without affecting the attainment date for the NAAQS or CAAQS. Since an ambient air quality standard is based on maximum pollutant levels in outdoor air that would not harm the public's health, and air district thresholds pertain to attainment of the ambient air quality standard, this means that the thresholds established by air districts are also protective of human health.

All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table 4.2-1.

Table 4.2-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ^a	National Standards ^b	
		Concentration ^c	Primary ^{c,d}	Secondary ^{c,e}
O ₃	1 hour	0.09 ppm (180 µg/m ³)	—	Same as Primary Standard ^f
	8 hours	0.070 ppm (137 µg/m ³)	0.070 ppm (137 µg/m ³) ^f	
NO ₂ ^g	1 hour	0.18 ppm (339 µg/m ³)	0.100 ppm (188 µg/m ³)	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	
CO	1 hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	None
	8 hours	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	
SO ₂ ^h	1 hour	0.25 ppm (655 µg/m ³)	0.075 ppm (196 µg/m ³)	—
	3 hours	—	—	0.5 ppm (1,300 µg/m ³)
	24 hours	0.04 ppm (105 µg/m ³)	0.14 ppm (for certain areas) ^g	—
	Annual	—	0.030 ppm (for certain areas) ^g	—
PM ₁₀ ⁱ	24 hours	50 µg/m ³	150 µg/m ³	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m ³	—	
PM _{2.5} ⁱ	24 hours	—	35 µg/m ³	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m ³	12.0 µg/m ³	15.0 µg/m ³
Lead ^{j,k}	30-day Average	1.5 µg/m ³	—	—
	Calendar Quarter	—	1.5 µg/m ³ (for certain areas) ^k	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 µg/m ³	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m ³)	—	—
Vinyl chloride ^l	24 hours	0.01 ppm (26 µg/m ³)	—	—
Sulfates	24 hours	25 µg/m ³	—	—
Visibility reducing particles	8 hours (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70 percent	—	—

Source: CARB 2016a.

Notes: $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter; ppm = parts per million by volume; O_3 = ozone; NO_2 = nitrogen dioxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $\text{PM}_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

- ^a California standards for O_3 , CO, SO_2 (1-hour and 24-hour), NO_2 , suspended particulate matter (PM_{10} , $\text{PM}_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- ^b National standards (other than O_3 , NO_2 , SO_2 , particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10} , the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than 1. For $\text{PM}_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.
- ^c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- ^d National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
- ^e National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- ^f On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- ^g To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- ^h On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
- ⁱ On December 14, 2012, the national annual $\text{PM}_{2.5}$ primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour $\text{PM}_{2.5}$ standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM_{10} standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.
- ^j CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- ^k The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

CARB's Mobile Source Strategy

On May 16, 2016, CARB released the 2016 Mobile Source Strategy that demonstrates how the state can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risk from transportation emissions, and reduce petroleum consumption over the next fifteen years. The actions contained in the 2016 Mobile Source Strategy will deliver broad environmental and public health benefits, as well as support much needed efforts to modernize and upgrade transportation infrastructure, enhance system-wide efficiency and mobility options, and promote clean economic growth in the mobile sector.

The estimated benefits of the strategy in reducing emissions from mobile sources includes an 80 percent reduction of smog-forming emissions and a 45 percent reduction in DPM. Statewide, the 2016 Mobile Source Strategy would also result in a 45 percent reduction in GHG emissions, and a 50 percent reduction in the consumption of petroleum-based fuels (CARB 2016b).

In September 2019, Governor Newsom signed Senate Bill (SB) 44 which acknowledges the ongoing need to evaluate opportunities for mobile source emissions reductions and requires CARB to update the 2016 Strategy by 2021 and every five years thereafter. Specifically, SB 44 requires CARB to update the 2016 Strategy to include a

comprehensive strategy for the deployment of medium- and heavy-duty vehicles for the purpose of meeting air quality standards and reducing GHG emissions. It also directs CARB to set reasonable and achievable goals for reducing emissions by 2030 and 2050 from medium- and heavy-duty vehicles that are consistent with the State's overall goals and maximizes the reduction of criteria air pollutants. In September 2021, CARB developed the 2020 Mobile Source Strategy that, similar to the 2016 Mobile Source Strategy, is a framework to identify the technology trajectories and programmatic concepts to meet our criteria pollutant, GHG, and TAC emission reduction goals from mobile sources. The 2020 Mobile Source Strategy will be incorporated in other planning efforts such as the State Implementation Plan and 2022 Climate Change Scoping Plan Update.

The estimated benefits of the strategy in reducing emissions from mobile sources includes an 82 percent reduction of smog-forming emissions by 2037 and a 66 percent reduction in DPM by 2031. The 2020 Mobile Source Strategy would also result in a 76 percent reduction in GHG emissions by 2045, and 85 percent and 77 percent of passenger cars and heavy-duty trucks would be zero-emission vehicles (ZEV) or plug-in hybrid electric vehicles (PHEV) in 2045 (CARB 2021c).

Advanced Clean Cars Program and Zero-Emissions Vehicle Program

The Advanced Clean Cars (ACC) program (January 2012) is an emission-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The ACC II program establishes the next set of low-emission vehicle and zero-emission vehicle requirements for model years after 2025 to contribute to meeting federal ambient air quality ozone standards and California's carbon neutrality standards (CARB 2021b). By 2035 all new passenger cars, trucks and SUVs sold in California will be zero emissions. The main objectives of ACC II are:

1. Maximize criteria and GHG emission reductions through increased stringency and real-world reductions.
2. Accelerate the transition to zero-emission vehicles through both increased stringency of requirements and associated actions to support wide-scale adoption and use.

An ACC II rulemaking package, which considers technological feasibility, environmental impacts, equity, economic impacts, and consumer impacts, was adopted by CARB in August 2022.

EO S-1-07

Executive Order (EO) S-1-07 (January 2007, implementing regulation adopted in April 2009) sets a declining Low Carbon Fuel Standard for GHG emissions measured in metric tons of CO₂ equivalent (CO₂e) grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020 and 20 percent by 2030 (17 CCR 95480 et seq.). The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel—including extraction/feedstock production, processing, transportation, and final consumption—per unit of energy delivered.

Executive Order B-48-18: Zero-Emission Vehicles

On January 26, 2018, Governor Brown signed EO B-48-18 requiring all State entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle (EV) charging stations by 2025. It specifies that 10,000 of the EV charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local

and regional governments to streamline the installation of ZEV infrastructure. The Governor’s Office of Business and Economic Development is required to publish a *Plug-in Charging Station Design Guidebook* and update the *2015 Hydrogen Station Permitting Guidebook* (Eckerle and Jones 2015) to aid in these efforts. All State entities are required to participate in updating the *2016 Zero-Emissions Vehicle Action Plan*, along with the *2018 ZEV Action Plan Priorities Update*, which includes and extends the *2016 ZEV Action Plan* (Governor’s Interagency Working Group on Zero-Emission Vehicles 2016, 2018), to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities.

Executive Order N-79-20

Governor Gavin Newsom signed EO N-79-20 in September 2020, which sets a statewide goal that 100 percent of all new passenger car and truck sales in the state will be zero-emissions by 2035. It also sets a goal that 100 percent of statewide new sales of medium- and heavy-duty vehicles will be zero emissions by 2045, where feasible, and for all new sales of drayage trucks to be zero emissions by 2035. Additionally, the EO targets 100 percent of new off-road vehicle sales in the state to be zero emission by 2035. CARB is responsible for implementing the new vehicle sales regulation.

Amendments to the Small Off-Road Engine Regulations: Transition to Zero Emissions

On December 9, 2021, CARB approved proposed amendments to the SORE Regulations, which would require most newly manufactured small off-road engines (SORE), such as those found in leaf blowers, lawn mowers, and other equipment, be zero emission starting in 2024. Portable generators, including those in recreational vehicles, would be required to meet more stringent standards in 2024 and meet zero-emission standards starting in 2028.

Toxic Air Contaminants

The state Air Toxics Program was established in 1983 under AB 1807 (Tanner). The California TAC list identifies more than 700 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) HAPs. In 1987, the Legislature enacted the Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) to address public concern over the release of TACs into the atmosphere. AB 2588 law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified and prioritized. “High-priority” facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). The regulation is anticipated to result in an 80 percent decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. There are several Airborne Toxic Control Measures that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled

Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025). On June 25, 2020, the CARB adopted the final rule for new standards that require the sale of zero-emission heavy-duty trucks, starting with the 2024 model year. The Advanced Clean Trucks rulemaking finalizes standards that were initially proposed on October 22, 2019, and strengthened in a revised proposal on April 28, 2020 (CARB 2021c). The Advanced Clean Trucks would require manufacturers to sell increasing percentages of zero-emission trucks, is expected to reduce the lifecycle emission of GHGs, eliminate tailpipe emissions of air pollutants, and foster a market for zero-emission heavy-duty trucks.

California Health and Safety Code Section 41700

Section 41700 of the Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. This Section also applies to sources of objectionable odors.

Regional and Local Regulations

Bay Area Air Quality Management District

The BAAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the SFBAAB, where the project site is located. The clean air strategy of the BAAQMD includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, issuance of permits for stationary sources of air pollution, inspection of stationary sources of air pollution and response to citizen complaints, monitoring of ambient air quality and meteorological conditions, and implementation of programs and regulations required by the federal and California Clean Air Acts.

On April 19, 2017, the BAAQMD adopted the Spare the Air – Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area Final 2017 Clean Air Plan (2017 Clean Air Plan) (BAAQMD 2017b). The 2017 Clean Air Plan provides a regional strategy to protect public health and protect the climate. To protect public health, the 2017 Clean Air Plan includes all feasible measures to reduce emissions of O₃ precursors (ROG and NO_x) and reduce O₃ transport to neighboring air basins. In addition, the 2017 Clean Air Plan builds on BAAQMD efforts to reduce PM_{2.5} and TACs. To protect the climate, the 2017 Clean Air Plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050 and provides a regional climate protection strategy that will put the San Francisco Bay Area on a pathway to achieve those GHG reduction targets.

BAAQMD establishes and administers a program of rules and regulations to attain and maintain state and national air quality standards and regulations related to TACs. The following BAAQMD rules and regulations may apply to the project:

- **Regulation 2, Rule 1 – Permits.** This rule specifies the requirements for authorities to construct and permits to operate.
- **Regulation 6, Rule 1 – General Requirements.** This rule limits the quantity of particulate matter in the atmosphere through the establishment of limitations on emission rates, concentration, visible emissions, and opacity.
- **Regulation 6, Rule 6 – Prohibition of Trackout.** This rule addresses fugitive road dust emissions associated with trackout of solid materials onto paved public roads outside the boundaries of

large bulk material sites, large construction sites and large disturbed surface sites (sites of 1 acre or more), and large disturbed surface sites.

- **Regulation 8, Rule 1 – General Provisions.** This rule limits the emission of organic compounds into the atmosphere.
- **Regulation 8, Rule 3 – Architectural Coatings.** This rule limits the quantity of volatile organic compounds in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the BAAQMD.
- **Regulation 8, Rule 15 – Emulsified and Liquid Asphalts.** This rule limits the emissions of volatile organic compounds caused by the use of emulsified and liquid asphalt in paving materials and paving and maintenance operations.

City of Menlo Park General Plan

Policies pertaining to improving air quality are addressed in the Circulation and the Open Space and Conservation and the Noise and Safety Elements of the City's General Plan. Relevant General Plan policies related to air quality are included below:

Circulation Element

Goal CIRC-3: Increase mobility options to reduce traffic congestion, GHG emissions, and commute travel time.

Policy CIRC-3.1: Support development and transportation improvements that help reduce per service population (or other efficiency metric) vehicle miles traveled (VMT).

Goal CIRC-4: Improve Menlo Park's overall health, wellness, and quality of life through transportation enhancements.

Policy CIRC-4.1: Encourage the safer and more widespread use of nearly zero-emission modes, such as walking and biking, and lower emission modes like transit, to reduce GHG emissions.

Policy CIRC-4.2: Promote non-motorized transportation to reduce exposure to local air pollution, thereby reducing risks of respiratory diseases, other chronic illnesses, and premature death.

Open Space/Conservation, Noise and Safety Element

Goal OSC 4: Promote Sustainability and Climate Action Planning.

Policy OSC 4.1: Encourage, to the extent feasible, (1) a balance and match between jobs and housing, (2) higher density residential and mixed-use development to be located adjacent to commercial centers and transit corridors, and (3) retail and office areas to be located within walking and biking distance of transit or existing and proposed residential developments.

Policy OSC 4.4: Explore the potential for installing infrastructure for vehicles that use alternative fuel, such as electric plug in charging stations.

Goal OSC 5: Enhance and preserve air quality in accord with State and regional standards, and encourage the coordination of total water quality management including both supply and wastewater treatment.

Policy OSC 5.1: Continue to apply standards and policies established by the BAAQMD, San Mateo Countywide Water Pollution Prevention Program (SMCWPPP), and City of Menlo Park Climate Action Plan through the CEQA process and other means as applicable.

Regional and Local Air Quality Conditions

San Francisco Bay Area Air Basin Attainment Designation

Pursuant to the 1990 federal Clean Air Act amendments, the EPA classifies air basins (or portions thereof) as “attainment” or “nonattainment” for each criteria air pollutant, based on whether the NAAQS have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as “attainment” for that pollutant. If an area exceeds the standard, the area is classified as “nonattainment” for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as “unclassified” or “unclassifiable.” The designation of “unclassifiable/attainment” means that the area meets the standard or is expected to be meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are re-designated as maintenance areas and must have approved maintenance plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as “attainment” or “nonattainment,” but based on CAAQS rather than the NAAQS. Table 4.2-2 depicts the current attainment status of the project site with respect to the NAAQS and CAAQS.

Table 4.2-2. State and Federal Ambient Air Quality Standards and Attainment Status

Pollutant	Averaging Time	California Standards ^a		National Standards ^b	
		Standard	Attainment Status	Standard	Attainment Status
Ozone (O ₃)	1 hour	0.09 ppm	N	NA	NA
	8 hour	0.07 ppm	N	0.070 ppm	N/Marginal ^c
Carbon Monoxide (CO)	1 hour	20 ppm	A	35 ppm	A
	8 hour	9 ppm	A	9 ppm	A
Nitrogen Dioxide (NO ₂)	1 hour	0.18 ppm	A	0.100 ppm	U
	Annual	0.030 ppm	NA	0.053 ppm	A
Sulfur Dioxide (SO ₂)	1 hour	0.25 ppm	A	0.075 ppm	A
	24 hour	0.04 ppm	A	0.14 ppm	A
	Annual	NA	NA	0.03 ppm	A
Course Particulate Matter (PM ₁₀)	24 hour	50 µg/m ³	N	150 µg/m ³	U
	Annual	20 µg/m ³	N	NA	NA
Fine Particulate Matter (PM _{2.5})	24 hour	NA	NA	35 µg/m ³	N ^d
	Annual	12 µg/m ³	N	12 µg/m ³	U/A ^e
Sulfates	24 hour	25 µg/m ³	A	NA	NA
Lead	30 day	1.5 µg/m ³	NA	NA	A
	Cal. Quarter	NA	NA	1.5 µg/m ³	A
	Rolling 3-Month Average	NA	NA	0.15 µg/m ³	U/A
Hydrogen Sulfide	1 hour	0.03 ppm	U	NA	NA

Table 4.2-2. State and Federal Ambient Air Quality Standards and Attainment Status

Pollutant	Averaging Time	California Standards ^a		National Standards ^b	
		Standard	Attainment Status	Standard	Attainment Status
Visibility-Reducing Particles	8 hour	See Note “f”	U	NA	NA

Source: BAAQMD 2017c; CARB 2020 (state); EPA 2020a (federal).

Notes: ppm = parts per million by volume; N = Nonattainment; NA = Not Applicable (no applicable standard); A = Attainment; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; U = Unclassified.

- ^a California standards for O_3 , CO, SO_2 (1-hour and 24-hour), NO_2 , suspended particulate matter (PM_{10} , $\text{PM}_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour, or 24-hour average (i.e., all standards except for lead and the PM_{10} annual standard), then some measurements can be excluded. In particular, measurements are excluded that the CARB determines would occur less than once per year on the average.
- ^b National standards shown are the “primary standards” designed to protect public health. National Ambient Air Quality Standards (NAAQS) (other than O_3 , NO_2 , SO_2 , particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10} , the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than 1. For $\text{PM}_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.
- ^c On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over 3 years, is equal to or less than 0.070 ppm. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the O_3 level in the area.
- ^d On January 9, 2013, the EPA issued a final rule to determine that the San Francisco Bay Area attains the 24-hour $\text{PM}_{2.5}$ national standard. This EPA rule suspends key State Implementation Plan requirements as long as monitoring data continues to show that the San Francisco Bay Area attains the standard. Despite this EPA action, the San Francisco Bay Area will continue to be designated as “nonattainment” for the national 24-hour $\text{PM}_{2.5}$ standard until such time as the BAAQMD submits a “redesignation request” and a “maintenance plan” to EPA, and EPA approves the proposed redesignation.
- ^e In December 2012, the EPA strengthened the annual $\text{PM}_{2.5}$ NAAQS from 15.0 to $12.0 \mu\text{g}/\text{m}^3$. In December 2014, EPA issued final area designations for the 2012 primary annual $\text{PM}_{2.5}$ NAAQS. Areas designated “unclassifiable/attainment” must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.
- ^f Statewide visibility-reducing particle standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

In summary, the SFBAAB is designated as a nonattainment area for federal and state O_3 and $\text{PM}_{2.5}$ standards. The SFBAAB is also designated as a nonattainment area for the state PM_{10} standards. The SFBAAB is designated as “unclassified” or “attainment” for all other criteria air pollutants.

Local Ambient Air Quality

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. BAAQMD operates a network of ambient air monitoring stations throughout San Mateo County, which measure ambient concentrations of pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The BAAQMD monitors air quality conditions at 22 locations throughout the SFBAAB. Due to proximity to the site and similar geographic and climactic characteristics, the Redwood City and San Jose-Jackson Street monitoring station concentrations for all pollutants are considered most representative of the project site. Data for these sites was available for 8-hour O_3 , 1-hour O_3 , CO, SO_2 , NO_2 , PM_{10} , and $\text{PM}_{2.5}$ concentrations. Ambient concentrations of pollutants from 2018 through 2020 are presented in Table 4.2-3. The federal and state 8-hour O_3 standards were

exceeded in 2019 and 2020, state PM₁₀ standard was exceeded in 2018 through 2020, and the federal PM_{2.5} standard was exceeded in 2018 and 2020.

Table 4.2-3. Local Ambient Air Quality Data

Averaging Time	Unit	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
				2018	2019	2020	2018	2019	2020
Ozone (O ₃) – Redwood City									
Maximum 1-hour concentration	ppm	State	0.12	0.067	0.083	0.098	0	0	1
Maximum 8-hour concentration	ppm	State	0.070	0.050	0.077	0.078	0	2	1
		Federal	0.070	0.049	0.077	0.077	0	2	1
Nitrogen Dioxide (NO ₂) – Redwood City									
Maximum 1-hour concentration	ppm	State	0.18	0.077	0.054	0.045	0	0	0
		Federal	0.100	0.077	0.055	0.046	0	0	0
Annual concentration	ppm	State	0.030	0.010	0.009	0.008	—	—	—
		Federal	0.053	0.010	0.009	0.008	—	—	—
Carbon Monoxide (CO) – Redwood City									
Maximum 1-hour concentration	ppm	State	20	2.5	2.0	2.1	0	0	0
		Federal	35	2.5	2.0	2.1	0	0	0
Maximum 8-hour concentration	ppm	State	9.0	1.7	1.1	1.5	0	0	0
		Federal	9	1.7	1.0	1.5	0	0	0
Sulfur Dioxide (SO ₂) – San Jose – Jackson Street									
Maximum 1-hour concentration	ppm	Federal	0.075	0.069	0.025	0.029	0	0	0
Maximum 24-hour concentration	ppm	Federal	0.14	0.011	0.015	0.008	0	0	0
Annual concentration	ppm	Federal	0.030	0.0021	0.0014	0.0017	—	—	—
Coarse Particulate Matter (PM ₁₀) ^a – San Jose – Jackson Street									
Maximum 24-hour concentration	µg/m ³	State	50	121.8	77.1	137.1	12.2 (4)	11.8 (4)	29.9 (10)
		Federal	150	115.4	75.4	134.9	0.0 (0)	0 (0)	0.0 (0)
Annual concentration	µg/m ³	State	20	23.1	19.1	24.8	—	—	—
Fine Particulate Matter (PM _{2.5}) ^a – Redwood City									
Maximum 24-hour concentration	µg/m ³	Federal	35	120.9	29.5	124.1	13.7 (13)	0.0 (0)	9.3 (9)
Annual concentration	µg/m ³	State	12	120.9	29.5	124.1	—	—	—
		Federal	12.0	10.5	7.0	—	—	—	—

Sources: CARB 2021a; EPA 2021b.

Notes: ppm = parts per million by volume; ND = insufficient data available to determine the value; — = not available; µg/m³ = micrograms per cubic meter.

Data taken from CARB iADAM (<http://www.CARB.ca.gov/adam>) and EPA AirData (<http://www.epa.gov/airdata/>) represent the highest concentrations experienced over a given year.

Daily exceedances for particulate matter are estimated days because PM₁₀ and PM_{2.5} are not monitored daily. All other criteria pollutants did not exceed federal or state standards during the years shown. There is no federal standard for 1-hour ozone, annual PM₁₀, or 24-hour SO₂, nor is there a state 24-hour standard for PM_{2.5}.

The Redwood City monitoring station is located at 897 Barron Avenue, Redwood City, California.

The San Jose-Jackson Street monitoring station is located at 158b Jackson Street, San Jose, California.

^a Measurements of PM₁₀ and PM_{2.5} are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

4.2.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to air quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to air quality would occur if the project would:

- A. Conflict with or obstruct implementation of the applicable air quality plan.
- B. 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.
- C. Expose sensitive receptors to substantial pollutant concentrations.
- D. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.
- E. Result in cumulatively considerable air quality impacts.

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) indicates that, where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to determine whether the Project would have a significant impact on air quality.

Notably, in the *California Building Industry Association v. Bay Area Air Quality Management District* case decided in 2015, the California Supreme Court held that CEQA does not generally require lead agencies to consider how existing environmental conditions might impact a project's occupants, except where the project would significantly exacerbate an existing environmental condition. Accordingly, for each significance criteria above, this analysis considers whether the project would create new impacts or exacerbate existing health risks rather than whether the air quality conditions in the project area would adversely impact the project's workers or residents.

In June 2010, the BAAQMD adopted its updated CEQA Air Quality Guidelines, including new thresholds of significance (BAAQMD 2010), and most recently revised them in May 2017 (BAAQMD 2017a). The guidelines advise lead agencies on how to evaluate potential air quality impacts, including establishing quantitative and qualitative thresholds of significance. These thresholds are based on substantial evidence identified in BAAQMD's Revised Draft Options and Justification Report (BAAQMD 2009) and are summarized in Table 4.2-4.

In general, the BAAQMD significance thresholds for criteria pollutants (ROG, NO_x, PM₁₀, PM_{2.5}, and CO) address the first two air quality significance criteria of Appendix G of the CEQA Guidelines (listed above). The BAAQMD maintains that these criteria pollutant thresholds are intended to maintain ambient air quality concentrations below state and federal standards and to prevent a cumulatively considerable contribution to regional nonattainment with ambient air quality standards. The TAC thresholds (cancer and noncancer risks) and local CO

thresholds address the third Appendix G significance criterion, and the BAAQMD odors threshold addresses the fourth Appendix G significance criterion.

Table 4.2-4. Thresholds of Significance

Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tons/year)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82 (exhaust)	82	15
PM _{2.5}	54 (exhaust)	54	10
PM ₁₀ /PM _{2.5} (fugitive dust)	Best Management Practices	None	
Local CO	None	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	
Risks and Hazards (Individual Project)	Compliance with Qualified Community Risk Reduction Plan or Increased cancer risk of >10.0 in 1 million Increased noncancer risk of >1.0 Hazard Index (Chronic or Acute) Ambient PM _{2.5} increase >0.3 µg/m ³ annual average Zone of Influence: 1,000-foot radius from property line of source or receptor		
Risks and Hazards (Cumulative)	Compliance with Qualified Community Risk Reduction Plan or Cancer risk of >100 in 1 million (from all local sources) Noncancer risk of >10.0 Hazard Index (chronic, from all local sources) Ambient PM _{2.5} >0.8 µg/m ³ annual average (from all local sources) Zone of Influence: 1,000-foot radius from property line of source or receptor		
Accidental Release of Acutely Hazardous Air Pollutants	None	Storage or use of acutely hazardous material located near receptors or new receptors located near stored or used acutely hazardous materials considered significant	
Odors	None	Five confirmed complaints to BAAQMD per year averaged over 3 years	

Source: BAAQMD 2017a.

Notes: lbs/day = pounds per day; tons/year = tons per year; ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; CO = carbon monoxide; ppm = parts per million; µg/m³ = micrograms per cubic meter; BAAQMD = Bay Area Air Quality Management District.

The BAAQMD established their thresholds of significance for CEQA purposes based on the regional goal to attain the NAAQS and CAAQS. Since an AAQS is based on a conservative estimate of pollutant levels in outdoor air that would protect the public's health, and air district thresholds pertain to attainment of the AAQS, this means that the thresholds established by air districts are also protective of human health.

4.2.4 Impacts and Mitigation Measures

Methodology

Construction Emissions

Emissions from the construction phase of the project were estimated using the California Emissions Estimator Model (CalEEMod) Version 2020.4.0. Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the project applicant and CalEEMod default values when project specifics were not known.

For purposes of estimating project emissions, and based on information provided by the project applicant, construction would begin in September 2023 for a duration of 50 months, with buildout in May 2028. The analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Demolition: 13 weeks (September 1, 2023 – December 1, 2023)
- Site Preparation: 6 days (December 1, 2023 – December 10, 2023)
- Grading: 9 weeks (December 11, 2023 – February 11, 2024)
- Building Construction: 3.75 years (September 1, 2024 – May 1, 2028)
- Paving: 2 months (November 1, 2024 – January 1, 2025)
- Architectural Coating: 1.5 years (July 1, 2026 – February 1, 2028)

Construction-worker estimates, vendor and haul truck trips by construction phase were based on information provided by the applicant. Haul truck trips during each grading phase were based on approximate earthwork quantities. Grading for the apartments/townhomes was estimated to involve a total of 5,260 cubic yards of soil import and 32,000 cubic yards of soil export. Construction activities would result in a total of approximately 100 round trips (200 one-way truck trips) for demolition, 1,850 round trips (3,700 one-way truck trips) during grading, and 1,750 round trips (3,850 one-way truck trips) for building construction. CalEEMod default trip length values were used for the distances for worker and vendor trips; however, haul trips from demolition and grading activities was increased to 25 miles per one-way trip per applicant input. Fugitive dust generated during truck loading is included in CalEEMod as an on-site source of fugitive dust emissions and is calculated based on estimated throughput of loaded and unloaded material.

The construction equipment mix and vehicle trips used for estimating the project-generated construction emissions are shown in Table 4.2-5. For the analysis, it was generally assumed that heavy construction equipment would be operating at the site 5 days per week (22 days per month) during project construction.

Table 4.2-5. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Workers Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Type	Quantity	Usage Hours
Demolition	8	3	200	Excavators	2	8
				Loaders (Tractors/Loaders/Backhoes)	2	8
				Bobcats (Skid Steer Loaders)	4	8
				Backhoes (Tractors/Loaders/Backhoes)	1	8
Site Preparation	6	3	0	Scrapers	2	8
				Graders	2	8
				Water Trucks (Off-Highway Trucks)	2	8
				Compactors (Plate Compactors)	2	8
Grading	8	3	3,700	Scrapers	2	8
				Graders	2	8
				Water Trucks (Off-Highway Trucks)	1	8
				Compactors (Plate Compactors)	2	8
Building Construction	120	20	3,500	Excavators	2	8
				Loaders (Tractors/Loaders/Backhoes)	2	8
				Forklifts	4	8
				Backhoes (Tractors/Loaders/Backhoes)	4	8
Paving	0	0	0	Pavers	5	8
				Paving Equipment	1	8
				Rollers	1	8

Table 4.2-5. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Workers Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Type	Quantity	Usage Hours
Architectural Coating	50	5	0	Paint Sprayers (Other Construction Equipment)	6	8
				Stucco Rigs (Other Construction Equipment)	4	8
				Forklifts	4	8
				Air Compressors	48	8

Source: Appendix C1.

Notes: Equipment types noted in parenthesis represent the equipment equivalent used in CalEEMod construction modeling.

Operational Emissions

Emissions from the operational phase of the project were estimated using CalEEMod Version 2020.4.0. Year 2028 was assumed as the first full year of operations after completion of construction.

Area Sources

CalEEMod was used to estimate operational emissions from area sources, including emissions from consumer product use, architectural coatings, and landscape maintenance equipment.

Consumer products are chemically formulated products used by household and institutional consumers, including detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. Other paint products, furniture coatings, or architectural coatings are not considered consumer products (CAPCOA 2021). Consumer product ROG emissions are estimated in CalEEMod based on the floor area of residential buildings and on the default factor of pounds of ROG per building square foot per day. For parking lot land uses, CalEEMod estimates ROG emissions associated with use of parking surface degreasers based on a square footage of parking surface area and pounds of ROG per square foot per day.

ROG off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers used during building maintenance. CalEEMod calculates the ROG evaporative emissions from application of residential surface coatings based on the ROG emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. The model default reapplication rate of 10 percent of area per year is assumed. Consistent with CalEEMod defaults, it is assumed that the residential surface area for painting equals 2.7 times the floor square footage with 75 percent assumed for interior coating and 25 percent assumed for exterior surface coating. For the surface parking, the architectural coating area is assumed to be 6 percent of the total square footage, consistent with the supporting CalEEMod studies provided as an appendix to the CalEEMod User's Guide (CAPCOA 2021).

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers. The emissions associated from landscape equipment use are estimated based on CalEEMod default values for emission factors (grams per residential dwelling unit per day and grams per square foot of nonresidential building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days. For San Mateo County, the average annual operational days for landscape equipment are estimated at 180 days per year (CAPCOA 2021). As noted in Section 4.2.2, in December 2021, CARB approved proposed amendments to the SORE Regulations, which requires landscaping equipment to be zero emission starting in 2024.

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage. Notably, only the existing buildings include emissions from natural gas usage. Furthermore, the project would be built in accordance with the City's Municipal Code Chapter 12.16, approved September 2019, which requires new residential buildings, with exceptions that do not apply here, to be "all-electric," i.e., built without a natural gas pipeline connection. Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHG emissions in CalEEMod, since criteria pollutant emissions occur at the site of the power plant, which is typically off site.

Mobile Sources

Mobile sources for the project would primarily be motor vehicles (automobiles and light-duty trucks) traveling to and from the project site. Motor vehicles may be fueled with gasoline, diesel, or alternative fuels. Regulatory measures related to mobile sources include AB 1493 (Pavley), ACC Standards, and related federal standards. AB 1493 required that CARB establish GHG emission standards for automobiles, light-duty trucks, and other vehicles determined by CARB to be vehicles that are primarily used for noncommercial personal transportation in the state. The ACC I program is an emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package of regulations. Although not currently included in EMFAC's emission factor estimates and forecasts, in August 2022, CARB adopted the ACC II regulations which would rapidly scale down light-duty passenger car, truck and SUV emissions starting with the 2026 model year through 2035, with all new passenger cars, trucks and SUVs sold in California to be zero emissions by 2035.

The anticipated trip generation, including the trip rates and total trips, are based on the project's transportation analysis. Specifically, the project would generate 1,774 trips per day while the existing land uses currently generate approximately 904 trips per day. CalEEMod default data, including temperature, trip characteristics, variable start information, emissions factors, were conservatively used for the model inputs to estimate daily emissions from proposed vehicular sources. Project-related traffic was assumed to include a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2028 were used to estimate emissions associated with full buildout of the project. For existing land uses, emission factors representing the vehicle mix and emissions for 2020 were used to estimate emissions.

Emergency Generator

An emergency, or stand-by, generator is anticipated to be required for the project in event of a power outage. While use of generators during an emergency is not included in the emissions inventory as they are speculative, emissions associated with testing and maintenance of the generators is included. Based on information provided by the applicant,

the project would include a 300-kilowatt or 464-brake horsepower emergency generator. The emergency generator would be diesel-fueled and would be used for non-emergency operation up to 50 hours per year (for routine testing and maintenance). CalEEMod was used to estimate emissions from emergency generator testing and maintenance.

Construction Health Risk Assessment

The greatest potential for TAC emissions during project construction would be DPM emissions from heavy equipment operations and heavy-duty trucks. As a precautionary measure, a HRA was performed to assess the impact of construction on sensitive receptors proximate to the project Site. A construction HRA was performed to evaluate the potential impact to existing offsite receptors as a result of construction of the project. For risk assessment purposes, PM₁₀ in diesel exhaust is considered a proxy for DPM.³ Notably, complete model results for the construction HRA are included as Appendix C2

The construction HRA applies the methodologies prescribed in the OEHHA document, Air Toxics Hot Spots Program Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments (OEHHA Guidelines) (OEHHA 2015). Cancer risk parameters, such as age-sensitivity factors, daily breathing rates, exposure period, fraction of time at home, and cancer potency factors were based on the values and data recommended by OEHHA are implemented in Hotspots Analysis and Reporting Program Version 2 (HARP2), which was used to estimate risk from construction activities.

For short-term construction, a dispersion modeling analysis was conducted of DPM emitted from diesel vehicles and construction equipment on the proposed project site for the HRA to assess the health risk impacts of the project's construction on proximate off-site sensitive receptors. Additionally, a separate dispersion modeling analysis was conducted of TACs emitted by the natural gas emergency generators to be located at the project. The dispersion modeling was performed using the AERMOD Version 21112, which is the model EPA approved and BAAQMD recommends for atmospheric dispersion of emissions. AERMOD is a steady-state Gaussian plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of surface and elevated sources, building downwash, and simple and complex terrain. Principal parameters of AERMOD for the project included the following:

- **Dispersion Model:** The air dispersion model used was AERMOD, Version 21112, with the Lakes Environmental Software implementation/user interface, AERMOD View, Version 10.2.1. Under the construction scenario, a unit emission rate (1 gram per second [g/s]) was normalized over the line of adjacent volume sources for the AERMOD run to obtain the “X/Q” values. Under the operational scenario, AERMOD was run with each source emitting unit emissions (1 g/s) to obtain the “X/Q” values. X/Q is a dispersion factor that is the average effluent concentration normalized by source strength, and is used as a way to simplify the representation of emissions from many sources. The maximum concentrations were determined for the 1-hour and Period averaging periods.
- **Meteorological Data:** The latest 5-year meteorological data (years 2011-2015) for the San Carlos Airport station (KSQL) were provided by BAAQMD, and then input to AERMOD.
- **Urban and Rural Options:** Typically, urban areas have more surface roughness and structures and low-albedo surfaces that absorb more sunlight, and thus, more heat, relative to rural areas. The urban

³ Under California regulatory guidelines, DPM is used as a surrogate measure of carcinogen exposure for the mixture of chemicals that make up diesel exhaust as a whole. CalEPA is a proponent of using the surrogate approach to quantifying cancer risks associated with diesel exhaust over a component-based approach, which involves estimating risks for each of the individual components of a mixture. CalEPA has concluded that “potential cancer risk from inhalation exposure to whole diesel exhaust will outweigh the multi-pathway cancer risk from the speciated components” (OEHHA 2003).

dispersion option was selected and the San Mateo County population for year 2020 (764,442 persons) input into AERMOD.

- **Terrain Characteristics:** Digital elevation model files were imported into AERMOD so that complex terrain features were evaluated as appropriate. The National Elevation Dataset (NED) dataset with resolution of 1/3 arc-second was used.
- **Sensitive Receptors:** This HRA evaluates the risk to existing residential receptors located in proximity to the project. A uniform fine 1-kilometer by 1-kilometer Cartesian grid with 20-meter spacing was centered over the project site and converted into discrete receptors to capture the maximum risk.
- **Source Release Construction Scenario:** Air dispersion modeling of DPM emissions was conducted assuming the equipment would operate in accordance with the modeling scenario estimated in CalEEMod. The construction equipment DPM emissions were modeled as a line of adjacent volume sources across the project site to represent project construction with a release height of 5 meters, plume height of 2.33 meters, and plume width of 11.63 meters. Construction equipment would operate up to 8 hours per day.

Plot files generated in AERMOD were then imported into CARB's HARP2, with ground level concentrations determined by multiplication of emission rates and X/Q values for each individual source of emissions. HARP2 then assessed resulting cancer and noncancer risk at the existing receptors from exposure to TAC emissions, in accordance with the OEHHA's *Air Toxics Hot Spots Program Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments 2015* (2015 Risk Assessment Guidelines Manual; OEHHA 2015).

Informational Roadway Health Risk Assessment

The project is located adjacent to the Bayshore Freeway (Highway 101), Bayfront Expressway (Highway 84), Marsh Road, and Chrysler Drive, which all have over 10,000 average daily traffic. As such, for informational purposes, a HRA analysis was prepared to estimate health risk impacts from roadway DPM and total organic gases (TOG) emissions at future residents of the project.

The project's operational year of 2028 was assumed as the starting year for the HRA's 30-year exposure for residents on project site. Assuming an earlier year results in a more conservative analysis as vehicle emission factors and the percent of diesel vehicles on the roadway generally decreases over time due to more stringent vehicle standards, as well as fleet turnover replacing older vehicles in later years.

The HRA includes exposure to TAC emissions from diesel vehicles traveling on Highways 101 and 84, Marsh Road, and Chrysler Drive. For risk assessment purposes, particulate matter with an aerodynamic diameter less than or equal to 2.5 microns (PM_{2.5}) in diesel exhaust originating from diesel vehicles traveling on Highways 101 and 84, Marsh Road, and Chrysler Drive is considered DPM. As explained previously, diesel exhaust, which a complex mixture of gases and fine particles emitted by diesel-fueled combustion engines (CalEPA 1998), is identified by the State of California as a known carcinogen. Under California regulatory guidelines, DPM is used as a surrogate measure of carcinogen exposure for the mixture of chemicals that make up diesel exhaust as a whole. CalEPA is a proponent of using the surrogate approach to quantifying cancer risks associated with diesel exhaust over a component-based approach, which involves estimating risks for each of the individual components of a mixture. CalEPA has concluded that "potential cancer risk from inhalation exposure to whole diesel exhaust will outweigh the multi-pathway cancer risk from the speciated components" (OEHHA 2003).

The project would be required to comply with the Building Code applicable when construction permit applications are submitted (likely the 2022 Building Code, which takes effect on January 1, 2023). In general, later building

codes are more stringent than earlier building codes. The 2019 Building Code requires installation of Minimum Efficiency Reporting Value 13 (MERV 13) air filtration systems on return vents in the proposed residential units. EPA reported that the MERV 13 filters remove 80 percent to 90 percent of particles ranging from 1 to 10 microns (EPA 2020b). Accordingly, this HRA assumes an 80 percent particulate matter reduction from MERV 13 filters. Additionally, to account for exposure of DPM and PM_{2.5} inside and outside the residence, the emissions incorporated an 87 percent time spent inside factor, which accounts for the amount of time that particulate exposure would be reduced by the MERV 13 filters. This HRA incorporates time spent indoors and the time spent away from home as recommended by OEHHA (OEHHA 2015). Accounting for the actual time spent indoors and exposure related to the residents within the project provides a more realistic exposure scenario from particulate emissions from Highways 101 and 84, Marsh Road, and Chrysler Drive. Detailed emissions data are provided in Appendix C2.

Per the BAAQMD *Recommended Methods for Screening and Modeling Local Risks and Hazards* (BAAQMD 2011), the TACs included in this HRA are DPM and total organic gases (TOG, both exhaust and evaporative) from on-road vehicles. DPM and TOG emission factors were calculated using the latest version of CARB's mobile source emission inventory, EMFAC2021. Exhaust particulate matter emissions with a diameter less than or equal to 2.5 microns (PM_{2.5}) from diesel-fueled vehicles were used as a proxy for DPM (BAAQMD 2011). To estimate the emissions from vehicles traveling on Highways 101 and 84, Marsh Road, and Chrysler Drive, EMFAC2021 was run for all vehicle classes in San Mateo County. EMFAC2021 can generate emission factors (also referred to as emission rates) in grams per mile for the fleet in a class of motor vehicles within a region for a particular geographical study year. For this analysis, San Mateo County and calendar year 2028 were selected.

A vehicle miles traveled weighted average emission factor was estimated for trucks (LHDT1, LHDT2, MHDT, and HHDT) and non-trucks (LDA, LDT1, LDT2, MDV, MH, OBUS, SBUS, UBUS, and MCY). The amount of vehicle traffic present on the roadway segments evaluated in this HRA is measured in terms of vehicle miles traveled per segment. This was calculated by taking the average daily traffic and multiplying it by the distance of the roadway segment evaluated. The total emissions of DPM and TOG (in pounds per hour and pounds per year) were then calculated for each roadway segment by multiplying the emission factor and the vehicle miles traveled. Notably, in addition to exhaust PM_{2.5} (which is used as a surrogate for DPM), non-TAC PM_{2.5} emissions associated with tire-wear and brake-wear were included in the emissions inventory to estimate total PM_{2.5} concentrations. The calculated emissions of DPM, TOG, and PM_{2.5} and speciation profiles for TOG, used to determine the emissions of gaseous TACs (BAAQMD 2011), which are included in Appendix C2.

A dispersion modeling analysis was conducted of DPM emitted from diesel vehicles on the project site for the HRA to assess the health risk impacts of the existing vehicles on future onsite sensitive receptors. The dispersion modeling was performed using the AERMOD. AERMOD is a steady-state Gaussian plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of surface and elevated sources, building downwash, and simple and complex terrain. Principal parameters of this modeling are presented below.

- **Dispersion Model:** The air dispersion model used was AERMOD, Version 21112, with the Lakes Environmental Software implementation/user interface, AERMOD View, Version 10.2.1. A unit emission rate (1 gram per second (g/s)) was normalized over the line of adjacent volume sources and area sources for the AERMOD run to obtain the "X/Q" values. X/Q is a dispersion factor that is the average effluent concentration normalized by source strength, and is used as a way to simplify the representation of emissions from many sources. The maximum concentrations were determined for the 1-hour and Period averaging periods.

- **Meteorological Data:** The latest 5-year meteorological data (years 2011-2015) for the San Carlos Airport station (KSQL) were provided by BAAQMD, and then input to AERMOD.
- **Urban and Rural Options:** Typically, urban areas have more surface roughness and structures and low-albedo surfaces that absorb more sunlight, and thus, more heat, relative to rural areas. The urban dispersion option was selected and the San Mateo County population for year 2020 (764,442 persons) input into AERMOD.
- **Terrain Characteristics:** Digital elevation model files were imported into AERMOD so that complex terrain features were evaluated as appropriate. The National Elevation Dataset (NED) dataset with resolution of 1/3 arc-second was used.
- **Sensitive Receptors:** This HRA evaluates the risk to existing residential receptors located in proximity to the project. A uniform fine 1-kilometer by 1-kilometer Cartesian grid with 20-meter spacing was centered over the project site and converted into discrete receptors to capture the maximum risk.
- **Source Release Construction Scenario:** Vehicles traveling on the Bayfront Expressway (Highway 84), Bayshore Freeway (Highway 101), Marsh Road, and Chrysler Drive were modeled as a line of adjacent volume sources for the freeway segment nearby the project site. The length of each line volume source was based on the modeled length in AERMOD. The AERMOD-modeled roadway segments total up to 518 meters. Trucks and non-trucks were modeled as separate line volume sources to account for different plume and release characteristics resulting in a total of eight separate line volume sources. Plume height was assumed to be 6.1 meters for trucks and 0.91 meters for non-trucks (BAAQMD 2011). A release height was estimated for each source assuming 1/2 of the plume height, which equals 3.05 meters for trucks and 0.46 meters for non-trucks (BAAQMD 2011). The plume width was estimated for each segment based on the width of the traveling lanes plus 6 meters (or approximately 3 meters on each side) to account for vehicle wake (EPA 2021c).

Dispersion model plot files from AERMOD were then imported into CARB's HARP2 to determine health risk, which requires peak one-hour emission rates and annual emission rates for all pollutants for each modeling source. OEHHA recommends that an exposure duration (residency time) of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident (MEIR) starting in the third trimester of pregnancy to accommodate the increased susceptibility of exposures in early life (OEHHA 2015).

Project Impacts

Impact 4.2-1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

An area is designated as "in attainment" when it is in compliance with the federal and/or state standards. These standards are set by the EPA or CARB for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or public welfare with a margin of safety. The project site is located within the SFBAAB, which is designated non-attainment for the federal 8-hour O₃ and 24-hour PM_{2.5} standards. The area is in attainment or unclassified for all other federal standards. The area is designated non-attainment for state standards for 1-hour and 8-hour O₃, 24-hour PM₁₀, annual PM₁₀, and annual PM_{2.5}.

On April 19, 2017, the BAAQMD adopted the *Spare the Air: Cool The Climate - Final 2017 Clean Air Plan* (BAAQMD 2017b). The BAAQMD *CEQA Air Quality Guidelines* identify a three-step methodology for determining a project's consistency with the current Clean Air Plan. If the responses to these three questions can be concluded in the

affirmative and those conclusions are supported by substantial evidence, then the BAAQMD considers the project to be consistent with air quality plans prepared for the Bay Area. The three questions are:

1. Does the project support the goals of the Air Quality Plan?
2. Does the project include applicable control measures from the Clean Air Plan?
3. Does the project disrupt or hinder implementation of any control measures from the Clean Air Plan?

The first question to be assessed in this methodology is “does the project support the goals of the Air Quality Plan”? The BAAQMD-recommended measure for determining project support for these goals is consistency with BAAQMD thresholds of significance. If a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation measures, the project would be consistent with the goals of the *2017 Clean Air Plan*. As indicated in the following discussion with regard to Threshold AQ-2 below, the project would result in less than significant construction and operational emissions and would not result in long-term adverse air quality impacts. Therefore, the project would be considered to support the primary goals and be consistent with the BAAQMD current Clean Air Plan.

The second question to be assessed is “does the project include applicable control measures from the Clean Air Plan?” The *2017 Clean Air Plan* contains 85 control measures aimed at reducing air pollution in the Bay Area. Projects that incorporate all feasible and applicable air quality plan control measures are considered consistent with the Clean Air Plan. The control strategies of the *2017 Clean Air Plan* include measures in the categories of stationary sources, the transportation sector, the buildings sector, the energy sector, the agriculture sector, natural and working lands, the waste sector, the water sector, and super-GHG measures. Depending on the control measure, the tools for implementation include leveraging the BAAQMD rules and permitting authority, regional coordination and funding, working with local governments to facilitate best policies in building codes, outreach and education, and advocacy strategies. The project site is designated as Mixed-Use Residential on the ConnectMenlo land use designation map and is within the City’s Residential Mixed-Use Bonus (R-MU-B) zoning district. The project proposes to develop 116 for-sale townhomes and 316 rental apartments, consistent with these designations. As detailed in Chapter 3, Project Description, the project includes multiple improvements and site-related features that would result in a reduction in vehicle trips and associated emissions, including: participation in a local Transportation Management Association (TMA) that provides documented, ongoing support for alternative commute programs; public and/or private bike share program; car share membership for employees and residents; and access to and from the nearby SamTrans transit stations. The project also would also include various sustainability features including: installation of rooftop photovoltaic energy generation panels, EV charging, ultra-low-flow plumbing fixtures, water-efficient landscaping, and pedestrian and bicycle facilities. In addition, the project would construct all-electric residential buildings per the City’s Municipal Code Chapter 12.16. Since the project would comply with all applicable BAAQMD rules and would meet or exceed state and federal standards and/or local building codes, the project would not conflict with any applicable control measures from the *2017 Clean Air Plan*.

The third question to be assessed in this consistency methodology is “does the project disrupt or hinder implementation of any control measures from the Clean Air Plan?” Examples of how a project may cause the disruption or delay of control measures include a project that precludes an extension of a transit line or bike path, or proposes excessive parking beyond parking requirements. The project would not create any barriers or impediments to planned or future improvements to transit or bicycle facilities in the area, nor would it include excessive parking. Therefore, the project would not hinder implementation of *2017 Clean Air Plan* control measures.

In summary, the responses to all three of the questions with regard to Clean Air Plan consistency are affirmative and the project would not conflict with or obstruct implementation of the Clean Air Plan. This is a **less-than-significant** impact.

Mitigation Measures

No mitigation measures are required.

Impact 4.2-2 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?

Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the BAAQMD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are used in the determination of whether a project's individual emissions would have a cumulatively considerable contribution on air quality. Appendix G of the CEQA Guidelines indicates that, where available, the significance criteria established by the applicable air district may be relied upon to determine whether a project would have a significant impact on air quality. The BAAQMD has established Air Quality Significance Thresholds which set forth quantitative emissions significance thresholds below which a project would not have a significant impact on ambient air quality (BAAQMD 2017a). If a project's emissions would exceed the BAAQMD significance thresholds, it would be considered to have a cumulatively considerable contribution to cumulative air quality impacts. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant (BAAQMD 2017a).

A quantitative analysis was conducted to determine whether project would result in a cumulatively considerable net increase in emissions of criteria air pollutants for which the SFBAAB is designated as nonattainment under the NAAQS or CAAQS. As discussed above, the SFBAAB is designated as nonattainment for ozone and particulate matter. The BAAQMD has thresholds for particulate matter but not ozone. Ozone is created primarily through the atmospheric combination of NO_x and ROG. For this reason, the BAAQMD thresholds for NO_x and ROG act as a proxy for measuring a project's impact on ozone.

The quantitative air quality analysis of project-generated emissions associated with construction and operation presented in the following discussion applies the BAAQMD thresholds to determine the potential for the project to result in a cumulatively considerable contribution to significant impacts under CEQA. The BAAQMD significance thresholds for construction are as follows: 54 pounds per day for ROG, 54 pounds per day for NO_x, 82 pounds per day for PM₁₀ exhaust, and 54 pounds per day for PM_{2.5} exhaust. The BAAQMD significance thresholds for operations are as follows: 54 pounds per day for ROG or 10 tons per year, 54 pounds per day for NO_x or 10 tons per year, 82 pounds per day for PM₁₀ or 15 tons per year, and 54 pounds per day for PM_{2.5} or 10 tons per year.

Construction Emissions

Proposed construction activities would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment and soil disturbance) and off-site sources (i.e., on-road delivery trucks, and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity; the specific type of operation; and, for dust, the prevailing weather conditions. Therefore,

such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

Average daily emissions were computed by dividing the total construction emissions by the number of active construction days, which were then compared to the BAAQMD construction thresholds of significance. Table 4.2-6 shows average daily construction emissions of O₃ precursors (ROG and NO_x), PM₁₀ exhaust, and PM_{2.5} exhaust during project construction.⁴ Details of the emission calculations are provided in Appendix C1.

Table 4.2-6. Average Daily Unmitigated Construction Emissions

	ROG	NO _x	PM ₁₀ Exhaust	PM _{2.5} Exhaust
Year	Pounds per day			
2023-2028	9.3	47.4	2.1	2.0
<i>BAAQMD Construction Thresholds</i>	54	54	82	54
Threshold exceeded?	No	No	No	No

Source: Appendix C1.

Notes: ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter. The values shown are average daily emissions based on total overall tons of construction emissions, converted to pounds, and divided by 1,072 active work days.

As shown in Table 4.2-6, construction of the project would not exceed BAAQMD significance thresholds. However, the BAAQMD does not have a quantitative significance threshold for fugitive dust. Instead, the BAAQMD's CEQA Air Quality Guidelines recommend that projects determine the significance for fugitive dust through application of best management practices (BMPs). Pursuant to ConnectMenlo Mitigation Measure AQ-2b1, the City requires all "applicants for future development projects to comply with the current Bay Area Air Quality Management District's basic control measures for reducing construction emissions of PM₁₀ (Table 8-1, Basic Construction Mitigation Measures Recommended for All Proposed Projects, of the BAAQMD CEQA Guidelines)." The project would comply with this City requirement by implementing MM 4.2a, which contains the BAAQMD recommended BMPs. Implementation of the required fugitive dust mitigation would ensure air quality and fugitive dust-related impacts associated with construction would remain **less than cumulatively considerable** and that the projects impact on all criteria air pollutants during construction would be **less than cumulatively considerable**.

Operational Emissions

Operation of the project would generate criteria pollutant (including ROG, NO_x, PM₁₀, and PM_{2.5}) emissions from mobile sources (vehicular traffic), area sources (consumer products, landscaping equipment), and energy sources (electrical consumption). The criteria pollutant emissions associated with the existing land uses within the site were also quantified using CalEEMod. CalEEMod default values were used to estimate emissions from area and energy sources for both the project and the existing land uses where project-specific information was not available.

⁴ Fuel combustion during construction and operation would also result in the generation of sulfur dioxide (SO₂) and CO. These values are included in Appendix C1. However, since the SFBAAB is in attainment of these pollutants, the BAAQMD has not established a quantitative mass-significance threshold for comparison and are not included in the project-generated emissions tables in this document. Notably, the BAAQMD does have screening criteria for operational localized CO.

Table 4.2-7 summarizes the net change in operational emissions from the daily mobile, energy, and area emissions of criteria pollutants that would be generated from the project and the existing land uses which are compared to the BAAQMD operational thresholds. Complete details of the emissions calculations are provided in Appendix C1.

Table 4.2-7. Maximum Daily Unmitigated Operational Emissions

Emission Source	ROG	NO _x	PM ₁₀	PM _{2.5}
	Pounds per day			
Proposed Project				
Area	13.38	0.41	0.20	0.20
Energy	0.00	0.00	0.00	0.00
Mobile	5.16	4.44	12.18	3.28
Emergency Generator	0.76	2.13	0.11	0.11
Total	19.30	6.98	12.49	3.59
Existing Land Uses				
Area	2.52	<0.01	<0.01	<0.01
Energy	0.08	0.75	0.06	0.06
Mobile	2.71	3.27	5.37	1.46
Total	5.31	4.02	5.43	1.52
Net Change in Emissions				
Net Change (Project – Existing Land Uses)	13.99	2.96	7.06	2.07
BAAQMD Operational Thresholds	54	54	82	54
Threshold exceeded?	No	No	No	No

Source: Appendix C1.

Notes: ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; BAAQMD = Bay Area Air Quality Management District; <0.01 = value less than reported 0.01.

The values shown are the maximum summer or winter daily emissions results from CalEEMod.

As indicated in Table 4.2-7, project-related operational emissions of ROG, NO_x, PM₁₀, and PM_{2.5} would not exceed the BAAQMD significance thresholds, and thus, project operations would have a **less than cumulatively considerable** impact on emissions in the air basin.

Regarding localized CO concentrations, according to the BAAQMD thresholds, a project would result in a less than significant impact if the following screening criteria are met:

1. The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans.
2. The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
3. The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

As identified in Section 4.14, Transportation, and the Transportation Impacts Analysis provided in Appendix J, the proposed project would generate a net increase of 870 daily traffic trips. The project would not result in new traffic trips that would exceed the BAAQMD screening criteria (numbers 2 and 3 above) and, as discussed in Section 4.14, Transportation, of this EIR, is consistent with the applicable congestion management program. Accordingly, project-related traffic would not exceed CO standards and therefore, no further analysis was conducted for CO impacts. This CO emissions impact would be considered **less than significant** on a project-level and **less than cumulatively considerable** on a cumulative basis.

Health Effects of Criteria Air Pollutants

Construction and operational emissions of the project would not exceed the BAAQMD emission thresholds for any criteria air pollutants, including ROG, NO_x, PM₁₀, and PM_{2.5}; the BAAQMD thresholds are protective of human health.

Health effects associated with O₃ include respiratory symptoms, worsening of lung disease leading to premature death, and damage to lung tissue (CARB 2019c). ROG and NO_x are precursors to O₃, for which the SFBAAB is designated as nonattainment with respect to the NAAQS and CAAQS. The contribution of ROG and NO_x to regional ambient O₃ concentrations is the result of complex photochemistry. The increases in O₃ concentrations in the SFBAAB due to O₃ precursor emissions tend to be found downwind of the source location because of the time required for the photochemical reactions to occur. Further, the potential for exacerbating excessive O₃ concentrations would also depend on the time of year that the ROG emissions would occur, because exceedances of the O₃ NAAQS and CAAQS tend to occur between April and October when solar radiation is highest. Due to the lack of quantitative methods to assess this complex photochemistry and the difficulty in connecting small amounts of pollution to generalized health outcomes, the holistic effect of a single project's emissions of O₃ precursors on health impacts is hard to predict. That being said, because the project would not exceed the BAAQMD emission thresholds, the project would not make a cumulatively considerable contribution to adverse health effects associated with O₃. Additionally, the project would use architectural coatings that adhere to Regulation 8, Rule 3 – Architectural Coatings, which restricts the content of volatiles in coatings. This would ensure that ROG emissions are minimized.

Health effects associated with NO_x include lung irritation and enhanced allergic responses (CARB 2019c). Because project-related NO_x emissions would not exceed the BAAQMD emission threshold, and because the SFBAAB is a designated attainment area for NO₂ (and NO₂ is a constituent of NO_x) and the existing NO₂ concentrations in the area are well below the NAAQS and CAAQS standards, it is not anticipated that the project would cause an exceedance of the NAAQS and CAAQS for NO₂ or result in potential health effects associated with NO₂ and NO_x.

Health effects associated with CO include chest pain in patients with heart disease, headache, light-headedness, and reduced mental alertness (CARB 2019d). CO tends to be a localized impact associated with congested intersections. As described previously, the project would result in minimal new traffic trips and would not exceed the BAAQMD CO screening criteria resulting in the formation of potential CO hotspots. Thus, the project's CO emissions would not contribute to significant health effects associated with this pollutant.

Health effects associated with PM₁₀ include premature death and hospitalization, primarily for worsening of respiratory disease (CARB 2022). Construction and operation of the project would also not exceed thresholds for PM₁₀ or PM_{2.5} and would not contribute to exceedances of the NAAQS and CAAQS for particulate matter or obstruct the SFBAAB from coming into attainment for these pollutants. Additionally, the project would implement dust control strategies and be required to comply with BAAQMD's Regulation 6, Rule 1 – Particulate Matter to limit the amount of fugitive dust generated during construction. Due to the minimal contribution of PM₁₀ and PM_{2.5} during

construction and operation, it is not anticipated that the project would result in potential health effects related to particulate matter.

In summary, because construction and/or operation of the project would not exceed the BAAQMD significance thresholds for ROG, NO_x, PM₁₀, and PM_{2.5}, and because the BAAQMD thresholds are based on levels that the SFBAAB can accommodate without affecting the attainment date for the AAQS and the AAQS are established to protect public health and welfare, the project would result in **less than significant** health effects associated with criteria air pollutants.

Mitigation Measures

MM 4.2a has been evaluated for feasibility and incorporated to reduce potentially significant impacts related to fugitive dust during construction of the project.

MM 4.2a Fugitive Dust Reductions, the project shall implement the following during construction:

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

Impact 4.2-3 Would the project expose sensitive receptors to substantial pollutant concentrations?

Toxic Air Contaminants

Health Impacts of Construction Toxic Air Contaminants

When evaluating whether a project would expose sensitive receptors to substantial pollutant concentrations, the analysis focuses on whether emissions would be high enough to have substantial health effects on such receptors. The health effects from criteria air pollutants are addressed above. TACs also have health impacts, including increasing the risk of having cancer and other illnesses. "Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-year, 30-year, and 70-year

exposure period would contract cancer based on the use of standard OEHHA risk assessment methodology (OEHHA 2015). In addition, some TACs have non-carcinogenic effects. TACs that would potentially be emitted during construction activities would be DPM emitted from heavy-duty construction equipment and heavy-duty trucks. Heavy-duty construction equipment and diesel trucks are subject to CARB ATCMs to reduce DPM emissions. According to the OEHHA, HRAs should be based on a 30-year exposure duration based on typical residency period; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015). The results of the HRA for project construction is summarized in Table 4.2-8.

Table 4.2-8. Summary of Maximum Cancer and Chronic Health Risks - Unmitigated

Impact Analysis	Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
Maximally Exposed Individual Resident					
Construction HRA	Cancer Risk	Per Million	13.67	10	Potentially Significant
	Chronic Hazard Index	Index Value	0.04	1.0	Less than Significant
	PM _{2.5} Concentration (µg/m ³)	µg/m ³	0.19	0.3	Less than Significant

Source: Appendix C2.

Notes: CEQA = California Environmental Quality Act; HRA = Health Risk Assessment

As shown in Table 4.2-8, the results of the HRA demonstrate that the TAC exposure from construction diesel exhaust emissions would result in an on-site cancer risk above the 10 in 1 million threshold for the project. The Chronic Hazard Index for the project would be less than one and the maximum PM_{2.5} concentration would be 0.19 µg/m³. Therefore, TAC emissions from construction activities associated with the project may expose sensitive receptors to substantial pollutant concentrations of TACs and would result in a potentially significant impact; therefore, implementation of MM 4.2b is required. MM 4.2b, which requires the use of Tier 4 Final engines on construction equipment, shall be implemented to reduce DPM during project construction.

The detailed emissions assumptions and model outputs using CalEEMod are provided in Appendix C2. Table 4.2-9 shows the results of the HRA after implementation of MM 4.2b.

Table 4.2-9. Summary of Maximum Cancer and Chronic Health Risks - Mitigated

Impact Analysis	Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
Maximally Exposed Individual Resident					
Construction HRA	Cancer Risk	Per Million	9.21	10	Less than Significant
	Chronic Hazard Index	Index Value	0.03	1.0	Less than Significant
	PM _{2.5} Concentration (µg/m ³)	µg/m ³	0.13	0.3	Less than Significant

Source: Appendix C2.

Notes: CEQA = California Environmental Quality Act; HRA = Health Risk Assessment

As shown in Table 4.2-9, the HRA results from the mitigated scenario show cancer risks less than the 10 in 1 million threshold, the chronic hazard index less than the 1.0 threshold and the maximum PM_{2.5} concentration would be 0.13 µg/m³. Impacts would be **less than significant** with mitigation incorporated.

Health Impacts of Operational Toxic Air Contaminants

As noted above, CEQA does not require an EIR to analyze the impacts of the environment on the project. Nonetheless, the City has an interest in the safety of its citizens and desires information about the impacts of existing freeways on project residents, which is provided here for informational purposes.

OEHHA recommends that an exposure duration (residency time) of 30 years be used to estimate individual cancer risk for the MEIR starting in the third trimester to accommodate the increased susceptibility of exposures in early life (OEHHA 2015).

Based on the 30-year exposure scenario, the MEIR for cancer risk would be at the western portion of the project site, north of Independence Drive. This same receptor would be exposed to the maximum chronic and acute health impact. Table 4.2-10 summarizes the HRA results based on the HRA methodology described above and contained in Appendix C2.

Table 4.2-10. Summary of Maximum Cancer and Chronic Health Risks - Unmitigated

Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
Maximally Exposed Individual Resident				
Cancer Risk	Per million	8.77	10	Less than significant
Chronic Hazard Index	Index value	0.015	1.0	Less than significant
Acute Hazard Index	Index value	0.0061	1.0	Less than significant
PM _{2.5} Concentration	µg/m ³	0.10	0.3	Less than significant

Source: Appendix C2.

Notes: CEQA = California Environmental Quality Act; HRA = Health Risk Assessment

As shown in Table 4.2-10, the maximum potential cancer risk at the project site from on-road vehicle exhaust along Highways 101 and 84, Marsh Road, and Chrysler Drive would be approximately 8.77 in a million. The maximum chronic hazard and acute hazard indices would be 0.015 and 0.0061, respectively. The maximum PM_{2.5} concentration would be 0.10 µg/m³. As such, the future residents at the project site would be exposed to less than significant cancer, chronic, and acute health impacts, as well as less than significant PM_{2.5} concentrations. Additionally, although traffic volumes are forecast to increase with time due to growth, vehicular emission factors are expected to decrease with time due to California's Statewide regulation to increase fuel efficiency (Assembly Bill 1493, the Pavley I standard) and other State and federal regulations aimed at vehicles emissions reduction, including the requirement to phase out the sale of gas-powered vehicles by 2035.

Regarding long-term operations of the project on existing nearby residents, based on the proposed land uses, the project would not result in any long-term sources of TACs. Further, the project would result in the demolition of five existing office and industrial buildings, which would reduce the generation and exposure of TACs in the vicinity of the project site. Any potential health risk impacts associated with project operations would be **less than significant**.

Local Carbon Monoxide Concentrations

Mobile source impacts occur on two scales of motion. Regionally, project-related travel would add to regional trip generation and increase the vehicle miles traveled within the local airshed and the SFBAAB. Locally, project generated traffic would be added to the City’s roadway system near the project site. If such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles “cold-started” and operating at pollution-inefficient speeds, and is operating on roadways already crowded with non-project traffic, there is a potential for the formation of microscale CO hotspots in the area immediately around points of congested traffic. Because of continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SFBAAB is steadily decreasing.

The BAAQMD thresholds of significance for local CO emissions is the 1-hour and 8-hour CAAQS of 20 ppm and 9 ppm, respectively. By definition, these represent levels that are protective of public health. According to the BAAQMD, a project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria are met (BAAQMD 2017a):

1. Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans.
2. The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
3. The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

As noted previously, the project would generate a net increase of 870 daily traffic trips and would be consistent with the applicable congestion management program. This minimal amount of new traffic trips would comply with the BAAQMD screening criteria. Accordingly, project-related traffic would not exceed CO standards and therefore, no further analysis was conducted for CO impacts. Thus, the CO emissions impact would be considered less-than-significant on a project-level and cumulative basis.

Mitigation Measures

MM-4.2b **Construction Equipment Emissions Reductions**, to reduce the potential for TAC emissions, specifically diesel particulate matter (DPM) as a result of construction of the project, the applicant shall:

- a. Prior to the start of construction activities, the project applicant, or its designee, shall ensure that all 50-horsepower or greater diesel-powered equipment is powered with California Air Resources Board (CARB)-certified Tier 4 Final engines or better. The project applicant shall include this requirement in applicable bid documents and require compliance as a condition of contract. A copy of each equipment unit’s certified tier specification and CARB or Bay Area Air Quality Management District (BAAQMD) operating permit (if applicable) should be available upon request at the time of mobilization of each applicable unit of equipment. The City shall require periodic reporting and provision of written documentation by contractors to ensure compliance and shall conduct regular inspections to the maximum extent feasible to ensure compliance.

If the applicant is unable to obtain a necessary piece of equipment with a Tier 4 Final engine, the project representatives or contractors must provide written documentation supported by substantial evidence that is reviewed and approved by the City before using other technologies/strategies. Before an exemption may be considered by the City, the applicant shall: (1) be required to demonstrate that two construction fleet owners/operators in the Bay Area region were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within the Bay Area region; and (2) the proposed replacement equipment has been evaluated using the California Emissions Estimator Model or other industry standard emission estimation method and documentation provided to the City to confirm the project-generated emissions would remain below the applicable BAAQMD mass daily thresholds of significance.

The construction contractor(s) shall maintain equipment maintenance records for the construction portion of the project. All construction equipment must be tuned and maintained in compliance with the manufacturer's recommended maintenance schedule and specifications. Upon request for inspection, construction contractor(s) shall make available all maintenance records for equipment used on site within one business day (either hardcopy or electronic versions).

Impact 4.2-4 Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

Odors would be potentially generated from vehicles and equipment exhaust emissions during construction of the project. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, architectural coatings, and asphalt pavement application. Such odors would disperse rapidly from the project site and generally occur at magnitudes and durations that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction would be less than significant.

Common sources of odors include manufacturing plants, rendering plants, coffee roasters, wastewater treatment plants, sanitary landfills, and solid waste transfer stations (BAAQMD 2017a). The project would not result in the creation of a land use that is commonly associated with odors. Therefore, project operations would result in an odor impact that is **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

The cumulative context of an air pollutant is dependent on the specific pollutant being considered. O₃ precursors (NO_x and ROG) are a regional pollutant; therefore, the cumulative context would be existing and future development within the entire SFBAAB. This means that O₃ precursors generated in one location do not necessarily have O₃ impacts in that area. Instead, precursors from across the region can combine in the upper atmosphere and be

transported by winds to various portions of the SFBAAB. Consequently, all O₃ precursors generated throughout the SFBAAB are part of the cumulative context. Particulate matter directly emitted from a project is also generally regarded as having both regional and localized impacts; however, PM₁₀ and PM_{2.5} are the largest concern during construction of a proposed project. Furthermore, CO concentrations are influenced by local meteorological conditions, primarily wind speed, topography and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas.

The geographic scope for the project's cumulative analysis includes the City of Menlo Park and surrounding areas within the SFBAAB. The SFBAAB includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara Counties; the western portion of Solano County and the southern portion of Sonoma County.

Cumulative localized impacts could potentially occur if a construction project were to occur concurrently with another off-site project. Construction of other projects in the vicinity, including the Willow Village Master Plan Project, Commonwealth Building 3 Project, the Hotel Moxy Project, and the 3705 Haven Avenue Project could occur concurrently with the proposed project. For example, the Willow Village Master Plan Project EIR assumed construction beginning in 2023 with buildout in 2026, and the Commonwealth Building 3 Project is expected to be constructed between 2023 and 2025. However, all of these projects are consistent with the City's Land Use and Transportation Element ("ConnectMenlo") and must comply with ConnectMenlo EIR air quality mitigation measures, consisting of the following:

Mitigation Measure AQ-2b1: As part of the City's development approval process, the City shall require applicants for future development projects to comply with the current Bay Area Air Quality Management District's basic control measures for reducing construction emissions of PM₁₀ (Table 8-1, Basic Construction Mitigation Measures Recommended for All Proposed Projects, of the BAAQMD CEQA Guidelines).

Mitigation Measure AQ-2b2: Prior to issuance of building permits, development project applicants that are subject to CEQA and exceed the screening sizes in the BAAQMD's CEQA Guidelines shall prepare and submit to the City of Menlo Park a technical assessment evaluating potential project construction-related air quality impacts. The evaluation shall be prepared in conformance with the BAAQMD methodology in assessing air quality impacts. If construction-related criteria air pollutants are determined to have the potential to exceed the BAAQMD thresholds of significance, as identified in the BAAQMD CEQA Guidelines, the City of Menlo Park shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during construction activities to below these thresholds (e.g., Table 8-2, Additional Construction Mitigation Measures Recommended for Projects with Construction Emissions Above the Threshold of the BAAQMD CEQA Guidelines, or applicable construction mitigation measures subsequently approved by BAAQMD). These identified measures shall be incorporated into all appropriate construction documents (e.g., construction management plans) submitted to the City and shall be verified by the City's Building Division and/or Planning Division.

Mitigation Measure AQ-3a: Applicants for future non-residential land uses within the city that: 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered TRUs, and 2) are within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, nursing homes), as measured from the property line of a proposed project to the property line of the nearest sensitive use, shall submit a health risk assessment (HRA) to the City of Menlo Park prior to future discretionary project approval. The HRA shall be

prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment and the Bay Area Air Quality Management District. If the HRA shows that the incremental cancer risk exceeds 10 in one million (10E-06), PM_{2.5} concentrations exceed 0.3 µg/m³, or the appropriate noncancer hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and noncancer risks to an acceptable level, including appropriate enforcement mechanisms. Mitigation measures may include but are not limited to:

- Restricting idling on-site beyond Air Toxic Control Measures idling restrictions, as feasible.
- Electrifying warehousing docks.
- Requiring use of newer equipment and/or vehicles.
- Restricting off-site truck travel through the creation of truck routes.

Mitigation measures identified in the project-specific HRA shall be identified as mitigation measures in the environmental document and/or incorporated into the site development plan as a component of a proposed project.

Mitigation Measure AQ-3b: Applicants for residential and other sensitive land use projects (e.g., hospitals, nursing homes, day care centers) in Menlo Park within 1,000 feet of a major sources of toxic air contaminants (TACs) (e.g., warehouses, industrial areas, freeways, and roadways with traffic volumes over 10,000 vehicle per day), as measured from the property line of the project to the property line of the source/edge of the nearest travel lane, shall submit a health risk assessment (HRA) to the City of Menlo Park prior to future discretionary Project approval. The HRA shall be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment (OEHHA) and the Bay Area Air Quality Management District. The latest OEHHA guidelines shall be used for the analysis, including age sensitivity factors, breathing rates, and body weights appropriate for children ages 0 to 16 years. If the HRA shows that the incremental cancer risk exceeds ten in one million (10E-06), PM_{2.5} concentrations exceed 0.3 µg/m³, or the appropriate noncancer hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and non-cancer risks to an acceptable level (i.e., below ten in one million or a hazard index of 1.0), including appropriate enforcement mechanisms. Measures to reduce risk may include but are not limited to:

- Air intakes located away from high volume roadways and/or truck loading zones.
- Heating, ventilation, and air conditioning systems of the buildings provided with appropriately sized maximum efficiency rating value (MERV) filters.

Measures identified in the HRA shall be included in the environmental document and/or incorporated into the site development plan as a component of the proposed project. The air intake design and MERV filter requirements shall be noted and/or reflected on all building plans submitted to the City and shall be verified by the City's Building Division and/or Planning Division.

As the ConnectMenlo EIR stated, “[s]imilar to GHG emissions impacts, air quality impacts are regional in nature as no single project generates enough emissions that would cause an air basin to be designated as nonattainment area.” Nevertheless, the ConnectMenlo EIR concluded that criteria air pollutant emissions generated by cumulative development associated with buildout of the General Plan would exceed BAAQMD’s project-level significance

thresholds and would contribute to the nonattainment designations of the Air Basin. Thus, the ConnectMenlo EIR identified a significant cumulative air quality impact associated with construction activities.

Impact 4.2-5 Would the project result in cumulatively considerable air quality impacts?

Construction-Related Cumulative Impacts

The potential for the project to result in a cumulatively considerable air quality impact is evaluated in Impact 4.2-2. The BAAQMD maintains that the significance thresholds are intended to maintain ambient air quality concentrations of the criteria air pollutants state and federal standards and to prevent a cumulatively considerable contribution to regional nonattainment with ambient air quality standards. As discussed, construction of the project is not expected to exceed the BAAQMD average daily significance thresholds. In addition, MM 4.2a would ensure that the project implements the BAAQMD recommended BMPs to reduce fugitive dust impacts from construction activities. Further, as discussed under Impact 4.2-3, the project's short-term construction-related TAC emissions could result in a significant health risk but this risk would be reduced to a less-than-significant level with implementation of MM 4.2b. Thus, the project would not substantially contribute to health risks from air pollutants in the area. In addition, as discussed above, it is reasonable to assume that construction emissions of the other construction projects in the region would be limited by applicable BAAQMD regulations and rules. Therefore, with implementation of MM 4.2a and MM 4.2b to minimize project-related construction emissions, and because project construction activities throughout the region would comply with BAAQMD rules, project-generated construction emissions would not be cumulatively considerable and the proposed project would make a less than cumulatively considerable contribution to the significant cumulative impact.

Operation-Related Cumulative Impacts

As discussed under Impact 4.2-2 above, the project would make a less than cumulatively considerable contribution to long-term operational air quality impacts for all criteria pollutants, and the project would not conflict with the BAAQMD 2017 Clean Air Plan, which addresses the cumulative emissions in the SFBAAB. Because the BAAQMD air quality plans are regularly updated and consider the cumulative emissions of existing and projected development, it may be concluded that a project that conforms to the applicable air quality plans and does not have a direct air quality impact would not have or contribute to a significant cumulative regional air quality impact. Therefore, the project would make a less than cumulatively considerable contribution to air quality impacts related to long-term regional emissions of all criteria pollutants. As such, the project potential to result in a cumulatively considerable increase of any criteria pollutant for which the SFBAAB is in nonattainment under an applicable NAAQS or CAAQS O₃, PM₁₀, and PM_{2.5} would be less than significant.

The analysis for local CO hotspot impacts under Impact 4.2-2 is based on the BAAQMD CEQA Guidelines. The qualitative assessment that demonstrated a less than significant impact is inherently a cumulative analysis, and the cumulative impact would be less than significant. Because the project would not include non-permitted stationary sources of TACs onsite and permitted emergency generators would only be used for maintenance and testing, it would not contribute to long-term health risk impacts in the project area.

The project is not anticipated to generate nuisance operational odors and there is no existing significant cumulative odor impact in the area; therefore, the project would not combine with other uses to create a significant cumulative odor impact and would have a less than cumulatively considerable operational odor impact.

Mitigation Measures

MM 4.2a is required as discussed under Impact 4.2-3 and MM 4.2b is required as discussed under Impact 4.2-4. No additional mitigation measures are required.

4.2.5 References

13 CCR 2025. Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles.

13 CCR 2449–2449.3 and Appendix A. General Requirements for In-Use Off-Road Diesel-Fueled Fleets. 14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

17 CCR 93000. Substances Identified as Toxic Air Contaminants. In Subchapter 7, Toxic Air Contaminants.

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4.3 Biological Resources

The following analysis describes the existing biological resources associated with the proposed 123 Independence Drive Residential Project (project; proposed project); identifies the applicable regulatory framework; evaluates potential impacts of the project on biological resources; describes measures to avoid, minimize, and/or mitigate these impacts; and identifies the level of significance after mitigation.

As discussed in Chapter 2, Introduction, and Section 4, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this environmental impact report (EIR), one in January and February 2021 and one in September and October 2021. Public comments received in response to the NOPs include a letter from the California Department of Fish and Wildlife (CDFW) offering comments and recommendations to assist the City in adequately identifying and/or mitigating the project's significant or potentially significant impacts on biological resources. The letter identified bats and nesting birds as the primary biological resources with potential to occur in or near the project site and recommended mitigation measures to address potential impacts. These recommendations have been fully considered and incorporated into the below mitigation measures, as appropriate. Both NOPs and the comments received in response to them are provided in Appendix A.

4.3.1 Environmental Setting

Methodology

Preliminary Site Evaluation

Special-status plant and wildlife species present or potentially present on the project site were identified through a literature search, conducted in January 2021, using the following sources: the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) (USFWS 2021a), CDFW's California Natural Diversity Database (CNDDDB) (CDFW 2021), and the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (CNPS 2021). Searches of the above-referenced databases were completed for the Palo Alto and eight surrounding U.S. Geological Survey 7.5-minute quadrangles: San Mateo, Redwood Point, Newark, Woodside, Mountain View, La Honda, Mindego Hill, and Cupertino. Following a review of these resources, Dudek determined the potential for each species to occur within the site based on a review of vegetation communities and available land cover types, habitat types, soils, and elevation preferences, as well as the known geographic range of each species. Dudek also reviewed current and historical aerial photography to identify any potentially jurisdictional aquatic resources based on aerial and topographic signatures.

For the purposes of this analysis, special-status plant species are those plants listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS under the Endangered Species Act (ESA) (16 USC 1531 et seq.), those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA) (California Fish and Game Code, Section 2050 et seq.), and plants that have a California Rare Plant Rank (CRPR) of 1 or 2 in the California Native Plant Society's online Inventory of Rare and Endangered Plants (CNPS 2021). Special-status wildlife species are those that are designated as either rare, threatened, or endangered (or candidates for designation) by CDFW or the USFWS, are protected under either the CESA or the ESA; meet the California Environmental Quality Act (CEQA) definition for endangered, rare, or threatened (14 CCR 15380[b],[d]), are considered fully protected under the California Fish and Game Code, Sections 3511, 4700, 5050, and 5515, or that are on the CDFW Special Animals List (CDFW 2020) and determined by CDFW to be a Species of Special Concern.

Field Reconnaissance

Dudek biologist Emily Scricca performed a reconnaissance-level field survey of the project site on January 11, 2021, from 8:30 a.m. to 10:00 p.m. Weather during the field survey was partly sunny, with an ambient temperature of approximately 45°F–48°F. The field survey included mapping and documenting vegetation communities and land cover types present on the project site, a preliminary evaluation of potentially jurisdictional aquatic resources, and assessing the potential for special-status plant and wildlife species to occur within the project site and adjacent areas.

The survey was conducted on foot to visually cover the entire project site, including a 500-foot buffer of areas adjacent to the site where access allowed. Field notes and an aerial photograph (Google Earth Pro 2021) with an overlay of the project boundary were used to map vegetation communities, potential aquatic resources, and record any special-status species or sensitive biological resources while in the field. Representative project site photographs are provided in Figures 4.1-1a and 4.1-1b.

All plant species encountered during the field survey were identified to the lowest taxonomic group possible to determine rarity, and any wildlife species detected during the field survey by sight, calls, tracks, scat, or other signs were recorded directly into a field notebook. Burrows identified within the project site were investigated for sign of special-status wildlife species use or occupation. Nomenclature for all plant species observed on the project site follow the Jepson Manual, Vascular Plants of California, Second Edition (Jepson Flora Project 2020).

Dudek's field survey did not include a formal wetland delineation or focused surveys for special-status plant or animal species. The field survey was sufficient to generally identify any features of the project site that could be subject to the jurisdiction of CDFW, the U.S. Army Corps of Engineers (USACE), and/or the Regional Water Quality Control Board (RWQCB). However, the site was found not to support any aquatic resources.

Site Description

The project site is located within the Bayfront Area of Menlo Park. As described in the ConnectMenlo General Plan Update (City of Menlo Park 2016a) and the ConnectMenlo General Plan Update EIR (City of Menlo Park 2016b), the Bayfront Area is heavily urbanized with commercial, industrial, and residential development. At the time of the site visit, the project site was entirely developed with five commercial buildings, paved parking lots, driveways, and associated sidewalks. Small slivers of ornamental landscaping bound the northern, eastern, and southern edges of the project site. A review of historical Google Earth imagery shows that the site and immediate surroundings has been developed for at least the past 20 years. The site is immediately surrounded by offices, commercial business parks, hospitality uses, public facilities, and busy roadways.

Topography and Soils

Topography of the project site is relatively flat, with little to no topographic variation. Elevations on the project site range from roughly 0 to 15 feet above mean sea level. San Mateo County experiences a Mediterranean climate with warm, dry summers and cool, wet, winters. The average annual daytime temperature in the general vicinity of the site is 68.7°F, and the average minimum temperature is approximately 48.5°F. Average annual precipitation in the general vicinity of the site is 19 inches, nearly all of which falls from November to April (WRCC 2021).

According to the U.S. Department of Agriculture Natural Resources Conservation Service (USDA 2021), one soil type occurs within the project site: Urban-land-Orthents, reclaimed complex, 0 to 2 percent slopes. The U.S. Department of Agriculture Natural Resources Conservation Service does not consider Urban-land-Orthents, reclaimed complex,

0 to 2 percent slopes to be hydric (USDA 2021), defined as saturated, flooded, or ponded for long enough periods during the growing season to develop anaerobic conditions such that under sufficiently wet conditions they support hydrophytic (water-long) vegetation. Because the soil type on the project site is a disturbed soil and has been substantially altered through development of the property, the soil does not maintain its native soil characteristics, and would therefore have no particular significance to biological resources of the site. Additionally, Urban-land-Orthents, reclaimed complex, 0 to 2 percent slopes is not known to support edaphic special-status plant species (i.e., the soils of the site are neither serpentine nor alkaline).

Hydrology

The project site is located in the Cordilleras Creek-Frontal San Francisco Bay Estuaries Hydrologic Unit (HUC 180500040902) (USGS 2021). According to the U.S. Geological Survey National Hydrography Dataset (USGS 2021), predefined waters of the United States or state are absent from the project site; however, the project site is located less than 0.25 miles south of the San Francisco Bay, a traditional navigable water of the United States, and existing storm drain systems within and surrounding the project site drain into the San Francisco Bay. The National Wetlands Inventory does not identify any previously mapped wetlands or other waters within the project site (USFWS 2021b), and no features were discovered during the January 2021 site visit.

Vegetation Communities and Land Covers

The entire 8.15-acre site is composed of urban/developed land cover. Urban/developed land cover refers to areas that support residential, commercial, and/or industrial development and that have been physically altered to the point where native vegetation is no longer present. Most of these areas are paved with impermeable surfaces that cannot support vegetation and have limited habitat value for wildlife, although non-native ornamental landscaping that provides habitat for urban-adapted wildlife is often present. The urban/developed land cover type also includes areas that lack vegetation such as paved roads or unimproved areas that still retain a pervious surface.

In its existing condition, the project site consists of five commercial buildings with paved parking lots, driveways, driveways, fencing structures and gates, and associated sidewalks. A small patch of landscaped, planted ornamental vegetation lines the northern, southern, and eastern boundaries of the project site. Plant species observed within these areas include bottlebrush (*Callistemon* spp.), English ivy (*Hedera helix*), Japanese cheesewood (*Pittosporum tobira*), magnolia (*Magnolia* spp.), olive (*Olea europaea*), star jasmine (*Trachelospermum jasminoides*), Indian hawthorn (*Raphiolepis indica*), oleander (*Nerium oleander*), Mexican fan palm (*Washingtonia robusta*), and weeping baeckea (*Baeckea linifolia*).

Jurisdictional Aquatic Resources

No wetlands or waters supporting jurisdictional aquatic resources were observed on the project site during the January 2021 field survey. Aerial imagery further indicates that no aquatic features are present or historically have been present within the project site.

Wildlife Resources

Dudek directly observed 12 bird species on the project site during the January 2021 field survey: rock pigeon (*Columba livia*), Anna's hummingbird (*Calypte anna*), California gull (*Larus californicus*), California scrub-jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), chestnut-backed chickadee (*Poecile rufescens*), European

starling (*Sturnus vulgaris*), house finch (*Haemorhous mexicanus*), lesser goldfinch (*Spinus psaltria*), dark-eyed junco (*Junco hyemalis*), golden-crowned sparrow (*Zonotrichia atricapilla*), and house sparrow (*Passer domesticus*).

No mammals, amphibians, or reptiles, or signs of their presence, were observed during the survey. No additional wildlife was observed during the survey.

Sensitive Biological Resources

Special-Status Plants

Results of the CNDDDB and California Native Plant Society searches revealed 53 special-status plant species as present or potentially present on the project site or in the vicinity. Of these special-status plants, all 53 species were removed from consideration and are not expected to occur on the site due to the lack of suitable habitat within or immediately adjacent to the project site, the extensively disturbed and developed condition of the site and lack of natural vegetation communities, or due to the site being outside of the species' known elevation range (Appendix D1). No special-status plants were identified during the January 2021 field survey.

Special-Status Wildlife

Results of the CNDDDB and U.S. Fish and Wildlife Service IPaC database queries revealed 42 special-status wildlife species as present or potentially present on the project site or in the vicinity. Of these, 40 species were removed from consideration due to the lack of suitable habitat within or adjacent to the project area, the level of disturbance from frequent human activity within and surrounding the project site, the extensively disturbed and developed condition of the site and lack of natural vegetation communities, or due to the project site being outside of the species' known range (Appendix D2). The remaining two special-status wildlife species, pallid bat (*Antrozous pallidus*) and Townsend's big-eared bat (*Corynorhinus townsendii*), have a low potential to occur on the project site and are discussed in the following subsection. Appendix D2 summarizes the special-status wildlife determined to be unlikely to occur on the project site. No special-status wildlife species, apart from native and migratory birds, were detected during the January 2021 field survey.

Special-Status Bats

Pallid bat is a California Species of Special Concern that inhabits grasslands, shrublands, woodlands, and forests in low elevations in California (Zeiner et al. 1990). This species occurs throughout California in open, dry habitats with rocky areas for roosting. Pallid bat requires protected areas for day roosting, including caves, crevices, and hollow trees, and may roost at night in more open sites, including buildings.

Townsend's big-eared bat is a California Species of Special Concern that typically inhabits riparian and mesic habitats that contain coniferous and deciduous forests with caves for roosting in California (Zeiner et al. 1990). This species occurs throughout California and typically prefers caves or lava tubes for roosting; however, Townsend's big-eared bat will roost in human-made structures and tunnels.

Both pallid bat and Townsend's big-eared bat are known to roost in crevices of human-made structures, but are highly sensitive to disturbance. The project site supports marginal roosting habitat for these species, as well as other common bat species, within the existing structures and buildings within the project site. Because the project site is immediately surrounded by urban development and subject to frequent human disturbance, there is a low likelihood that, if either of these species are present, that they would occur in large numbers. Signs of

roosting bat occupancy (i.e., guano or staining) were not observed within the project site during Dudek's January 2021 field survey.

The nearest documented CNDDDB occurrence of pallid bat is from 1951 in which roosting colonies were discovered at Stanford University (Occ. No. 249), approximately 3.7 miles southeast of the project site (CDFW 2021). Townsend's big-eared bat has not been documented within 5 miles of the project site (CDFW 2021).

Nesting and Migratory Birds

In California, all native active bird nests (with eggs or young) are protected by provisions in the federal Migratory Bird Treaty Act of 1918 and Sections 3503 and 3503.5 of the California Fish and Game Code. The existing buildings and structures on site, and ornamental trees and shrubs within and adjacent to the project site, provide suitable nesting habitat for several native local and migratory bird species.

4.3.2 Regulatory Framework

Federal Regulations

Federal Endangered Species Act

The ESA of 1973 (16 USC 1531 et seq.), as amended, is administered by USFWS, National Oceanic and Atmospheric Administration, and National Marine Fisheries Service. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend, and provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. Under provisions of Section 9(a)(1)(B) of the ESA, it is unlawful to "take" any listed species. "Take" is defined in Section 3(19) of the ESA as, harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage in any such conduct.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act prohibits the intentional take of any migratory bird or any part, nest, or eggs of any such bird. Under the Migratory Bird Treaty Act, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). The Migratory Bird Treaty Act prohibits both intentional and unintentional take. Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853-3856). Executive Order 13186 requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect migratory bird species.

State Regulations

California Endangered Species Act

CDFW administers CESA (California Fish and Game Code, Section 2050 et seq.), which prohibits the take of plant and animal species designated by the Fish and Game Commission as endangered, candidate, or threatened in the State of California. Under CESA Section 86, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to

hunt, pursue, catch, capture, or kill.” CESA addresses the take of threatened, endangered, or candidate species by stating the following (California Fish and Game Code, Sections 2080–2085):

No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act (California Fish and Game Code, Sections 1900–1913), or the California Desert Native Plants Act (Food and Agricultural Code, Section 80001).

Sections 2081(b) and (c) of the California Fish and Game Code authorize take of endangered, threatened, or candidate species if take is incidental to otherwise lawful activity and if specific criteria are met. In certain circumstances, Section 2080.1 of CESA allows CDFW to adopt a federal incidental take statement or a 10(a) permit as its own, based on its findings that the federal permit adequately protects the species and is consistent with state law. A Section 2081(b) permit may not authorize the take of “Fully Protected” species, “specially protected mammal” species, and “specified birds” (California Fish and Game Code, Sections 3505, 3511, 4700, 4800, 5050, 5515, and 5517). If a project is planned in an area where a Fully Protected species, specially protected mammal, or a specified bird occurs, an applicant must design the project to avoid take.

California Fish and Game Code

Fully Protected Species and Resident and Migratory Birds

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code designate certain birds, mammals, reptiles and amphibians, and fish as Fully Protected species. Fully Protected species may not be taken or possessed without a permit from the Fish and Game Commission. CDFW may not authorize the take of such species except for the following:

- Necessary scientific research
- Protection of livestock
- When the species is a covered species under an approved natural community conservation plan
- When legislatively authorized by the passing of a State Assembly Bill

In addition, the California Fish and Game Code prohibits the needless destruction of nests or eggs of native bird species (California Fish and Game Code, Section 3503), and it states that no birds in the orders of Falconiformes or Strigiformes (birds of prey) can be taken, possessed, or destroyed (California Fish and Game Code, Section 3503.5).

For the purposes of these state regulations, CDFW currently considers an active nest as one that is under construction or in use and includes existing nests that are being modified. For example, if a hawk is adding to or maintaining an existing stick nest in a transmission tower, then it would be considered to be active and covered under these California Fish and Game Code Sections.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) (California Fish and Game Code Section 1900 et seq.) allows the California Fish and Game Commission to designate plants as rare or endangered. Sixty-four species, subspecies, and varieties

of plants are protected as rare under the NPPA. The act prohibits take of endangered or rare native plants but includes exceptions for agricultural and nursery operations; for emergencies; and, after proper notification of CDFW, for vegetation removal from canals, roads, and other building sites, changes in land use, and other situations.

Porter-Cologne Water Quality Control Act

The intent of the Porter-Cologne Water Quality Control Act is to protect water quality and the beneficial uses of water, and it applies to both surface water and groundwater. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the RWQCBs develop basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. All waters of the state are regulated under the Porter-Cologne Water Quality Control Act, including isolated waters that are no longer regulated by USACE. Recent changes in state procedures require increased analysis and mitigation. Developments with impact to jurisdictional waters of the state must demonstrate compliance with the goals of the act by developing stormwater pollution prevention plans, standard urban stormwater mitigation plans, and other measures to obtain a Clean Water Act, Section 401 certification and/or Waste Discharge Requirement.

California Environmental Quality Act

CEQA requires identification of a project's potentially significant impacts on biological resources and feasible mitigation measures and alternatives that could avoid or reduce significant impacts. The CEQA Guidelines Section 15380(b)(1) defines endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" (14 CCR 15000 et seq.). A rare animal or plant is defined in Section 15380(b)(2) as a species that, although not presently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or ... [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in the CEQA Guidelines Section 15380(c). CEQA also requires identification of a project's potentially significant impacts on riparian habitats (e.g., wetlands, bays, estuaries, and marshes) and other sensitive natural communities, including habitats occupied by endangered, rare, and threatened species.

Regional and Local Regulations

City of Menlo Park General Plan

The City's General Plan (specifically the Land Use Element, Open Space/Conservation Element, Noise Element, and Safety Element) contains general goals, policies, and programs that would require local planning and development decisions to consider impacts on biological resources. The following General Plan goals, policies, and programs would serve to minimize potential adverse impacts on biological resources:

Goal LU-6: Preserve open-space lands for recreation; protect natural resources and air and water quality; and protect and enhance scenic qualities.

Policy LU-6.2: Open Space in New Development. Require new nonresidential, mixed use, and multiple dwelling development of a certain minimum scale to provide ample open space in the form of plazas, greens, community gardens, and parks whose frequent use is encouraged through thoughtful placement and design.

Policy LU-6.8: Landscaping in Development. Encourage extensive and appropriate landscaping in public and private development to maintain the City's tree canopy and to promote sustainability and healthy living, particularly through increased trees and water-efficient landscaping in large parking areas and in the public right-of-way.

Policy LU-6.11: Baylands Preservation. Allow development near the Bay only in already developed areas.

Program LU-6.D: Design for Birds. Require new buildings to employ façade, window, and lighting design features that make them visible to birds as physical barriers and eliminate conditions that create confusing reflections to birds.

Goal OSC-1: Maintain, Protect and Enhance Open Space and Natural Resources. Protect, conserve and enhance valuable natural resources, open areas and designated open space lands rich in scenic value, wildlife or of a fragile ecological nature through conservation and restoration efforts.

Policy OSC-1.1: Natural Resources Integration with Other Uses. Protect Menlo Park's natural environment and integrate creeks, utility corridors, and other significant natural and scenic features into development plans.

Policy OSC-1.3: Sensitive Habitats. Require new development on or near sensitive habitats to provide baseline assessments prepared by qualified biologists, and specify requirements relative to the baseline assessments.

Policy OSC-1.4: Habitat Enhancement. Require new development to minimize the disturbance of natural habitats and vegetation, and requires revegetation of disturbed natural habitat areas with native or non-invasive naturalized species.

Policy OSC-1.5: Invasive, Non-Native Plant Species. Avoid the use of invasive, non-native species, as identified on the lists of invasive plants maintained at the California Invasive Plant Inventory and United States Department of Agriculture invasive and noxious weeds database, or other authoritative sources, in landscaping on public property.

Policy OSC-1.11: Sustainable Landscape Practices. Encourage the enhancement of boulevards, plazas and other urban open spaces in high-density and mixed-use residential developments, commercial and industrial areas with landscaping practices that minimize water usage.

Policy OSC-1.12: Landscaping and Plazas. Include landscaping and plazas on public and private lands, and well-designed pedestrian and bicycle facilities in areas of intensive non-vehicular activity. Require landscaping for shade, surface runoff, or to obscure parked cars in extensive parking areas.

Policy OSC-1.13: Yard and Open Space Requirements in New Development. Ensure that required yard and open spaces are provided for as part of new multi-family residential, mixed-use, commercial and industrial development.

Policy OSC-1.15: Heritage Trees. Protect Heritage Trees, including during construction activities through enforcement of the Heritage Tree Ordinance (Chapter 13.24 of the Municipal Code).

City of Menlo Park Municipal Code

The project is subject to the City's Heritage Tree Ordinance, codified in Chapter 13.24 of the Municipal Code. The project is proposed under Senate Bill (SB) 330, the Housing Crisis Act of 2019. The Preliminary Application, as defined in the Housing Crisis Act of 2019, was submitted on February 26, 2020. Thus, under the provisions of the Housing Crisis Act of 2019, the project is subject to the Heritage Tree Ordinance as it existed on February 26, 2020. The text of the Heritage Tree Ordinance as of February 26, 2020 is provided in Appendix D3. The ordinance requires that tree surveys be conducted by an International Society of Arboriculture-certified arborist, and a tree report and map be prepared to show the locations of all pertinent trees prior to initiation of construction activities. Any work performed within an area 10 times the diameter of the tree (i.e., the tree protection zone) requires submittal of a tree protection plan prepared by a certified arborist for review and approval by the Community Development Director or his/her designee prior to issuance of any permit for grading or construction. Removal of heritage trees requires an appropriate permit from the Director of Public Works or his/her designee and replacement of each Heritage Tree at a 1:1 ratio. A tree report for the project site was prepared by FMA Landscape Services, Inc. in June 2020 and updated in January 2022. The Arborist Report is provided in Appendix D4.

The project is also subject to Chapter 16.44.130(6) of the Municipal Code concerning bird-friendly designs for buildings. No revisions to Chapter 16.44.130(6) of the Municipal Code have been made since February 26, 2020. As required by the ordinance, all new construction, regardless of size, must implement the following bird-friendly design features:

- A. No more than ten percent (10%) of facade surface area shall have non-bird-friendly glazing.
- B. Bird-friendly glazing includes, but is not limited to, opaque glass, covering the outside surface of clear glass with patterns, paned glass with fenestration, frit or etching patterns, and external screens over nonreflective glass. Highly reflective glass is not permitted.
- C. Occupancy sensors or other switch control devices shall be installed on nonemergency lights and shall be programmed to shut off during nonwork hours and between ten (10) p.m. and sunrise.
- D. Placement of buildings shall avoid the potential funneling of flight paths towards a building facade.
- E. Glass skyways or walkways, freestanding (see-through) glass walls and handrails, and transparent building corners shall not be allowed.
- F. Transparent glass shall not be allowed at the rooflines of buildings, including in conjunction with green roofs.
- G. Use of rodenticides shall not be allowed.
- H. A project may receive a waiver from one (1) or more of the items listed in subsections (6)(A) to (F) of [the ordinance], subject to the submittal of a site-specific evaluation from a qualified biologist and review and approval by the planning commission. (Ord. 1025 Section 3 (part), 2016)

4.3.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to biological resources are based on Appendix G of the CEQA Guidelines. Potential project-related impacts analyzed in this section account for biological resources that

occur or have the potential to occur on the project site. According to Appendix G of the CEQA Guidelines, a significant impact related to biological resources would occur if the project would:

- A. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
- B. 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 California Department of Fish and Game or U.S. Fish and Wildlife Service.
- C. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- D. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- E. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- F. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.
- G. Make a cumulatively considerable contribution to a significant cumulative impact related to biological resources.

4.3.4 Impacts and Mitigation Measures

Methodology

Direct impacts are caused by a project and occur at the same time and place. Direct impacts may be permanent or temporary. **Direct permanent impacts** typically refer to the permanent physical loss of a biological resource due to ground disturbance activities associated with implementation of a proposed project. Direct permanent impacts can include the following (1) permanent loss of vegetation communities and land covers that can serve as habitat for special-status plant and wildlife species; (2) injury or mortality to individuals of special-status plant and wildlife species; (3) permanent loss of sensitive habitat; and (4) permanent loss of areas that facilitate wildlife movement and habitat connectivity. **Direct temporary impacts** typically consist of ground disturbance associated with construction activities that would not result in a permanent structure and that would be restored to substantially similar conditions after construction is complete. Temporary impacts may result from equipment staging, equipment turnaround areas, and construction access. Additionally, temporary direct impacts can occur from removal or trampling of vegetation outside designated work zones in the absence of avoidance and minimization measures.

Indirect impacts are reasonably foreseeable effects on biological resources caused by the project but that occur at a different time and place (e.g., resources adjacent to but outside of the site during construction, remaining resources either during construction or operation). Indirect impacts may be short-term construction-related impacts, such as those due to noise and dust, or long-term impacts, such as degradation of habitat or impacts from activities during operations and maintenance.

Cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or several separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

Project Impacts

The significance of impacts to biological resources are typically assessed by comparing the potential changes resulting from a proposed project to the significance thresholds defined above. However, Section 15064(b) of the CEQA Guidelines states that an ironclad definition of “significant” effect is not possible because the significance of an activity may vary with the setting. As such, an evaluation of whether or not an effect on biological resources would be “substantial,” and therefore a potentially significant impact with respect to the significance thresholds identified above, generally considers the following:

- amount and/or extent of the resource (numbers, acres, etc.) to be affected;
- the relative biological value (rarity, functions and values) and/or sensitivity status of the resource and its relevance within a specified geographical area;
- the type and severity of impact, (i.e., would the project adversely affect wildlife through mortality, injury, displacement, or habitat loss or adversely impact vegetation through destruction of a sensitive plant population?);
- timing of the impact, (i.e., would the impact occur at a critical time in the life cycle of a special-status plant or animal, such as breeding, nesting, or flowering periods?);
- duration of the impact, (i.e., whether the impact is temporary or permanent); and
- project design attributes included as part of the overall proposed project that would avoid or minimize potential impacts on biological resources.

Direct impacts from the proposed project would generally be associated with the construction of structures such as townhomes, rental apartments, and associated parking and landscaping as shown in Figure 3-5, Proposed Site Plan. No direct temporary impacts would occur because the entire site is developed and does not have any natural vegetation communities or land cover types that would need to be restored to pre-project conditions. Therefore, this analysis focuses on direct permanent impacts.

Potential indirect impacts resulting from the proposed project include:

- **Noise.** Construction-related and operational noise can result in altered foraging and nesting behavior of birds, displacement of animals from shelter, damaged hearing from extremely loud noises, and increased vulnerability to predators (Lovich and Ennen 2011).
- **Chemical pollutants.** Accidental spills of hazardous chemicals could contaminate surface and sub-surface waters, and impact wildlife species through direct or secondary poisoning.

Indirect impacts are expected to be minimal to non-existent. The project site is in a heavily urbanized area and habitat for special-status wildlife on and adjacent to the site is very limited. Any species using nearby buildings or trees would have adapted to existing urban noise levels from traffic, nearby construction, and humans. These species may temporarily alter normal foraging and movement behaviors during construction (e.g., birds reacting to

loud demolition noises by flushing from trees) but are highly unlikely to permanently abandon the area, and their populations would not be reduced below self-sustaining levels.

Impact 4.3-1 Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Special-Status Plants

As previously described, no special-status plant species are known to occur or have potential to occur on the project site or within the immediate vicinity as the site lacks suitable habitat, is extensively disturbed and developed lacking natural vegetation communities, and due to the site being outside of several species' known elevation ranges. Therefore, there is no potential for direct or indirect impacts to special-status plant species within the project site. As such, special-status plant species are not discussed any further in this section.

Special-Status Wildlife

The proposed project is not expected to have a substantial adverse effect on most special-status wildlife species known to occur in the region because it would redevelop existing hardscape that provides little to no habitat for wildlife species. Adjacent lands are also developed and heavily urbanized and therefore unlikely to support special-status wildlife species that could be indirectly affected by the proposed project.

The project site has a low potential to support roosting bats, including pallid bat and Townsend's big-eared bat, both of which are California Species of Special Concern. If present, potential direct impacts to these species from the project include direct mortality or injury of roosting individuals and the loss of roosting habitat. Such impacts would be significant because they would have a substantial adverse effect, through loss of roosts, on these special-status species. The loss of roosting habitat is considered one of the primary conservation issues facing bat populations, with loss of maternity roosts considered especially significant (Johnston et al. 2019).

Mitigation Measures

Implementation of MM 4.3a, which requires a pre-construction survey for and avoidance of bat roosts, would reduce the impact to a **less-than-significant** level.

MM 4.3a **Pre-construction Surveys for Bat Roosts.** To the extent practicable, demolition of existing structures should occur outside the bat maternity season when dependent young would be present, which generally occurs from April to September in California. Prior to the removal of trees or the demolition of buildings, a bat survey shall be performed by a qualified bat biologist no more than 3 days prior to the start of construction activities. A qualified bat biologist shall have at least 2 years of experience conducting bat surveys that resulted in detections for relevant species, such as pallid bat and Townsend's big-eared bat, with verified project names, dates, and references, and experience with relevant equipment used to conduct bat surveys. The survey should include a determination on whether active bat roosts are present on or within 50 feet of the project site. The survey shall include a visual inspection of potential roosting features (e.g., cavities, crevices in wood and bark, exfoliating bark, suitable canopy for foliage roosting species, attics, eaves).

If no evidence of bat roosting is found, the project sponsor shall complete the following:

- Submit a memorandum prepared by the biologist who completed the survey describing survey methods, conditions, and results of the survey.
- No further action is required if the trees and buildings are removed prior to the next breeding season (the following April).
- If demolition is not completed by the following April, a new bat survey shall be completed by a qualified biologist no more than three days prior to any further demolition or tree removal.

If the survey identifies active bat roosts, or buildings scheduled for demolition, or trees scheduled for removal as potential bat habitat, demolition and tree removal may not begin, or resume, and the project sponsor shall complete the following:

- Retain a qualified biologist to conduct an evening visual emergence survey of the source building(s) from 0.5 hours before to 1 or 2 hours after sunset for a minimum of 2 nights, using night-vision goggles and/or passive acoustic detectors/monitoring equipment to assist in species identification.
- If roosting is found to occur on site, the project sponsor and qualified biologist must prepare an appropriate bat eviction and exclusion plan which will recognize maternity and winter roosting seasons as vulnerable seasons for bats, and require exclusion outside of these times, for example, dates generally between March 1 and April 15 or September 1 and October 15 are suitable times for exclusion; identify suitable areas for excluded bats to disperse or require installation of appropriate dispersal habitat, such as artificial bat houses, prior to project activities, and include an associated management and monitoring plan with implementation and funding; and include a requirement that exclusion materials shall be re-evaluated for effectiveness by the qualified biologist up to 2 weeks prior to building demolition. Locations and procedures for the implementation of bat boxes shall be determined by a qualified biologist and consultation with the California Department of Fish and Wildlife to reduce the likelihood of mortality of the evicted bats.
- If maternity roosts are identified during the maternity roosting season (between the months of April and September), avoid all disturbance to such roosts until a qualified biologist has determined the young bats are no longer roosting.
- If a female or maternity colony of bats is found on the project site, construction activities shall be conducted outside of the maternity roost season (after September 1 and before April 15), if feasible.
- If an active maternity roost is documented on-site and the project cannot be conducted outside of the maternity roosting season, a qualified biologist shall implement a construction-free buffer zone around the active roost to ensure the continued success of the colony. Such buffer zones may include a construction-free barrier of 200 feet from the roost. If implementing a construction-free buffer during the maternity roosting season is not feasible for the project, then bats shall be excluded from the site after September 1 and before October 15, and/or after March 1 and before April 15, to prevent the formation of maternity colonies. Non-breeding bats shall be safely evicted under the direction of a qualified biologist.
- If the qualified biologist identifies potential bat habitat trees, then tree trimming and tree removal shall not proceed unless the following occurs: (1) a qualified biologist conducts night emergence surveys or completes visual examination of roost features that establishes absence of roosting bats or (2) tree trimming and tree removal occurs only during seasonal periods of

non-breeding bat activity, from approximately March 1 through April 15 and September 1 through October 15, and tree removal occurs using the two-step removal process. Two-step tree removal shall be conducted over two consecutive days. The first day (in the afternoon), under the direct supervision and instruction by a qualified biologist with experience conducting two-step tree removal, limbs and branches shall be removed by a tree cutter using chainsaws only; limbs with cavities, crevices or deep bark fissures shall be avoided. The second day the entire tree shall be removed.

Impact 4.3-2 Would the project 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 California Department of Fish and Game or U.S. Fish and Wildlife Service?

As previously described, the project site contains only one non-natural land cover type (urban/developed) and does not support riparian habitat or other sensitive natural communities. Therefore, there would be **no impact** on any riparian habitat or sensitive natural community.

Mitigation Measures

No mitigation measures are required.

Impact 4.3-3 Would the project 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?

As previously described, no wetlands, waters, or riparian habitats under the jurisdiction of the USACE, RWQCB, or CDFW were identified on the project site during the January 2021 field survey or from desktop assessments, database searches, or aerial imagery review. Therefore, there would be **no impact** on state or federally protected wetlands.

Mitigation Measures

No mitigation measures are required.

Impact 4.3-4 Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Project construction associated with the proposed project could result in impacts to nesting birds, including the loss of nests, eggs, and fledglings if work activities occur during the nesting season (generally February 1 through August 31). All native migratory bird species are protected by the federal Migratory Bird Treaty Act, California Fish and Game Code section 3503.5 (which also specifically protects raptors). As discussed in Impact 4.3-1, the project site could also support bat roosts.

As discussed in Section 4.3.1, the project site is highly developed and does not contain habitat for other native resident or migratory wildlife species.

Given the potential for nesting birds and bat roosts to occur on the project site that could be destroyed or disturbed during project construction, the project would have a **potentially significant** impact related to impeding the use of wildlife nursery sites. Thus, mitigation is required.

Mitigation Measures

Implementation of Mitigation Measure 4.3a as identified in Impact 4.3-1 would ensure that impacts to bat roosts are avoided and/or reduced to a **less-than-significant** level. Additionally, implementation of Mitigation Measure 4.3b would ensure that impacts to nesting birds are avoided and/or reduced to a **less-than-significant** level.

MM 4.3b **Pre-construction Survey for Nesting Birds.** If project construction activities are scheduled to occur during the nesting season (February 1 to August 31), a pre-construction nesting bird survey should be conducted by a qualified biologist within 7 days prior to construction activities to determine if any native birds are nesting on or near the project site (including a 250-foot buffer for raptors). If any active nests are observed during surveys, a suitable avoidance buffer will be determined by the qualified biologist based on species, location, and planned construction activity. These nests would be avoided until the chicks have fledged and the nests are no longer active as determined by the qualified biologist.

Impact 4.3-5 Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Heritage Trees

Twenty-nine of the 85 trees on the site meet the City's definition of a heritage tree; all of these are proposed for removal (Appendix D1). As stated in Chapter 2, Project Description, the project site is approximately 7 to 9 feet above mean sea level and is within the Federal Emergency Management Agency (FEMA) Zone AE (FEMA 2019), indicating it is likely to be subject to inundation during a 100-year flood. Further, the site is in an area that would be subject to sea-level rise. Menlo Park Municipal Code Section 16.45.130(4) requires that all ground-level residential units in the Residential Mixed-Use zone district be raised 2 feet above the 5-foot FEMA floodplain to avoid potential hazards associated with sea-level rise. Because the project proposes to construct residential units throughout the site, complying with the elevation requirement necessitates that the entire site be graded and covered with fill material to achieve the required elevation above the floodplain. As a result, it would not be feasible to retain existing trees within the site. The Heritage Tree Ordinance as it existed as of February 26, 2020, when the Preliminary Application for the project was submitted, required that when heritage trees are removed to accommodate a development project, the project developer must provide for replacement of those trees at a 1:1 ratio or pay a heritage tree in-lieu fee if replacement onsite is not feasible.

Applications for tree removal permits were submitted to the City in June 2020 and permits would be issued prior to construction. The project proposes to plant 353 new trees with a minimum 15-gallon container size throughout the project site, as shown in Figure 3-9, Tree Planting Plan. The project would therefore comply with the City's Heritage Tree Ordinance as it existed at the time that the Preliminary Application for the project was submitted, in accordance with the Housing Crisis Act of 2019.

Bird-Safe Building Design

Glass windows and building façades can result in bird injury or mortality because birds do not perceive glass as an obstruction (City of San Francisco 2011, Loss et al. 2014). They may collide with glass that reflects the sky or vegetation or glass that is transparent, which allows birds to perceive an unobstructed flight route to vegetation inside the building. Most bird-window collisions occur within the first 60 feet of the ground, where birds spend most of their time foraging, nesting, and roosting, and where vegetation is most likely to be reflected in glazed surfaces (City of San Francisco 2011).

By necessity, the buildings constructed as part of the proposed project would be within the primary “bird collision zone” (i.e., within 0 to 60 feet of the ground) and the project is therefore subject to bird-safe building design requirements under Chapter 16.44.130(6) of the Municipal Code, with which the project would comply.

The project would construct 116 three-story townhomes and a five-story apartment building. Roof heights for the townhouse buildings would generally be between 40 and 43 feet but in some places would reach as much as approximately 50 feet, while the apartment building roof would be 68 feet at the top of the ridge and approximately 67 feet around the perimeter, with rooftop elevator overruns reaching 73 feet and penthouse stairways reaching 75 feet. Terrace and podium guardrails on all buildings will either be open metal railings or fitted with fritted clear-glazed glass. This is considered a bird-friendly glazing, as required by the Municipal Code, because it creates “visual noise barriers” that help avoid bird-window collisions. In addition, the buildings would not include any transparent glass at the rooflines or building corners.

In addition, vegetation in the vicinity of the project site is limited to non-native ornamental trees and shrubs. It lacks the structural diversity that typically attracts large numbers of native birds. The number of birds that would be exposed to increased risk of window collisions is therefore expected to be relatively low. Species with the greatest potential to collide with new buildings are primarily the common, urban-adapted passerines that currently use the site.

In summary, the proposed project is subject to bird-safe building design requirements under the City’s Municipal Code and has incorporated these requirements into the design of the buildings’ windows and facades. Combined with the low number of birds expected to be exposed to increased risk of collisions and the fact that most birds would be urban generalists that already occur in the area, compliance with the City’s bird-safe design requirements would reduce the number of bird collisions at the new buildings to a less-than-significant level.

Conclusion

The proposed project is subject to City ordinances concerning heritage tree removal and bird-safe building design. Compliance with these ordinances is mandatory. Although the proposed project would remove heritage trees and may not be able to completely remove the risk of bird-window collisions, compliance with City requirements regarding heritage tree removal and bird-safe building design would reduce potential impacts to a **less than significant** level.

Mitigation Measures

No mitigation measures are required.

Impact 4.3-6 Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

To date, there are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved habitat conservation plans that cover the project site. Therefore, the project would not conflict with an adopted habitat conservation plan and there would be **no impact**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

This analysis of potential cumulative impacts to biological resources considers the effects of buildout under the City's General Plan. This includes ongoing development throughout the City of Menlo Park, particularly within the Bayfront Area, as described in Section 4.0 Environmental Analysis. This geographic area is appropriate for consideration of cumulative impacts to biological resources because, as stated in the ConnectMenlo EIR, "potential impacts of proposed development on biological resources tend to be site-specific" and dependent upon the resources present within a given project site. However, it is also important to recognize that biological resources in a given region or area comprise a network of vegetation communities and hydrologic features that support a diversity of plant and wildlife species that are not limited to individual properties or project sites. These resources can be adversely affected by the incremental loss of such resources on individual sites.

Impact 4.3-7 Would the Project make a cumulatively considerable contribution to a significant cumulative impact related to biological resources?

The ConnectMenlo EIR contained a discussion of cumulative impacts to biological resources under Impact BIO-7. This analysis found that when individual projects comply with the goals, policies and programs in the General Plan Land Use, Open Space/Conservation, and Noise and Safety elements, comply with the bird-safe design measures in the Municipal Code, and provide project-specific baseline biological resources assessment as required under ConnectMenlo EIR Mitigation Measure BIO-1, buildout of the City's General Plan within the Bayfront Area would result in a less-than-significant cumulative impact to biological resources.

The ConnectMenlo EIR analysis also concluded that the future development anticipated under the General Plan has the potential to cumulatively impact biological resources but that such impacts would be reduced to less-than-significant levels with implementation of mitigation measures and compliance with applicable federal, state, and local regulations. The ConnectMenlo EIR contains the conclusion that ongoing development within the City would not create or contribute to a cumulative impact on biological resources (City of Menlo Park 2016b). While the proposed project would increase the total development density and intensity compared to the amount of development evaluated in the ConnectMenlo EIR, the project would not expand the footprint of development relative to the City's General Plan. Thus, the analysis and conclusions of the ConnectMenlo EIR regarding cumulative impacts to biological resources remain applicable to the proposed project.

As stated in Section 4.3.1, a Dudek biologist conducted a site-specific survey and assessment of the potential for the project site and adjacent areas to support significant biological resources, consistent with the City's requirements under General Plan Policy OSC-1.3, Sensitive Habitats, and Mitigation Measure BIO-1 from the ConnectMenlo EIR. As discussed in Section 4.3.1 and under Impact 4.3-1, the project site supports urban development. There is no native vegetation or populations of special-status plant species, no aquatic or hydrologic resources, and no wildlife movement corridors within or adjacent to the site. Thus, the proposed project would not result in any incremental loss of such resources within the project region.

Section 4.3.1 and Impact 4.3-1 identify that the site has a low potential to support pallid bat and Townsend's big-eared bat, which are special-status wildlife species. Pallid bat and Townsend's big-eared bat are known to roost in crevices of human-made structures but are highly sensitive to disturbance. The extent of urban development and activity within and immediately surrounding the project site reduces the potential for these species to be present at all, and greatly reduces the likelihood for large numbers of either species to be present. In addition, Impact 4.3-4 identifies that the project site could support nesting birds and construction activities

could result in impacts to nesting birds, including the loss of nests, eggs, and fledglings if work activities occur during the nesting season, as well as that the project site could support bat roosts.

Mitigation Measures 4.3a and 4.3b require that pre-construction surveys for roosting bats and nesting birds be completed prior to commencement of construction activities and identify additional requirements to avoid adverse effects to such species if they are present. With implementation of these measures, the proposed project would not result in any significant incremental effects to these species.

Impact 4.3-5 identifies that the project would result in the removal of 29 heritage trees from the project site, but in compliance with the City's Heritage Tree Ordinance as it existed as of February 26, 2020, the project would replace these trees at a 1:1 ratio and would plant additional trees throughout the site, as shown in Figure 3-9. Impact 4.3-5 also identifies that the project is subject to and complies with the City's Bird Safe Design requirements. Thus, the project would not result in any significant incremental effects to these biological resources.

In conclusion, the project would be consistent with the findings of the ConnectMenlo EIR that there would not be a significant cumulative impact to biological resources to which the project could contribute. Thus, the project would have **no impact** associated with cumulative losses of biological resources.

Mitigation Measures

No mitigation measures are required.

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4.4 Cultural Resources

This section describes the existing cultural resources conditions of the proposed 123 Independence Drive Residential Project (project; proposed project) site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

As discussed in Chapter 2, Introduction, and Chapter 4, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this environmental impact report (EIR), one in January and February 2021, and one in September and October 2021. One verbal comment was received at the January 2021 scoping session raising concern that cultural and tribal resources may not have been evaluated prior to construction of the existing buildings within the project site. The Native American Heritage Commission (NAHC) submitted written responses to both NOPs describing state regulations regarding Native American consultation requirements and evaluation of cultural and tribal resources. Both NOPs and the comments received in response to them are provided in Appendix A of this EIR.

The primary sources reviewed to prepare this section include the City of Menlo Park (City) General Plan (City of Menlo Park 2016a), the ConnectMenlo General Plan Update EIR (City of Menlo Park 2016b), the Phase I Archaeological Assessment prepared for the project by Albion in March 2020 (Appendix E1), and the Historical Resources Technical Report prepared for the project by Dudek in March 2021 (Appendix E2).

4.4.1 Environmental Setting

The project site, and its surrounding area, has been developed since the 1960s. The project site currently features office and industrial uses and includes one building that has retained its original scale since the 1960s (Appendix E2). Implementation of the project would require the demolition of existing buildings as well as grading the entire project site and importing fill soil to raise the site elevation sufficient to ensure that ground-level residential units are 2 feet above the Federal Emergency Management Agency floodplain, per the requirements of Menlo Park Municipal Code (Section 16.45.130[4]).

The Bayfront Area of Menlo Park has been identified as archaeologically sensitive. The ConnectMenlo EIR notes that “artifacts from the lives of these early residents of what is now Menlo Park are still being discovered today. As recently as 2012, Native American remains were found at a construction site along Willow Road, in Menlo Park. Additionally, Native American remains were found at the Prologis commercial development site in the Bayfront Area” (City of Menlo Park 2016b).

Prehistory Background

As discussed in the Phase I Archaeological Assessment for the project (Appendix E1), archaeological research in the San Francisco Bay Area (Bay Area), including San Mateo County, began in the early twentieth century. As research techniques evolved and research efforts led to a greater understanding of the region’s cultural history, a detailed chronology of patterns of Native American occupation and cultural adaptation was developed. The following discussion summarizes the current understanding of the archaeology of California and the Bay Area, as presented in the Phase I Archaeological Assessment.

Early Period (ca. 3500 to 600 BC)

Artifacts from the Early Period include various types of projectile points, shell beads, and ground stone implements that suggest hunting, fishing, and plant gathering constituted the major subsistence regimes in the region. The gathering of shellfish (especially mussels) was also an important subsistence activity for coastal peoples. In addition, obsidian has been found at Early Period sites, suggesting an east-west trade pattern that resulted in obsidian from sources in the eastern Sierras ending up in coastal and inland sites in central California.

Middle Period (ca. 600 BC to AD 1000)

Artifacts from this period are similar to the Early Period, with comparable profiles of flaked stone and ground stone implements. However, the artifacts indicate a greater diversification of subsistence than the previous period, with heavier reliance on small terrestrial animals (e.g., rabbits and sea otters) in addition to the typical foods like acorns, hard seeds, and fish. Artifacts also indicate increased storage of food items, which may have supported an increasing degree of sedentism, as well as increasingly gender-specific work.

Meganos Aspect

Many archaeologists suggest that the Middle Period also saw a distinct cultural pattern emerge along the southern and eastern ends of San Francisco Bay (the Bay), called the Meganos Aspect. It is thought that this cultural pattern may indicate an intrusion of peoples moving into the area from the south and east, which resulted in two different ethnic groups occupying the Bay Area as the forerunners of the Ohlone and the Meganos culture. Cultural traits associated with the Meganos Aspect are exemplified by changes in burial patterns and traditions.

Albion describes that “Mortars and pestles suggest a reliance on vegetal resources, especially acorns. Flaked lithic technologies are considered rare at Meganos Aspect sites, though faunal assemblages indicate that the hunting of large mammals (e.g., deer, elk) was important. A number of archaeologists have also argued that this intrusion may have led to violent conflict between Meganos peoples and the older inhabitants of the Bay Area.”

Middle/Late Transition Period (ca. AD 1000 to AD 750)

Although this period is relatively brief, it has been identified as a distinct period because of sharp contrasts in geologic and climactic conditions that influenced settlement patterns in the region. The period coincides with a geologic interval known as the Medieval Climatic Anomaly, which involved a period of severe drought and accelerated aridity. It is thought that the climatic changes could have resulted in a less stable and reliable resource base, which would have contributed to populations returning to a pattern of more frequent movement rather than the increased sedentism of the Middle Period. Changes in the subsistence patterns are also indicated, including increased reliance on terrestrial ungulates, intensification in fishing and other aquatic resources, and a shift toward lower-ranked resources. The archaeological record provides evidence of this in the “disappearance of stemmed points and the abrupt appearance of small, leaf-shaped and double side-notched projectile points.” In addition, there appears to have been increased use of the bow and arrow and emergence of new fishing technologies, such as circular fishhooks and notched stone sinkers.

Late Period (ca. AD 750 to AD 1750)

During this period, there was a continuing trend of changes in social and economic characteristics, with increased seasonal sedentism as indicated by evidence of semi-permanent village sites. This includes a continuing

intensification of resources, with reliance on acorns, seeds, and other lower-ranked vegetal foods, small terrestrial mammals (e.g., rabbits and rodents), birds, and aquatic resources (especially small, schooling fishes). This is shown by an increase in the frequency of small projectile points and a decrease in the frequency of milling slabs compared to earlier periods. Use of sea otters become especially important, with evidence that trade of pelts became an important economic activity. It is also believed that there was a decrease in long distance trade due to declines in obsidian densities, with an increase in local trade of shell beads.

Ethnohistoric (post-AD 1750)

At the time of Spanish contact, Native American groups residing in the southern Bay Area were organized under a tribelet system where villages were autonomous political units. Native American inhabitants of the Bay Area and vicinity came to be known by Spanish explorers as Costanoans, although present-day descendants of those earlier inhabitants prefer to be referred to as Ohlone. Both terms refer to the language group spoken by the people, rather than a tribal name. The Ohlone inhabited the San Francisco Peninsula, the East Bay to the Delta, and south past Santa Clara Valley to the coast of the Monterey Bay.

The Ohlone exploited all of the regional habitats including bay marshes, valley grasslands, mountainous uplands and open coastal environs. They relied on a wide range of natural resources, including elk, pronghorn, deer, sea mammals, salmon, trout, shellfish, ducks, geese, acorns, seeds, grasses, and roots. During the ethnohistoric period, the trend towards more local trade appears to have increased, based on increased frequency of shell bead artifacts.

Evidence of Ohlone villages has been identified throughout the Bay Area, including many sites within San Mateo County. The San Francisquito Creek and associated watershed contains a number of approximately 90 archaeological sites and resources, including 50 major village sites (Appendix E1). Research at these sites has yielded artifacts that include human burials, shell beads, projectile points, flaked and ground stone tools, notched stone net weights, mortars and pestles, fire-cracked rocks, charmstones, eccentric crescents, and an array of bone tools.

Historic Background

Native American History and European Settlement Periods

As described in the project's Historical Resources Technical Report (Appendix E2), Post-Contact history for the State of California is generally divided into three periods: the Spanish Period (1769–1821), which began with Establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá; the Mexican Period (1821–1848), which began with Mexico's independence from Spain in 1821, and the American Period (1846–present), which began with the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican–American War and resulting in California becoming a territory of the United States.

The Spanish period was defined by the goal of King Carlos of Spain to construct Missionary churches along the coast of Alta California and convert the local Native Americans into Catholics and thus subjects of the Spanish crown. As reported in the project's Historic Resources Technical Report (Appendix E2), "The area that would become Menlo Park was located between two missions: San Francisco del Asís founded in 1776 and Santa Clara de Asís founded in 1777. In 1795, the Spanish government granted the land that currently includes Menlo Park to Captain Don Dario Arguello, the ninth governor of Alto California. The land was named Rancho de las Pulgas and encompassed 35,240 acres stretching from San Mateo Creek to the north, San Francisquito Creek to the south, bay marshland to the east, and Cañada Road to the west."

Over time, the Argüello family lost much of the original Rancho, which allowed new settlers to occupy the area (City of Menlo Park 2016a). This included Irish immigrants Dennis Oliver and Daniel McGlynn, who established farms and built two houses with a common entrance. In August 1854, the men erected an arched wooden gate with the name of their estate, “Menlo Park,” in tribute to the village where they were born, Menlough, County Galway, Ireland (Appendix E2).

Incorporation as a City

After McGlynn and Oliver settled in Menlo Park, the area became a vacation destination for the upper class of San Francisco. Through 1863 and 1864, the railroad connected from San Francisco to San Jose, making Menlo Park easily accessible from both San Francisco and San Jose. Menlo Park emerged into a growing town and sought to be incorporated as a city in order to respond to the demand of infrastructure. Menlo Park incorporated in 1874 as an effort to bring about improvements such as the surfacing of Middlefield Road. However, once the desired improvements were completed local leaders ceased to meet, and the incorporation lapsed in 1876 (City of Menlo Park 2016a).

The history of Menlo Park and other communities within the San Francisco Peninsula was strongly influenced by the opening of Stanford University in 1891 and the opening of Camp Fremont, a training ground for U.S. soldiers preparing to fight during World War I. The growth of Stanford University, the research and business it generated, as well as the population increase associated with Camp Fremont contributed to the City’s development. After the end of World War I, Camp Fremont closed and later became the Veterans Medical Center. The closure of the camp returned the town to more incremental growth but left behind a number of new businesses and improvements (City of Menlo Park 2016a).

The Modern Era

Between 1920 and 1930, Menlo Park’s transportation infrastructure and residential neighborhoods expanded. In 1927, the same year as the official incorporation of City of Menlo Park (the City), the original Dumbarton Bridge opened, creating a new link between the East Bay and the Peninsula. Between 1929 and 1931 the Bayshore Highway (now US 101) was constructed and expanded to Menlo Park (City of Menlo 2016a). By the late 1930s El Camino Real was paved and widened from two lanes to four. Also, during this time the Belle Haven neighborhood was constructed as a low-income housing development; however, the neighborhood was not complete until after the Great Depression in the 1950s.

In 1946, the Stanford Research Institute was established, making the City of Menlo Park a center of research and innovation. Although the Stanford Research Institute separated from Stanford University and changed its name to SRI International in 1970, this institution is still headquartered in the City and has contributed to innovations ranging from the computer mouse to the 9-1-1 emergency call system (City of Menlo Park 2016a).

The 1950s brought increased industrial development to the City of Menlo Park near the San Francisco Bay. Job opportunities in the study area led to an increasingly diverse population in the City, especially in the areas between US 101 and the Bay. Today, the Belle Haven neighborhood is a focal point for the City’s Latino, African American, and Pacific Islander communities. The expansion of the Silicon Valley economy in the 1980s and 1990s made the City of Menlo Park and the entire San Francisco Peninsula increasingly popular and expensive places to live. The “Dot-Com Boom” in the late 1990s drove up demand for housing in the City and similar areas with good schools, convenient access to job centers, and high quality of life. Although the recessions that began in 2001 and more recently in 2008 slowed or even temporarily reversed regional job growth, the City of Menlo Park has remained a

highly desired community. The latest and ongoing economic expansion has brought new growth and real estate demand to the City. The Bayside campus that once hosted Sun Microsystems is now occupied by Facebook, one of the world's leading technology firms, which continues to grow its headquarters and build additional office facilities in the city.

Historical Resources

Chapter 4, Cultural Resources, of the ConnectMenlo EIR (City of Menlo Park 2016b) identifies existing historic resources obtained from archival research that included a review of the Menlo Park Historical Association, a Historic Resources Report prepared by Knapp Architects in February 2013 for the City of Menlo Park Housing Element Update, General Plan Consistency Update, and Zoning Ordinance Amendments Environmental Assessment. In addition, the ConnectMenlo EIR reviewed the current listing of properties on the National Register of Historic Places (NRHP), California Historical Landmarks, California Register of Historical Resources (CRHR), and California Points of Historical Interest as listed in the 2012 Office of Historic Preservation's Historic Property Directory that was conducted in preparation of the 2015 ConnectMenlo Existing Conditions Report. The City includes two H-zoned sites, one California Historical Landmark, two NRHP California Historical Landmarks, one NRHP California Point of Historical Interest, and two California Points of Historical Interest. The historical resources are listed in ConnectMenlo EIR, Table 4.4-1 Designated Historical Resources in the Study Area, page 4.4-8 (City of Menlo Park 2016b).

Flood Park is listed as a California Point of Historical Interest by the County of San Mateo Parks Department. In the early 1930s, funds became available for San Mateo County to purchase 21-acre parcel of the James Clair Flood estate. Around 1936, the Work Progress Administration, in an effort to provide work for those without jobs in the Great Depression, constructed an administration building, a swimming pool, the maintenance area, the caretaker's residence, two restrooms and the picnic sites in the park. The baseball and softball fields, tennis courts, and parking were added in the early 1950s (County of San Mateo Parks Department n.d.).

Archaeological Resources

Archaeological resources may be considered to be either "unique archaeological resources" or "historical resources" as defined by the California Environmental Quality Act (CEQA; California Public Resources Code [PRC], Section 12000 et seq.) and described further under the "California Environmental Quality Act" subheading. CEQA Section 21083.2 defines a "unique archaeological resource" as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

- Contains information needed to answer important scientific research questions, and there is a demonstrable public interest in that information;
- Has a special and particular quality, such as being the oldest of its type or the best available example of its type; and/or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Future development under the proposed project would occur on developed or highly disturbed sites in the study area; however, there is potential for archaeological resources to exist.

Project Site

The project site is approximately 7 feet above mean sea level and relatively flat. Flood Slough is approximately 884 feet northwest of the site; Ravenswood Slough is 0.5 miles east of the site. Soils in the project area are characterized as Urban land Orthents, reclaimed complex, 0–2 percent slopes, which occurs in areas that were once part of the San Francisco Bay and adjacent tidal flats (Appendix E1). Urban land soils generally consist of deep, poorly drained fill. However, the underlying landform includes Holocene alluvial soils, which indicates there is potential for buried archaeological deposits beneath the fill soils (Appendix E1).

Records Search

Albion's investigation included a background records search at the Northwest Information Center of the California Historical Resources Information System at Sonoma State University. The records search results identified that one archaeological study was previously conducted within the project site that did not identify any archaeological resources, and 13 studies have been conducted within a 0.25-mile radius of the site, resulting in recordation of one pre-historic period resource and four historic period resources (Appendix E1).

Historic Resources Evaluation

Dudek completed a Historic Resources Technical Report for the project site in March 2021 (Appendix E2). The analysis included a pedestrian survey of the project site by a qualified architectural historian; building development and archival research, including review of the California Office of Historic Preservation's Built Environment Resource Directory for San Mateo County; development of an appropriate historic context for the project site; and recordation and evaluation of six office and light industrial properties over 45 years old for historical significance and integrity in consideration of NRHP, CRHR, and City of Menlo Park designation criteria and integrity requirements.

The Historic Resources Technical Report concludes that the five office and light industrial properties that comprise the project site and one adjacent property that supports a building that is over 45 years old do not appear eligible under any NRHP, CRHR, or City of Menlo Park designation criteria due to a lack of significant historical associations and architectural merit. Therefore, the project site properties and adjacent property are not historical resources under CEQA.

4.4.2 Regulatory Framework

Federal Regulations

National Historical Preservation Act

The NRHP was established in 1966 under the National Historical Preservation Act. The NRHP serves as an official federal list of cultural resources that have been nominated by state offices for their historical significance at the local, state, and national level. Any properties that are listed or eligible for listing in the NRHP must meet certain criteria for historical significance and possess integrity in form, location, and setting. Under Section 106, federal agencies are required to consider the effects of their actions, or those they fund or permit, on properties that are listed or may be eligible for listing. The regulations in Title 36 of the Code of Federal Regulations, Section 60.4, describe the criteria to evaluate cultural resources for inclusion in the NRHP. Properties may be listed in the NRHP if they meet the following eligibility requirements:

1. The property is at least 50 years old (however, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);
2. It retains integrity of location, design, setting, materials, workmanship, feeling, and associations; and
3. It possesses at least one of the following characteristics:

Criterion A: Is associated with events that have made a significant contribution to the broad patterns of history (events).

Criterion B: Is associated with the lives of persons significant in the past (persons).

Criterion C: Embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant, distinguishable entity whose components may lack individual distinction (architecture).

Criterion D: Has yielded, or may be likely to yield, information important in prehistory or history (information potential).

A project is considered to have a significant impact when the effect on a historic property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. No historic properties, buildings or resources eligible for listing in the NRHP are known to exist on the project site or adjacent areas that would be disturbed during project construction.

The Department of the Interior has established Standards and Guidelines for Archaeology and Historic Preservation. These standards and guidelines are not regulatory and do not set or interpret agency policy. According to Section 15064.5(b)(3) of the CEQA Guidelines (14 CCR 15000 et seq.), a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Weeks and Grimmer 1995) shall be considered as mitigated to a level of less than a significant impact on a historical resource.

American Indian Religious Freedom Act and Native American Graves and Repatriation Act

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved. Additionally, Native American remains are protected by the Native American Graves and Repatriation Act of 1990.

State Regulations

California Register of Historical Resources

All properties in California that are listed in or formally determined eligible for listing in the NRHP are eligible for listing in the CRHR. The CRHR is a listing of State of California resources that are significant in the context of California's history. It is a statewide program with a scope and criteria for inclusion similar to those used for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR. A historic resource must be significant at the local, state, or federal level under one or more of the criteria defined in the California Code of Regulations Title 15, Chapter 11.5, Section 4850 to be included in the CRHR. Any resource that meets the CRHR criteria is considered a significant historical resource under CEQA.

A building, site, structure, object, or historic district may be considered potentially eligible for listing in the CRHR if it meets any of the four criteria listed below and retains integrity:

1. Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
2. Is associated with the lives of persons important to local, California, or national history.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
4. Has yielded or may be likely to yield information important to the prehistory or history of the local area, California, or the nation.

Integrity is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Historical resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Historical resources that have been rehabilitated or restored may be evaluated for listing. The CRHR includes resources listed in or formally determined eligible for listing in the NRHP, as well as some California State Landmarks and Points of Historical Interest.

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on both "historical resources" and "unique archaeological resources." Pursuant to the California PRC Section 21084.1, a "project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment." PRC 21083.2 requires agencies to determine whether proposed projects would have effects on "unique archaeological resources."

Historical Resources

"Historical resource" is a term of art with a defined statutory meaning (see PRC 21084.1 and 14 CCR 15064.5[a] and 15064.5[b]). Under CEQA, a cultural resource is considered a "historical resource" if it meets any of the criteria found in Section 15064.5(a) of the CEQA Guidelines:

- (1) a resource determined by the State Historical Resources Commission to be eligible for the CRHR (including all properties on the NRHP), as described above;
- (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k);
- (3) a resource identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant; or
- (4) any object, building, structure, site, area, place, record, or manuscript that the City determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the City's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered to be historically significant if it meets the criteria for listing on the CRHR.

The fact that a resource is neither listed in nor determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC Section 5020.1[k]), nor identified in a historical resources survey (meeting the criteria in PRC Section 5024.1[g]) does not preclude a lead agency from determining that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1. If the lead agency determines that a project may have a significant impact on a historical resource, the project is determined to have a significant effect on the environment, and these effects must be addressed. However, no further environmental review need be completed if, under the qualifying criteria, a cultural resource is not found to be a historical resource or unique archaeological resource.

A proposed project that would cause a substantial adverse change in the significance of a historical resource is considered to have a significant impact. A “substantial adverse change” in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired (14 CCR 15064.5[b][1]). In turn, the significance of a historical resource is materially impaired when a project demolishes or alters the physical characteristics that convey a resources historical significance such that it would no longer be eligible for listing in the CRHR and/or a local register of historic resources.

Unique Archeological Resources

CEQA also distinguishes between two classes of archaeological resources: archaeological sites that meet the definition of a historical resource, as described above, and “unique archaeological resources.” PRC Section 21083.2(g) states that “unique archaeological resource” means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special or particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

CEQA Guidelines Section 15064.5(c) provides specific guidance on the treatment of archaeological resources, depending on whether they meet the definition of a historical resource or a unique archaeological resource. If the site meets the definition of a unique archaeological resource, it must be treated in accordance with the provisions of PRC Section 21083.2.

CEQA Guidelines Section 15064.5(e) requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as identified in a timely manner by the NAHC. Section 15064.5 of the CEQA Guidelines directs the lead agency (or sponsor), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

State Historical Building Code

The State Historical Building Code provides alternative building regulations and building standards for the rehabilitation, preservation, restoration (including related reconstruction), or relocation of buildings or structures

designated as historic buildings. These regulations are intended to facilitate the restoration or change of occupancy so as to preserve their original or restored architectural elements and features, to encourage energy conservation and enable a cost-effective approach to preservation, and to provide for the safety of the building occupants.

Public Resources Code Section 5097.5

PRC Section 5097.5 prohibits “knowing and willful” excavation or removal of any “vertebrate paleontological site...or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands.” Public lands are defined to include lands owned by or under the jurisdiction of the state or any city, county, district, authority, or public corporation, or any agency thereof.

State Laws Pertaining to Human Remains

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the county coroner has examined the remains and determined whether they are subject to the coroner’s authority. If the human remains are determined to be of Native American origin, the county coroner must contact the California NAHC within 24 hours of this identification. An NAHC representative will then identify a Native American Most Likely Descendant to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods. In addition, PRC Section 5097.98 and CEQA Guidelines Section 15064.5 specify the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the NAHC.

Regional and Local Regulations

City of Menlo Park General Plan

The City of Menlo Park General Plan (City of Menlo Park 2016a) contains the following goals and policies applicable to consideration of the project’s potential effects on cultural resources.

Land Use Element

Goal LU-7: Promote the implementation and maintenance of sustainable development, facilities and services to meet the needs of Menlo Park’s residents, businesses, workers, and visitors.

Policy LU-7.8: Cultural Resource Prevention. Promote preservation of buildings, objects, and sites with historic and/or cultural significance.

Open Space and Conservation Element

Goal OSC-3: Protect and enhance historic resources.

Policy OSC-3.1: Prehistoric or Historic Cultural Resources Investigation and Preservation. Require significant historic or prehistoric artifacts be examined by a qualified consulting archaeologist or

historian for appropriate protection and preservation, and to ensure compliance with local, state, and federal regulations.

Policy OSC-3.3: Archaeological and Paleontological Resources Protection. Protect prehistoric or historic cultural resources either on site or through appropriate documentation as a condition of removal. Require that when a development project has sufficient flexibility, avoidance and preservation of the resource shall be the primary mitigation measure, unless the city identifies superior mitigation. If resources are documented, undertake coordination with descendants and/or stakeholder groups, as warranted.

Policy OSC-3.4: Prehistoric and Historic Cultural Resources Found During Construction. Require that is cultural resources, including archaeological or paleontological resources, are uncovered during grading or other on-site excavation activities, construction shall stop until appropriate mitigation is implemented.

Policy OSC-3.5: Consultation with Native American Tribes. Consult with those Native American tribes with ancestral ties to the Menlo Park city limits regarding General Plan Amendments and land use policy changes.

Policy OSC-3.6: Identification of Potential Historic Resources. Identify historic resources for the historic district in the Zoning Ordinance and require design review of proposals affecting historic buildings.

4.4.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to cultural resources are based on Appendix G and Section 15130 of the CEQA Guidelines. A significant impact related to cultural resources would occur if the project would:

- A. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.
- B. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.
- C. Disturb any human remains, including those interred outside of formal cemeteries.
- D. Make a cumulatively considerable contribution to a significant cumulative impact related to cultural resources.

4.4.4 Impacts and Mitigation Measures

Methodology

As stated in Section 4.4.1, Environmental Setting, Albion's investigation included a background records search at the Northwest Information Center of the California Historical Resources Information System at Sonoma State University. The records search included a review of the information center's mapped prehistoric, historical, and built-environment resources, Department of Parks and Recreation Site Records, technical reports, historical maps, and local inventories. Additional consulted sources included the NRHP, CRHR, and listed Office of Historic Preservation Archaeological Determinations of Eligibility, California Points of Historical Interest, and California Historical Landmarks. The records search results identified that one archaeological study was previously conducted within the project site that did not identify any archaeological resources, and 13 studies have been conducted

within a 0.25-mile radius of the site, resulting in recordation of one pre-historic period resource and four historic period resources (Appendix E1).

In January 2020, Albion completed a pedestrian survey of the project site and Native American outreach under the Native American Historic Resource Protection Act. The City also provided notification to Native American tribes under AB 52 in January 2020, at the time of public circulation of the NOP for this EIR, and sent the revised NOP to the same Native American tribes in September 2021. The notification letters included a brief project description and invitation to provide information and/or request consultation with the City regarding the potential for the project to affect tribal cultural resources. The City has not received any responses to the notification letters or any Native American tribal responses to the NOPs.

Albion's visual inspection of the project site revealed no evidence of intact precolonial or historic-era archaeological deposits. However, there is minimal soil visibility at the site due to the existing buildings and paving. Albion's background research conducted for the site suggests that, due to past dynamic geological processes, the area holds a moderate to high potential to contain buried archaeological deposits.

Dudek's Historic Resources Technical Report (Appendix E2) also involved background research and a pedestrian survey of the project site. Each building was documented with notes and photographs, specifically noting character-defining features, spatial relationships, and observed alterations. The Historic Resources Technical Report concluded that none of the buildings within the project site are historic resources and that the adjacent building that is at least 45 years of age is also not a historic resource.

Project Impacts

Impact 4.4-1 Would the project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?

Consistent with the ConnectMenlo Final EIR Mitigation Measure CULT-1, Dudek completed a site-specific historic resources evaluation for the project site because the five existing buildings within the site and one adjacent building are more than 45 years old. The evaluation of the existing buildings located on the project site that are proposed to be demolished and the adjacent property was conducted by Dudek's architectural historian Sarah Corder, MFA, who meets the Secretary of the Interior's Professional Qualification Standards for architectural history. The Historic Resources Technical Report (Appendix E2) found that none of the six properties evaluated appear to be eligible for listing in the NRHP or the CRHR and none meet the City's criteria for identifying a historic resource.

Additionally, while there are identified historic properties within the City, none of these are located within the Bayfront Area or within the immediate project vicinity (Menlo Park 2016b). Therefore, the proposed project would have **no impact** because it would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5

Mitigation Measures

No mitigation measures are required.

Impact 4.4-2 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

As discussed in Section 4.4.1, Environmental Setting, there are no known resources eligible for listing in the NRHP or CRHR that exist in the project area. The records search prepared for the proposed project identified that one archaeological study was previously conducted within the project site that did not identify any archaeological resources, and that 13 studies have been conducted within a 0.25-mile radius of the site which resulted in recordation of one pre-historic period resource and four historic period resources, none of which are within or adjacent to the project site (Appendix E1).

However, Albion's investigation of the project site indicates that potentially significant cultural materials may be located in the project area. If such resources are uncovered during construction and are eligible for listing in the NRHP or CRHR or otherwise meet the definitions and standards of significant archaeological resources under CEQA, disturbance to those resources would result in a **potentially significant** impact. Thus, mitigation is required.

Mitigation Measures

Implementation of Mitigation Measures 4.4a and 4.4b would reduce this impact to a **less-than-significant** level by ensuring that additional sub-surface investigation is conducted after existing buildings are demolished and paving on the site is removed and prior to excavation, grading, and trenching, consistent with the recommendation in the Phase I Archaeological Assessment (Appendix E1), and that any unanticipated archaeological deposits that may be encountered during construction are evaluated by a qualified archaeologist.

MM 4.4a **Extended Phase I Investigation.** Prior to issuance of a demolition permit, the City shall verify that the project sponsor has retained a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, to develop and implement an Extended Phase I Archaeological Assessment of the project site to test for buried archaeological deposits to the depth of the project's grading, trenching, and excavation. This Extended Phase 1 Assessment shall include subsurface testing of the project site through mechanical trenching to allow the archaeologist to observe subsurface conditions and locate any buried cultural deposits, features or artifacts. Following demolition of existing buildings and removal of pavement and other impervious surfaces at the project site and prior to commencement of grading, trenching, and excavation, the Extended Phase I Assessment shall be completed, and the archaeologist shall document any findings and subsurface conditions in an Extended Phase 1 report which shall be submitted to the City. If the Extended Phase I Investigation identifies archaeological resources, the archaeologist shall evaluate the find to determine its significance under CEQA (14 CCR 15064.5[f]; Public Resources Code Section 21082), consistent with MM 4.4b.

MM 4.4b **Unanticipated Discovery of Archaeological Resources.** In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the proposed project, all construction work occurring within 50 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Construction activities may not resume in the area immediate to the discovery until authorized by the archaeologist. Depending upon the significance of the find under CEQA (14 CCR 15064.5[f]; Public Resources Code Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work such as preparation of an archaeological or tribal cultural treatment plan, testing, or data recovery would be warranted. Examples of treatment for archaeological resources, in no order of preference, may include, but are not limited to, any of the following: (1) avoiding the resource, (2) establishing a

permanent conservation easement over the resource, (3) capping or covering archaeological site with a layer of soil before building on the site, and (4) having parks, greenspace, or other open space incorporate the archaeological site. Excavation and curation shall be the last considered treatment for archaeological resources.

Impact 4.4-3 Would the project disturb any human remains, including those interred outside of formal cemeteries?

There is no evidence that human remains are present within the project site. However, the ConnectMenlo Final EIR determined that human remains associated with pre-contact archaeological deposits could exist within the City and could be encountered during ground-disturbing activities associated with development and redevelopment projects. As noted above, the ConnectMenlo EIR notes that Native American remains were encountered during two construction projects in the Bayfront area as recently as 2012 (City of Menlo Park 2016b). Therefore, the excavation, grading and trenching activities necessary to implement the proposed project have the potential to disturb human remains interred outside of formal cemeteries.

A significant impact to cultural resources could occur if Native American human remains are disturbed during construction. However, in the event that human remains are encountered, construction contractors would be required to comply with California Health and Safety Code Section 7050.5 and PRC Section 5097.98, which define required notification and evaluation procedures, as described in Section 4.4.2, Regulatory Framework. This includes stopping all ground disturbance at and surrounding to the discovery notifying the County Coroner who must notify the NAHC if the remains are thought to be Native American, and the NAHC notifying a Most Likely Descendant for evaluation and recommendations on treatment. Compliance with Health and Safety Code Section 7050.5 would help reduce the potential impact to human remains because it would protect Native American burials, skeletal remains, and associated grave goods, and require sensitive treatment and disposition of those remains. Thus, potential impacts associated with discovery of human remains would remain **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

The geographic scope or cumulative context for evaluation of potential cumulative impacts on cultural resources is San Mateo County and adjacent areas of Santa Clara County. While project specific impact analysis for cultural resources necessarily includes separate analyses for historical, archaeological and human remains, the cumulative analysis combines these resources into a single, non-renewable resource base and considers the additive effect of project-specific impacts to significant regional impacts on cultural resources. Thus, this cumulative impact analysis for cultural resources relies on projected plans for development in the City of Menlo Park, the 19 other incorporated cities within San Mateo County, and the City of East Palo Alto, consistent with CEQA Guidelines Section 15130(b)(1)(B).

Impact 4.4-4 Would the project make a cumulatively considerable contribution to a significant cumulative impact related to cultural resources?

All cultural resources and human remains are unique and non-renewable; thus, all adverse effects or negative impacts erode a dwindling resource base. For example, the loss of any one archaeological site or historical site

affects all others in a region because these resources are best understood in the context of the entirety of the cultural system of which they are a part. Although there are no known cultural resources within or adjacent to the project site, the project region is considered archaeologically sensitive, as discussed further below. Thus, there is a potential for cultural resources to be encountered during construction and for the project to cause a substantial adverse change in the significance of such a resource.

Archaeological evidence suggests that San Mateo County has been inhabited dating to more than 5,500 years before present time. Background research has identified a number of historical archaeological sites, prehistoric archaeological sites, and historic buildings and structures throughout the County. Urban development throughout San Mateo County and adjacent areas of Santa Clara County has likely impacted a number of known and unknown historic and prehistoric sites. It is reasonable to assume that present and future development would continue to have an impact on known and unknown cultural, historical, and archaeological resources throughout the region. Proper planning and appropriate mitigation can help to capture and preserve knowledge of such resources and can provide opportunities for increasing our understanding of the past environmental conditions and cultures by recording data about sites discovered and preserving artifacts found. Federal, state, and local laws are also in place, as discussed above, that protect these resources in most instances. However, the cumulative loss of cultural, historic, and archaeological resources from present and future development within San Mateo County and adjacent areas of Santa Clara County would be considered a potentially significant cumulative impact.

Further, the Bayfront Area of the City of Menlo Park has been identified as archaeologically sensitive. The ConnectMenlo EIR notes that “artifacts from the lives of these early residents of what is now Menlo Park are still being discovered today. As recently as 2012, Native American remains were found at a construction site along Willow Road, in Menlo Park. Additionally, Native American remains were found at the Prologis commercial development site in the Bayfront Area” (City of Menlo Park 2016b).

The analysis in the ConnectMenlo EIR found that the future development anticipated under the General Plan has the potential to cumulatively impact cultural resources but that such impacts would be reduced to less-than-significant levels with implementation of mitigation measures and compliance with applicable federal, state, and local regulations. Thus, the analysis in the ConnectMenlo EIR concluded that ongoing development within the City would not create or contribute to a cumulative impact on cultural resources (Menlo Park 2016b). While the proposed project would increase the total development density and intensity compared to the amount of development evaluated in the ConnectMenlo EIR, the project would not expand the footprint of development relative to the General Plans of San Mateo County and each of the incorporated cities included in the geographic scope of this analysis, and relative to the Santa Clara County General Plan. Further, the project, like the development analyzed in the ConnectMenlo EIR, would undertake mitigation designed to minimize or eliminate impacts to cultural resources. Thus, the analysis and conclusions of the ConnectMenlo EIR regarding cumulative impacts to cultural resources remain applicable to the proposed project, which would not create or make a cumulatively considerable contribution to any significant cumulative impact on cultural resources from prior and existing development.

As discussed above and evaluated in Appendices E1 and E2, the project site does not contain any known cultural, historic, or archaeological resources or human remains, although archaeological resources and human remains could be present below-ground. The project is required to comply with the City’s General Plan implementation measures related to the preservation of cultural resources as described in Mitigation Measures 4.4a and 4.4b and the Health and Safety Code Section 7050.5 related to unearthing human remains. Under these requirements, any resources that may be uncovered during construction would be required to be evaluated and where a resource is significant, it must be preserved in place unless preservation in place is infeasible, in which case archaeological resources may be carefully excavated subject to an approved data recovery plan. This would ensure that the project

would not result in any significant direct adverse effects to cultural resources because all of the important information that a resource can provide would be retained, and therefore the project would not make a cumulatively considerable contribution to a significant cumulative impact related to cultural resources. Therefore, in combination with past, present, and reasonably foreseeable projects, the project would result in a **less-than-significant** cumulative impact with respect to cultural resources.

Mitigation Measures

Implementation of Mitigation Measures 4.4a and 4.4b and compliance with Health and Safety Code Section 7050.5 would reduce the project's impacts to cultural resources to a less-than-significant level and would ensure that the project would not make a cumulatively considerable contribution to any significant cumulative impact on cultural resources. No additional mitigation measures are required.

4.4.5 References Cited

- City of Menlo Park. 2016a. *General Plan*. Adopted November 19, 2016. https://www.menlopark.org/DocumentCenter/View/15013/Land-Use-and-Circulation-Element_adopted-112916_final_figures?bidId=.
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- Weeks, K.D., and A.E. Grimmer. 1995. *The Secretary of the Interior's Standards for the Treatment of Historic Properties: With Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings*. Washington, DC: U.S. Department of the Interior, National Park Service.

4.5 Energy

This section describes the existing conditions related to energy consumption, identifies associated regulatory requirements, and evaluates the potential energy consumption and conservation impacts related to implementation of the 123 Independence Drive Residential Project (project; proposed project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the project.

The primary sources reviewed to prepare this section include the City of Menlo Park (City) General Plan (City of Menlo Park 2016a), the 2019 California Building Standards Code, the adopted 2022 California Building Standards Code (effective January 1, 2023), and information from the City. Other sources consulted are listed in Section 4.5.5, References Cited. In addition to those sources, the analysis in this section is based, in part, on the Air Quality, Greenhouse Gas Emissions, and Energy Calculations prepared by Dudek in March 2022 (Appendix C1) and the Transportation Impact Analysis prepared by Dudek in September 2022 (Appendix J1).

Public comments received in response to the Notice of Preparation from the Sequoia Union High School District concerns with the potential increase in traffic volumes within the project area.

4.5.1 Existing Conditions

Electricity

The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into electrical energy. The delivery of electricity involves a number of system components, including power generation facilities, transmission and distribution lines, substations and transformers that lower transmission line power (voltage) to a level appropriate for on-site distribution and use. The electricity generated is distributed through a network of transmission and distribution lines commonly called a power grid. Production of electricity and its conveyance through the power grid occur in response to market demand.

Energy capacity, or electrical power, is generally measured in watts while energy use is measured in watt-hours (Wh). For example, if a light bulb has a capacity rating of 100 watts, the energy required to keep the bulb on for 1 hour would be 100 Wh. If 10 100-watt bulbs were on for 1 hour, the energy required would be 1,000 Wh or 1 kilowatt-hour (kWh). On a utility scale, a generator's capacity is typically rated in megawatts, which is 1 million watts, while energy usage is measured in megawatt-hours (1 million watt-hours) or gigawatt-hours (1 billion watt-hours).

Peninsula Clean Energy

Residences and businesses within the City of Menlo Park, including the project site, receive electricity from either the Pacific Gas and Electric Company (PG&E) or the Peninsula Clean Energy Authority (PCE). PCE is a Community Choice Aggregator that was created as a Joint Powers Agency in 2016 to serve all areas of San Mateo County. In March 2021, PCE received approval from the California Public Utilities Commission (CPUC) to also serve the City of Los Banos. PCE is the default energy provider throughout San Mateo County, including each of the 20 incorporated cities within the County, but residents may opt-out of obtaining energy from PCE and instead obtain it from PG&E. Energy supplied through PCE is transmitted to customers through transmission lines and other infrastructure owned and maintained by PG&E. In 2020, a total of 4,168 million kWh of electricity was consumed in San Mateo County, with 2,516 million kWh being used by non-residential customers and 1,652 million kWh being used by residential customers (CEC 2021a).

PCE serves 765,000 customers in San Mateo County by providing more than 3,500 gigawatt hours annually of electricity. PCE obtains all of its electric power from renewable resources (e.g., water, wind, and solar) and carbon-free sources (e.g., hydroelectric and geothermal). As of November 2021, PCE had secured long-term contracts for 500 megawatts (MW) of solar energy, 102 MW of energy storage, 357 MW of wind energy, and 35 MW of geothermal energy (PCE 2022). This includes a 15-year solar-plus-storage Power Purchase Agreement with Leeward Renewable Energy to receive electric power from Leeward Renewable Energy's 102 MW Chaparral Solar Facility in Kern County, California. The agreement includes purchase of energy and capacity from this facility's 52 MW (208 megawatt-hour) battery storage system (businesswire.com 2021). Customers of PCE have two electricity options to choose from, ECOplus which is 50 percent renewable energy (default option) and 100 percent carbon-free energy, and ECO100, which is 100 percent renewable energy (PCE 2022).

Pacific Gas & Electric

PG&E provides electric services to 5.4 million customers via 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines over a 70,000-square-mile service area that includes Northern California and Central California (PG&E 2016). According to PG&E, its customers consumed 78,519 million kWh of electricity in 2020 (Table 4.5-1) (CEC 2021b).

Table 4.5-1. Pacific Gas and Electric Company 2020 Electricity Consumption

Sector	Total Electricity (in Millions of kWh)
Agricultural and Water Pump	6,637.59
Commercial Buildings	26,246.78
Commercial Other	3,948.56
Industry	9,814.34
Mining and Construction	1,747.64
Residential	29,833.54
Streetlight	290.38
Total Consumption^a	78,518.84

Source: CEC 2021b.

Notes: kWh = kilowatt-hour.

^a Total may not sum precisely due to rounding.

PG&E receives electric power from a variety of sources. According to the CPUC's 2021 California Renewables Portfolio Standard Annual Report, 35 percent of PG&E's power came from eligible renewable energy sources in 2019, including biomass/waste, geothermal, small hydroelectric, solar, and wind sources (CPUC 2021). Therefore, PG&E exceeded the state's Renewables Portfolio Standard (RPS) goal of 33 percent renewable energy delivered by 2020.

Based on recent energy supply and demand projections in California, statewide annual peak electricity demand is projected to grow an average of 1,087 megawatts per year for the next decade, or 1.5 percent annually, and consumption per capita is expected to remain relatively constant at 7.6 to 8.0 megawatt-hours per person (CEC 2018).

Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs, mainly located outside the State, and delivered through high-pressure transmission pipelines. The natural gas transportation system is a nationwide network, and therefore, resource availability is typically not an issue. Natural gas provides almost one-

third of the state's total energy requirements and is used in electricity generation, space heating, cooking, water heating, industrial processes, and CPUC Public Utilities Commission regulates natural gas utility service for approximately 10.8 million customers who receive natural gas from PG&E, Southern California Gas, San Diego Gas and Electric Company, Southwest Gas, and several smaller natural gas utilities. PG&E provides natural gas service to most of Northern California, including San Mateo County. As provided in Table 4.5-2, PG&E customers consumed approximately 4,509 million therms of natural gas in 2020 (CEC 2021c).

Table 4.5-2. Pacific Gas and Electric Company 2020 Natural Gas Consumption

Sector	Total Natural Gas (in Millions of Therms)
Agricultural and Water Pump	44.03
Commercial Buildings	796.94
Commercial Other	50.97
Industry	1,585.35
Mining and Construction	139.96
Residential	1,891.28
Total Consumption^a	4,508.54

Source: CEC 2021c.

Note:

^a Total may not sum precisely due to rounding.

In 2020, PG&E delivered 200 million therms of natural gas to San Mateo County, with the majority going to residential uses (118 million therms) (CEC 2021d). Notably, the project would be built in accordance with the City's Municipal Code Chapter 12.16, approved September 2019, which requires new residential buildings be "all-electric," meaning they must be built without a natural gas supply.

Petroleum

There are more than 36 million registered vehicles in California, and those vehicles consume an estimated 16.8 billion gallons of fuel each year (CEC 2019a; DMV 2020). Petroleum currently accounts for approximately 92 percent of California's transportation energy consumption (CEC 2019a). However, technological advances, market trends, consumer behavior, and government policies could result in significant changes in fuel consumption by type and in total. At the federal and state levels, various policies, rules, and regulations have been enacted to improve vehicle fuel efficiency, promote the development and use of alternative fuels, reduce transportation-source air pollutants and greenhouse gas (GHG) emissions, and reduce vehicle miles traveled (VMT). Chapter 4.7, Greenhouse Gas Emissions, discusses in more detail both federal and state regulations that would help increase fuel efficiency of motor vehicles and reduce GHG emissions (see Section 4.7.2, Regulatory Framework). Market forces have driven the price of petroleum products steadily upward over time, and technological advances have made use of other energy resources or alternative transportation modes increasingly feasible.

Largely as a result of and in response to these multiple factors, gasoline consumption within the state has declined in recent years, and availability of other alternative fuels/energy sources has increased. The quantity, availability, and reliability of transportation energy resources have increased in recent years, and this trend will likely continue and accelerate (CEC 2019a). Increasingly available and diversified transportation energy resources act to promote continuing reliable and affordable means to support vehicular transportation within the state.

4.5.2 Regulatory Framework

Federal Regulations

Federal Energy Policy and Conservation Act and Corporate Average Fuel Economy Standards

In 1975, Congress enacted the Federal Energy Policy and Conservation Act, which established the first fuel economy standards, known as the Corporate Average Fuel Economy standards, for on-road motor vehicles in the United States. Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States. Pursuant to the act, the National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards. In 2012, new Corporate Average Fuel Economy (CAFE) standards for passenger cars and light trucks were approved for model years 2017 through 2021 (77 FR 62624–63200). In 2020, NHTSA and the U.S. Environmental Protection Agency (EPA) finalized amendments to the CAFE standards for model years 2021 through 2026 under the Safer Affordable Fuel-Efficient Vehicles Rule. Those amendments reduced the requirement for annual increases in efficiency from approximately 5 percent (as established in 2012) to approximately 1.5 percent. The Safer Affordable Fuel-Efficient Vehicles Rule also revoked California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates for the state. However, in December 2021, NHTSA and EPA again revised the CAFE standards and GHG emissions standards for passenger cars and light trucks for model years 2023–2026, and reinstated California's authority to set its own standards. The final standards will achieve significant reductions in energy consumption and GHG emissions within the transportation sector.

Energy Policy Act of 1992 and 2005

The Energy Policy Act of 1992 was passed to reduce the country's dependence on foreign petroleum and improve air quality. The act includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. The act requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are also included in the act. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs. The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law. In addition to setting increased Corporate Average Fuel Economy standards for motor vehicles, the EISA facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances

- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020
- While superseded by the EPA and NHTSA actions described previously, establishing miles per gallon targets for cars and light trucks and directing the NHTSA to establish a fuel economy program for medium-and heavy-duty trucks and create a separate fuel economy standard for trucks

This federal legislation requires ever-increasing levels of renewable fuels (the RFS) to replace petroleum (EPA 2017). The EPA is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains at least a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the U.S. As required under the act, the original RFS program required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the EISA, the RFS program was expanded in several key ways that lay the foundation for achieving significant reductions in GHG emissions from the use of renewable fuels, reducing imported petroleum, and encouraging the development and expansion of the renewable fuels sector in the United States. The updated program is referred to as “RFS2” and includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline.
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.
- EISA established new categories of renewable fuel and set separate volume requirements for each one.
- EISA required the EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

Additional provisions of the EISA address energy savings in government and public institutions, research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green” jobs.

State Regulations

California Environmental Quality Act

In accordance with the California Environmental Quality Act (CEQA) Guidelines and Appendix F, Energy Conservation, of the CEQA Guidelines, in order to ensure that energy implications are considered in project decisions, EIRs must include a discussion of the potential significant energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the CEQA Guidelines provides a list of energy-related topics that should be analyzed in an EIR. In addition, while not described as significance thresholds for determining the significance of impacts related to energy, Appendix F provides the

following topics that the lead agency may consider in the energy analysis in an EIR, where topics are applicable or relevant to the project:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The effects of the project on peak and base period demands for electricity and other forms of energy.
4. The degree to which the project complies with existing energy standards.
5. The effects of the project on energy resources.
6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Warren-Alquist Act

The California Legislature passed the Warren-Alquist Act in 1974, which gives statutory authority to the California Energy Commission (CEC). The legislation also incorporated the following three key provisions designed to address the demand side of the energy equation:

- It directed the CEC to formulate and adopt the nation's first energy conservation standards for both buildings constructed and appliances sold in California.
- It removed the responsibility of electricity demand forecasting from the utilities, which had a financial interest in high demand projections, and transferred it to the more impartial CEC.
- It directed the CEC to embark on an ambitious research and development program, with a particular focus on fostering what were characterized as "non-conventional energy sources."

State of California Energy Action Plan

The CEC and CPUC approved the first State of California Energy Action Plan in 2003. The plan established shared goals and specific actions to ensure the provision of adequate, reliable, and reasonably priced electrical power and natural gas supplies; it also identified cost-effective and environmentally sound energy policies, strategies, and actions for California's consumers and taxpayers. In 2005, the CEC and CPUC adopted a second Energy Action Plan to reflect various policy changes and actions of the prior 2 years.

At the beginning of 2008, the CEC and CPUC determined that it was not necessary or productive to prepare a new energy action plan. This determination was based, in part, on a finding that the state's energy policies have been significantly influenced by the passage of Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (discussed below). Rather than produce a new energy action plan, the CEC and CPUC prepared an "update" that examines the state's ongoing actions in the context of global climate change.

Renewables Portfolio Standard

Senate Bill (SB) 1078 (2002) established the California RPS Program and required that a retail seller of electricity purchase a specified minimum percentage of electricity generated by eligible renewable energy resources as

defined in any given year, culminating in a 20 percent standard by December 31, 2017. These retail sellers include electrical corporations, community choice aggregators, and electric service providers. The bill relatedly required the CEC to certify eligible renewable energy resources, design and implement an accounting system to verify compliance with the RPS by retail sellers, and allocate and award supplemental energy payments to cover above-market costs of renewable energy.

SB 107 (2006) accelerated the RPS established by SB 1078 by requiring that 20 percent of electricity retail sales be served by renewable energy resources by 2010 (not 2017). Additionally, SB X1-2 (2011) requires all California utilities to generate 33 percent of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 sets a three-stage compliance period: by December 31, 2013, 20 percent shall come from renewables; by December 31, 2016, 25 percent shall come from renewables; and by December 31, 2020, 33 percent shall come from renewables.

SB 350 (2015) requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030, with interim goals of 40 percent by 2024 and 45 percent by 2027.

SB 100 (2018) increased the standards set forth in SB 350. The bill establishes that 44 percent of the total electricity sold per year to retail customers in California be secured from qualifying renewable energy sources by December 31, 2024, with that number increasing to 52 percent by December 31, 2027, and 60 percent by December 31, 2030. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100 percent of the retail sales of electricity to California. This bill requires that the achievement of 100 percent zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Consequently, utility energy generation from non-renewable resources is expected to be reduced based on implementation of the 60 percent RPS in after December 31, 2030.

California Energy Efficiency Action Plan

The 2019 California Energy Efficiency Action Plan has three primary goals for the state: double energy efficiency savings by 2030 relative to a 2015 base year (per SB 350), expand energy efficiency in low-income and disadvantaged communities, and reduce GHG emissions from buildings. This plan provides guiding principles and recommendations on how the state would achieve those goals. These recommendations include:

- identifying funding sources that support energy efficiency programs,
- identifying opportunities to improve energy efficiency through data analysis,
- using program designs as a way to encourage increased energy efficiency on the consumer end,
- improving energy efficiency through workforce education and training, and
- supporting rulemaking and programs that incorporate energy demand flexibility and building decarbonization (CEC 2019b).

AB 3232

AB 3232 (Warren-Alquist Act) required the CEC to adopt building design and construction standards and energy and water conservation standards for new residential and nonresidential buildings to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy, including energy associated with the use of water.

AB 3232 also requires the CEC to adopt standards for a program of electrical load management for each utility service area and assess the potential for the state to reduce the emissions of GHGs from the state's residential and commercial building stock by at least 40 percent below 1990 levels by January 1, 2030. In addition, CEC would develop integrated energy policy reports, to report on the emissions of GHGs associated with the supply of energy to residential and commercial buildings.

AB 1007

AB 1007 (2005) required the CEC to prepare a statewide plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the plan in partnership with the California Air Resources Board (CARB) and in consultation with the other state, federal, and local agencies. The plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

AB 32 and SB 32

In 2006, the Legislature enacted AB 32, the California Global Warming Solutions Act. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020.

In 2016, the Legislature enacted SB 32, which extended the horizon year of the state's codified GHG reduction planning targets from 2020 to 2030, requiring California to reduce its GHG emissions to 40 percent below 1990 levels by 2030.

In accordance with AB 32 and SB 32, CARB prepares scoping plans to guide the development of Statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focus on increasing energy efficiencies and the use of renewable resources and reducing the consumption of petroleum-based fuels (such as gasoline and diesel). As such, the State's GHG emissions reduction planning framework creates co-benefits for energy-related resources. Additional information on AB 32 and SB 32 is provided in Chapter 4.7 Greenhouse Gas Emissions, of this Draft EIR.

California Building Standards

The California Building Standards Code was established in 1978 and serves to enhance and regulate California's building standards (California Code of Regulations, Title 24). Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically (every 3 years) to incorporate and consider new energy efficiency technologies and methodologies.

The 2019 Title 24 standards were approved and adopted by the California Building Standards Commission in December 2018. The 2019 standards became effective January 1, 2020. The standards require that all low-rise residential buildings have a photovoltaic system meeting the minimum qualification requirements such that annual electrical output equal to or greater than the dwelling's annual electrical usage. Notably, net energy metering rules limit residential rooftop solar generation to produce no more electricity than the home is expected to consume on an annual basis. Single-family homes built with the 2019 standards will use approximately 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards, while new non-residential buildings will use approximately 30 percent less energy.

Looking beyond the 2019 standards, the most important energy characteristic for a building will be that it produces and consumes energy at times that are appropriate and responds to the needs of the grid, which reduces the building's emissions.

In furtherance of that characteristic, the 2019 standards require that new single-family homes include solar photovoltaic to meet the home's expected annual electric needs and also encourage demand responsive technologies, including battery storage, heat pump water heaters, and improving the building's thermal envelope through high performance attics, walls, and windows. These smarter homes perform better and affect the grid less, which reduces the building's GHG emissions.

The 2022 standards will improve upon the 2019 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The CEC updates the Title 24 Energy Code every 3 years. The CEC adopted the 2022 Title 24 Energy Code in August 2021 and the California Building Standards Commission approved incorporating the updated code into the California Building Standards Code in December 2021. The 2022 Energy Code will go into effect on January 1, 2023.

Title 24 also includes Part 11, the California Green Building Standards Code (CALGreen). CALGreen instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, as well as schools and hospitals. The current code is the 2019 California Building Code; however, the 2022 California Building Code was adopted in December 2021 and will be effective January 1, 2023. The mandatory standards require the following:

- In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for low-emitting, fuel-efficient and carpool/van pool vehicles.
- Construction shall facilitate future installation of electric vehicle supply equipment.
- Shade trees shall be planted to comply with specifications for surface parking areas, landscape areas, and hardscape areas.
- Water conserving plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with efficiency standards.
- Outdoor potable water use in landscaped areas shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources Model Water Efficient Landscape Ordinance, whichever is more stringent.
- Outdoor recycled water supply systems shall be installed in accordance with applicable state codes.
- Installations of heating, ventilation, and air conditioning (HVAC); refrigeration; and fire suppression equipment shall comply with specified standards.

The CALGreen standards also include voluntary efficiency measures that are implemented at the discretion of agencies and applicants.

SB 1368

On September 29, 2006, Governor Arnold Schwarzenegger signed into law SB 1368 (Perata, Chapter 598, Statutes of 2006). The law limits long-term investments in baseload generation by the state's utilities to those power plants that meet an emissions performance standard jointly established by the CEC and the CPUC.

The CEC has designed regulations that:

- Establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 pounds carbon dioxide (CO₂) per megawatt-hour. This would encourage the development of power plants that meet California's growing energy needs while minimizing their emissions of GHGs;
- Require posting of notices of public deliberations by publicly owned utilities on long-term investments on the CEC website. This would facilitate public awareness of utility efforts to meet customer needs for energy over the long-term while meeting the state's standards for environmental impact; and
- Establish a public process for determining the compliance of proposed investments with the emissions performance standard (EPS) (Perata, Chapter 598, Statutes of 2006).

Integrated Energy Policy Report

CEC is responsible for preparing integrated energy policy reports, which identify emerging trends related to energy supply, demand, conservation, public health and safety, and maintenance of a healthy economy. The latest Integrated Energy Policy Report was released in early 2018 and addressed a variety of issues, including, but not limited to, implementation of SB 350, electricity resource/supply plans, electricity and natural gas demand forecast, natural gas outlook, transportation energy demand forecasts, doubling energy efficiency savings, integrated resource planning, climate adaptation and resiliency, renewable gas, Southern California energy reliability, distributed energy resources, strategic transmission investment plan, and existing power plant reliability issues (CEC 2019b).

AB 1493

Adopted in 2002 by the state legislature, AB 1493 ("Pavley" regulations) required that the CARB develop and adopt, no later than January 1, 2005, regulations to achieve the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles.

The first California request to implement GHG standards for passenger vehicles, known as a waiver request, was made in December 2005 and was denied by the EPA in March 2008. That decision was based on a finding that California's request to reduce GHG emissions from passenger vehicles did not meet the Clean Air Act requirement of showing that the waiver was needed to meet "compelling and extraordinary conditions."

The EPA granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks, and sport utility vehicles on June 30, 2009. On September 24, 2009, CARB adopted amendments to the Pavley regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016. These amendments are part of California's commitment to a nationwide program to reduce new passenger vehicle GHGs from 2012 through 2016. CARB's September 2009 amendments will allow for California's enforcement of the Pavley rule while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to harmonize its rules with the federal rules for passenger vehicles.

It is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016, all while improving fuel efficiency and reducing motorists' costs.

Executive Order S-1-07

Issued on January 18, 2007, Executive Order (EO) S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO₂-equivalent (CO₂e) grams per unit of fuel energy sold in California. The target of the Low

Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste. In addition, the Low Carbon Fuel Standard would drive the availability of plug-in hybrid, battery electric, and fuel-cell power motor vehicles. The Low Carbon Fuel Standard is anticipated to lead to the replacement of 20 percent of the fuel used in motor vehicles with alternative fuels by 2020.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or SB 375, coordinates land use planning, regional transportation plans, and funding priorities to help California meet its GHG emissions reduction mandates. As codified in California Government Code Section 65080, SB 375 requires metropolitan planning organizations to include a sustainable communities strategy in their regional transportation plans. The main focus of the sustainable communities strategy is to plan for growth in a fashion that will ultimately reduce GHG emissions, but the strategy is also a part of a bigger effort to address other development issues within the general vicinity, including transit and VMT, which influence the consumption of petroleum-based fuels. Plan Bay Area 2050 is the SCS for the region. As required by SB 375, Plan Bay Area 2050 defines a transportation and land use/housing strategy for the Bay Area to address transportation mobility and accessibility needs, land development, and GHG emissions reduction requirements through 2050 (MTC and ABAG 2021).

Truck and Bus Regulation, On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation

On December 12, 2008, CARB approved the Truck and Bus Regulation to significantly reduce PM, and NO_x emissions from existing diesel vehicles operating in California. Amendments to this regulation were approved by CARB on April 25, 2014.

The regulation applies to nearly all diesel fueled, dual-fueled, or alternative diesel-fueled trucks and buses with a gross vehicle weight rating greater than 14,000 pounds that are privately or federally owned and for privately and publicly owned school buses. The purpose of this regulation is to reduce emissions of diesel PM, NO_x, and other criteria pollutants from in-use diesel-fueled vehicles.

Heavier trucks and buses with a gross vehicle weight rating greater than 26,000 pounds must comply with a schedule by engine model year or owners can report to show compliance with more flexible options. Starting January 1, 2012, heavier trucks were required to meet the engine model year schedule. Fleets that comply with the schedule must install the best available PM filter on 1996 model year and newer engines and replace the vehicle 8 years later. Trucks with 1995 model year and older engines must be replaced starting in 2015. Replacements with a 2010 model year or newer engines meet the final requirements, but owners can also replace with used trucks that have a future compliance date on the schedule. For example, a replacement with a 2007 model year engine complies until 2023. By 2023, all trucks and buses must have 2010 model year engines with few exceptions. No reporting is required if complying with this schedule (CARB 2014).

Advanced Clean Cars Program

The Advanced Clean Cars (ACC) I program (January 2012) is an emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package of regulations: the Low-Emission Vehicle regulation for criteria air pollutant and GHG

emissions and a technology forcing regulation for zero-emission vehicles (ZEV) that contributes to both types of emission reductions (CARB 2021a). The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars. To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025 cars will emit 75 percent less smog-forming pollution than the average new car sold in 2015. The ZEV program will act as the focused technology of the ACC I program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid EVs in the 2018 to 2025 model years.

The ACC II program is currently in development to establish the next set of Low-Emission Vehicle and ZEV requirements for model years after 2025 to contribute to meeting federal ambient air quality ozone standards and California's carbon neutrality standards (CARB 2021a). The main objectives of ACC II are:

1. Maximize criteria and GHG emission reductions through increased stringency and real-world reductions.
2. Accelerate the transition to ZEVs through both increased stringency of requirements and associated actions to support wide-scale adoption and use.

An ACC II rulemaking package, which considered technological feasibility, environmental impacts, equity, economic impacts, and consumer impacts, was adopted by CARB in August 2022.

Advanced Clean Trucks Program

The purpose of the Advanced Clean Trucks Regulation (June 2020) is to accelerate the market for zero-emission vehicles in the medium- and heavy-duty truck sector and to reduce emissions NO_x, fine particulate matter, TACs, GHGs, and other criteria pollutants generated from on-road mobile sources (CARB 2021b). Requiring medium- and heavy-duty vehicles to transition to zero-emissions technology will reduce health risks to people living in and visiting California and is needed to help California meet established near- and long-term air quality and climate mitigation targets. The regulation has two components including (1) a manufacturer sales requirement and (2) a reporting requirement:

1. **Zero-emission truck sales:** Manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines will be required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales.
2. **Company and fleet reporting:** Large employers including retailers, manufacturers, brokers and others will be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, will be required to report about their existing fleet operations. This information will help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

Executive Order B-16-12

Governor Brown issued EO S-16-12 on March 23, 2012. The EO requires that state entities under the governor's direction and control support and facilitate the rapid commercialization of ZEVs. It orders CARB, the CEC, CPUC, and other relevant agencies work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve the following by 2015:

- The state's major metropolitan areas will be able to accommodate ZEVs, each with infrastructure plans and streamlined permitting
- The state's manufacturing sector will be expanding ZEV and component manufacturing

- The private sector's investment in ZEV infrastructure will be growing
- The state's academic and research institutions will be contributing to ZEV research, innovation and education.

CARB, the CEC, and CPUC, are also directed to establish benchmarks to help achieve the following goals by 2020:

- The state's ZEV infrastructure will be able to support up to one million vehicles
- The costs of ZEV will be competitive with conventional combustion vehicles
- ZEVs will be accessible to mainstream consumers
- There will be widespread use of ZEVs for public transportation and freight transport
- Transportation sector GHG emissions will be falling as a result of the switch to ZEVs
- Electric vehicle charging will be integrated into the electricity grid
- The private sector's role in the supply chain for ZEV component development and manufacturing will be expanding.

Benchmarks are also to be established to help achieve the following goals by 2025:

- Over 1.5 million ZEVs will be on California roads and their market share will be expanding
- Californians will have easy access to ZEV infrastructure
- The ZEV industry will be a strong and sustainable part of California's economy
- California's clean, efficient vehicles will annually displace at least 1.5 billion gallons of petroleum fuels.

On a statewide basis, the EO establishes a target reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels by 2050.

SB 1383

SB 1383 (Chapter 395, Statutes of 2016). 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. Law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed of edible food is recovered for human consumption by 2025 (CalRecycle 2019).

Regional and Local Regulations

City of Menlo Park General Plan

Policies pertaining to improving air quality are addressed in the Circulation and the Open Space/Conservation, and the Noise and Safety Elements of the City's General Plan. Relevant General Plan policies related to air quality are included in the following subsections.

Circulation Element

Goal CIRC-3: Increase mobility options to reduce traffic congestion, greenhouse gas emissions, and commute travel time.

Policy CIRC-3.1: Support development and transportation improvements that help reduce per service population (or other efficiency metric) VMT.

Goal CIRC-4: Improve Menlo Park’s overall health, wellness, and quality of life through transportation enhancements.

Policy CIRC-4.1: Encourage the safer and more widespread use of nearly zero-emission modes, such as walking and biking, and lower emission modes like transit, to reduce GHG emissions.

Policy CIRC-4.2: Promote non-motorized transportation to reduce exposure to local air pollution, thereby reducing risks of respiratory diseases, other chronic illnesses, and premature death.

Open Space/Conservation, Noise and Safety Element

Goal OSC 4: Promote Sustainability and Climate Action Planning.

Policy OSC 4.1: Encourage, to the extent feasible, (1) a balance and match between jobs and housing, (2) higher density residential and mixed-use development to be located adjacent to commercial centers and transit corridors, and (3) retail and office areas to be located within walking and biking distance of transit or existing and proposed residential developments.

Policy OSC 4.2: Promote and/or establish environmentally sustainable building practices or standards in new development that would conserve water and energy, prevent stormwater pollution, reduce landfilled waste, and reduce fossil fuel consumption from transportation and energy activities.

Policy OSC 4.3: Promote the installation of renewable energy technology, such as, on residences and businesses through education, social marketing methods, establishing standards and/or providing incentives.

Policy OSC 4.4: Explore the potential for installing infrastructure for vehicles that use alternative fuel, such as electric plug in recharging stations.

Policy OSC 4.5: Encourage projects to achieve a high level of energy conservation exceeding standards set forth in the California Energy Code for Residential and Commercial development.

Policy OSC 4.6: Strive to meet the California State Integrated Waste Management Board per person target of waste generation per person per day through their source reduction, reuse, and recycling programs.

Policy OSC 4.8: Develop and implement a zero waste policy, or implement standards, incentives, or other programs that would lead the community towards a zero waste goal.

Goal OSC 5: Enhance and preserve air quality in accord with State and regional standards, and encourage the coordination of total water quality management including both supply and wastewater treatment.

Policy OSC 5.3: Encourage water-conserving practices in businesses, homes and institutions.

City of Menlo Park Municipal Code

On September 24, 2019, the Menlo Park City Council approved a reach code ordinance, which amended Chapter 12 of the City’s Municipal Code. The amendments require electricity as the only fuel source for most new buildings (not natural gas; emergency generators, however, can use natural gas). This ordinance would apply to new construction projects. Specifically, residential buildings must have an electric energy source for space heating, water heating, cooking appliances, and clothes dryers and cannot have any natural gas or propane plumbing

installed within the building. Furthermore, new high-rise buildings (more than three stories) would require a minimum of a 3-kilowatt photovoltaic system for buildings less than 10,000 square feet and a minimum of a 5-kilowatt photovoltaic system for buildings greater than or equal to 10,000 square feet (City of Menlo Park 2019). In addition, Section 16.45.130 of the City's Zoning Ordinance applies green building requirements to development projects within the R-MU zone district. This includes the following standards:

- 100 percent of the project's energy demand be met through any combination of the following measures: on-site energy generation; purchase of 100 percent renewable electricity through PCE or PB&E in an amount equal to the annual energy demand of the project; purchase and installation of local renewable energy generation within the City of Menlo Park in an amount equal to the annual energy demand of the project; and/or purchase of certified renewable energy credits and/or certified renewable energy offsets annually in an amount equal to the annual energy demand of the project;
- Construction of a new building 100,001 square feet and above must meet Leadership in Energy and Environmental Design (LEED) Gold BD+C standards;
- Construction of 100,001 square feet and above must enroll in EPA Energy Star Building Portfolio Manager and submit documentation of compliance;
- Attain the City's indoor and outdoor water use efficiency standards and be dual plumbed for the internal use of recycled water; and
- Prepare and implement a zero-waste management plan.

The City's Municipal Code Section 12.18.050 also imposes the following requirements on developments involving the construction of more than two multifamily dwelling units:

- Each townhome must be prewired for one electric vehicle charger; and
- Electric vehicle charging stations must be installed in 15 percent of the required parking spaces.

4.5.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to energy are based on Appendix G and Section 15130 of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to energy would occur if the project would:

- A. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- B. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.
- C. Result in cumulatively considerable energy impacts.

4.5.4 Impacts and Mitigation Measures

Methodology

Construction

The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to estimate potential project-generated GHG emissions during construction, which were then used to estimate energy consumption.

Construction of project would result in GHG emissions primarily associated with use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. All details for construction criteria air pollutants discussed in Chapter 4.2, Air Quality, and Appendix A of this Draft EIR are also applicable for the estimation of construction-related GHG emissions. The estimated GHG emissions were back-calculated based on carbon content (i.e., kilograms of CO₂ per gallon) in order to estimate fuel usage during project construction. The conversion factor for gasoline is 8.38 kilograms per metric ton CO₂ per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton CO₂ per gallon (The Climate Registry 2021). Energy use calculations for construction are provided in Appendix A.

Operational

During project operations, activities that would consume energy would include electricity use for building operations, electricity for water and wastewater conveyance, and petroleum consumption from residents, visitors, and delivery vehicle trips. Additional assumptions for these sources are described in Chapter 4.7, Greenhouse Gases and energy use calculations for operations are provided in Appendix C1.

Project Impacts

Impact 4.5-1 Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Implementation of the project would increase the demand for electricity at the project site and gasoline and diesel consumption in the project area during construction and operation relative to existing uses. Because the existing uses at the project site use natural gas and the new buildings that would be constructed at the project site would be all-electric, the project would reduce the demand for natural gas.

Electricity

Construction Use

Temporary electric power for as-necessary lighting and electronic equipment such as computers inside temporary construction trailers would be provided by PG&E or PCE. The electricity used for such activities would be temporary, would be substantially less than that required for project operation, and would therefore have a negligible contribution to the project's overall energy consumption.

Operational Use

Project operation would require electricity for multiple purposes including, but not limited to, building heating and cooling, lighting, appliances, and electronics. Additionally, the supply, conveyance, treatment, and distribution of water would indirectly result in electricity usage. CalEEMod was used to estimate project emissions from electricity uses (see Appendix C1 for calculations). The existing land uses energy consumption was estimated by using default electricity generation rates in CalEEMod, based on the existing land use and climate zone. Based on the CalEEMod modeling, the existing land uses are estimated to consume approximately 899,487 kWh per year. The electricity consumption under the proposed project at full buildout was provided by the project sponsor (The Sobrato Organization) and is estimated to be approximately 4,451,000 kWh per year. As such, upon project implementation,

electricity demand and consumption at the project site would increase by 3,551,513 kWh per year (or 3.6 million kWh per year) (Appendix C-1).

The energy demand calculations do not take into account all of the project's energy-saving design features that surpass the code requirements. As such, the project's electricity use would be more efficient than what is required and would likely be even lower than the calculations presented above. Specifically, the project's green building features would involve the following:

Apartments

- All electric buildings to reduce greenhouse gas emissions
- On-site solar photovoltaic arrays to offset energy use and cost
- Electric vehicle charging stations
- Bike facilities for residents and visitors
- Water use reduction through efficient plumbing fixtures
- Use of native/adapted species to reduce irrigation needs
- Dual plumbing for recycled water reuse for building
- Recycled water reuse for irrigation
- Enhanced ventilation and carbon dioxide monitors for better indoor air quality
- Enhanced combustion ventilation and garage pollutant protection

Townhomes

- All electric buildings to reduce greenhouse gas emissions
- On-site solar photovoltaic arrays to offset energy use and cost
- Electric vehicle chargers
- Water use reduction through efficient plumbing fixtures
- Use of native/adapted species to reduce irrigation needs
- Recycled water reuse for irrigation
- Enhanced ventilation and carbon dioxide monitors for better indoor air quality
- Enhanced combustion ventilation and garage pollutant protection

These aspects of the project design would reduce energy associated with indoor and outdoor lighting, as well as direct energy consumption for each residential unit, and indirect energy consumption associated with water and wastewater treatment and conveyance. In addition, construction of the proposed project would be required to comply with the 2022 Title 24 Standards at a minimum and depending on timing of full project buildout, may be required to comply with future, more stringent energy codes at the time of construction. The 2022 Title 24 Standards include robust requirements for energy efficiency that apply to the planning, design, operation, construction, use and occupancy of every newly constructed building or structure.

Because the project is located within the R-MU zone district, Section 16.45.130 of the City's Zoning Ordinance would be applicable to the project, which includes the following green building requirements for development projects:

- 100 percent of the project's energy demand be met through on-site generation and/or renewable energy sources and/or be offset through the purchase of certified renewable energy credits;
- Construction of a new building of 100,001 square feet or more must meet LEED Gold standards;
- New construction of 100,001 square feet or more must enroll in EPA Energy Star Building Portfolio Manager and submit documentation of compliance;
- Attain indoor and outdoor water use efficiency standards and be dual plumbed for the internal use of recycled water; and
- Prepare and implement a zero-waste management plan.

Although electricity consumption would increase at the project site due to implementation of the project, the project would comply with the City's mandatory green building ordinance through implementing energy-efficiency measures. In addition, the project would be more energy efficient than the existing development on the site. The energy resources involved in project construction and operation would be used to accommodate existing and projected demand for housing rather than induce unnecessary energy use. Further, the amount of energy used by each project resident would be less than residents in older homes or less dense developments, such as traditional single-family subdivisions. For these reasons, electricity consumption of the proposed project would not be considered inefficient, wasteful, or unnecessary, and impacts would be **less than significant**.

Natural Gas

Construction

Natural gas is not anticipated to be required during project construction. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below under the "petroleum" subsection. Any minor amounts of natural gas that may be consumed as a result of project construction would have a negligible contribution to the project's overall energy consumption.

Operational Use

As previously discussed under Section 4.5.2, Regulatory Framework, the Menlo Park City Council approved a reach code ordinance, which amended Chapter 12 of the City's Municipal Code. The amendments require electricity as the only fuel source for new residential buildings (not natural gas, other than for emergency generators). This ordinance applies to new construction projects. Specifically, residential buildings must have an electric energy source for space heating, water heating cooking appliances, and clothes dryers and cannot have any natural gas or propane plumbing installed within the building. Accordingly, the project would be built "all electric" and would not result in natural gas consumption. Default natural gas usage rates in CalEEMod were used for the existing land uses. According to these estimations, the existing manufacturing and research and development land uses would consume approximately 2,803,488 thousand British thermal units (kBtu) per year. As such, upon project implementation, natural gas demand at the project site would decrease by 2,803,488 kBtu per year (Appendix C-1). This amount of natural gas is equivalent to a reduction of 28,041 therms. Therefore, the project would not result in natural gas consumption that would be considered inefficient or wasteful, and impacts would be **less than significant**.

Petroleum

Construction Use

Heavy-duty construction equipment of various types would be used during each phase of project construction. The CalEEMod analysis discussed in Section 4.2, Air Quality, and included in Appendix C1, lists the assumed equipment usage for each phase of construction. Based on that analysis, diesel-fueled construction equipment would run for an estimated total of 307,856 hours as summarized in Table 4.5-3.

Table 4.5-3. Hours of Operation for Construction Equipment

Construction Phase	Hours of Equipment Use
Demolition	4,752
Site Preparation	144
Grading	2,880
Building Construction	91,776
Paving	2,464
Architectural Coating	205,840
Total	307,856

Source: Appendix C1.

The estimated diesel fuel use from construction equipment is shown in Table 4.5-4.

Table 4.5-4. Construction Equipment Diesel Demand

Phase	Pieces of Equipment ^a	Equipment CO ₂ (MT) ^a	kg CO ₂ /Gallon ^b	Gallons
Demolition	9	81.04	10.21	7,936.94
Site Preparation	3	5.32	10.21	521.18
Grading	8	139.81	10.21	13,693.37
Building Construction	12	1,476.51	10.21	144,614.00
Paving	7	58.37	10.21	5,716.48
Architectural Coating	62	3,522.83	10.21	345,037.69
Total				517,519.66

Sources:

^a Appendix C1

^b The Climate Registry 2021.

Notes: CO₂ = carbon dioxide; MT = metric ton; kg = kilogram.

Calculations for total worker, vendor, and hauler fuel consumption are provided in Table 4.5-5 (Construction Worker Vehicle Gasoline Demand); Table 4.5-6 (Construction Vendor Truck Diesel Demand); and Table 4.5-7 (Construction Haul Truck Diesel Demand).

Table 4.5-5. Construction Worker Vehicle Gasoline Demand

Phase	Trips	Vehicle CO ₂ (MT) ^a	kg CO ₂ /Gallon ^b	Gallons
Demolition	528	1.54	8.78	175.93
Site Preparation	36	0.11	8.78	11.99

Table 4.5-5. Construction Worker Vehicle Gasoline Demand

Phase	Trips	Vehicle CO ₂ (MT) ^a	kg CO ₂ /Gallon ^b	Gallons
Grading	360	1.03	8.78	117.36
Building Construction	114,720	305.58	8.78	34,804.58
Paving	0	5.78	8.78	658.20
Architectural Coating	20,750	54.09	8.78	6,160.46
Total				41,928.52

Sources:^a Appendix C1^b The Climate Registry 2021.**Notes:** CO₂ = carbon dioxide; MT = metric ton; kg = kilogram.**Table 4.5-6. Construction Vendor Truck Diesel Demand**

Phase	Trips	Vehicle CO ₂ (MT) ^a	kg/CO ₂ /Gallon ^b	Gallons
Demolition	198	2.10	10.21	206.00
Site Preparation	18	0.19	10.21	18.73
Grading	135	1.42	10.21	138.80
Building Construction	19,120	191.69	10.21	18,774.62
Paving	0	0.00	10.21	0.00
Architectural Coating	2,075	20.49	10.21	2,006.68
Total				21,144.83

Sources:^a Appendix C1^b The Climate Registry 2021.**Notes:** CO₂ = carbon dioxide; MT = metric ton; kg = kilogram.**Table 4.5-7. Construction Haul Truck Diesel Demand**

Phase	Trips	Vehicle CO ₂ (MT) ^a	kg CO ₂ /Gallon ^b	Gallons
Demolition	200	9.45	10.21	925.41
Site Preparation	0	0.00	10.21	0.00
Grading	3,700	172.79	10.21	16,923.34
Building Construction	3,500	155.74	10.21	15,254.15
Paving	0	0.00	10.21	0.00
Architectural Coating	0	0.00	10.21	0.00
Total				33,102.90

Sources:^a Appendix C1^b The Climate Registry 2021.**Notes:** CO₂ = carbon dioxide; MT = metric ton; kg = kilogram.

As shown in Tables 4.5-4 through 4.5-7, the project is estimated to consume 613,696 gallons of petroleum during the construction phase. The project would be required to comply with CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes, which would minimize fuel consumption. While construction activities would consume petroleum-based fuels, consumption of such resources would be temporary

and would cease upon the completion of construction. Further, the petroleum consumed related to project construction would be typical of construction projects of similar types and sizes and would not necessitate new petroleum resources beyond what are typically consumed in California. Therefore, because petroleum use during construction would be temporary and relatively minimal, and would not be wasteful or inefficient, impacts would be **less than significant**.

Further, construction of the project is necessary to meet housing demand in a jobs-rich area. Since the housing responds to demand, using resources to construct housing is not wasteful. In addition, the housing is relatively dense, using fewer construction materials per unit than a less dense project, such as a single-family, large lot subdivision. As discussed above, those resources would be used as efficiently as possible.

Operational Use

During operations, the majority of fuel consumption resulting from the project would involve the use of motor vehicles traveling to and from the project site, as well as fuels used for alternative modes of transportation that may be used by employees, visitors, residents, and guests of the project.

Petroleum fuel consumption associated with motor vehicles traveling to and from the project site is a function of the vehicle miles traveled as a result of project operation. The annual unmitigated VMT as estimated by CalEEMod, attributable to the project is expected to be approximately 4,416,233 VMT (Appendix C1). The project would result in the consumption of an estimated 131,890 gallons of gasoline per year and 6,130 gallons of diesel per year from operation of vehicle trips traveling to and from the project site, or 138,020 gallons of petroleum per year. The existing uses was estimated to consume 71,321 gallons of gasoline per year and 2,990 gallons of diesel per year or 74,310 gallons of petroleum per year. As such, implementation of the project would lead to an increase in petroleum consumption of 63,709 gallons of petroleum per year, due to the increased number of vehicles traveling to and from the project site. As shown in Table 4.14-5, the proposed Transportation Demand Management Plan would reduce project-generated VMT per resident by 20.63 percent compared to the average VMT for the project site transportation analysis zone of 13.29 miles per day. With the resulting VMT per resident of 10.55 miles per day, the proposed project is expected to generate 4,274,333 VMT per year. Thus, the CalEEMod modeling and fuel consumption calculations presented above slightly overestimate the project's fuel consumption.

Over the lifetime of the project, the fuel efficiency of the vehicles being used by the residents, guests, and visitors of the project is expected to increase. As such, the amount of gasoline consumed as a result of vehicular trips to and from the project site during operation would decrease over time. As discussed under Section 4.5.2, there are numerous regulations in place that require and encourage increased fuel efficiency. For example, CARB has adopted a new approach to passenger vehicles by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards, as discussed in Section 4.5.2. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California (CARB 2021). Additionally, in response to SB 375, CARB has adopted the goal of reducing per-capita GHG emissions from 2005 levels by 10 percent by the year 2020 and 19 percent by the year 2035 for light-duty passenger vehicles in the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) planning area. This reduction would occur in part by reducing vehicle miles traveled through the integration of land use planning and transportation (MTC and ABAG 2021). As such, operation of the project is expected to use decreasing amounts of petroleum over time, due to advances in fuel economy.

Note that due to the urban setting of the project site, which is served by passenger rail and bus services, it is expected that residents, visitors, and guests may use transit or non-vehicular modes of transportation to travel to

and from the project site. The Caltrain commuter rail system serves the Menlo Park Station, located at 1120 Merrill Street, approximately 2 miles south of the project site. The study area is also served by the Menlo Park Shuttle Service and the SamTrans bus service, which collectively provide local and regional public transit within the project area (see Section 4.14, Transportation, and Appendix J1 for details). Also, use of transit and non-vehicular modes of transportation is anticipated to increase over time, as local and regional plans and policies facilitating increased use and development of transit and non-vehicular transportation modes are implemented. Section 4.5.2 summarizes some of these plans and policies, which includes *Plan Bay Area 2050*, which was adopted by MTC and ABAG October 2021. Additionally, project-specific sustainable design features would include electric vehicle charging electric infrastructure consistent with State and Local requirements as identified at the time of plan check submittal and other transportation features, as described in Section 3.4 of this EIR. Such features include preparation and implementation of a Transportation Demand Management Plan and provision of on-site bicycle storage and preferential parking for low-emission/fuel-efficient vehicles and carpools/vanpools for residents and visitors. Additionally, the proposed project design would allow for pedestrian circulation in the project area by employing design features that improve the landscape and streetscape, making the area more pedestrian friendly.

In summary, although project implementation would result in an increase in petroleum use during construction and operation, over time vehicles would use less petroleum due to advances in fuel economy. Additionally, the project would include a variety of features that are expected to reduce the number of vehicles traveling to and from the site during operation. For example, the project would include implementation of a Transportation Demand Management Plan, would be accessible via a variety of major bus lines, would include on-site bicycle infrastructure, and would enhance the pedestrian-friendliness of the project area. As such, while the project would generate 870 new daily vehicle trips compared to existing conditions, as discussed in Section 4.14, Transportation, implementation of the Transportation Demand Management Plan would ensure that daily trips are reduced sufficient to ensure that vehicle miles traveled per capita for project site residents would be at least 15 percent below the regional average. Further, the project would add non-vehicular transportation amenities to the site that are not currently present, such as enhanced streetscape, bicycle parking and storage, and preferred parking for low-emission/fuel-efficient vehicles and carpools/vanpools. Additionally, when viewed on a regional scale, the project is an urban infill project located within a major population center where residential units are in demand, as reflected in the regional and local growth projections under ConnectMenlo and Plan Bay Area. When compared with new development projects sited on previously undeveloped land and away from population centers, infill projects are generally expected to involve fewer VMT during operation. Given these considerations, the petroleum consumption associated with the project would not be considered inefficient or wasteful, and impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.5-2 Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The project would be subject to and would comply with, at a minimum, the California Building Energy Efficiency Standards (24 CCR, Part 6). Part 6 of Title 24 establishes energy efficiency standards for residential and non-residential buildings constructed in California in order to reduce energy demand and consumption. As such, the project would exceed California code requirements for energy efficiency, as demonstrated below.

Part 11 of Title 24 sets forth voluntary and mandatory energy measures that are applicable to the project under the California Green Building Standards Code. As discussed under Impact 4.5-1, the project would result in an increased demand for electricity and petroleum. In accordance with CALGreen's Title 24 Part 11 Tier 2 voluntary efficiency measures, the project would have at least 75 percent of its construction and demolition waste diverted from landfills. In addition, the project is subject to the City's reach code ordinance which requires new residential projects be built "all-electric." See Section 3.4 for a full list of green components incorporated into the project design.

The project would also be consistent with the energy use and efficiency strategies of the City's CAP as illustrated in Section 4.7. As previously discussed, the project would include solar-power-generation equipment, meet LEED Gold standards, enroll in the EPA Energy Star Building Portfolio Manager, attain indoor and outdoor water use efficiency standards, and implement a zero-waste management plan.

Furthermore, as explained in Section 4.5.1, the City is a partner agency with PCE, a Community Choice Aggregator, which is the default electric energy provider in the City and sources 100 percent of its energy from renewable and/or carbon-free sources. Customers have two electricity options to choose from, ECOplus which is 50 percent renewable energy (default option), and ECO100, which is 100 percent renewable energy. Under both options, the project would include renewable energy as part of the power content mix and would be consistent with the City's renewable energy commitment.

Finally, the proposed project is consistent with state goals (as reflected in bills such as SB 375 and SB 743) to respond to housing demand by building housing near job centers, which results in more efficient use of energy. The Project is in a robust job center and would help balance the jobs with housing. Providing needed housing close to jobs rather than in other locations, such as the Central Valley, reduces fuel use.

Because the project would comply with and exceed the existing energy standards and regulations, the project would result in a **less-than-significant** impact associated with the potential to conflict with energy standards and regulations.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

Buildout of the project, related projects, and additional forecasted growth in the PG&E and PCE service area would cumulatively increase the demand for electricity and natural gas supplies and infrastructure capacity.

Impact 4.5-3 Would the project result in a cumulatively considerable energy impact?

Although project development would result in the use of renewable and non-renewable resources during construction and operation, which could limit future availability of non-renewable energy sources, the use of such resources would be on a relatively small scale, would be reduced by measures making the project more energy-efficient, and would be consistent with growth expectations for the service areas.

All cumulative projects would be required to comply with regulatory measures such as CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes, minimizing construction fuel consumption. Additionally, petroleum use by cumulative projects relative to construction activities is reasonably expected to continue to decline, as Tier 4 construction equipment, which is more fuel efficient, becomes more widely available. While construction activities related to the project would consume petroleum-based fuels,

consumption of such resources would be temporary and would cease upon the completion of construction. Regarding operations, the cumulative projects within the areas serviced by PG&E and PCE would be applicable to this analysis. Projects that include development of large buildings or other structures that would have the potential to consume energy in an inefficient manner would have the potential to contribute to a cumulative impact. However, as discussed in Impacts 4.5-1 and 4.5-2, comprehensive state and local regulations are designed and would be implemented to increase and ensure energy efficiency.

As described in Impact 4.5-1, the project would not result in wasteful, inefficient, or unnecessary use of energy due to the implementation of water, energy and mobility project design features and compliance with and exceedance of Title 24 building standards. For the same reason, the project would not conflict with relevant energy-related plans, as discussed in the analysis for Impact 4.5-2. Cumulative projects that include long-term energy demand, such as residential and/or non-residential developments, would be subject to CALGreen, which provides energy efficiency standards for commercial and residential buildings. CALGreen is used to implement increasingly stringent energy efficiency standards that would require the project and the cumulative projects to minimize the wasteful and inefficient use of energy. In addition, cumulative projects would be required to meet or exceed the Title 24 building standards, further reducing the inefficient use of energy. Furthermore, various federal and state regulations, including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program, would serve to reduce the transportation fuel demand of cumulative projects.

In consideration of cumulative energy use, the project would not contribute to a wasteful or inefficient demand on energy resources or services, and would not conflict with energy-related plans. Therefore, the project's contribution would not be cumulatively considerable and cumulative impacts related to the use of energy would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

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4.6 Geology, Soils, Seismicity, and Paleontological Resources

This section of the environmental impact report (EIR) evaluates the potential changes to the existing geologic and soils resources of the project site and vicinity that could result from implementation of the proposed 123 Independence Drive Residential Project (project or proposed project). The analysis focuses on potential impacts to the project's exposure to fault zones, risk of seismic ground shaking, risk of seismic-related ground failure (liquefaction), soil profile, risk of potential risk of soil erosion, expansive soils, and the project soil profile capability to support of septic tank and/or wastewater.

As discussed in Chapter 2, Introduction, and Section 4.0, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this EIR, one in January and February 2021, and one in September and October 2021. None of the written or verbal comments received in response to the NOPs address geology and soils. Both NOPs and the comments received in response to them are provided in Appendix A of this EIR.

The primary sources reviewed to prepare this section include the Geotechnical Investigation prepared for the project by Rockridge Geotechnical (Appendix F1), the Phase I Environmental Site Assessment prepared for the project by PES Environmental Inc. (Appendix F2), the ConnectMenlo General Plan Update (City of Menlo Park 2016a), the ConnectMenlo General Plan Update EIR (City of Menlo Park 2016b), and the City of Menlo Park (City) Municipal Code (City of Menlo Park 2021).

4.6.1 Environmental Setting

Regional Geology

The San Francisco Peninsula is a relatively narrow band of rock at the north end of the Santa Cruz Mountains separating the Pacific Ocean from San Francisco Bay. It represents one mountain range in a series of discontinuous northwesterly-aligned mountains, valleys, and ridges that form the Coast Ranges geomorphic province of California that stretches from the Oregon border on the north nearly to Point Conception on the south. The project site is located in the southeastern portion of the peninsula, in the Santa Clara Valley. The Santa Clara Valley is a broad, sediment-filled basin bounded on the west by the Santa Cruz Mountains and on the northeast by the Diablo Range.

The ConnectMenlo EIR identifies that the natural geology of the study area is comprised of Pleistocene-age (10,000 to 2.6 million years ago) alluvial fan deposits and Holocene-age (less than 10,000 years ago) levee deposits. As discussed under the Project Site Soils and Groundwater Conditions heading below, the project site is underlain by artificial fill, which is an engineered mixture of sand, silt, and gravel used to prepare areas for urban development, with Holocene-age deposits present below the artificial fill (Appendix F1).

Regional Seismicity

The San Francisco Bay area is one of the most active seismic regions in the United States. There are no Alquist-Priolo Earthquake Fault Zones mapped within the City and the potential for ground rupture is therefore considered low (City of Menlo Park 2016a). The project site is located within the Coast Range's geomorphic province, which is characterized by northwest-trending valleys and ridges that formed due to historic seismic activity in the region. The closest and most prominent active fault near the project site is the San Andreas Fault System, specifically the North San Andreas fault, which is located approximately 6.2 miles to the southwest. There have been four major

earthquakes on this fault since 1800; one centered east of Monterey Bay in 1836 with an estimated moment magnitude of 6.25, one in 1838 with an estimated moment magnitude of 7.5, the 1906 San Francisco Earthquake with an estimated moment magnitude of 7.9, and the 1989 Loma Prieta Earthquake with a moment magnitude of 6.9 (Appendix F1).

Other active earthquake faults in the region include the Monte Vista Fault, which lies approximately 4.8 miles southwest of the project site, the Hayward Fault Zone, approximately 12.4 miles to the east, the Calaveras Fault approximately 18 miles east, and the San Gregorio Fault, whose trace passes approximately 14.9 miles west of the project site. The most recent significant earthquake on the Calaveras fault was the 1984 Morgan Hill Earthquake, with a moment magnitude of 6.2. In addition, the Pulgas Fault crosses the southwest part of the Bayfront Area. However, this fault has not been classified as “active” because it has not ruptured in the past 11,000 years. Thus, there are no known active faults in the Bayfront Area (City of Menlo Park 2016a); thus, there is a very low potential for surface fault rupture in the project vicinity.

Ground Shaking

Although the severity of ground shaking at a particular site depends on several variables including the magnitude of the earthquake, the distance between a particular site and the fault source, the directivity of the earthquake energy, and the site-specific soil conditions, it is expected that all areas within the region have a potential to be exposed to substantial ground shaking. This could result in major damage to structures and foundations that have not been designed to resist such forces. The ConnectMenlo EIR identified that “the [U.S. Geological Survey] estimated that the probability of a magnitude (M) 6.7 or greater earthquake prior to year 2032 is 62%, or roughly a two-thirds probability over this timeframe. Individually, the forecasted probability for each individual fault to produce an M 6.7 or greater seismic event by the year 2032 is as follows: 27% for the Hayward Fault, 21% for the San Andreas Fault, 11% for the Calaveras Fault, and ten percent for the San Gregorio Fault” (City of Menlo Park 2016b). The Geotechnical Investigation for the project provides probabilities for a major earthquake (magnitude 6.7 or greater) occurring in the San Francisco Bay Area region through the year 2044 of 72 percent, with probabilities for individual faults of 25 percent for the Hayward (south) fault, 21 percent for the Calaveras (central) fault, and 17 percent for the North San Andreas (Santa Cruz mountains) fault. The Geotechnical Investigation concludes that the site would be exposed to strong to very strong ground shaking during a major earthquake on a segment of one of the nearby faults, particularly the North San Andreas and Hayward faults (Appendix F1).

Liquefaction

Liquefaction occurs when partially saturated soil enters a liquid state, resulting in the soil’s inability to support overlying structures. Liquefaction typically occurs in areas where the groundwater is less than 30 feet from the surface and where the soils are composed of poorly consolidated fine to medium sand and/or fill material. Liquefaction most often when soils are subject to strong seismically induced ground shaking but can also occur due to improper grading and landslides. Lateral spreading consists of lateral movement of gently to steeply sloping saturated soil deposits that is caused by earthquake-induced liquefaction. Liquefaction is a serious hazard because land in areas that experience liquefaction may experience cyclic densification (when non-saturated, cohesionless soil is compacted by earthquake vibrations, causing ground-surface settlement) which can cause major structural damage to buildings and other improvements. The ConnectMenlo EIR states that liquefaction potential in the Bayfront Area is very high, particularly where the soil type known as “Bay Mud” is present. The project site is within a designated liquefaction hazard zone (Appendix F1 and City of Menlo Park 2016b).

Landslides and Subsidence

Landslides occur when rock, soil, unconsolidated sediment, or combinations of such materials shift towards lower elevations due to gravity. Landslide movement can be rapid, as in a soil or rock avalanche, or can creep slowly for extended periods of time. Several factors influence the potential for a given location to be subject to landslide, including slope steepness, slope material, water content, and vegetative cover. The project site and surrounding areas are generally flat and there is no risk of landslide within or adjacent to the site.

The ConnectMenlo EIR identifies that the Bayfront Area has been subject to historical subsidence due to the highly compressible nature of the fill and sediments that underlie the area and historical groundwater overdraft conditions between the 1920s and mid-1960s. The construction of the Hetch Hetchy aqueduct allowed for imported water to largely replace groundwater as a source of drinking water, which in turn led to increased groundwater levels and effectively stopped the land settlement trends (City of Menlo Park 2016b).

Soil Erosion

Soil erosion is the process whereby soil materials are worn away and transported to another area either by wind or water. Rates of erosion can vary depending on the soil material, structure, and placement, as well as human activity. Soil containing high amounts of silt is often easily eroded while sandy soils are less susceptible. Excessive soil erosion can lead to damage of building foundations, roadways and stream embankments. The erosion potential for soils in the project area is variable, however the majority of the project site is covered with impervious surfaces and landscaping. There are very few areas where soil is exposed to wind and water, and thus the potential for erosion to occur is very low.

Project Site Soils and Groundwater Conditions

A Geotechnical Investigation was prepared to identify the geologic, soil, and seismic conditions at the project site (Appendix F1). This evaluation of subsurface conditions at the site included performing 20 cone penetration tests, drilling six test borings, performing laboratory testing on selected soil samples, and performing engineering analyses to develop conclusions and recommendations regarding subsurface conditions, seismicity and seismic hazards, including potential liquefaction hazards, settlement, soil corrosivity and construction methods including grading, excavation, dewatering, fill placement and compaction, foundation types and design, and pavement design,

The Geotechnical Investigation identifies that the site is mapped as being underlain by Holocene-age alluvial deposits. Specifically, the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service, maps a single soil type as occurring within the project site: Urban-land-Orthents, reclaimed complex, 0 to 2 percent slopes (USDA 2022). The Urban Land-Orthents designation indicates that 65 percent of the original soils have been disturbed or covered by paved surfaces, buildings or other structures, 30 percent consist of orthents and similar soils, and four percent consists of minor components. The Urban-land-Orthents soil unit consists of very deep and poorly drained soils that have been filled, and are composed of gravel, broken cement and asphalt, Bay Mud, and solid waste material.

A 1991 USDA soil survey of San Mateo County provides an overview of the soil types present within and surrounding the project site as well as their physical and engineering properties (USDA 2019). The project site, adjacent properties, and much of the land within the northern portion of the Bayfront Area is underlain by the Urban land-Orthents, reclaimed complex soil classification. This map unit identifies areas that were once part of San Francisco Bay and adjacent tidal flats but have been covered with artificial fill. The “Urban land” component of this

classification identifies areas where more than 85 percent of the surface is covered by asphalt, concrete, buildings, and other structures. The Orthents soils component of this classification identifies soils that are very deep, poorly drained, and texturally heterogeneous, and were placed in the area as fill to facilitate development of the former tidal flats. Because these soils were imported to their present locations and can include varying amounts of soil, rock fragments, broken concrete and asphalt, Bay Mud, and solid waste material, the soil properties can be highly variable. Soils north of the site, along the Bay, are of the Botella complex. These soils are generally composed of deep or very deep, well drained clay loams. Areas to the south are characterized as Urban land.

The cone penetration tests performed as part of the Geotechnical Investigation were advanced to between 50 and 100 feet below ground surface (bgs) while the borings were advanced to depths between 30.5 and 45 feet bgs. The results of these explorations “indicate the alluvium primarily consists of stiff to very stiff clay with occasional medium stiff layers up to about two feet thick. The clay is interbedded with layers of medium dense to very dense sand and gravel to the maximum depth explored of about 100 feet bgs. The granular layers encountered at this site varied in thickness from 1 to 9 feet. Below depths of about 32 feet bgs (northwest corner of the site) and 52 feet bgs (southeast corner of the site), the clays become very stiff to hard, and the sand and gravels become dense to very dense” (Appendix F1).

Expansive Soil

Expansive soils are soils that experience swelling (expansion) when moisture content increases and shrinking (contracting) when moisture content decrease. Expansive soils are typically very fine-grained with a high to very high percentage of clay, which can retain a lot of moisture. Soils on the northeastern Baylands edge are known to be clay-rich, poorly drained, and likely to possess high shrink-swell potential (City of Menlo Park 2016b). The Geotechnical Investigation included testing of near-surface soils samples. The results of this testing indicate that much of the near-surface soil consists of clay that is very highly expansive (Appendix F1).

Sources of moisture that can influence the shrink-swell potential include seasonal rainfall, landscape irrigation, utility leakage, and/or perched groundwater. When the soil shrinks, wide cracks in the ground surface can appear. The shrink/swell properties can result in structural hazards such as damage to concrete slabs, foundations, and pavement. Specific building and structure design measures and soil treatment are often needed in areas with expansive soils.

Groundwater

Groundwater measurements taken from the cone penetration tests and borings indicate the depth to groundwater ranged from about 4.5 and 7 feet bgs at the time of the field work completed for the Geotechnical Investigation. Similarly, the Phase I Environmental Site Assessment prepared for the project found that groundwater ranges from between 4 and 9 feet bgs. This was determined based on data from two groundwater monitoring wells that were installed at the 119 Independence Drive property and which had an average depth to groundwater of 4.5 feet bgs in 2009; data from borings taken in 2015 at the 130 Constitution Drive where groundwater was encountered at depths of 8 to 10 feet bgs; and quarterly groundwater monitoring data from the adjacent property at 120 Constitution Drive where static depth to groundwater was measured at between 4 and 5 feet bgs (Appendix F2).

The Geotechnical Investigation reports that groundwater levels at the site are expected to fluctuate seasonally due to rainfall and may be subject to tidal fluctuations due to the site’s location approximately 600 feet south of the Bay margin, thus a groundwater level of between 1.8 to 3.8 feet below existing grades is used for the project design and construction recommendations presented in the Geotechnical Investigation. The Phase I Environmental Site

Assessment reports that groundwater flows fluctuate from north to southeast depending on tidal influences. The Phase I Environmental Site Assessment also reports that there is regional groundwater contamination in the project area. This is discussed in Section 4.8, Hazards and Hazardous Materials.

Paleontological Resources

Paleontological resources, or fossils, are, by definition, objects that are more than 10,000 years old and provide evidence of and information about past life on earth. They can include remains, traces, and imprints of once-living organisms preserved in rocks and sediments. An individual vertebrate fossil specimen may be considered unique or significant if it is identifiable and well preserved. Marine invertebrates are generally common, well developed, and well documented and would generally not be considered a unique paleontological resource whereas identifiable vertebrate marine and terrestrial fossils are generally considered scientifically important because they are relatively rare. Surveys previously completed in northern California have found two major divisions of Pleistocene-age fossils: the Irvingtonian (older Pleistocene fauna) and the Rancholabrean (younger Pleistocene and Holocene fauna). The potential of a particular area to produce a valuable paleontological resource is largely dependent on the geologic age and origin of the underlying rocks.

The ConnectMenlo EIR reports that vertebrate fossils have been identified at eight locations within San Mateo County, including locations along the Pacific coast, along Skyline Drive in South San Francisco, and along Middlefield Road in unincorporated San Mateo County (City of Menlo Park 2016b). The project site is underlain by artificial fill material that was imported to the site during development of the existing buildings. Artificial fill does not typically contain any significant fossil records that could contribute to science or natural history, and thus typically does not contain unique or significant paleontological resources. However, as noted above, there may be Pleistocene-age alluvium and Holocene-age deposits below the artificial soil. Holocene-age deposits are less than 10,000 years old and therefore are considered too young support paleontological resources because the remains of organisms would not have fossilized yet because fossilization processes take place over millions of years. In contrast, the Pleistocene alluvium are old enough to have stiffened and preserved the remains of Pleistocene organisms; therefore, could have high potential for producing paleontologically significant resources (City of Menlo Park 2016b).

4.6.2 Regulatory Framework

Federal Regulations

National Earthquake Hazards Reduction Act

The National Earthquake Hazards Reduction Act was passed to reduce the risks to life and property resulting from earthquakes. The act established the National Earthquake Hazards Reduction Program (NEHRP). The mission of NEHRP includes improving the understanding, characterization, and prediction of hazards and vulnerabilities; improving building codes and land use practices; reducing risk through post-earthquake investigations and education; developing and improving design and construction techniques; improving mitigation capacity; and accelerating application of research results. NEHRP designates the Federal Emergency Management Agency as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities. Other NEHRP agencies include the National Institute of Standards and Technology, National Science Foundation, and the U.S. Geological Survey.

Paleontological Resources Preservation Act

The federal Paleontological Resources Preservation Act of 2002 limits the collection of vertebrate fossils and other rare and scientifically significant fossils to qualified researchers who have obtained a permit from the appropriate state or federal agency. Additionally, it specifies these researchers must agree to donate any materials recovered to recognized public institutions, where they will remain accessible to the public and to other researchers. This Act incorporates key findings of a report, *Fossils on Federal Land and Indian Lands*, issued by the Secretary of Interior in 2000, which establishes that most vertebrate fossils and some invertebrate and plant fossils are considered rare resources.

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Act (Public Resources Code [PRC] Sections 2621 through 2630) was passed in 1972 to mitigate the hazard of surface faulting for structures designed for human occupancy. The main purpose of the law is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. A structure for human occupancy is defined as any structure used or intended for supporting or sheltering any use or occupancy, which is expected to have a human occupancy rate of more than 2,000 person-hours per year. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning efforts. Before a structure for human occupancy can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, the local agency must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (PRC Sections 2690 through 2699.6), passed by the California legislature in 1990, addresses earthquake hazards from non-surface fault rupture, including liquefaction and seismically induced landslides. The act established a mapping program for areas that have the potential for liquefaction, strong ground shaking, or other earthquake and geologic hazards.

California Building Code

The state regulations protecting structures from geo-seismic hazards are contained in the California Code of Regulations, Title 24, Part 2 (the California Building Code), which is updated every three years. These regulations apply to public and private buildings in the state. The current code is the 2019 California Building Code; however, the 2022 California Building Code was adopted in December 2021 and will be effective January 1, 2023. The California Building Code is based on the current (2018) International Building Code and includes enhancements to the sections dealing with existing structures. Seismic-resistant construction design is required to meet more stringent technical standards than those set by previous versions of the California Building Code.

Construction activities are subject to occupational safety standards for excavation and trenching, as specified in the California Safety and Health Administration regulations (Title 8 of the California Code of Regulations) and in Chapter 33 of the California Building Code. These regulations specify the measures to be used for excavation and trench work where workers could be exposed to unstable soil conditions. The project would be required to employ these safety measures during excavation and trenching.

State Earthquake Protection Law

The State Earthquake Protection Law (California Health and Safety Code Section 19100 et seq.) requires that structures be designed and constructed to resist stresses produced by lateral forces caused by wind and earthquakes, as provided in the California Building Code. Chapter 16 of the California Building Code sets forth specific minimum seismic safety and structural design requirements, requires a site-specific geotechnical study to address seismic issues, and identifies seismic factors that must be considered in structural design. Because the program and programmatic infrastructure component sites are not located within an Alquist-Priolo Earthquake Fault Zone, as noted above, no special provisions would be required for development of the Proposed Project related to fault rupture.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) Guidelines require that all private and public activities not specifically exempted be evaluated against the potential for environmental damage, including effects to paleontological resources. Paleontological resources, which are limited, nonrenewable resources of scientific, cultural, and educational value, are recognized as part of the environment under these state guidelines. This analysis satisfies project requirements in accordance with CEQA (13 PRC Section 21000 et seq.) and PRC Section 5097.5 (Stats 1965, c. 1136, p. 2792). This analysis also complies with guidelines and significance criteria specified by the SVP (2010).

Paleontological resources are explicitly afforded protection by CEQA, specifically in Section VII(f) of CEQA Guidelines Appendix G, the “Environmental Checklist Form,” which addresses the potential for adverse impacts to “unique paleontological resource[s] or site[s] or ... unique geological feature[s].” This provision covers fossils of significant importance – remains of species or genera new to science, for example, or fossils exhibiting features not previously recognized for a given animal group – as well as localities that yield fossils significant in their abundance, diversity, and degree of preservation. Other state requirements for paleontological resource management are found in PRC Chapter 1.7, Section 5097.5, Archaeological, Paleontological, and Historical Sites. This statute specifies that state agencies may undertake surveys, excavations, or other operations as necessary on state lands to preserve or record paleontological resources. This statute does not apply to the proposed project because none of the property includes public lands.

Regional and Local Regulations

Menlo Park General Plan

The City of Menlo Park General Plan includes goals, policies, and programs relevant to the aesthetic factors potentially affected by the proposed project. The City’s General Plan includes the following policies relevant to geology and soils.

Goal LU-7: Promote the implementation and maintenance of sustainable development, facilities and services to meet the needs of Menlo Park’s residents, businesses, workers, and visitors.

Policy LU-7.7: Hazards. Avoid development in areas with seismic, flood, fire, and other hazards to life or property when potential impacts cannot be mitigated.

Goal OSC-3: Protect and enhance historic resources.

Policy OSC3.3: Archaeological or Paleontological Resources Protection. Protect prehistoric or historic cultural resources either on site or through appropriate documentation as a condition of removal.

Require that when a development project has sufficient flexibility, avoidance and preservation of the resource shall be the primary mitigation measure, unless the City identifies superior mitigation. If resources are documented, undertake coordination with descendants and/or stakeholder groups, as warranted.

Policy OSC3.4: Prehistoric or Historic Cultural Resources Found During Construction. Require that if cultural resources, including archaeological or paleontological resources, are uncovered during grading or other on-site excavation activities, construction shall stop until appropriate mitigation is implemented.

Goal S-1: Assure a safe community.

Policy S-1.1: Location of Future Development. Permit development only in those areas where potential danger to the health, safety and welfare of the residents of the community can be adequately mitigated.

Policy S-1.3: Hazard Data and Standards. Integrate hazard data (geotechnical, flood, fire, etc.) and risk evaluations into the development review process and maintain, develop and adopt up-to-date standards to reduce the level of risk from natural and human-caused hazards for all land use.

Policy S-1.5: New Habitable Structures. Require that all new habitable structures incorporate adequate hazard mitigation measures to reduce identified risks from natural and human-caused hazards.

Policy S-1.7: Hazard Reduction. Continue to require new development to reduce the seismic vulnerability of buildings and susceptibility to other hazards through enforcement of the California Building Standards Code and other programs.

Policy S-1.13: Geotechnical Studies. Continue to require site-specific geologic and geotechnical studies for land development or construction in areas of potential land instability as shown on the State and/or local geologic hazard maps or identified through other means.

Policy S-1.14: Potential Land Instability. Prohibit development in areas of potential land instability identified on State and/or local geologic hazard maps, or identified through other means, unless a geologic investigation demonstrates hazards can be mitigated to an acceptable level as defined by the State of California.

Policy S-1.26: Erosion and Sediment Control. Continue to require the use of best management practices for erosion and sediment control measures with proposed development in compliance with applicable regional regulations.

City of Menlo Park Municipal Code

Title 12 of the City of Menlo Park Municipal Code addresses buildings and construction, including specific requirements for addressing potential geologic, soil and seismic impacts. Chapters 12.04, 12.06, and 12.08 identify that the City has adopted applicable portions of the California Building Code as the City's building code, with minor modifications made to identify the specific types of work that the City has exempted from the need to obtain a building permit. In addition, Chapter 12.04 adds a standard for testing of soil samples prior to import of fill to a construction site to verify the material proposed for import meets standards established in the California Environmental Protection Agency, Department of Toxic Substances Control guidelines for clean imported fill material.

Within the California Building Code, Chapter 16 addresses Structural Design and Chapter 18 addresses Soils and Foundations. Both of these chapters include specific requirements for identifying potential hazards associated with geology, soils, and seismic activity. For example, both chapters include design criteria for construction within a range of seismic design categories, while Chapter 18 also includes requirements to evaluate if expansive soil is present and identifies design criteria to ensure that structural damage from expansive soil will be avoided, as well as similar requirements to ensure structural stability when constructing on engineered fill.

Land Development Guidelines

The City of Menlo Park Community Development Department, Building Division, is responsible for ensuring that new construction and redevelopment projects comply with the city's building code and related policies. The Building Division will complete a plan check and inspection process to verify compliance. This includes ensuring compliance with the City's requirements for grading and drainage (City of Menlo Park n.d.), such as the following:

- Use of post-construction best management practices
- When fill is imported to a site, ensuring a transition to existing grades on neighboring properties to avoid adverse effects and ensure drainage on adjacent properties is not impeded
- Design the drainage for sheet flow to lawn or pervious landscaped areas of the site without creating ponding and erosion
- Minimum and maximum drainage gradients to prevent excessive erosion and subsequent instability
- Maximum cut and fill slopes of 2:1

City of Menlo Park Emergency Operations Plan

The City of Menlo Park 2014 Emergency Operations Plan describes how the City will manage and coordinate resources and personnel responding to a range of “extraordinary” emergency situations including natural disasters and technological incidents. The operational concepts reflected in the Emergency Operations Plan focus on potential large-scale disasters which can generate unique situations requiring expanded emergency responses. It uses principles from the Federal National Incident Management System, the California Standardized Emergency Management System and the Incident Command System to ensure a comprehensive and effective strategy for providing a coordinated and efficient response to major emergencies. The Emergency Operations Plan defines emergency response phases and emergency levels; specifies policies and general procedures, including protocols for communication between emergency service providers and for communication with the public; defines and delegates tasks for emergency staff; and provides for coordination of planning efforts. (City of Menlo Park 2014).

4.6.3 Thresholds of Significance

The significance criteria used to evaluate project impacts to geology and soils are based on Appendix G of the CEQA Guidelines. Potential project-related impacts analyzed in this section account for geology and soils that occur or have the potential to occur on the project site. According to Appendix G of the CEQA Guidelines, a significant impact related to geology and soils would occur if the project would:

- A. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - a. 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;

- b. strong seismic ground shaking;
- c. seismic-related ground failure, including liquefaction; or
- d. landslides.
- B. Result in substantial soil erosion or the loss of topsoil.
- C. Be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse.
- D. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.
- E. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.
- F. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- G. Result in a cumulatively considerable contribution to adverse effects related to geology, soils, seismicity, and paleontological resources.

Methodology

The project setting and impact analysis was developed by reviewing available information relating to geology, soils, seismicity, and paleontological resources in the project vicinity, including the City's General Plan, San Mateo County Soil Survey, and Natural Resources Conservation Service Web Soil Survey as well as the site-specific Geotechnical Investigation (Appendix F1) and the site-specific Phase I Environmental Site Assessment (Appendix F2).

It is important to note impacts of the environment on a project (as opposed to impacts of a project on the environment) are beyond the scope of required CEQA review. "[T]he purpose of an EIR is to identify the significant effects of a project on the environment, not the significant effects of the environment on the project" (Ballona Wetlands Land Trust v. City of Los Angeles [2011] 201 Cal.App.4th 455, 473) and "CEQA generally does not require an analysis of how existing environmental conditions will affect a project's future users or residents" (California Building Industry Association v. Bay Area Air Quality Management District [2015] Cal.App 4th.).

With these rulings, the effect of the environment on a project (such as the impact of existing seismic hazards on new project occupants) is no longer required to be considered as an environmental impact under CEQA, unless the project could exacerbate an existing environmental hazard. However, information pertaining to potential impacts associated with the environment on the project are included for informational purposes.

4.6.4 Impacts and Mitigation Measures

Impact 4.6-1 Would the project expose people or structures to potentially substantial adverse events, 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?

Fault rupture occurs when ground surface is broken due to fault movement during an earthquake. These ruptures generally occur along active fault traces. As described above in Section 4.6.1, the closest and most prominent active fault near the project site is the San Andreas Fault System, specifically the North San Andreas fault, which is located approximately 6.2 miles to the southwest. Other active earthquake faults in the region include the Monte Vista Fault, which lies approximately 4.8 miles southwest of the project site, the Hayward Fault Zone, approximately

12.4 miles to the east, the Calaveras Fault approximately 18 miles east, and the San Gregorio Fault, whose trace passes approximately 14.9 miles west of the project site.

The project site is not located on a known active or potentially active earthquake fault trace and the risk of surface rupture is very low (Appendix F1); therefore, people within the project site would not be exposed to substantial risks related to surface rupture. Further, the proposed project would not change the risk of surface rupture and, therefore, would not exacerbate existing hazards related to surface fault rupture and seismic ground shaking. Thus, **no impact** would occur with regard to rupture of a known earthquake fault.

Mitigation Measures

No mitigation measures are required.

Impact 4.6-2 Would the project directly or indirectly expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

Seismic ground shaking generally occurs when the earth's surface is in motion due to an earthquake. Seismic shaking is typically the primary cause of structural damage during seismic events. The proposed project could experience substantial ground shaking during moderate and large magnitude earthquakes that may occur along the San Andreas Fault or other active fault zones in the Bay Area. However, construction and operation of the proposed project does not have the potential to exacerbate seismic risks and thus this discussion is provided for informational purposes. Given the proximity of the project site to active earthquake faults, in the event of an earthquake, the project site would have a high potential to experience strong seismic ground shaking (Appendix F1) which could have adverse effects to people or structures within the project site. The proposed project would not change existing seismic hazards and, therefore, would not exacerbate the potential for seismic ground shaking to occur. However, the project would increase human presence within the project site by replacing existing office and light industrial uses with residential and public open space uses, which would increase the number of people that could be exposed to hazards associated with seismic ground shaking,

However, risks related to building failure from ground shaking would be reduced through adherence to requirements set in the current California Building Standards Code to ensure that buildings can withstand the anticipated level of seismic activity. Specifically, the project design and construction methods would be required to comply the California Building Code standards for projects in areas of high seismic risk addressing excavation, grading, construction earthwork, fill embankments, foundations, liquefaction potential, and soil strength loss. In conjunction with the City's General Plan Policy S-1.7, a site-specific geotechnical report has been prepared (Appendix F1). Seismic hazards and risks to buildings cannot be completely eliminated even with site-specific geotechnical design and compliance with the California Building Code., but such risks are substantially reduced and safety for occupants increased with such compliance. However, the Geotechnical Investigation concludes that the proposed development can be constructed as planned and will not pose a safety risk to future occupants, provided the recommendations presented in the Geotechnical Investigation are incorporated into the project plans and specifications and implemented during construction. The Geotechnical Investigation recommendations include seismic design parameters to be used in accordance with the California Building Code to account for earthquake ground motion. The project would neither exacerbate the potential for seismic shaking to occur nor increase seismic-related risks for the existing population in the project area. Because risks associated with seismic hazards represent an effect of the environment on the proposed project, the potential for the proposed buildings to be exposed to seismic hazards is not considered an adverse environmental effect under CEQA. Thus, this impact is

considered **less than significant**. To ensure the safety of people and structures within the project site, compliance with the Geotechnical Investigation recommendations and California Building Code would be addressed through the City's Conditions of Approval for the proposed project.

Mitigation Measures

No mitigation measures are required.

Impact 4.6-3 Would the project directly or indirectly expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Soil liquefaction occurs typically when saturated soil layers are located close to the ground surface. During ground shaking, these soils can lose strength and result in horizontal and vertical movements. As described above, the ConnectMenlo EIR states that liquefaction potential in the Bayfront Area is very high, particularly where the soil type known as "Bay Mud" is present. The project site, along with much of the land adjacent to the south bay, is within a designated liquefaction seismic hazard zone by the California Geological Survey (CGS) (CGS 2022). The proposed project, however, would not exacerbate the potential for either seismic-related ground failure or liquefaction to occur, thus this discussion is provided for informational purposes.

The Geotechnical Investigation prepared for the project evaluated potential liquefaction hazards at the site assuming a high groundwater depth of three feet below existing grades for the "during earthquake" groundwater level, the 2019 California Building Code peak ground acceleration of 0.69 times gravity, and a moment magnitude 8.04 earthquake based on the characteristic moment magnitude for the San Andreas fault. The Geotechnical Investigation found that "most of the soils at the site are sufficiently cohesive and/or dense to resist liquefaction" and that because the potentially liquefiable layers are not continuous, there is no risk of lateral spreading (Appendix F1).

However, the several layers of potentially liquefiable material encountered in the cone penetration tests below a depth of 9 feet bgs indicate that there is a potential for ground surface settlement associated with liquefaction following a major earthquake on a nearby fault. The Geotechnical Investigation concludes that there could be up to 1 inch of total ground surface settlement associated with reconsolidation of soils after liquefaction, with a differential settlement of up to 0.5 inches over a horizontal distance of 30 feet. Further, the Geotechnical Investigation concludes that "the non-liquefiable soil overlying the potentially liquefiable soil layers is sufficiently thick such that the potential for liquefaction-induced ground failure at the ground surface is low" but that the "lenses of potentially liquefiable soil slightly below proposed basement subgrade that may result in a reduction in bearing capacity during a major seismic event in localized areas." Based on these findings, the Geotechnical Investigation recommends use of mat foundations rather than spread footings because spread footings could experience bearing failures during a major seismic event. However, post-tension slabs are also suggested as a viable alternative to mat foundations for the proposed townhomes. Section 7.3 of the Geotechnical Investigation provides design criteria for the foundation to accommodate 1 inch of total liquefaction-induced settlement and 0.5 inches of differential settlement over 30 feet (Appendix F1).

The project would not exacerbate the potential for liquefaction to occur. Because risks associated with liquefaction represent an effect of the environment on the proposed project, the potential for the proposed buildings to be exposed to differential settlement is not considered an adverse environmental effect under CEQA. Thus, this impact is considered **less than significant**. To ensure the safety of people and structures within the project site, compliance with the Geotechnical Investigation recommendations would be ensured through the City's Conditions of Approval for the proposed project.

Mitigation Measures

No mitigation measures are required.

Impact 4.6-4 Would the project directly or indirectly expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Landslides occur as a result of rapid movement of soil masses on unstable slopes. The project site is relatively level, with no free face or sloping ground in the vicinity. Therefore, there is no risk of landslides in the project area. The Seismic Hazard Zones mapped by CGS delineate areas susceptible to landslides; these areas require additional investigation to determine the extent and magnitude of potential ground failure. According to the CGS, the project site is not located within a zone for seismically induced landslides (CGS 2006). The project would involve importing fill material sufficient to ensure that the final floor elevation of all proposed ground-level residential units would be at least 2 feet above the 5-foot FEMA floodplain, per the requirements of Menlo Park Municipal Code Section 16.45.130(4). The current site grade varies from approximately 7.8 feet to 9.8 feet and the finished grade for the proposed development would be at approximately 13 feet, which is approximately 2.6 feet above the 5-foot FEMA floodplain. Therefore, between approximately 3.2 and 5.2 feet of engineered fill would be placed to reach proposed finished grades. The proposed grading would ensure that the transition between the finished grade level of the project site, which would be increased relative to adjacent properties due to this import of fill material, and the grade level of adjacent properties is smooth, and slopes are stabilized consistent with current Building Code requirements such that no new risk of landslide is created. For these reasons, impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.6-5 Would the project result in substantial soil erosion or the loss of topsoil?

The project site is currently developed with pavement and existing structures and has minimal areas of exposed soil. Redevelopment of the project site would involve demolition and construction activities, including excavation, grading, and trenching. Temporary soil erosion could occur if the site is exposed to wind or rain when soils are exposed. These impacts would be temporary and limited to the project's excavation and grading phases. Upon completion of construction, the project site would be covered with structures, pavement, and landscaping and would not include areas of exposed soil. The proposed project would also be required to comply with the City's Engineering Division's Grading and Drainage Control Guidelines which address potential impacts from erosion and the loss of topsoil during construction. Furthermore, because the project would disturb more than 1 acre of soil during construction, it would be subject to the National Pollutant Discharge Elimination System Constructing General Permit, requiring preparation of a Storm Water Pollution Prevention Plan including erosion control best management practices. For these reasons, the proposed project would result in **less-than-significant** soil erosion impacts.

Mitigation Measures

No mitigation measures are required.

Impact 4.6-6 Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

Unstable geologic units or soils are characterized by materials lacking sufficient integrity to support urban development. As discussed under Impact 4.6-2 and 4.6-3, the project would not exacerbate seismic hazards, including the potential for liquefaction, and thus impacts related to seismic hazards would be less than significant. As discussed in Impact 4.6-4, the project site is not subject to landslides and the project would not create the potential for landslides.

Subsidence or collapse can result from the removal of subsurface water, resulting in either catastrophic or gradual depression of the surface elevation of the project site. The project would connect to Menlo Park Municipal Water infrastructure and therefore would not require groundwater extraction during project operation. As discussed in Section 4.6.1, groundwater is present at between 4.5 feet and 9 feet bgs within the project site. During excavation to construct the below-grade parking facility for the proposed apartment building, dewatering would be required. The Geotechnical Investigation includes recommendations for a temporary active dewatering system consisting of a series of extraction wells installed outside the excavation. However, the Geotechnical Investigation notes that dewatering can result in settlement of improvements on adjacent properties, including ground subsidence and differential settlement. Thus, the project could result in adverse effects due to subsidence because it could exacerbate the potential for adjacent properties to be exposed to ground subsidence and differential settlement, which could cause associated risks to structures and people in the vicinity.

Additionally, the Geotechnical Investigation notes that placement of new fill to raise site elevation would result in static settlement at the project site due to consolidation of the underlying soil. To limit adverse effects, the Geotechnical Investigation recommends that fill placement occur a minimum of 3 months prior to construction of the foundations for proposed buildings, since most settlement is expected to occur within a few months of fill placement. This represents a potential adverse effect of the project on soil stability within the project site.

The area surrounding the project site supports development, which indicates that geologic conditions in the area are capable of supporting future development of the site and would not be unstable. Further, the Geotechnical Investigation found that the site is capable of supporting the proposed development and provides recommendations for project design and construction methods to ensure that the project minimizes existing potential adverse effects associated with geologic and seismic conditions, including soil stability. The Geotechnical Investigation concludes that the proposed development can be supported at the project site and would not be adversely affected by geological and soil instability provided that the recommendations presented in the Geotechnical Investigation are incorporated into the project plans. Specifically, this requires fill placement to occur a minimum of 3 months prior to construction of foundation, that the apartment building be supported on a mat foundation, and that the townhome buildings be supported on either mat foundations or post-tensioned slabs-on-grade (Appendix F1). The project would not affect the soil stability at adjacent sites except for potential subsidence resulting from dewatering as described in the preceding paragraph.

Finally, the Geotechnical Investigation notes that the analysis and recommendations in that report are based on limited subsurface exploration and laboratory testing, and that a qualified geotechnical consultant should be retained to monitor excavation, grading, and foundation installation to observe conditions and modify design and construction method recommendations if warranted based on the actual conditions encountered during construction.

Although impacts associated with geologic and soil stability are expected to remain less than significant, there is a potential for a significant impact if dewatering would cause substantial subsidence or differential settlement on adjacent properties, and/or if placement of new fill would cause substantial static settlement within the project site that could adversely affect the proposed buildings. Thus, this impact is considered **potentially significant**.

Mitigation Measures

Mitigation Measures (MM) 4.6a and 4.6b would lessen this potential impact to a **less-than-significant** level by ensuring that implementation of the dewatering system during construction does not result in adverse effects to adjacent properties, and that excavation, grading, and foundation installation methods ensure geologic and soil stability for the project site.

MM 4.6a Prior to issuance of a grading permit, the project developer shall submit to the City an analysis prepared by a qualified geotechnical consultant regarding the effects of dewatering on nearby buildings and the proposed design of the shoring and dewatering systems and confirming that the geotechnical aspects of the proposed shoring system meets the Geotechnical Investigation requirements. The analysis shall demonstrate that the shoring and dewatering systems minimize the amount of dewatering required and that dewatering will not result in structural damage to improvements on adjacent properties. If the estimated settlements are not acceptable, the dewatering and shoring system shall include measures to reduce settlement, such as installing a secant pile or continuous soil-cement mix wall to shore the excavation as well as cut off lateral groundwater flow, thus reducing the amount of dewatering required from within the excavation.

MM 4.6b Prior to issuance of a grading permit, the City shall ensure that the proposed grading and construction schedule provides for fill placement to occur a minimum of 3 months prior to foundation installation, consistent with the recommendations provided in the Geotechnical Investigation prepared for the project by Rockridge Geotechnical.

Impact 4.6-7 Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?

The ConnectMenlo EIR notes that expansive soils are most prevalent in areas in proximity to the Bay, especially within the northeastern portion of the City where the project is located. Expansive soils can shrink and swell as a result of moisture change. These volume changes can result in damage over time to building foundations, underground utilities, and other subsurface facilities, such as cause movement and cracking of foundations, pavements, slabs, and below-grade walls. Shrink-swell potential is influenced by the amount and type of clay minerals present in the soil and can be measured by the percent change of the soil volume. However, appropriate design and construction methods can reduce the potential for damage by ensuring that site improvements can accommodate changing soil conditions.

As discussed in Section 4.6.1, the Geotechnical Investigation found that the existing near-surface soil contains clay that has a very high expansion potential. However, because between 3.2 to 5.2 feet of engineered fill would be placed to raise the site grade to an elevation of 13 feet, which is approximately 2.6 feet above the 5-foot FEMA floodplain, the building foundations and other site improvements would be placed on non-expansive engineered fill, which would avoid the potential hazards associated with placing site improvements on or within expansive soil (Appendix F1). Additionally, the project would not exacerbate the potential for expansive soils to affect other properties within the project area. The project would have **no impact** associated with risks to life or property due to expansive soil.

Mitigation Measures

No mitigation measures are required.

Impact 4.6-8 Would the project 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 septic tanks or alternative wastewater disposal systems are proposed. The West Bay Sanitary District provides wastewater collection and conveyance service to the City. Wastewater generated at the project site would be conveyed to the Silicon Valley Clean Water wastewater treatment plant for treatment and discharge to the San Francisco Bay. The proposed project would connect to existing 8-inch sanitary sewer lines located in Constitution Drive and Independence Drive and an existing 10-inch sanitary sewer line in Chrysler Drive. Provision of wastewater collection, conveyance, and treatment services to the project is discussed further in Section 4.16, Utilities and Service Systems. The project would have **no impact** related to septic tanks or alternative wastewater disposal systems.

Mitigation Measures

No mitigation measures are required.

Impact 4.6-9 Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

According to the ConnectMenlo EIR, no known fossils or unique paleontological resources or unique geologic features are present in the project area. However, geological formations underlying Menlo Park have the potential for containing paleontological resources (i.e., fossils). There could also be fossils of potential scientific significance in other geological formations that have not been recorded (City of Menlo Park 2016b). Ground-disturbing construction associated with the project would include excavation to a depth of approximately 10 feet below the existing grade for construction of the below-grade parking garage for the apartment building and trenching to a depth of up to 8 feet below the existing grade for installation of utility infrastructure. If paleontological resources are encountered during excavation or trenching, damage to, or destruction of, paleontological resources could result. Thus, the project would result in a **potentially significant impact** to paleontological resources.

Mitigation Measures

MM 4.6c, which is the same as MM CULT-3 in the ConnectMenlo EIR, would lessen this potential impact to a **less-than-significant** level by ensuring that any potential paleontological resources encountered during construction are appropriately evaluated and recovered when necessary to avoid significant impacts.

MM 4.6c In the event that fossils or fossil bearing deposits are discovered during ground-disturbing activities, excavations within a 50-foot radius of the find shall be temporarily halted or diverted. Ground disturbance work shall cease until a City-approved qualified paleontologist determines whether the resource requires further study. The paleontologist shall document the discovery as needed (in accordance with Society of Vertebrate Paleontology standards [Society of Vertebrate Paleontology 1995]), evaluate the potential resource, and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The excavation plan shall be submitted to the City of Menlo Park for review and approval prior to implementation, and all construction activity shall adhere to the recommendations in the excavation plan (ConnectMenlo EIR MM CULT-3).

Cumulative Impacts

The geographic context considered for cumulative geology and soils impacts is the project site and immediate surroundings. The project site is within the Bayfront Area of the City, where development and redevelopment pursuant to the recent update to the City's General Plan is ongoing, as summarized in Section 4.0 Environmental Analysis. The cumulative development scenario for this analysis is buildout of the City's General Plan.

The proposed project would develop residential uses on an 8.15-acre site. Projects of this scale and nature typically do not have the ability to alter geologic, seismic, and soil conditions in areas not proximate to the project site. As described above, the project would result in potentially significant impacts associated with geologic and soil stability and paleontological resources, but all of these impacts would be reduced to less-than-significant levels with implementation of the mitigation measures identified in this section. The project would not increase seismic or geologic hazards on the project site or within the surrounding area.

Impact 4.6-10: Would the project make a cumulatively considerable contribution to a significant cumulative impact related to geology, soils, seismicity, or paleontological resources?

The ConnectMenlo EIR evaluated potential cumulative geological impacts that could arise from future development under the City's General Plan and concluded that impacts would remain less than significant because new development would be subject to California Building Code, Municipal Code, and General Plan policies. The ConnectMenlo EIR found that compliance with these requirements would reduce the cumulative impacts from land development related to seismic shaking, seismically induced landslides and liquefaction, expansive soils, and erosion and loss of topsoil to less than significant levels (City of Menlo Park 2016b). Thus, there are no significant geologic, soils, and seismicity cumulative impacts to which the project could contribute. The project similarly would comply with all applicable California Building Code, Municipal Code, and General Plan policies. Further, as noted above, with implementation of MMs 4.6a and 4.6b, the project would result in less-than-significant impacts to these resources.

Similarly, the ConnectMenlo EIR found that implementation of the City's General Plan would result in less-than-significant cumulative impacts to paleontological resources with implementation of ConnectMenlo EIR MM CULT-3. The same measure is included in this EIR as MM 4.6c. With implementation of MM 4.6c, the project would result in less-than-significant impacts to paleontological resources.

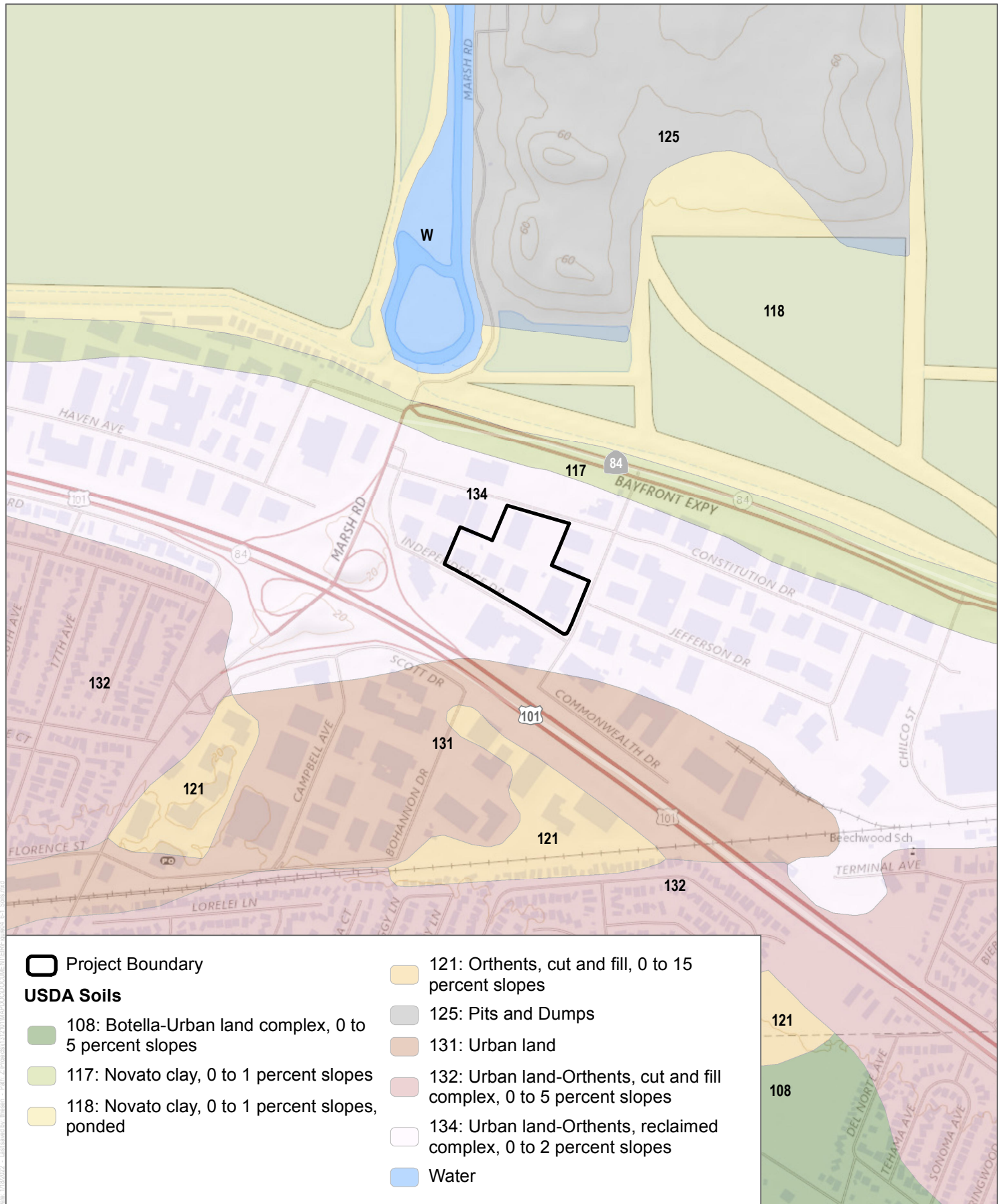
Although the project would construct more residential units than were evaluated under the ConnectMenlo EIR, the project would not expand the development area or footprint of development that was evaluated in that EIR. Thus, the conclusions of the ConnectMenlo EIR regarding the potential for significant cumulative impacts associated with geology, soils, seismicity, and paleontological resources remain applicable to the proposed project.

Mitigation Measures

Implementation of MM 4.6a would ensure that dewatering during construction does not result in adverse effects to adjacent properties; implementation of MM 4.6b would ensure that placement of fill material at the project site does not cause excessive settlement at the project site that could lead to soil instability; implementation of Mitigation Measure 4.6c would ensure that if any potential paleontological resources are encountered during construction, the resources would be appropriately evaluated and recovered when necessary to avoid significant impacts. No additional mitigation measures are necessary.

4.6.5 References Cited

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SOURCE: USGS National Map, USDA NRCS 2011

FIGURE 4.6-1

Site Soils

123 Independence Drive Residential Project

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4.7 Greenhouse Gas Emissions

This section describes the environmental setting related to climate change and greenhouse gas (GHG) emissions of the 123 Independence Drive Residential Project (project or proposed project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the project.

As discussed in Chapter 2, Introduction, and Chapter 4, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this environmental impact report (EIR); one in January and February 2021 and one in September and October 2021. Public comments received in response to the NOPs from the Sequoia Union High School District cite concerns with impacts on the TIDE Academy and Menlo-Atherton High School due to construction activities and the potential increase in traffic volumes within the project area. Both NOPs and the comments received in response to them are provided in Appendix A of this EIR.

Information contained in this section is based on the latest version of California Emissions Estimator Model (CalEEMod), Version 2020.4.0, to estimate the project's GHG emissions from both construction and operations. For the relevant data, refer to Appendix C-1, Air Quality, Greenhouse Gas Emissions, and Energy Calculations, prepared by Dudek in March 2022.

The primary sources reviewed to prepare this section includes the Transportation Impact Analysis, included as Appendix J, the Bay Area Air Quality Management District (BAAQMD) California Environmental Quality Act (CEQA) Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans (BAAQMD Thresholds) (BAAQMD 2022), and the City of Menlo Park 2030 Climate Action Plan (CAP) (City of Menlo Park 2021a).

4.7.1 Environmental Setting

Climate Change Overview

Climate change refers to any significant change in measures of climate—such as temperature, precipitation, or wind patterns—lasting for an extended period of time (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in Earth's energy balance, including variations in the sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2017).

The greenhouse effect is the trapping and buildup of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a three-part process as follows: (1) short-wave radiation emitted by the Sun is absorbed by the Earth, (2) the Earth emits a portion of this energy in the form of long-wave radiation, and (3) GHGs in the upper atmosphere absorb this long-wave radiation and emit it both into space and back toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise.

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural

causes, such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. However, recent climate changes, in particular the warming observed over the past century, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of warming since the mid-twentieth century and are the most significant driver of observed climate change (IPCC 2013; EPA 2017). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013). Continued emissions of GHGs will cause further warming and changes in all components of the climate system.

Greenhouse Gases

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code, Section 38505(g), for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃) (See also CEQA Guidelines, Section 15364.5). Some GHGs, such as CO₂, CH₄, and N₂O, occur naturally and are emitted into the atmosphere through natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Manufactured GHGs, which have a much greater heat-absorption potential than CO₂, include fluorinated gases, such as HFCs, PFCs, and SF₆, which are associated with certain industrial products and processes. The following paragraphs provide a summary of the most common GHGs and their sources.¹

Carbon Dioxide. CO₂ is a naturally occurring gas and a by-product of human activities and is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of CO₂ include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO₂ are from the combustion of fuels such as coal, oil, natural gas, and wood and changes in land use.

Methane. CH₄ is produced through both natural and human activities. CH₄ is a flammable gas and is the main component of natural gas. Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide. N₂O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N₂O. Sources of N₂O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers, manure management, industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants), vehicle emissions, and using N₂O as a propellant (e.g., rockets, racecars, and aerosol sprays).

Fluorinated Gases. Fluorinated gases (also referred to as F-gases) are synthetic powerful GHGs emitted from many industrial processes. Fluorinated gases are commonly used as substitutes for stratospheric ozone-depleting

¹ The descriptions of GHGs are summarized from the Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report (1995), IPCC Fourth Assessment Report (2007), CARB's "Glossary of Terms Used in GHG Inventories" (2021a), and EPA's "Glossary of Climate Change Terms" (2017).

substances (e.g., chlorofluorocarbons [CFCs], hydrochlorofluorocarbons [HCFCs], and halons). The most prevalent fluorinated gases include the following:

- **Hydrofluorocarbons:** HFCs are compounds containing only hydrogen, fluorine, and carbon atoms. HFCs are synthetic chemicals used as alternatives to ozone-depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are used in manufacturing.
- **Perfluorocarbons:** PFCs are a group of human-made chemicals composed of carbon and fluorine only. These chemicals were introduced as alternatives, with HFCs, to the ozone depleting substances. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Since PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.
- **Sulfur Hexafluoride:** SF₆ is a colorless gas soluble in alcohol and ether and slightly soluble in water. SF₆ is used for insulation in electric power transmission and distribution equipment, semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.
- **Nitrogen Trifluoride:** NF₃ is used in the manufacture of a variety of electronics, including semiconductors and flat panel displays.

Chlorofluorocarbons. CFCs are synthetic chemicals that have been used as cleaning solvents, refrigerants, and aerosol propellants. CFCs are chemically unreactive in the lower atmosphere (troposphere) and the production of CFCs was prohibited in 1987 due to the chemical destruction of stratospheric O₃.

Hydrochlorofluorocarbons. HCFCs are a large group of compounds, whose structure is very close to that of CFCs—containing hydrogen, fluorine, chlorine, and carbon atoms—but including one or more hydrogen atoms. Like HFCs, HCFCs are used in refrigerants and propellants. HCFCs were also used in place of CFCs for some applications; however, their use in general is being phased out.

Black Carbon. Black carbon is a component of fine particulate matter, which has been identified as a leading environmental risk factor for premature death. It is produced from the incomplete combustion of fossil fuels and biomass burning, particularly from older diesel engines and forest fires. Black carbon warms the atmosphere by absorbing solar radiation, influences cloud formation, and darkens the surface of snow and ice, which accelerates heat absorption and melting. Black carbon is a short-lived species that varies spatially, which makes it difficult to quantify the global warming potential. Diesel particulate matter emissions are a major source of black carbon and are TACs that have been regulated and controlled in California for several decades to protect public health. In relation to declining diesel particulate matter from the CARB's regulations pertaining to diesel engines, diesel fuels, and burning activities, CARB estimates that annual black carbon emissions in California have reduced by 70 percent between 1990 and 2010, with 95 percent control expected by 2020 (CARB 2014).

Water Vapor. The primary source of water vapor is evaporation from the ocean, with additional vapor generated by sublimation (change from solid to gas) from ice and snow, evaporation from other water bodies, and transpiration from plant leaves. Water vapor is the most important, abundant, and variable GHG in the atmosphere and maintains a climate necessary for life.

Ozone. Tropospheric O₃, which is created by photochemical reactions involving gases from both natural sources and human activities, acts as a GHG. Stratospheric O₃, which is created by the interaction between solar ultraviolet radiation and molecular oxygen (O₂), plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric O₃, due to chemical reactions that may be enhanced by climate change, results in an increased ground-level flux of ultraviolet-B radiation.

Aerosols. Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

Global Warming Potential

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo). The Intergovernmental Panel on Climate Change (IPCC) developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is CO₂; therefore, GWP-weighted emissions are measured in metric tons of CO₂ equivalent (MT CO₂e).

The current version of CalEEMod (Version 2020.4.0) assumes that the GWP for CH₄ is 25 (so emissions of 1 MT of CH₄ are equivalent to emissions of 25 MT of CO₂), and the GWP for N₂O is 298, based on the IPCC Fourth Assessment Report (IPCC 2007). The GWP values identified in CalEEMod were applied to the project.

Greenhouse Gas Inventories and Climate Change Conditions

Global Inventory

Anthropogenic (human-caused) GHG emissions worldwide in 2019 (the most recent year for which data is available) totaled approximately 38,020 million metric tons (MMT) CO₂e, excluding land use change and forestry (PBL 2020). Six countries (China, the United States, the Russian Federation, India, Japan, and Brazil) and the European Union accounted for approximately 68 percent of the total global emissions, or approximately 26,010 MMT CO₂e (PBL 2020). Table 4.7-1 presents the top GHG-emissions-producing countries.

Table 4.7-1. Six Top Greenhouse-Gas-Producing Countries and the European Union

Emitting Countries (Listed in Order of Emissions)	Greenhouse Gas Emissions (MMT CO ₂ e) ^b
China	11,580
United States	5,110
European Union	3,300
India	2,600
Russian Federation	1,790
Japan	1,150
Brazil	480
Total^a	26,010

Source: PBL 2020.

Notes: MMT CO₂e = million metric tons of carbon dioxide equivalent.

^a Total may not sum precisely due to rounding.

^b GHG emissions do not include land use change and forestry-related GHG emissions.

National and State Inventories

According to the 2021 U.S. Environmental Protection Agency Inventory of U.S. GHG Emissions and Sinks: 1990–2019, total U.S. GHG emissions were approximately 6,558 MMT CO₂e in 2019 (EPA 2021). The primary GHG emitted by human activities in the United States was CO₂, which represented approximately 80.1 percent of total GHG emissions (5,256 MMT CO₂e). The largest source of CO₂, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 74.1 percent of CO₂ emissions in 2019 (4,857 MMT CO₂e). Relative to the 1990 emissions level, gross U.S. GHG emissions in 2019 were 1.8 percent higher; however, the gross emissions were down from a high of 15.6 percent above the 1990 level that occurred in 2007. GHG emissions decreased from 2018 to 2019 by 1.7 percent (113 MMT CO₂e) and, overall, net emissions in 2019 were 13 percent below 2005 levels (EPA 2021).

According to California's 2000–2019 GHG emissions inventory (2021 edition), California emitted 418 MMT CO₂e in 2019, including emissions resulting from out-of-state electrical generation (CARB 2021b). The sources of GHG emissions in California include transportation, industrial uses, electric power production from both in-state and out-of-state sources, commercial and residential uses, agriculture, high-GWP substances, and recycling and waste. Table 4.7-2 presents California GHG emission source categories (as defined in CARB's 2008 Scoping Plan) and their relative contributions to the emissions inventory in 2019.

Table 4.7-2. Greenhouse Gas Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO ₂ e)	Percent of Total
Transportation	166.14	40
Industrial uses	88.18	21
Electricity generation	58.83	14
Residential and commercial uses	43.81	10
Agriculture	31.75	8
High-GWP substances	20.58	5
Recycling and waste	8.85	2
Totals^a	418.14	100

Source: CARB 2021b.

Notes: GHG = greenhouse gas; MMT CO₂e = million metric tons of carbon dioxide equivalent; GWP = global warming potential. Emissions reflect 2019 California GHG inventory.

^a Totals may not sum precisely due to rounding.

Between 2000 and 2019, per capita GHG emissions in California dropped from a peak of 14.0 MT per person in 2001 to 10.5 MT per person in 2019, representing a 25 percent decrease. Overall trends in the inventory also continue to demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product) is declining (CARB 2021b). The declining trend in GHG emissions, coupled with programs that will continue to provide additional GHG reductions going forward, demonstrates that California achieved the 2020 target of 431 MMT CO₂e.

City of Menlo Park Inventory

Table 4.7-3 presents the City's 2017 baseline GHG emissions and the percent contribution of each emissions source (energy, transportation, and solid waste).

Table 4.7-3. City of Menlo Park Baseline Greenhouse Gas Emissions Inventory (2019)

Emissions Source	Annual GHG Emissions (MT CO ₂ e/year)	Percent of Total
Transportation	122,029	48
Natural Gas	104,358	41
Electricity	20,963	8
Solid Waste	6,022	2
Totals^a	253,371	100

Source: City of Menlo Park 2021b.

Notes: GHG = greenhouse gas; MT CO₂e = metric tons of carbon dioxide equivalent per year.

^a Totals may not sum precisely due to rounding.

As shown in Table 4.7-3, the primary generators of GHGs within the City were attributed to transportation and natural gas, accounting for 56 percent and 34 percent of the City's GHG emissions in 2017, respectively.

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The 2014 *Intergovernmental Panel on Climate Change Synthesis Report* (IPCC 2014) indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice, and rising sea levels (IPCC 2014).

In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, frequency of severe weather events, and electricity demand and supply. The primary effect of global climate change has been a rise in average global tropospheric temperature. Reflecting the long-term warming trend since pre-industrial times, observed global mean surface temperature for the decade 2006–2015 was 0.87 °C, or likely between 33.35 °F and 33.78 °C, higher than the average over the 1850–1900 period (IPCC 2018). Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. Human activities are estimated to have caused approximately 1.0 °C (1.8 °F) of global warming above pre-industrial levels, with a likely range of 0.8 °C to 1.2 °C (1.4 °F to 2.2 °F) (IPCC 2018). Global warming is likely to reach 1.5 °C (2.7 °F) between 2030 and 2052 if it continues to increase at the current rate (IPCC 2018).

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting the state. The Office of Environmental Health Hazard Assessment identified various indicators of climate change in California, which are scientifically based measurements that track trends in various aspects of climate change. Many indicators reveal discernable evidence that climate change is occurring within the state and is having significant, measurable impacts. Changes in the state's climate have been observed including an increase in annual average air temperature with record warmth from 2012 to 2016, more frequent extreme heat events, more extreme drought, a decline in winter chill, an increase in cooling degree days and a decrease in heating degree days, and an increase in variability of statewide precipitation (OEHA 2018).

Warming temperatures and changing precipitation patterns have altered California's physical systems—the ocean, lakes, rivers, and snowpack—on which the state depends. Winter snowpack and spring snowmelt runoff from the

Sierra Nevada and southern Cascade Mountains provide approximately one-third of the state's annual water supply. Impacts of climate on physical systems have been observed such as high variability of snow-water content (i.e., amount of water stored in snowpack), decrease in snowmelt runoff, glacier change (loss in area), rise in sea levels, increase in average lake water temperature and coastal ocean temperature, and a decrease in dissolved oxygen in coastal waters (OEHHA 2018).

Impacts of climate change on biological systems, including humans, wildlife, and vegetation, have also been observed including climate change impacts on terrestrial, marine, and freshwater ecosystems. As with global observations, species responses include those consistent with warming: elevational or latitudinal shifts in range, changes in the timing of key plant and animal life-cycle events, and changes in the abundance of species and in community composition. Humans are better able to adapt to a changing climate than plants and animals in natural ecosystems. Nevertheless, climate change poses a threat to public health as warming temperatures and changes in precipitation can affect vector-borne pathogen transmission and disease patterns in California as well as the variability of heat-related deaths and illnesses. In addition, since 1950, the area burned by wildfires each year has been increasing.

The California Natural Resources Agency (CNRA) has released four California Climate Change Assessments (CNRA 2006, 2009, 2012, and 2018b), which have addressed the following: acceleration of warming across the state, more intense and frequent heat waves, greater riverine flows, accelerating sea level rise, more intense and frequent drought, more severe and frequent wildfires, more severe storms and extreme weather events, shrinking snowpack and less overall precipitation, and ocean acidification, hypoxia, and warming. To address local and regional governments need for information to support action in their communities, the Fourth Assessment (2018) includes reports for nine regions of the state, including the San Francisco Bay Area Region, where the project is located. Key projected climate changes for the San Francisco Bay Area Region include the following (CNRA 2018a):

- Continued future warming over San Francisco Bay Area Region. Across the region, average maximum temperatures are projected to increase around 2.7°F to 10.8°F by the late century.
- Extreme temperatures are also expected to increase. The hottest day of the year may be up to 10°F warmer for many locations across the San Francisco Bay Area Region by the late century under certain model scenarios. The number of extremely hot days is also expected to increase across the region.
- Several studies suggest that coastal fog along the California coast, so critical to the San Francisco Bay Area Region climate, is less frequent than before.
- Sea level in the San Francisco Bay Area Region has risen over 20 centimeters (8 inches) in the last 100 years. California's Fourth Climate Change Assessment projects median sea level rise between 0.74 meters and 1.37 meters for 2100 along the California coast. However, recent science studies, using advanced models and ice sheet observations, suggest the possibility of extensive loss from Antarctic ice sheets in the twenty-first century — possibly producing sea level rise by 2100 that could approach 3 meters.
- In the San Francisco Bay Area Region, will continue to exhibit high year-to-year variability—"booms and busts"—with very wet and very dry years. The San Francisco Bay Area Region's largest winter storms will likely become more intense, and potentially more damaging, in the coming decades. Wet winters and drier summers are likely to increase summer and fall wildfire activity.
- Future increases in temperature, regardless of whether total precipitation goes up or down, will likely cause longer and deeper California droughts, posing major problems for water supplies, natural ecosystems, and agriculture.

4.7.2 Regulatory Framework

International

United Nations Framework Convention on Climate Change, Kyoto Protocol, and Paris Agreement

In 1992, numerous countries joined an international treaty, the United Nations Framework Convention on Climate Change (UNFCCC), as a framework for international cooperation to combat climate change by limiting average global temperature increases and the resulting climate change, and coping with associated impacts. Currently, there are 197 Parties (196 States and 1 regional economic integration organization) in the UNFCCC (UNFCCC 2019).

By 1995, countries launched negotiations to strengthen the global response to climate change, and 2 years later, adopted the Kyoto Protocol, which was the first international agreement to regulate GHG emissions. The Kyoto Protocol legally binds developed country Parties to emission reduction targets. The Protocol's first commitment period started in 2008 and ended in 2012. The second commitment period began on January 1, 2013 and ended in 2020. More than 160 countries signed the Kyoto Protocol (UNFCCC 2019). In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended the United States involvement in the Kyoto Protocol.

The 2015 Paris Agreement, adopted in Paris on December 12, 2015, marks the latest step in the evolution of the UN climate change regime and builds on the work undertaken under the Convention. The Paris Agreement charts a new course in the global effort to combat climate change. The Paris Agreement central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 °C (UNFCCC 2019). The Paris Agreement also aims to strengthen the ability of countries to deal with the impacts of climate change. The Paris Agreement requires all Parties to put forward their best efforts through nationally determined contributions and to strengthen these efforts in the years ahead.

The Paris Agreement entered into force on November 4, 2016, thirty days after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55 percent of the total global GHG emissions have deposited their instruments of ratification, acceptance, approval or accession with the Depositary (UNFCCC 2019). On June 2, 2017 President Donald Trump announced his intention to withdraw from the Paris Agreement, which was formally recognized on November 4, 2019. President Joe Biden re-joined the Paris Agreement on January 21, 2021, which was accepted by the United Nations; the United States was formally re-entered into the Paris Agreement on February 29, 2021.

Federal Regulations

Massachusetts v. EPA

In *Massachusetts v. EPA* (April 2007), the U.S. Supreme Court directed the U.S. Environmental Protection Agency (EPA) administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too

uncertain to make a reasoned decision. In December 2009, the administrator signed a final rule with the following two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act:

- The Administrator found that elevated concentrations of GHGs—CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆—in the atmosphere threaten the public health and welfare of current and future generations. This is the “endangerment finding.”
- The Administrator further found the combined emissions of GHGs—CO₂, CH₄, N₂O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is the “cause or contribute finding.”

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, would do the following, which would aid in the reduction of national GHG emissions (EPA 2007):

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and directs National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy-efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Federal Vehicle Standards

In 2007, in response to the *Massachusetts v. EPA* U.S. Supreme Court ruling, the Bush Administration issued Executive Order (EO) 13432 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012 through 2016 (75 FR 25324–25728).

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017 through 2025 light-duty vehicles. The proposed standards projected to achieve 163 grams/mile of CO₂ in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017 through 2021 (77 FR 62624–63200), and NHTSA intends to set standards for model years 2022 through 2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014 through

2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines (76 FR 57106–57513).

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program applies to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all sizes of buses and work trucks. The final standards are expected to lower CO₂ emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (EPA and NHTSA 2016).

In August 2018 (during the administration of President Trump), the EPA and NHTSA proposed to amend certain fuel economy and GHG standards for passenger cars and light trucks and establish new standards for model years 2021 through 2026. Compared to maintaining the post-2020 standards then in place, the 2018 proposal increased U.S. fuel consumption by approximately half a million barrels per day (2–3 percent of total daily consumption, according to the Energy Information Administration) and would impact the global climate by 3/1000th of 1 °C by 2100 (EPA and NHTSA 2018).

In September 2019, the EPA and NHTSA published the final Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program ([SAFE I] 84 FR 51310), which revoked California’s authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. The EPA and NHTSA subsequently issued the Part Two Rule in March 2020, which set less aggressive CO₂ emissions standards and corporate average fuel economy standards for passenger vehicles and light-duty trucks for model years 2021 through 2026.

On January 20, 2021, President Joe Biden issued an EO on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, which called for review of Part One Rule by April 2021 and review of the Part Two Rule by July 2021 (The White House 2021). After reviewing the public comments submitted on the NHTSA’s April 2021 Notice of Proposed Rulemaking, the NHTSA concluded that SAFE I overstepped the Agency’s legal authority and established overly broad prohibitions that did not account for a variety of important state and local interests. The final rule ensures that SAFE I will no longer form an improper barrier to states exploring creative solutions to address their local communities’ environmental and public health challenges (NHTSA 2021).

Clean Power Plan and New Source Performance Standards for Electric Generating Units

On October 23, 2015, EPA published a final rule (effective December 22, 2015) establishing the Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO₂ emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: (1) fossil-fuel-fired electric utility steam-generating units, and (2) stationary combustion turbines. Concurrently, the EPA published a final rule (effective October 23, 2015) establishing Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units (80 FR 64661–65120). The rule prescribes CO₂ emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units. The U.S. Supreme Court stayed implementation of the Clean Power Plan pending resolution of several lawsuits.

EO 14057

President Joe Biden signed EO 14057 on December 8, 2021, which sets a path for reducing GHG emissions across federal operations, invest in clean energy industries and manufacturing, and create clean, healthy, and resilient communities to achieve carbon neutrality by 2050. The EO outlines five goals:

- 100 percent carbon pollution-free electricity by 2030, at least half of which will be locally supplied clean energy to meet 24/7 demand;
- 100 percent zero-emission vehicle acquisitions by 2035, including 100 percent zero-emission light-duty vehicle acquisitions by 2027;
- Net-zero emissions from federal procurement no later than 2050, including a Buy Clean policy to promote use of construction materials with lower embodied emissions;
- A net-zero emissions building portfolio by 2045, including a 50 percent emissions reduction by 2032; and
- Net-zero emissions from overall federal operations by 2050, including a 65 percent emissions reduction by 2030.

The Inflation Reduction Act of 2022

The Inflation Reduction Act was signed into law by President Biden in August 2022. The bill includes specific investment in energy and climate reform and is projected to reduce GHG emissions within the U.S. by 40 percent as compared to 2005 levels by 2030. The bill allocates funds to boost renewable energy infrastructure (e.g., solar panels and wind turbines), includes tax credits for the purchase of electric vehicles, and includes measures that will make homes more energy efficient.

State Regulations

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, building energy, renewable energy and energy procurement, mobile sources, solid waste, water, and other state regulations and goals. The following text describes EOs, legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

State Climate Change Targets

The state has taken a number of actions to address climate change. These include EOs, legislation, and CARB plans and requirements. These are summarized below.

EO S-3-05

EO S-3-05 (June 2005) established California's GHG emissions reduction targets and laid out responsibilities among the state agencies for implementing the EO and for reporting on progress toward the targets. This EO established the following targets:

- By 2010, reduce GHG emissions to 2000 levels
- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80 percent below 1990 levels

EO S-3-05 also directed the California Environmental Protection Agency to report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry. The Climate Action Team was formed, which subsequently issued reports from 2006 to 2010 (CAT 2006, 2010).

Assembly Bill 32

In furtherance of the goals established in EO S-3-05, the Legislature enacted Assembly Bill (AB) 32 (Núñez and Pavley). The bill is referred to as the California Global Warming Solutions Act of 2006 (September 27, 2006). AB 32 provided initial direction on creating a comprehensive multiyear program to limit California's GHG emissions at 1990 levels by 2020 and initiate the transformations required to achieve the state's long-range climate objectives.

EO B-30-15

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under Executive Order S-3-05 and AB 32. Executive Order B-30-15 set an interim target goal of reducing GHG emissions to 40 percent below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80 percent below 1990 levels by 2050 as set forth in Executive Order S-3-05. To facilitate achieving this goal, Executive Order B-30-15 called for CARB to update the scoping plan to express the 2030 target in terms of million metric tons (MMT) CO₂e. Executive Order B-30-15 also called for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets.

Senate Bill 32 and AB 197

Senate Bill (SB) 32 and AB 197 (enacted in 2016) are companion bills. SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to the Board as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the scoping plan.

CARB's 2007 Statewide Limit

In 2007, in accordance with California Health and Safety Code, Section 38550, CARB approved a statewide limit on the GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 MMT CO₂e). This 2020 target was later revised to 431 MMT CO₂e based on updated GWP data identified by the IPCC. As discussed in Section 4.7.2, per capita GHG emissions in California dropped from a peak of 14.0 MT per person in 2001 to 10.5 MT per person in 2019, representing a 25 percent decrease, which contributed to California achieving the 2020 target. In addition, overall trends in the statewide inventory continue to demonstrate a trend of declining carbon intensity of California's economy (CARB 2021b).

CARB's Climate Change Scoping Plan

One specific requirement of AB 32 is for CARB to prepare a "scoping plan" for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (California Health and Safety Code,

Section 38561[a]), and to update the plan at least once every 5 years. In 2008, CARB approved the first scoping plan. The *Climate Change Scoping Plan: A Framework for Change (Scoping Plan)* included a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the state's long-range climate objectives. The key elements of the Scoping Plan include the following (CARB 2008):

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards
2. Achieving a statewide renewable energy mix of 33 percent
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard (17 CCR 95480 et seq.)
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation

The Scoping Plan also identified local governments as essential partners in achieving California's goals to reduce GHG emissions because they have broad influence and, in some cases, exclusive authority over activities that contribute to significant direct and indirect GHG emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Specifically, the Scoping Plan encouraged local governments to adopt a reduction goal for municipal operations and for community emissions to reduce GHGs by approximately 15 percent from then levels (2008) by 2020. Many local governments developed community-scale local GHG reduction plans based on this Scoping Plan recommendation.

In 2014, CARB approved the first update to the Scoping Plan. The *First Update to the Climate Change Scoping Plan: Building on the Framework (First Update)* defined the state's GHG emission reduction priorities for the next 5 years and laid the groundwork to start the transition to the post-2020 goals set forth in EOs S-3-05 and B-16-2012. The *First Update* concluded that California is on track to meet the 2020 target but recommended a 2030 mid-term GHG reduction target be established to ensure a continuum of action to reduce emissions. The *First Update* recommended a mix of technologies in key economic sectors to reduce emissions through 2050 including: energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and, the rapid market penetration of efficient and clean energy technologies. As part of the *First Update*, CARB recalculated the state's 1990 emissions level, using more recent global warming potentials identified by the IPCC, from 427 MMT CO₂e to 431 MMT CO₂e (CARB 2014).

In 2015, as directed by EO B-30-15, CARB began working on an update to the Scoping Plan to incorporate the 2030 target of 40 percent below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80 percent below 1990 levels by 2050 as set forth in S-3-05. The Governor called on California to pursue a new and ambitious set of strategies, in line with the five climate change pillars from his inaugural address, to reduce GHG emissions and prepare for the unavoidable impacts of climate change. In the summer of 2016, the Legislature affirmed the importance of addressing climate change through passage of SB 32 (Pavley, Chapter 249, Statutes of 2016).

In December 2017, CARB released the 2017 Climate Change Scoping Plan Update (Second Update) for public review and comment (CARB 2017). The Second Update built upon the successful framework established in the initial Scoping Plan and First Update, while identifying new technologically feasible and cost-effective strategies that served as the framework to achieve the 2030 GHG target and define the state's climate change priorities to 2030 and beyond. The strategies' "known commitments" included implementing renewable energy and energy efficiency (including the mandates of SB 350), increased stringency of the Low Carbon Fuel Standard, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant Plan, and increased stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, the Second Update recommended continuing the Cap-and-Trade Program and a measure to reduce GHGs from refineries by 20 percent. The Second Update was approved by CARB's Governing Board on December 14, 2017.

CARB released the Draft 2022 Scoping Plan Update in May 2022, which outlines the state's plan to reach carbon neutrality by 2045 or earlier, while also assessing the progress the state is making toward reducing GHG emissions by at least 40 percent below 1990 levels by 2030, as is required by SB 32 and laid out in the Second Update. The carbon neutrality goal requires CARB to expand proposed actions from only the reduction of anthropogenic sources of GHG emissions to also include those that capture and store carbon (e.g., through natural and working lands, or mechanical technologies). The carbon reduction programs build on and accelerate those currently in place, including moving to zero-emission transportation; phasing out use of fossil gas use for heating homes and buildings; reducing chemical and refrigerants with high GWP; providing communities with sustainable options for walking, biking, and public transit; displacement of fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines); and scaling up new options such as green hydrogen (CARB 2022).²

The Draft 2022 Scoping Plan Update also emphasizes that there is no realistic path to carbon neutrality without carbon removal and sequestration, and to achieve the state's carbon neutrality goal, carbon reduction programs must be supplemented by strategies to remove and sequester carbon. Strategies for carbon removal and sequestration include carbon capture and storage from anthropogenic point sources, where CO₂ is captured as it leaves a facility's smokestack and is injected into geologic formations or used in industrial materials (e.g., concrete); and carbon dioxide removal from ambient air, through mechanical (e.g., direct air capture with sequestration) or nature-based (e.g., management of natural and working lands) applications.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32, SB 32, and the EOs; it also establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. A project is considered consistent with the statutes and EOs if it would meet the general policies in reducing GHG emissions in order to facilitate the achievement of the state's goals and would not impede attainment of those goals. While the 2022 Scoping Plan Update is still in draft form, the guidance and policies contained in the update are anticipated to largely remain unchanged. The public meeting to consider the Draft 2022 Scoping Plan Update was held in June 2022, and it is anticipated that adoption of the Plan will occur in the fall of 2022.

CARB's Regulations for the Mandatory Reporting of Greenhouse Gas Emissions

CARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (17 CCR 95100–95157) incorporated by reference certain requirements that EPA promulgated in its Final Rule on Mandatory Reporting of Greenhouse

² Green hydrogen refers to hydrogen that is generated by renewable energy or from low-carbon power, and has significantly lower associated carbon emissions than grey hydrogen, which is produced using natural gas and makes up the majority of hydrogen production. For the purposes of the *Draft 2022 Scoping Plan*, the term "green hydrogen" is not limited to only electrolytic hydrogen produced from renewables.

Gases (40 CFR, Part 98). Specifically, Section 95100(c) of the Mandatory Reporting Regulation incorporated those requirements that EPA promulgated in the Federal Register on October 30, 2009; July 12, 2010; September 22, 2010; October 28, 2010; November 30, 2010; December 17, 2010; and April 25, 2011. In general, entities subject to the Mandatory Reporting Regulation that emit over 10,000 MT CO₂e per year are required to report annual GHGs through the California Electronic GHG Reporting Tool. Certain sectors, such as refineries and cement plants, are required to report regardless of emission levels. Entities that emit more than the 25,000 MT CO₂e per year threshold are required to have their GHG emission report verified by a CARB-accredited third-party verified.

EO B-18-12

EO B-18-12 (April 2012) directed state agencies, departments, and other entities under the governor's executive authority to take action to reduce entity-wide GHG emissions by at least 10 percent by 2015 and 20 percent by 2020, as measured against a 2010 baseline. EO B-18-12 also established goals for existing state buildings for reducing grid-based energy purchases and water use.

SB 605 and SB 1383

SB 605 (2014) requires CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants in the state; and SB 1383 (2016) requires CARB to approve and implement that strategy by January 1, 2018. SB 1383 also establishes specific targets for the reduction of short-lived climate pollutants (40 percent below 2013 levels by 2030 for methane and HFCs, and 50 percent below 2013 levels by 2030 for anthropogenic black carbon) and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, and as mentioned above, CARB adopted its *Short-Lived Climate Pollutant Reduction Strategy* (SLCP Reduction Strategy) in March 2017. The SLCP Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, methane, and fluorinated gases.

EO B-55-18

EO B-55-18 (September 2018) establishes a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." This EO directs CARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal."

AB 1279

The Legislature enacted AB 1279, the California Climate Crisis Act, in September 2022. The bill declares the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter. Additionally, the bill requires that by 2045, statewide anthropogenic GHG emissions be reduced to at least 85 percent below 1990 levels.

Building Energy

Title 24, Part 6

Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy

efficiency standards are reviewed every few years by the Building Standards Commission and the California Energy Commission (CEC) (and revised if necessary) (California Public Resources Code, Section 25402[b][1]). The regulations receive input from members of industry, as well as the public, with the goal of “reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy” (California Public Resources Code, Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (California Public Resources Code, Section 25402[d]) and cost effectiveness (California Public Resources Code, Sections 25402[b][2] and [b][3]). As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2019 Title 24 standards are the currently applicable building energy efficiency standards and became effective on January 1, 2020. The 2019 Title 24 Building Energy Efficiency Standards further reduce energy used and associated GHG emissions compared to prior standards. In general, single-family residences built to the 2019 standards are anticipated to use approximately 7 percent less energy due to energy efficiency measures than those built to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards will use approximately 53 percent less energy than those under the 2016 standards (CEC 2018).

The 2022 standards will improve upon the 2019 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The CEC updates the Title 24 Energy Code every 3 years. The CEC adopted the 2022 Title 24 Energy Code in August 2021 and the California Building Standards Commission approved incorporating the updated code into the California Building Standards Code (CALGreen) in December 2021. The 2022 Energy Code will go into effect on January 1, 2023. When compared to the 2019 Title 24 Standards, the 2022 amendments include measures that will further reduce energy use in single family, multifamily, and nonresidential buildings, through the following strategies (CEC 2021a):

- New prescriptive and performance standards for electric heat pumps for space conditioning and water heating, as appropriate for the various climate zones in California,
- Require PV and battery storage systems for newly constructed multifamily and selected nonresidential buildings,
- Updated efficiency measures for lighting, building envelope, HVAC, and
- Improvements to reduce the energy loads of certain equipment covered by (i.e., subject to the requirements of) the Energy Code that perform a commercial process that is not related to the occupant needs in the building (such as refrigeration equipment in refrigerated warehouses, or air conditioning for computer equipment in data processing centers).

Title 24, Part 11

In addition to the CEC’s efforts, in 2008, the California Building Standards Commission adopted the nation’s first green building standards. The California Green Building Standards Code (Part 11 of Title 24), which is commonly referred to as CALGreen, establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. As noted above, the 2019 CALGreen standards are the current applicable standards, while the 2022 CALGreen standards will become effective on January 1, 2023. Some of the key mandatory CALGreen 2022 standards involve requirements related to bicycle parking, designated parking for clean air vehicles, electric vehicle (EV) charging stations, shade trees, water conserving plumbing fixtures and fittings, outdoor potable water use in landscaped areas, recycled water supply systems, construction waste management, excavated soil and land clearing debris, and commissioning (24 CCR Part 11). The CALGreen standards also include voluntary efficiency measures that are implemented at the discretion of local agencies and applicants. Compliance with the CALGreen code is enforced through the building permit process.

Title 20

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. The CEC certifies an appliance based on a manufacturer's demonstration that the appliance meets the standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwaters; clothes washers and dryers; cooking products; electric motors; low-voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing each type of appliance covered under the regulations and appliances must meet the standards for energy performance, energy design, water performance and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

SB 1

SB 1 (Murray) (August 2006) established a \$3 billion rebate program to support the goal of the state to install rooftop solar energy systems with a generation capacity of 3,000 megawatts through 2016. SB 1 added sections to the Public Resources Code, including Chapter 8.8 (California Solar Initiative), that require building projects applying for ratepayer-funded incentives for photovoltaic systems to meet minimum energy efficiency levels and performance requirements. Section 25780 established that it is a goal of the state to establish a self-sufficient solar industry. The goals included establishing solar energy systems as a viable mainstream option for both homes and businesses within 10 years of adoption and placing solar energy systems on 50 percent of new homes within 13 years of adoption. SB 1, also termed "Go Solar California," was previously titled "Million Solar Roofs."

California AB 1470 (Solar Water Heating)

This bill established the Solar Water Heating and Efficiency Act of 2007. The bill makes findings and declarations of the Legislature relating to the promotion of solar water heating systems and other technologies that reduce natural gas demand. The bill defines several terms for purposes of the act. The bill requires the commission to evaluate the data available from a specified pilot program, and, if it makes a specified determination, to design and implement a program of incentives for the installation of 200,000 solar water heating systems in homes and businesses throughout the state by 2017.

Renewable Energy and Energy Procurement

SB 1078

SB 1078 (Sher) (September 2002) established the Renewables Portfolio Standard (RPS) program, which required an annual increase in renewable generation by the utilities equivalent to at least 1 percent of sales, with an aggregate goal of 20 percent by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20 percent of their power from renewable sources by 2010 (see SB 107, EO S-14-08, and S-21-09).

SB 1368

SB 1368 (September 2006) required the CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission (CPUC).

AB 1109

Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general-purpose lighting, to reduce electricity consumption 50 percent for indoor residential lighting and 25 percent for indoor commercial lighting.

EO S-14-08

EO S-14-08 (November 2008) focused on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. This EO required that all retail suppliers of electricity in California serve 33 percent of their load with renewable energy by 2020. Furthermore, the EO directed state agencies to take appropriate actions to facilitate reaching this target. The CNRA, through collaboration with the CEC and California Department of Fish and Wildlife (formerly the California Department of Fish and Game), was directed to lead this effort.

EO S-21-09 and SBX1-2

EO S-21-09 (September 2009) directed CARB to adopt a regulation consistent with the goal of EO S-14-08 by July 31, 2010. CARB was further directed to work with the CPUC and CEC to ensure that the regulation builds upon the RPS program and was applicable to investor-owned utilities, publicly owned utilities, direct access providers, and community choice providers. Under this order, CARB was to give the highest priority to those renewable resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health and can be developed the most quickly in support of reliable, efficient, cost-effective electricity system operations. On September 23, 2010, CARB initially approved regulations to implement a Renewable Electricity Standard. However, this regulation was not finalized because of subsequent legislation (SB X1-2, Simitian, statutes of 2011) signed by Governor Brown in April 2011.

SB X1 2 expanded the RPS by establishing a renewable energy target of 20 percent of the total electricity sold to retail customers in California per year by December 31, 2013, and 33 percent by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation (30 megawatts or less), digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location.

SB X1-2 applies to all electricity retailers in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must meet the renewable energy goals previously listed.

SB 350

SB 350 (October 2015, Clean Energy and Pollution Reduction Act) further expanded the RPS by establishing a goal of 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030. In addition,

SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (e.g., heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. Regarding mobile sources, as one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see California Public Utilities Code Section 740.12).

SB 100

SB 100 (2018) increased the standards set forth in SB 350 establishing that 44 percent of the total electricity sold to retail customers in California per year by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100 percent of the retail sales of electricity to California. This bill requires that the achievement of 100 percent zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

SB 1020

SB 1020 (September 2022) revises the standards from SB 100, requiring the following percentage of retail sales of electricity to California end-use customers come from eligible renewable energy resources and zero-carbon resources: 90 percent by December 31, 2035, 95 percent by December 31, 2040, and 100 percent by December 31, 2045.

Mobile Sources

CARB's Mobile Source Strategy

On May 16, 2016, CARB released the 2016 Mobile Source Strategy that demonstrates how the state can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risk from transportation emissions, and reduce petroleum consumption over the next 15 years. The actions contained in the 2016 Mobile Source Strategy will deliver broad environmental and public health benefits, as well as support much needed efforts to modernize and upgrade transportation infrastructure, enhance system-wide efficiency and mobility options, and promote clean economic growth in the mobile sector. The 2016 Mobile Source Strategy would also result in a 45 percent reduction in GHG emissions and a 50 percent reduction in the consumption of petroleum-based fuels (CARB 2016).

AB 1493

AB 1493 (2002) was enacted in response to the transportation sector accounting for more than half of California's CO₂ emissions at the time of its drafting (California Health and Safety Code Section 43018.5 and Section 42823 amendments). AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards were projected to result in a reduction of approximately 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of approximately 30 percent.

Heavy-Duty Diesel

The Heavy-Duty Truck and Bus Regulation that went into effect January 2012, requires diesel particulate matter filters be applied to newer heavier trucks and buses by January 1, 2012, with older vehicles required to comply by January 1, 2015. CARB adopted the proposed amendments to the Heavy-Duty Truck and Bus Regulation on December 31, 2014, to reduce diesel particulate matter, a major source of black carbon, and oxides of nitrogen emissions from heavy-duty diesel vehicles (13 CCR, Part 2025). The rule requires nearly all diesel trucks and buses to be compliant with the 2010 model year engine requirement by January 1, 2023. CARB also adopted an Airborne Toxic Control Measure to limit idling of diesel-fueled commercial vehicles on December 12, 2013. This rule requires diesel-fueled vehicles with gross vehicle weights greater than 10,000 pounds to idle no more than 5 minutes at any location (13 CCR, Part 2485).

EO S-1-07

EO S-1-07 (January 2007, implementing regulation adopted in April 2009) sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO_{2e} grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020 and 20 percent by 2030 (17 CCR 95480 et seq.). The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel—including extraction/feedstock production, processing, transportation, and final consumption—per unit of energy delivered.

SB 375

SB 375 (Steinberg) (September 2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035 and to update those targets every 8 years. SB 375 requires the state's 18 regional metropolitan planning organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP) that will achieve the GHG reduction targets set by CARB. If a MPO is unable to devise an SCS to achieve the GHG reduction target, the MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code, Section 65080(b)(2)(K), an SCS does not: (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

On September 23, 2010, CARB adopted the SB 375 targets for the regional MPOs. CARB set a target of 7 percent per capita reduction by 2020 and a 15 percent per capita reduction by 2035 for the Bay Area. The Metropolitan Transportation Commission (MTC), which is the MPO for the Bay Area, as well as the Association of Bay Area Governments (ABAG), adopted *Plan Bay Area 2050* in October 2021 (MTC and ABAG 2021), which is the RTP/SCS for the Bay Area. *Plan Bay Area 2050* is a long-range plan for transportation projects within the planning area. A key focus in *Plan Bay Area 2050* is understanding interrelated elements of housing, the economy, transportation, and the environment and implementing strategies to improve conditions throughout the Bay Area, including reducing per capita GHG emissions to comply with SB 375.

Advanced Clean Cars Program and Zero-Emissions Vehicle Program

The Advanced Clean Cars (ACC) program (January 2012) is an emission-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB 2012). To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025, cars will emit 75 percent less smog-forming pollution than the average new car sold today. To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34 percent in 2025. The zero-emission vehicle program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of zero-emission vehicles and plug-in hybrid EVs in the 2018 to 2025 model years.

The ACC II program establishes the next set of low-emission vehicle and zero-emission vehicle requirements for model years after 2025 to contribute to meeting federal ambient air quality ozone standards and California's carbon neutrality standards (CARB 2021c). The main objectives of ACC II are:

1. Maximize criteria and GHG emission reductions through increased stringency and real-world reductions.
2. Accelerate the transition to zero-emission vehicles through both increased stringency of requirements and associated actions to support wide-scale adoption and use.

An ACC II rulemaking package, which will consider technological feasibility, environmental impacts, equity, economic impacts, and consumer impacts, was adopted by CARB in August 2022. In March 2022, EPA reinstated California's authority under the Clean Air Act to implement its own GHG emission standards and zero emission vehicle (ZEV) sales mandate (EPA 2022). This action concludes the agency's reconsideration of 2019's SAFE I by finding that the actions taken under the previous administration as a part of SAFE I were decided in error and are now entirely rescinded.

Advanced Clean Trucks Regulation

The Advanced Clean Trucks Regulation was also approved by CARB in 2020. The purpose of the Advanced Clean Trucks Regulation is to accelerate the market for zero-emission vehicles in the medium- and heavy-duty truck sector and to reduce air pollutant emissions generated from on-road mobile sources (CARB 2021d). The regulation has two components including (1) a manufacturer sales requirement and (2) a reporting requirement:

- Zero-emission truck sales: Manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines will be required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55 percent of Class 2b-3 truck sales, 75 percent of Class 4-8 straight truck sales, and 40 percent of truck tractor sales.
- Company and fleet reporting: Large employers including retailers, manufacturers, brokers and others will be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, will be required to report about their existing fleet operations. This information will help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

EO B-16-12

EO B-16-12 (March 2012) required that state entities under the Governor's direction and control support and facilitate the rapid commercialization of zero-emission vehicles. It ordered CARB, CEC, CPUC, and other relevant agencies to work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve benchmark goals by 2015, 2020, and 2025. On a statewide basis, EO B-16-12 established a target reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels by 2050. This directive did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare.

EO N-79-20

Governor Newsom's EO N-79-20 (September 2020) sets a course to end the sale of new internal combustion passenger vehicles by 2035. The primary mechanism to facilitate achievement of this executive specific target is the ACC II program under development that is discussed above. The EO also sets zero-emission vehicle penetration targets for medium- and heavy-duty vehicles, drayage trucks, as well as off-road vehicles and equipment.

AB 1236

AB 1236 (October 2015) (Chiu) required a city, county, or city and county to approve an application for the installation of electric vehicle charging stations, as defined, through the issuance of specified permits unless the city or county makes specified written findings based upon substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill provided for appeal of that decision to the planning commission, as specified. The bill provided that the implementation of consistent statewide standards to achieve the timely and cost-effective installation of electric vehicle charging stations is a matter of statewide concern. The bill required electric vehicle charging stations to meet specified standards. The bill required a city, county, or city and county with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that created an expedited and streamlined permitting process for electric vehicle charging stations, as specified. The bill also required a city, county, or city and county with a population of less than 200,000 residents to adopt this ordinance by September 30, 2017.

Water

EO B-29-15

In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25 percent relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

EO B-37-16

Issued May 2016, EO B-37-16 directed the State Water Resources Control Board (SWRCB) to adjust emergency water conservation regulations through the end of January 2017 to reflect differing water supply conditions across the state. The SWRCB also developed a proposal to achieve a mandatory reduction of potable urban water usage that builds off the mandatory 25 percent reduction called for in EO B-29-15. The SWRCB and Department of Water Resources will develop new, permanent water use targets that build upon the existing state law requirements that the state achieve 20 percent reduction in urban water usage by 2020. EO B-37-16 also specifies that the SWRCB permanently prohibit water-wasting practices such as hosing off sidewalks, driveways, and other hardscapes; washing automobiles with hoses not equipped with a shut-off nozzle; using non-recirculated water in a fountain or other decorative water feature; watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation; and irrigating ornamental turf on public street medians.

Solid Waste

AB 939, AB 341, AB 1826, and AB 1383

In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code, Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25 percent by 1995 and 50 percent by the year 2000.

AB 341 (Chapter 476, Statutes of 2011 [Chesbro]) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75 percent of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle conducted several general stakeholder workshops and several focused workshops and in August 2015 published a discussion document titled AB 341 Report to the Legislature, which identifies five priority strategies that CalRecycle believes would assist the state in reaching the 75 percent goal by 2020, legislative and regulatory recommendations and an evaluation of program effectiveness (CalRecycle 2015).

AB 1826 (Chapter 727, Statutes of 2014, effective 2016) requires businesses to recycle their organic waste (i.e., food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste) depending on the amount of waste they generate per week. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. The minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

SB 1383 (Chapter 395, Statutes of 2016) 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. CalRecycle was granted the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025 (CalRecycle 2019).

Other State Actions

SB 97

SB 97 (Dutton) (August 2007) directed the Governor's Office of Planning and Research to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, the Governor's Office of Planning and Research issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (OPR 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The CNRA adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4[a]). The Guidelines require a lead agency to consider the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]). The Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures. The adopted amendments do not establish a GHG emission threshold, instead allowing a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The CNRA also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009).

With respect to GHG emissions, the CEQA Guidelines state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance-based standards" (14 CCR 15064.4[a]). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]).

EO S-13-08

EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009 (CNRA 2009), and an update, *Safeguarding California: Reducing Climate Risk*, followed in July 2014 (CNRA 2014). To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: Agriculture, Biodiversity and Habitat, Emergency Management, Energy, Forestry, Ocean and Coastal Ecosystems and Resources, Public Health, Transportation, and Water. Issuance of the *Safeguarding California: Implementation Action Plans* followed in March 2016 (CNRA 2016). In January 2018, the CNRA released the *Safeguarding California Plan: 2018 Update*, which communicates current and needed actions that state government should take to build climate change resiliency (CNRA 2018b).

Amendments to the Small Off-Road Engine Regulations: Transition to Zero Emissions

On December 9, 2021, CARB approved proposed amendments to the SORE Regulations, which would require most newly manufactured small off-road engines (SORE), such as those found in leaf blowers, lawn mowers and other equipment, be zero emission starting in 2024. Portable generators, including those in recreational vehicles, would be required to meet more stringent standards in 2024 and meet zero-emission standards starting in 2028.

Assembly Bill 1757

AB 1757 (September 2022) requires the CNRA to determine a range of targets for natural carbon sequestration, and for nature-based climate solutions that reduce GHG emissions for future years 2030, 2038, and 2045. These targets are to be determined by no later than January 1, 2024, and are established to support the state's goals to achieve carbon neutrality and foster climate adaptation and resilience.

Regional and Local Regulations

Bay Area Air Quality Management District

Air districts typically act in an advisory capacity to local governments in establishing the framework for environmental review of air pollution impacts under CEQA. This may include recommendations regarding significance thresholds, analytical tools to estimate emissions and assess impacts, and mitigations for potentially significant impacts. As discussed in Section 4.7.4, Thresholds of Significance, BAAQMD has CEQA significance thresholds for GHG emissions for lead agencies to use in assessing GHG impacts. See Section 4.2.2, Regulatory Framework, under Bay Area Air Quality Management District for additional discussion on BAAQMD.

Metropolitan Transportation Commission and Association of Bay Area Governments

SB 375 requires MPOs to prepare an SCS in their RTP. In the Bay Area, the MTC and the ABAG are jointly responsible for developing and adopting a SCS that integrates transportation, land use, and housing to meet GHG reduction targets set by CARB. Plan Bay Area 2050 is a 30-year plan that charts a course for a Bay Area that is affordable, connected, diverse, healthy, and vibrant for all residents through 2050 and beyond. There are 35 strategies that comprise the heart of the plan to improve housing, the economy, transportation and the environment across the Bay Area's nine counties (MTC and ABAG 2021). Under Plan Bay Area 2050's strategies, just under half of all Bay Area households would live within one half-mile of frequent transit by 2050, with this share increasing to over 70 percent for households with low incomes. Transportation and environmental strategies that support active and shared modes, combined with a transit-supportive land use pattern, are forecasted to lower the share of Bay Area residents that drive to work alone from 50 percent in 2015 to 33 percent in 2050. GHG emissions from transportation would decrease significantly as a result of these transportation and land use changes, and the Bay Area would meet the state mandate of a 19 percent reduction in per capita emissions by 2035—but only if all strategies are implemented (MTC and ABAG 2021).

City of Menlo Park 2030 Climate Action Plan

In April 2021, the City of Menlo Park adopted its amended 2030 CAP to reduce GHG emissions within the City in order to meet the goal of reducing GHG emissions by 90 percent from 2005 baseline levels by 2030 (City of Menlo Park 2021a). The City updated their inventory of GHG emissions in December 2019 which revealed that GHG emissions in Menlo Park fell from 349,284 MT CO₂e in 2005 to 284,378 MT CO₂e in 2017, a reduction of 19 percent. The aim of the 2030 CAP is to reduce community-wide emissions by another 71 percent for a total reduction of 90 percent from 2005 emissions, leaving just 34,933 MT CO₂e per year by 2030 (City of Menlo Park 2021a).

Under CEQA, local agencies must evaluate the environmental impacts of new development projects, including impacts from GHG emissions associated with construction and operation. Per the state CEQA Guidelines Section 15183.5(b), a qualified GHG reduction plan must:

- Quantify existing and projected GHG emissions within the plan area.
- Establish a reduction target based on SB 32.
- Identify and analyze sector specific GHG emissions from plan activities.
- Specify policies and actions (measures) that local jurisdictions will enact and implement over time to achieve a specified reduction target.
- Establish a tool to monitor progress and amend if necessary. Adopt in a public process following environmental review.

The 2030 CAP Update fulfills these requirements and is therefore a “qualified” GHG reduction plan as defined by the state CEQA Guidelines.

The 2030 CAP establishes robust actions for helping the City achieve its 2030 targets while accommodating growth, however, federal, state, and local efforts contemplated in the future are too speculative to support definitive statements. Overall, the proposed actions would reduce the City’s GHG emissions by approximately 98,748 MT CO_{2e} per year. Additional continuing efforts would be required to meet the City’s 2030 goal of reducing GHG emissions by 249,447 MT CO_{2e} per year by 2030. The six actions are as follows:

1. Explore policy/program options to convert 95 percent of existing buildings to all-electric by 2030
2. Set citywide goal for increasing EVs and decreasing gasoline sales
3. Expand access to EV charging for multifamily and commercial properties
4. Reduce vehicle miles travelled (VMT) by 25 percent or an amount recommended by the Complete Streets Commission
5. Eliminate the use of fossil fuels from municipal operations
6. Develop a climate adaptation plan to protect the community from sea level rise and flooding

City of Menlo Park General Plan

Policies pertaining to promoting sustainability and reducing GHG emissions are addressed in the Circulation and the Open Space/Conservation, and the Noise and Safety Elements of the City’s General Plan. Relevant General Plan policies related to air quality are included below.

Circulation Element

Goal CIRC-3: Increase mobility options to reduce traffic congestion, greenhouse gas emissions, and commute travel time.

Policy CIRC-3.1: Support development and transportation improvements that help reduce per service population (or other efficiency metric) VMT [vehicle miles traveled].

Goal CIRC-4: Improve Menlo Park’s overall health, wellness, and quality of life through transportation enhancements.

Policy CIRC-4.1: Encourage the safer and more widespread use of nearly zero-emission modes, such as walking and biking, and lower emission modes like transit, to reduce GHG emissions.

Policy CIRC-4.2: Promote non-motorized transportation to reduce exposure to local air pollution, thereby reducing risks of respiratory diseases, other chronic illnesses, and premature death.

Open Space/Conservation, Noise and Safety Element

Goal OSC 4: Promote Sustainability and Climate Action Planning.

Policy OSC 4.1: Encourage, to the extent feasible, (1) a balance and match between jobs and housing, (2) higher density residential and mixed-use development to be located adjacent to commercial centers and transit corridors, and (3) retail and office areas to be located within walking and biking distance of transit or existing and proposed residential developments.

Policy OSC 4.2: Promote and/or establish environmentally sustainable building practices or standards in new development that would conserve water and energy, prevent stormwater pollution, reduce landfilled waste, and reduce fossil fuel consumption from transportation and energy activities.

Policy OSC 4.3: Promote the installation of renewable energy technology, such as, on residences and businesses through education, social marketing methods, establishing standards and/or providing incentives.

Policy OSC 4.4: Explore the potential for installing infrastructure for vehicles that use alternative fuel, such as electric plug in recharging stations.

Policy OSC 4.5: Encourage projects to achieve a high level of energy conservation exceeding standards set forth in the California Energy Code for Residential and Commercial development.

Policy OSC 4.6: Strive to meet the California State Integrated Waste Management Board per person target of waste generation per person per day through their source reduction, reuse, and recycling programs.

Policy OSC 4.8: Develop and implement a zero waste policy, or implement standards, incentives, or other programs that would lead the community towards a zero waste goal.

Goal OSC 5: Enhance and preserve air quality in accord with State and regional standards, and encourage the coordination of total water quality management including both supply and wastewater treatment.

Policy OSC 5.3: Encourage water-conserving practices in businesses, homes and institutions.

City of Menlo Park Municipal Code

On September 24, 2019, the Menlo Park City Council approved a reach code ordinance, codified as Chapter 12.16 of the City’s Municipal Code. The amendments require new buildings to be “all electric,” which is defined in Municipal Code Section 12.16.100(b) as:

ALL ELECTRIC BUILDING: is a building that has no natural gas or propane plumbing installed within the building, and that uses electricity as the source of energy for its space heating, water heating, cooking appliances, and clothes drying appliances. All Electric Buildings may include solar thermal pool heating.

Furthermore, new high-rise buildings (more than three stories) require a minimum of a 3-kilowatt photovoltaic system for buildings less than 10,000 square feet and a minimum of a 5-kilowatt photovoltaic system for buildings greater than or equal to 10,000 square feet (City of Menlo Park 2019). In addition, Section 16.45.130 of the City's Zoning Ordinance applies green building requirements to development projects within the R-MU zone district. This includes the following standards:

- 100 percent of the project's energy demand be met through on-site generation and/or renewable energy sources or be offset through the purchase of certified renewable energy credits;
- Projects that construct at least 100,001 square feet must meet LEED Gold standards;
- Projects that construct at least 100,001 square feet must enroll in the EPA Energy Star Building Portfolio Manager and submit documentation of compliance;
- Development projects must attain indoor and outdoor water use efficiency standards and be dual plumbed for the internal use of recycled water; and
- Development projects must prepare and implement a zero-waste management plan.

The City's Municipal Code Section 12.18.050 also imposes the following requirements on developments involving the construction of more than two multifamily dwelling units:

- Each townhome must be prewired for one EV charger; and
- EV charging stations must be installed in 15 percent of the required parking spaces.

In addition, Menlo Park Municipal Code Chapter 12.48 establishes landfill diversion requirements for solid waste generated during demolition and construction. Residential projects of 1,000 square feet or greater and commercial projects of 5,000 square feet or greater are required to divert 60 percent of total generated waste tonnage through recycling, reuse, salvage, and other diversion programs. As part of a building or demolition permit application, project applicants must submit estimated tonnage of Construction and Demolition debris and plans for diverting materials to the building division.

4.7.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to greenhouse gases/climate change are based on Appendix G and Section 15130 of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to greenhouse gas emissions would occur if the project would:

- A. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- B. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The CEQA Guidelines do not prescribe specific methodologies for performing an assessment, establish specific thresholds of significance, or mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance that are consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009). The analysis of climate change impacts is inherently cumulative.

BAAQMD

Regarding impacts from GHGs, both BAAQMD and the California Air Pollution Control Officers Association consider GHG impacts to be exclusively cumulative impacts (BAAQMD 2022; CAPCOA 2008); therefore, assessment of significance is based on a determination of whether the GHG emissions from a project represent a cumulatively considerable contribution to the global atmosphere.

The first significance criterion: “Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?” This analysis considers the updated BAAQMD Thresholds, which identifies operational measures that should be applied to all projects in order to not have cumulatively considerable GHG emissions. Projects are to comply with either option A) or option B) would result in a less than cumulatively considerable contribution and has no further action would be required (BAAQMD 2022).

A. Projects must include, at a minimum, the following project design elements:

1. Buildings

- a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
- b. The project will not result in any wasteful, inefficient, or unnecessary electrical usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the state CEQA Guidelines.

2. Transportation

- a. Achieve compliance with electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.
- b. 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:
 - I. Residential projects: 15 percent below the existing VMT per capita
 - II. Office projects: 15 percent below the existing VMT per employee
 - III. Retail projects: no net increase in existing VMT

B. Be consistent with a local GHG Reduction Strategy that meets the criteria under the CEQA Guidelines section 15183.5(b).

Although the City’s 3020 Climate Action Plan meets the requirements of Option B, this assessment uses the BAAQMD’s Option A threshold to evaluate whether the project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

4.7.4 Impacts and Mitigation Measures

Methodology

Construction Emissions

CalEEMod Version 2020.4.0 was used to estimate potential project-generated GHG emissions during construction. Construction of the project would result in GHG emissions primarily associated with use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. All details

for construction criteria air pollutants discussed in Section 4.2.4, are also applicable for the estimation of construction-related GHG emissions. As such, see Section 4.2.4 for a discussion of construction emissions calculation methodology and assumptions.

Operational Emissions

As with Air Quality (refer to Section 4.2 of this EIR), emissions from the operational phase of the project were estimated using CalEEMod Version 2020.4.0. Operational year 2029 was assumed consistent with completion of project construction. Emissions from the existing buildings were also estimated using CalEEMod to present the net change in criteria air pollutant emissions. Operational year 2020 was assumed for the existing land uses.

Area Sources

CalEEMod was used to estimate GHG emissions from the project's area sources, which include operation of gasoline-powered landscape maintenance equipment, which produce minimal GHG emissions. See Section 4.2.4, for a discussion of landscaping equipment emissions calculations.

Energy Sources

The estimation of operational energy emissions for both the project and the existing land uses were based on CalEEMod land use defaults and total area (i.e., square footage) of the project's land use.

Title 24 of the California Code of Regulations serves to enhance and regulate California's building standards. The current Title 24, Part 6 standards, referred to as the 2019 Title 24 Building Energy Efficiency Standards, became effective on January 1, 2020 which is assumed in CalEEMod. However, construction of the proposed project would be required to comply with the 2022 Title 24 Standards at a minimum and depending on timing of full project buildout, may be required to comply with future, more stringent energy codes. Nevertheless, to be conservative, the analysis herein assumes compliance with the 2019 Title 24 Standards. CalEEMod was used to estimate project emissions from electricity uses (see Appendix A for calculations). The existing land uses energy consumption was estimated by using default electricity generation rates from CalEEMod, based on the proposed land use and climate zone. According to these estimations, the existing land uses would consume approximately 899,487 kilowatt-hour (kWh) per year. The electricity consumption at the project site was provided by the project sponsor (The Sobrato Organization) at full buildout and is estimated to be approximately 4,451,000 kWh per year. Furthermore, on September 24, 2019, the City adopted changes to the Menlo Park Municipal Code, which would require electricity as the only fuel source for newly construction buildings (Municipal Code Chapter 12.16); therefore, it was assumed that per City requirements, the residential units would be all-electric. This is consistent with the BAAQMD Thresholds, which states "For the building sector to achieve carbon neutrality, natural gas usage will need to be phased out and replaced with electricity usage" and "new land use development projects must be built without any natural gas infrastructure in order to be consistent with achieving the 2045 carbon neutrality goal" (BAAQMD 2022).

CalEEMod default energy intensity factors (CO₂, CH₄, and N₂O mass emissions per kilowatt-hour) for Peninsula Clean Energy, which is one of California's Community Choice Aggregation organizations and serves San Mateo County, is based on 100 percent RPS by 2025. As explained in Section 3.2.2, SB X1 2 established a target of 33 percent from renewable energy sources for all electricity providers in California by 2020, and SB 100 calls for further development of renewable energy, with a target of 60 percent by 2030. The CO₂ emissions intensity factor for utility energy use was adjusted based on Peninsula Clean Energy's *Our Path to 24/7 Renewable Energy by 2025* report in which the delivered electricity had a GHG emissions intensity of 12 pounds CO₂e per megawatt-hour (MWh) (Peninsula Clean Energy 2021).

Mobile Sources

All details for criteria air pollutants discussed in Section 4.2.2 are also applicable for the estimation of operational mobile source GHG emissions.

Regulatory measures related to mobile sources include AB 1493 (Pavley), ACC Standards, and related federal standards. AB 1493 required that CARB establish GHG emission standards for automobiles, light-duty trucks, and other vehicles determined by CARB to be vehicles that are primarily used for noncommercial personal transportation in the state. The ACC I program is an emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package of regulations. Although not currently included in EMFAC's emission factor estimates and forecasts, in August 2022, CARB adopted the ACC II regulations which would rapidly scale down light-duty passenger car, truck and SUV emissions starting with the 2026 model year through 2035, with all new passenger cars, trucks and SUVs sold in California to be zero emissions by 2035. In addition, the NHTSA and EPA have established corporate fuel economy standards and GHG emission standards, respectively, for automobiles and light-, medium-, and heavy-duty vehicles. Implementation of these standards and fleet turnover (replacement of older vehicles with newer ones) will gradually reduce emissions from the project's motor vehicles. The effectiveness of fuel economy improvements was evaluated using the CalEEMod emission factors for motor vehicles in 2028 to the extent it was captured in EMFAC2017. The 2017 version of EMFAC was used because this version was used in CalEEMod 2020.4.0. The Pavley Clean Car Standards, ACC Standards, and fuel efficiency standards for medium- and heavy-duty vehicles are included in EMFAC2017's emission factor estimates and forecasts. The Low Carbon Fuel Standard was excluded in EMFAC forecasts because most of the emission benefits originate from upstream fuel production. For existing land uses, emission factors representing the vehicle mix and emissions for 2020 were used to estimate emissions.

Solid Waste

The project would generate solid waste, and therefore, result in CO_{2e} emissions associated with landfill off-gassing. CalEEMod default values for solid waste generation was updated for the project while default values were used to estimate GHG emissions associated with solid waste for the existing uses. The project's Zero Waste Management Plan (Appendix K2) shows that it is expected that individuals residing within the project site would generate 5 pounds per day of solid waste in the years 2023 through 2025, 4 pounds per day from 2026 to 2028, 3.5 pounds per day from 2029 to 2032, 2 pounds per day in 2033 and 2034, and 0.5 pounds per day in 2035 and beyond. Per information provided by the project sponsor (The Sobrato Organization), the CalEEMod modeling was based on the estimation that the project would result in a solid waste generation rate of approximately 281 tons per year. In initial operational years, the total annual solid waste generation would be somewhat higher, while in all years after 2034, the project site residents would generate 102.5 tons of solid waste per year, and the associated CO_{2e} emissions associated with landfill off-gassing would be less than what is reflected in this analysis.

Water and Wastewater

Supply, conveyance, treatment, and distribution of water for the project require the use of electricity, which would result in associated indirect GHG emissions. Similarly, wastewater generated by the project requires the use of electricity for conveyance and treatment, and GHG emissions would be generated during wastewater treatment. CalEEMod default values were adjusted based on the consumption and future forecast data provided by the sponsor (The Sobrato Organization) as shown in the 123 Independence Water Budget (Appendix J1). Total potable water use for the project at buildout would be 12,023,277 gallons per year for the apartments, 4,851,349 gallons per year for the townhomes, and 69,379 gallons per year for irrigation offsite. Default CalEEMod values were assumed for

the existing land uses. The electricity use for water supply, treatment, distribution, and wastewater treatment are based on the electricity intensity factors from CalEEMod for the County and the indoor and outdoor water use default values in CalEEMod. Regarding indoor water use, the project would install low-flow water fixtures including, low-flow bathroom and kitchen faucets, and low-flow toilets which would reduce the project’s water consumption.

Project Impacts

Impact 4.7-1 Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

As stated in Section 4.7.3 above, the significance determination for GHGs are based on project consistency with the BAAQMD’s Thresholds, which BAAQMD adopted in April 2022. The analysis presented in this Impact follows the BAAQMD Thresholds description of the approach to determining whether a project’s GHG contribution would be cumulatively considerable. Specifically, this analysis evaluates whether the proposed project would be “designed and built to ensure that it will be consistent with the goal of carbon neutrality by 2045,” which is the state’s current “articulation of what will be required to achieve long-term climate stabilization at a sustainable level,” as defined in EO B-55-18. The BAAQMD Thresholds conclude “if a land use project incorporates all of the design elements necessary for it to be carbon neutral by 2045, then it will contribute its portion of what is needed to achieve the state’s climate goals and will help to solve the cumulative problem. It can therefore be found to make a less-than-cumulatively-considerable climate impact” (BAAQMD 2022).

In addition, the proposed project’s GHG emissions have been quantified below for informational purposes.

Construction Emissions

Construction of the project would result in GHG emissions, which are primarily associated with use of off-road construction equipment, vendor trucks, and worker vehicles. Since the BAAQMD has not established construction-phase GHG thresholds, construction GHG emissions were amortized assuming a 30-year development life after completion of construction. A detailed depiction of the construction schedule—including information regarding phasing, equipment utilized during each phase, trucks, and worker vehicles—is included in Appendix C1. The estimated project-generated GHG emissions from construction activities are shown in Table 4.7-4.

In addition, this analysis includes a qualitative evaluation of the project’s consistency with statewide GHG emission reduction goals. BAAQMD explains that a construction phase GHG emission threshold was not adopted because construction GHG emissions “represent a very small portion of a project’s lifetime GHG emissions” (BAAQMD 2022). The Draft Environmental Analysis prepared in support of the 2022 Draft Scoping Plan Update, however, states that “Depending on project size, the generation of construction emissions are inherently short-term when compared to operational emissions which continue to emit until a project or facility has been decommissioned. Nevertheless, GHGs typically have a long atmospheric lifespan. Therefore, construction emissions must be considered in the overall context of a project” (CARB 2022).

Table 4.7-4. Estimated Annual Construction GHG Emissions

Year	CO ₂	CH ₄	N ₂ O	CO ₂ e
	Metric Tons			
2023	205.46	0.05	0.01	210.09
2024	463.17	0.11	0.02	473.13

Table 4.7-4. Estimated Annual Construction GHG Emissions

Year	CO ₂	CH ₄	N ₂ O	CO ₂ e
	Metric Tons			
2025	586.99	0.14	0.02	595.56
2026	1,725.92	0.21	0.02	1,736.61
2027	2,839.14	0.29	0.02	2,851.88
2028	379.41	0.06	0.01	382.49
Total				6,249.76
Amortized over 30 years				208.33

Source: Appendix C1.

Notes: CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent.

As shown in Table 4.7-4, the estimated total GHG emissions during construction would be approximately 6,250 MT CO₂e over the construction period. Estimated project-generated construction emissions amortized over 30 years would be approximately 208 MT CO₂e per year. As with project-generated construction criteria air pollutant emissions, GHG emissions generated during construction of the project would be short term in nature, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions. Because there is no separate GHG threshold for construction, the evaluation of the significance of the estimated GHG emissions is discussed in the operational emissions analysis.

As noted above, consideration of the consistency of project construction emissions with statewide GHG emission reduction goals, the CARB Scoping Plan, BAAQMD Guidance, and the City's Climate Action Plan is approached qualitatively. These statewide, regional, and local planning documents and regulations do not contain specific mandates that are directly applicable to reduction of GHG emissions during project construction. Instead, they recommend use of best management practices to minimize construction GHG emissions. These recommendations are not requirements however, and not all recommendations or examples of best management practices will apply to and be feasible to implement for every construction project. Specifically, Appendix B to the 2017 Scoping Plan notes "[t]his appendix should be viewed as a general reference document. It should not be interpreted as official guidance or as dictating requirements" to regulate GHGs emissions for local projects.

Construction activities associated with the proposed project would be consistent with these planning documents and regulations as follows:

- Landfill waste would be reduced, consistent with the BAAQMD Guidelines and CARB Scoping Plan through compliance with Menlo Park Municipal Code Chapter 12.48, which establishes landfill diversion requirements for solid waste generated during demolition and construction,
- Fuel used in construction equipment would comply with statewide low-carbon fuel standards.
- Construction crews would be required to shut equipment off when not in use and/or reduce the maximum idling time to 5 minutes as required by the California Airborne Toxics Control Measure and Mitigation Measure 4.2a.
- Under Mitigation Measure 4.2b, construction vehicles of 50 horsepower or greater would be required to use Tier 4 engines to minimize diesel particulate matter emissions
- While the project cannot avoid removal of trees from the project site due to the requirement to raise the ground elevation in response to potential sea level rise, the project proposes to plant over 350 new trees and other landscaping, which would provide shading to reduce energy consumption and provide opportunities for carbon sequestration.

Operational Emissions

Operation of the project would generate GHG emissions through motor vehicle trips to and from the project site, landscape maintenance equipment operation, energy use (natural gas and generation of electricity consumed by the proposed project), natural gas-fueled emergency generator maintenance and testing, solid waste disposal, and generation of electricity associated with water supply, treatment, and distribution and wastewater treatment. CalEEMod was used to calculate the annual GHG emissions based on the operational assumptions described at the beginning of Section 4.7.4 under the 'Methodology' heading.

For informational purposes, the estimated operational project-generated GHG emissions from area sources, energy usage, motor vehicles, solid waste generation, and water usage and wastewater generation are shown in Table 4.7-5.

Table 4.7-5. Estimated Annual Operational GHG Emissions

Emission Source	CO ₂	CH ₄	N ₂ O	CO ₂ e
	Metric Tons			
Project				
Area	5.26	0.01	0.00	5.38
Energy	0.40	0.00	0.00	0.40
Mobile	1,220.58	0.08	0.05	1,238.67
Solid Waste	57.00	3.37	0.00	141.21
Water Supply and Wastewater	11.41	0.45	0.01	25.72
Emergency Generator	8.83	<0.01	0.00	8.87
Total				1,420.25
Amortized Construction Emissions				208.33
Operation + Amortized Construction Total				1,628.58
Existing Land Uses				
Area	<0.01	0.00	0.00	<0.01
Energy	232.83	0.02	<0.01	234.54
Mobile	656.72	0.04	0.03	666.83
Solid Waste	10.89	0.64	0.00	26.98
Water Supply and Wastewater	33.45	1.34	0.03	76.34
Total				1,004.69
Net Change in Emissions				
Net Change (Project – Existing Land Uses)				623.89

Source: Appendix C1.

Notes: CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent; <0.01 = value less than reported 0.01.

As shown in Table 4.7-5, estimated annual project-generated GHG emissions would be approximately 1,420 MT CO₂e per year as a result of project operations only. After summing the amortized project construction emissions, total GHGs generated by the project would be approximately 1,629 MT CO₂e per year. Emissions from the existing land uses are estimated to be approximately 1,005 MT CO₂e per year. As such, implementation of the project would result in net annual operational GHG emissions of 624 MT CO₂e per year.

As stated above, significance of the project in the category of GHG emissions is determined based on the BAAQMD Option A threshold (BAAQMD 2022) rather than a quantitative threshold. Analysis of the project against the BAAQMD Option A threshold is in the Building Elements and Transportation Elements subsections below.

As previously discussed in Section 4.7.3, the BAAQMD Option A threshold includes building and transportation design elements that all projects are required to meet to have a less than cumulatively considerable contribution to climate change. Specifically, the building design elements must exclude natural gas appliances and natural gas plumbing and must not use energy in a wasteful, inefficient, or unnecessary manner. Transportation design elements includes complying with CALGreen electric vehicle charging requirements and, for residential projects, achieving a 15 percent reduction in project-generated per capita VMT below the existing VMT per capita or meeting a locally adopted SB 743 VMT target.

Building Elements

The project would comply with recent revisions to the Menlo Park Municipal Code, which would require electricity as the only fuel source for newly constructed residential buildings (Municipal Code Chapter 12.16). Because the project is all electric and does not propose a natural gas line, it is consistent with the first part of the building element threshold. Regarding the second building element threshold, as discussed in Section 4.5, Energy, the project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operations. Overall, the project would increase electricity and petroleum demand associated with the project site. The project would be built in accordance with the current Building Energy Efficiency Standards (Title 24) at the time of construction, which include robust requirements for energy efficiency and the buildings would be more energy efficient than the existing buildings. Also, the provisions of the CALGreen code apply to the planning, design, operation, construction, use and occupancy of every newly constructed building or structure. Furthermore, the energy demand calculations do not take into account all of the project's energy-saving design features that would result in exceedances of the code requirements. As such, the project's electricity use would be more efficient than what is required and would likely be even lower than the calculations presented above. In addition, the project would provide much-needed housing close to jobs, which results in more efficient commutes. The project's relationship to efficiency requirements and project-specific design features that would minimize electricity use are summarized below. The project's green building features would include compliance with Menlo Park Municipal Code Section 16.45.130 through installation of solar-power generation equipment and ensuring that 100 percent of the project's energy demand is met with renewable energy sources, attaining Leadership in Energy and Environmental Design Gold standard, enrolling in EPA Energy Star Building Portfolio Manager, attaining indoor and outdoor water use efficiency standards, and implementing project-specific zero waste management plans. Additional green building measures incorporated in the proposed project include consistency with Municipal Code Chapter 12.16 to provide all electric buildings, providing electric vehicle charging stations and parking spaces that are "EV Ready," and providing bicycle and pedestrian facilities.

Transportation Elements

In regard to the transportation criteria, due to the urban setting of the project site, which is served by passenger rail and bus services, it is expected that residents, visitors, and guests may use transit or non-vehicular modes of transportation to travel to and from the project site. The Caltrain commuter rail system serves the Menlo Park Station, located at 1120 Merrill Street, approximately 2 miles south of the project site. The study area is also served by the Menlo Park Shuttle Service and the SamTrans bus service, which collectively provide local and regional public transit within the project area. As discussed in detail in Section 4.14, Transportation, and Appendix J1, the proposed

project would implement a Transportation Demand Management Plan (Appendix J2) that is expected to achieve a 20.63 percent reduction in daily trips and total VMT per capita for the project. The project would thus meet the City's residential VMT threshold and BAAQMD's target of achieving a VMT that is at least 15 percent below the existing VMT per capita. In addition, the project would include electric vehicle charging stations and EV Ready parking spaces, consistent with requirements under CALGreen and the Menlo Park Municipal Code.

Therefore, the proposed project's GHG contribution would be **less than significant** and would not be cumulatively considerable.

Mitigation Measures

No mitigation measures are required.

Impact 4.7-2 Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Project Consistency with the City of Menlo Park CAP

As discussed in Section 4.7.2, Regulatory Framework, the City of Menlo Park 2030 CAP identifies a variety of actions, which will help the City make progress towards achieving the CAP goals with respect to conservation of energy, reducing GHG emissions associated with transportation, and adapting to sea level rise. Notably, the six actions detailed below were selected from over 76 actions included in the City's prior Bold and Moderate Plans, because they offered the most benefit for reductions in GHG emissions per cost. The list of actions presented within the 2030 CAP are outlined in Table 4.7-6, along with analysis of the project's consistency with them.

Table 4.7-6. Project Consistency with the City of Menlo Park CAP

CAP Actions	Project Consistency
Action 1: Explore policy/program options to convert 95 percent of existing buildings to all-electric by 2030.	<i>Not Applicable.</i> The project consists of new residential development and would be built all-electric consistent with the Menlo Park Municipal Code.
Action 2: Set citywide goal for increasing EVs and decreasing gasoline sales.	<i>Consistent.</i> The project would provide EV charging in compliance with the Menlo Park Municipal Code Section 12.18.050 and CALGreen requirements.
Action 3: Expand access to EV charging for multifamily and commercial properties.	<i>Consistent.</i> The project would provide EV charging in compliance with the Menlo Park Municipal Code Section 12.18.050 and CALGreen requirements.
Action 4: Reduce VMT by 25 percent or an amount recommended by the Complete Streets Commission.	<i>Consistent.</i> The 25 percent VMT reduction goal is intended to be applied citywide, rather than as a mandate for each individual project to achieve a 25 percent reduction in VMT. This action is described in the CAP as being implemented with a two-pronged approach that includes encouraging higher density development, especially housing, near transit and making the city easier to navigate without a car by implementing the Transportation Master Plan. The project proposes higher density housing through bonus-level development, as permitted by the site's zoning designation. As discussed in Section 4.14, transit services are available proximate to and within walking distance of the

Table 4.7-6. Project Consistency with the City of Menlo Park CAP

CAP Actions	Project Consistency
	<p>project site. The project also incorporates pedestrian and bicycle facilities to support non-motor vehicle mobility. The project also places housing in a job-rich area, which promotes the ability of workers to live near their jobs and reduce commute miles.</p> <p>Also as discussed in Section 4.14, the proposed project would implement a Transportation Demand Management Plan (Appendix J2) that would reduce the project-specific VMT per capita by 20.63 percent compared to the existing VMT per capita.</p>
Action 5: Eliminate the use of fossil fuels from municipal operations.	<i>Not Applicable.</i> Applies to City facilities. However, until all municipal operations have eliminated use of fossil fuels, the project's water conservation measures would contribute to reduced fossil fuel consumption associated with operation of Menlo Park Municipal Water facilities.
Action 6: Develop a climate adaptation plan to protect the community from sea level rise and flooding.	<i>Not Applicable.</i> This Action describes a City initiative. However, as part of this Action, the City has adopted a requirement that all new residential units in areas subject to sea level rise must be raised 2 feet above the 5-foot FEMA floodplain. The proposed project design is consistent with this requirement.

Source: City of Menlo Park 2020.

Project Consistency with Plan Bay Area 2050

MTC and ABAG's Plan Bay Area 2050 is a regional growth-management strategic plan that focuses on reducing GHG emissions associated with transportation, pursuant to SB 375. Plan Bay Area 2050 incorporates local land use projections and circulation networks as identified in city and county general plans and presents 35 strategies across the elements of housing, the economy, transportation and the environment. These strategies identify public policies and investments that can be implemented in the Bay Area at the city, county, regional, and/or state level over the next 30 years.

Typically, a project would be consistent with the RTP/SCS if the project does not exceed the underlying growth assumptions within the RTP/SCS. As discussed in Section 4.12, Population and Housing, the project would provide a minor amount of growth, 1,110 residents (assuming 2.57 persons per household in the City) which is estimated at 9.3 percent of new residents contemplated by the ConnectMenlo General Plan Update and EIR.. Furthermore, the project is consistent with the bonus-level residential capacity permitted by the project site's General Plan land use designation and zoning and is within the housing unit demand projection for the City as determined by ABAG. As such, the project is within the population growth projections in the City and the ABAG region.

The project's consistency with Plan Bay Area 2050 is demonstrated via the project's land use characteristics and features that would reduce vehicular trips and VMT. As discussed in Section 4.2, Air Quality, the project site is designated as Mixed-Use Residential on the ConnectMenlo land use designation map and is within the City's Residential Mixed-Use Bonus (R-MU-B) zoning district. The project proposes to develop 116 for-sale townhomes and 316 rental apartments, consistent with these designations. Because the project would result in the development of uses and growth that are consistent with the City's General Plan and zoning designations it is concluded to have been anticipated in the MTC and ABAG's Plan Bay Area 2050 growth projections. In addition, as demonstrated in the VMT

analysis prepared for the project (refer to Section 4.14 and Appendix J1), the estimated per capita VMT for the project at buildout and with implementation of the proposed Transportation Demand Management Plan (Appendix J2) is estimated to be 20.63 percent less than the current per capita VMT for the transportation analysis zone in which the project site is located. Therefore, the project would not exceed the regional (City) VMT per service population estimates and the project is anticipated to be consistent with Plan Bay Area 2050 strategies.

Based on the analysis above, the project would not conflict with the strategies of Plan Bay Area 2050.

Project Consistency with CARB's Scoping Plan

The Scoping Plan (approved by CARB in 2008 and updated in 2014 and 2017) provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. The Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations.³ Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., Low Carbon Fuel Standard), among others.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. Table 4.7-7 highlights measures that have been developed under the 2030 Scoping Plan and the project's consistency with those measures (these measures are denoted with a letter and number). Table 4.7-7 also includes measures recommended in the 2030 Scoping Plan (these measures are labeled as recommended and are contained in a list that lacks lettering and numbering). To the extent that these measures are applicable to the project, its inhabitants, or uses, the project would comply with all applicable measures adopted in furtherance of the Scoping Plan. The Scoping Plan includes five measures and one recommendation related to the Industry Sector, one measure related to the Forestry Sector, and one measure related to the Agricultural Sector. None of these measures are included in Table 4.7-7 because the proposed Project does not include any industrial, forestry, or agricultural uses.

Table 4.7-7. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Transportation Sector		
Advanced Clean Cars	T-1	<i>Consistent.</i> The project's residents and visitors would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
Low Carbon Fuel Standard	T-2	<i>Consistent.</i> This is a statewide measure that cannot be implemented by a project applicant or lead agency. Nonetheless, this standard would be applicable to the fuel used by vehicles that would

³ The Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009).

Table 4.7-7. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
		access the project site (i.e., motor vehicles driven by the project's residents and visitors would use compliant fuels).
Regional Transportation-Related GHG Targets	T-3	<i>Consistent.</i> At the time of construction, 15 percent of the parking stalls in the apartment garage would be equipped with an electric vehicle (EV) charging station and one parking stall per residential unit would be "EV Ready," meaning that conduits would be installed to facilitate adding a charging station in the future. The project would also designate parking for clean air/EV parking to encourage use of alternative forms of transportation.
Advanced Clean Transit	Recommended	<i>Not applicable.</i> The project would not prevent CARB from accelerating the use of advanced technologies in heavy-duty vehicles to meet air quality, climate, and public health goals.
Last-Mile Delivery	Recommended	<i>Not applicable.</i> The project would not prevent CARB from increasing the deployment of zero-emission trucks primarily in California.
Reduction in VMT	Recommended	<i>Consistent.</i> The project would be developed within proximity of existing transit infrastructure, which would help reduce the project's VMT. As assessed in Section 4.14, Transportation of this Draft EIR, Caltrain commuter rail system serves the Menlo Park Station, approximately 2 miles south of the project site. The study area is also served by the Menlo Park Shuttle Service and the SamTrans bus service, which collectively provide local and regional public transit within the project area
Vehicle Efficiency Measures 1. Tire Pressure 2. Fuel Efficiency Tire Program 3. Low-Friction Oil 4. Solar-Reflective Automotive Paint and Window Glazing	T-4	<i>Consistent.</i> These standards would be applicable to the light-duty vehicles that would access the project site. Motor vehicles driven by the project's residents and visitors would maintain proper tire pressure when their vehicles are serviced. It is anticipated that the project's residents and visitors would replace tires in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase. Motor vehicles driven by the project's residents and visitors would use low-friction oils when their vehicles are serviced. In addition, the project would not prevent CARB from implementing this measure.
Ship Electrification at Ports (Shore Power)	T-5	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure.
Goods Movement Efficiency Measures 1. Port Drayage Trucks	T-6	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure.

Table 4.7-7. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
2. Transport Refrigeration Units Cold Storage Prohibition 3. Cargo Handling Equipment, Anti-Idling, Hybrid, Electrification 4. Goods Movement Systemwide Efficiency Improvements 5. Commercial Harbor Craft Maintenance and Design Efficiency 6. Clean Ships 7. Vessel Speed Reduction		
Heavy-Duty Vehicle GHG Emission Reduction <ul style="list-style-type: none"> Tractor-Trailer GHG Regulation Heavy-Duty Greenhouse Gas Standards for New Vehicle and Engines (Phase I) 	T-7	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure. However, heavy-duty vehicles, such as those that may be used during project construction and for deliveries to project residents, would be required to comply with CARB GHG reduction measures.
Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Proposed Project	T-8	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure. However, all medium and heavy-duty vehicles that would access the project would be subject to this regulation.
Medium and Heavy-Duty GHG Phase 2	Recommended	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure. However, all medium and heavy-duty vehicles that would access the project would be subject to this regulation.
High-Speed Rail	T-9	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure.
Electricity and Natural Gas Sector		
Energy Efficiency Measures (Electricity)	E-1	<i>Consistent.</i> The project would comply with the Menlo Park Municipal Code and with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards for electrical appliances and other devices at the time of building construction.
Energy Efficiency (Natural Gas)	CR-1	<i>Consistent.</i> The project would comply with the Menlo Park Municipal Code and would not include natural gas appliances.
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	<i>Consistent.</i> The apartment building would include solar water heating where feasible.
Combined Heat and Power	E-2	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure.
Renewables Portfolio Standard (33 percent by 2020)	E-3	<i>Consistent.</i> The electricity used by the project would benefit from reduced GHG emissions resulting from increased use of renewable energy sources by electricity providers.

Table 4.7-7. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Renewables Portfolio Standard (50 percent by 2050)	Recommended	<i>Consistent.</i> The increased use of renewable energy sources would reduce GHG emissions due to the project's electricity use.
SB 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and Earlier Solar Programs	E-4	<i>Consistent.</i> The project would be required to meet at minimum, the applicable current Title 24 Building Energy Efficiency Standards regarding the installation rooftop solar systems. As set forth in 2019 Building Energy Efficiency Standards, low-rise residential buildings must include solar panels (subject to a few exceptions) and high-rise multi-family buildings must be solar ready. The City's Reach Code requires solar on high-rise multi-family buildings. as does 2022 Title 24, which takes effect on January 1, 2023.
Water Sector		
Water Use Efficiency	W-1	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure.
Water Recycling	W-2	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure.
Water System Energy Efficiency	W-3	<i>Not applicable.</i> This is applicable for the transmission and treatment of water, but it is not applicable for the project. The project would not prevent CARB from implementing this measure.
Reuse Urban Runoff	W-4	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure.
Renewable Energy Production	W-5	<i>Not applicable.</i> Applicable for wastewater treatment systems. In addition, the project would not prevent CARB from implementing this measure.
Green Buildings		
State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	<i>Not Applicable.</i> This measure is specific to buildings constructed by the State of California. See Measure GB-2.
Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-2	<i>Consistent.</i> The project would be required to be constructed in compliance with the Menlo Park Municipal Code and CALGreen requirements in effect at the time of building construction.
Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-3	<i>Consistent.</i> The project would be required to be constructed in compliance with the Menlo Park Municipal Code, including its Reach Code, and CALGreen requirements in effect at the time of building construction.
Greening Existing Buildings (Greening Existing Homes and Commercial Buildings)	GB-4	<i>Not applicable.</i> This measure applies to existing buildings and therefore does not apply to the project. The project would not inhibit CARB from implementing this Measure.

Table 4.7-7. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Recycling and Waste Management Sector		
Landfill Methane Control Measure	RW-1	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure.
Increasing the Efficiency of Landfill Methane Capture	RW-2	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure.
Mandatory Commercial Recycling	RW-3	<i>Consistent.</i> During both construction and operation of the project, the project would comply with all state and local regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act and the City's zero waste management plans, as amended.
Increase Production and Markets for Compost and Other Organics	RW-4	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure.
Anaerobic/Aerobic Digestion	RW-5	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure.
Extended Producer Responsibility	RW-6	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure.
Environmentally Preferable Purchasing	RW-7	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure.
High GWP Gases Sector		
Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Servicing	H-1	<i>Consistent.</i> The project's leases and/or HOA rules, as applicable, would prohibit air conditioning repairs on motor vehicles on site.
SF6 Limits in Non-Utility and Non-Semiconductor Applications	H-2	<i>Not applicable.</i> The project does not include semiconductor manufacturing. The project would not prevent CARB from implementing this measure.
Reduction of Perfluorocarbons (PFCs) in Semiconductor Manufacturing	H-3	<i>Not applicable.</i> The project does not include semiconductor manufacturing. The project would not prevent CARB from implementing this measure.
Limit High GWP Use in Consumer Products	H-4	<i>Consistent.</i> The project's residents and visitors would use consumer products that would comply with the regulations that are in effect at the time of manufacture.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	<i>Consistent.</i> Motor vehicles driven by the project's residents and visitors would comply with the leak test requirements during smog checks.
Stationary Equipment Refrigerant Management Program – Refrigerant Tracking/Reporting/Repair Program	H-6	<i>Not applicable.</i> The project does not include stationary equipment that uses refrigerant. The project would not prevent CARB from implementing this measure.
Stationary Equipment Refrigerant Management Program – Specifications for Commercial and Industrial Refrigeration	H-6	<i>Not applicable.</i> The project does not include stationary equipment for commercial or industrial refrigeration. The project would not prevent CARB from implementing this measure.

Table 4.7-7. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
SF6 Leak Reduction Gas Insulated Switchgear	H-6	<i>Not applicable.</i> The project does not include development of a switchgear. The project would not prevent CARB from implementing this measure.
40 percent Reduction in Methane and Hydrofluorocarbon (HFC) Emissions	Recommended	<i>Not applicable.</i> The project would emit methane or HFC. The project would not prevent CARB from implementing this measure.
50 percent Reduction in Black Carbon Emissions	Recommended	<i>Not applicable.</i> The project would emit black carbon. The project would not prevent CARB from implementing this measure. However, on-road vehicles accessing the project would be subject to this regulation.

Source: CARB 2008, 2017.

Notes: GHG = greenhouse gas; CARB = California Air Resources Board; EV = electric vehicle; VMT = vehicle miles traveled; SB = Senate Bill; N/A = not applicable; SF₆ = sulfur hexafluoride.

Based on the analysis in Table 4.7-7, the project would be consistent with the applicable strategies and measures in the Scoping Plan.

The 2022 Draft Scoping Plan Update reflects the 2030 target of a 40 percent reduction below 1990 levels codified by SB 32, and the 2045 target of carbon neutrality established by EO B-55-18. Appendix D to the Draft Scoping Plan Update recommends three potential ways for determining whether a local project would be in alignment with state climate goals.

First, Appendix D “strongly recommends” that local governments adopt a local CAP that complies with CEQA requirements. Consistency with a locally adopted CAP would be evidence of consistency with state-wide goals to reduce GHG emissions. Table 4.7-6 contains the analysis of the project’s consistency with the City’s CAP, concluding that the project would be consistent. Accordingly, the project also would be in alignment with the Scoping Plan.

Second, CARB also identified residential and mixed-use project attributes that would “clearly” cause the project to be consistent with the state’s climate strategy (CARB 2022). Per the Scoping Plan, empirical evidence shows that residential development projects that are consistent with these project attributes to reduce GHG emissions will accommodate growth in a manner that aligns with the GHG and equity goals of SB 32. Additionally, consistency with the project attributes will ensure that projects are: (1) addressing the largest sources of their operational emissions, (2) are in alignment with the priority areas defined for Local Climate Action (see Table 4.7-8), and (3) are in alignment with the state’s climate goals. The attributes and analysis of the project’s consistency with them are presented in Table 4.7-8. As shown in Table 4.7-8, the project is consistent with most, but not all, of the project attributes identified by the Draft 2022 Scoping Plan that would clearly cause a project to be consistent with state climate goals. According to the Draft Plan, these attributes are a guide to determine residential projects that are clearly consistent with the state’s climate strategy for CEQA purposes and consistency with each attribute is not necessarily required. The Scoping Plan notes that even projects with some (but not all) of these attributes may well be consistent with the state’s climate strategy, though they will likely need to provide further evidence to demonstrate consistency. The project has demonstrated such consistency by showing it is consistent with the City’s 2030 CAP and BAAQMD’s thresholds.

Third, the 2022 Draft Scoping Plan Appendix D states that a project can show alignment with state climate goals by showing that it would meet a local air quality management agency's adopted GHG threshold. As discussed above, the project is consistent with the BAAQMD's GHG threshold.

Table 4.7-8. Project Consistency with Draft 2022 Scoping Plan Climate Change Guidance Prior to Mitigation

Project Attributes	Project Consistency
At least 20 percent of the units are affordable to lower-income residents ^{a, b}	<i>Potential conflict.</i> The project proposes 432 homes, 74 Below Market Rate (BMR) units consisting of 18 BMR townhomes and 56 BMR apartments. These 74 units comprise approximately 17 percent of the total units and therefore do not meet the 20 percent or greater recommendation. However, the project has demonstrated consistency with the Scoping Plan by showing that it is consistent with the City's 2030 CAP and BAAQMD's GHG threshold.
Result in no net loss of existing affordable units	<i>Consistent.</i> The proposed project would include demolition of five existing office and industrial buildings. There are no affordable housing units currently within the project site and no affordable housing units would be lost as a result of the project.
Utilize existing infill sites that are surrounded by urban uses, and reuse or redevelop previously developed, underutilized land presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer) ^c	<i>Consistent.</i> The project involves redevelopment of an existing urban, developed area. Furthermore, the Caltrain commuter rail system serves the Menlo Park Station, approximately 2 miles south of the project site. The study area is also served by the Menlo Park Shuttle Service and the SamTrans bus service, which collectively provide local and regional public transit within the project area
Include transit-supportive densities (minimum of 20 residential dwelling units/acre), or are in proximity to existing transit (within ½ mile), or satisfy more detailed and stringent criteria specified in the region's SCS to achieve further emission reductions through consistency with the SCS	<i>Consistent.</i> The project site is within the Residential Mixed-Use Bonus (R-MU-B) zoning district which is subject to the requirements of the Menlo Park Municipal Code Chapter 16.45, R-MU Residential Mixed-Use District. The project site comprises approximately 8.15 acres, with 432 residential units, for a density of 53 dwelling units per acre. Furthermore, the study area is also served by the Menlo Park Shuttle Service and the SamTrans bus service, which collectively provide local and regional public transit within the project area
Do not result in the loss or conversion of the state's natural and working lands	<i>Consistent.</i> The project involves redevelopment of an existing urban, developed area and implementation of project would not result in land use conversion that would reduce the state's natural and working lands.
Use all electric appliances, without any natural gas connections, and would not use propane or other fossil fuels for space heating, water heating, or indoor cooking ^{f, g}	<i>Consistent.</i> The project consists of new residential development and would be built all-electric consistent with the Menlo Park Municipal Code.
Provide EV charging infrastructure at least in accordance with CalGreen Tier 2 standards ^h	<i>Consistent.</i> The project would provide EV charging in compliance with the Menlo Park Municipal Code and CALGreen requirements.

Table 4.7-8. Project Consistency with Draft 2022 Scoping Plan Climate Change Guidance Prior to Mitigation

Project Attributes	Project Consistency
<p>Relax parking requirementsⁱ by:</p> <ul style="list-style-type: none"> ▪ Eliminating parking requirements or including maximum allowable parking ratios. ▪ Providing residential parking supply at a ratio of <1 parking space per unit. ▪ Unbundling residential parking costs from costs to rent or lease. 	<p><i>Not Applicable.</i> This Project Attribute requires the City to make changes in development standards to relax parking requirements. The proposed project would not impede the City's ability to make such changes.</p> <p>Further, the project proposes to provide an average of 1.3 parking spaces per dwelling unit, which is within the City's currently required range of providing between 1.0 and 1.5 parking spaces per unit (Municipal Code Section 16.45.080. The project is proposed under the Housing Crisis Act of 2019 which requires the City to evaluate the project under the objective standards that existed at the time the project's Preliminary Application was submitted. Applying a reduced parking standard to the project would require the project to obtain a variance from the existing Municipal Code, which is not permitted under the Housing Crisis Act of 2019. Further, as noted above, the project has demonstrated consistency with the Scoping Plan by showing that it is consistent with the City's 2030 CAP and BAAQMD's GHG threshold.</p>

Source: CARB 2022.

Notes: MMT CO₂e = million metric tons of carbon dioxide equivalent.

^a Newmark and Haas 2015.

^b California Housing Partnership Corporation and TransForm 2014.

^c California Government Code §§ 65041.1.

^d Federal Transit Administration. 2014.

^e Washington Department of Transportation. 2013.

^f Energy and Environmental Economics. 2019.

^g Energy and Environmental Economics. 2021.

^h Cal. Code of Regs., tit. 24, Part 11.

ⁱ CAPCOA 2021.

Project Consistency with SB 32 and EO S-3-05

For informational purposes, the EIR discusses SB 32 and EO S-3-05. The project would not impede the attainment of the GHG reduction goals for 2030 or 2050 identified in EO S-3-05 and SB 32. As discussed in Section 4.7.2, EO S-3-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. SB 32 establishes a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40 percent below 1990 levels by December 31, 2030; the measures to reach this target are in the 2017 Scoping Plan and the project's consistency with that Scoping Plan is discussed above. While there are no established protocols or thresholds of significance for that future year analysis, CARB forecasts that compliance with the current Scoping Plan puts the state on a trajectory of meeting these long-term GHG goals, although the specific path to compliance is unknown (CARB 2014).

CARB has expressed optimism with regard to both the 2030 and 2050 goals. In the First Update to the Climate Change Scoping Plan, CARB recognized that California was on track to meet the near-term 2020 GHG emissions limit. Achievement of this standard was confirmed in the 2017 Scoping Plan (CARB 2017). The First Update to the Climate Change Scoping Plan indicated that policy goals that existed at that time, "such as 12,000 megawatts of

renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others” would further contribute to the state’s ability to realize additional GHG reductions and “stay on track to reduce emissions to 80 percent below 1990 levels by 2050.”

The 2030 Scoping Plan reaffirmed CARB’s expectation that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, SB 32, and EO S-3-05, which states (CARB 2017):

The Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities.

The project would not interfere with implementation of any of the previously described GHG reduction goals for 2030 or 2050 because the project would comply with the BAAQMD’s significance threshold for land use projects. Because the project would meet the threshold, this analysis provides support for the conclusion that the project would not impede the state’s trajectory toward the previously described statewide GHG reduction goals for 2030 or 2050. In September 2018, EO B-55-18 was signed, which commits the state to total carbon neutrality by 2045. As demonstrated in Table 4.7-8, the project is consistent with most of the project attributes identified by the Draft 2022 Scoping Plan which were developed in order for new projects to be consistent with the state climate goals.

Conclusion

The project is consistent with the current Scoping Plan which promotes growth while achieving greater energy efficiency. The project also would be consistent with the Menlo Park 2030 CAP, Plan Bay Area 2050, SB 32, and EO S-3-05 by being consistent with VMT reduction strategies and policies, increasing the use of alternative fueled vehicles, and implementing energy efficiency strategies. The project would not conflict with any plans adopted with the purpose of reducing GHG emissions; therefore, the project’s impacts with respect to GHG emissions would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

Impact 4.7-3 Would the project result in cumulatively considerable impacts with regard to greenhouse gas emissions?

As previously discussed in Section 4.7.1, Environmental Setting, GHG emissions inherently contribute to cumulative impacts. As shown in Section 4.7.4, the project would comply with the BAAQMD Thresholds and would be consistent with the Scoping Plan, Menlo Park 2030 CAP, Plan Bay Area 2050, SB 32, and EO S-3-05. Therefore, the proposed project’s GHG emissions would not make a cumulatively considerable contribution to global climate change.

Mitigation Measures

No mitigation measures are required.

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4.8 Hazards and Hazardous Materials

The following analysis evaluates impacts related to potential exposure to hazards and hazardous materials associated with implementation of the proposed 123 Independence Drive Residential Project (project; proposed project).

As discussed in Chapter 2, Introduction, and Chapter 4, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this environmental impact report (EIR), one in January and February 2021, and one in September and October 2021. No comments were received in response to either NOP addressing hazards and hazardous materials, other than potential health risks due to air pollution for schools located in the project vicinity. Health risks associated with air pollution are addressed in Section 4.2, Air Quality. Both NOPs and the comments received in response to them are provided in Appendix A of this EIR.

The primary sources reviewed to prepare this section include the ConnectMenlo General Plan Update (City of Menlo Park 2016a), the ConnectMenlo General Plan Update EIR (City of Menlo Park 2016b), and the Phase I Environmental Site Assessments (ESA) prepared in 2021 for the project site (Appendix F2).

4.8.1 Environmental Setting

Site Location

The approximately 8.15-acre project site (355,185 square feet on Assessor's Parcel Numbers 055-236-140, 055-236-180, 055-236-240, 055-236-300, and 055-236-280) is located in the Bayfront Area of the City of Menlo Park (City), as shown in Figure 3-1, Project Location. The adjacent land uses include a variety of offices, commercial business parks, and public facilities along Constitution Drive and Chrysler Drive. A mix of commercial businesses, including several buildings housing offices of Facebook, are located south of the project site along Independence Drive, as shown in Figure 3-2, Project Vicinity. At the time environmental review for the proposed project commenced, several commercial buildings and hotels were under construction between Constitution Drive and Bayfront Expressway, west of Chrysler Drive.

Soils and Surface Water

A review of the U.S. Department of Agriculture Soil Survey for the project area and the soils in the vicinity of the project site are classified as Urban Land-Orthents (USDA 2021). The Urban Land Orthents designation indicates that 65 percent of the original soils have been disturbed or covered by paved surfaces, buildings or other structures, 30 percent consist of orthents and similar soils, and 4 percent consists of minor components. The nearest surface water to the proposed project site is the Ravenwood Slough, located approximately 960 feet to the north.

Surrounding School and Airport Land Uses

The project site is located within the Ravenswood City School District and the Sequoia Union High School District. Several other school districts serve other portions of Menlo Park. The closest schools to the project site are TIDE Academy, part of the Sequoia Union High School District located approximately 0.2 miles southeast; Beechwood School (a private school) located approximately 0.5 miles southeast; Belle Haven Elementary School approximately 1 mile southeast; Encinal Elementary School approximately 1.5 miles southwest, Laurel Elementary Lower Campus approximately 1.2 miles southeast, Mid-Peninsula High School approximately 1.5 miles east, and Peninsula School approximately 1.3 miles southeast.

Palo Alto Airport, a general aviation field that is owned and operated by the City of Palo Alto, is within 5 miles of the project site (City of Palo Alto 2021). The Comprehensive Land Use Plan for the Palo Alto Airport describes the Airport Influence Area (AIA) as an area within which all development must be evaluated by local agencies to determine how the Comprehensive Land Use Plan may affect proposed development (Santa Clara County ALUC 2020). The AIA includes the areas surrounding the airport that are affected by noise, height, and safety issues. The AIA for the Palo Alto Airport is defined as the portion of Palo Alto east of US 101 (i.e., from US 101 to San Francisquito Creek along the Palo Alto city boundary, to Charleston Slough, to Barron Creek, then back to US 101). For structures with a height of 500 feet or greater, the AIA includes all of Santa Clara County. The project site does not lie within the AIA.

San Carlos Airport, a community airport located near the San Francisco Bay owned by San Mateo County, is located approximately 5 miles northwest of the project site. According to the Airport Comprehensive Land Use Plan for San Carlos Airport, the project site is outside the AIA (CCAG 2015; County of San Mateo 2021b).

Existing Site Conditions

Phase I ESAs were previously prepared in 2015 and 2016 for three of the project site parcels: 130 Constitution Drive (PES 2016), 123 and 125 Independence Drive (AEI 2015), and 127 Independence Drive (PES 2015b). In February 2021, a new Phase I ESA was prepared to evaluate the entirety of the project site including 119 Independence Drive, 123-125 Independence Drive, 127 Independence Drive, 1205 Chrysler Drive, and 130 Constitution Drive. Information provided below regarding previous and current conditions is sourced from the Phase I ESA prepared in February 2021 (Appendix F2).

Aerial photographs from 1943 and 1958 show the proposed project site as vacant land that was likely in agricultural use (grass and/or grain farming), and there is a potential that agricultural chemicals such as pesticides, herbicides, and fertilizers were used on site. The existing industrial buildings on site were constructed circa 1960/1961 which indicates there is a potential for each building to contain lead-based paint (LBP) and asbestos-containing materials (ACMs). Further, many of the building occupants over time have carried out industrial processes, warehousing, installation and use of underground storage tanks (USTs), and other activities that involved use and/or storage of various chemicals which could be present within on-site soils (Appendix F2, AEI 2015, PES 2015b, PES 2016).

Phase I Environmental Site Assessments

The Phase I ESA completed in February 2021 was prepared for the entirety of the proposed project site, which comprises five individual parcels. Findings of the 2021 Phase I ESA identified hazardous material use and storage limited to small quantities of chemicals as well as surface soil staining at the project site. Further, the presence of volatile organic compounds (VOCs), primarily trichloroethene (TCE) and vinyl chloride, were documented in groundwater and soil vapor beneath the project site. While no evidence of USTs or above-ground storage tanks are present, there were two USTs near the northwestern project boundary that have been removed but represent a recognized environmental condition (REC) due to documented groundwater impacts and lack of site closure documentation. The ESA also indicates the potential presence of LBPs and ACMs due to the age of on-site structures as well the potential for residual chemicals (i.e., pesticides, herbicides, etc.) to be present as a result of past agricultural uses at the site (Appendix F2).

The following discussion provides a summary of site conditions as described in the 2021 Phase I ESA, which incorporates summaries of the findings of earlier ESAs for each of the parcels comprising the project site.

119 Independence Drive

The 2021 Phase I ESA discusses that the 2015 ESA for 119 Independence Drive (western portion of the project site) identified two RECs at the subject property. RECs included concentrations of TCE within groundwater beneath the site, and USTs that had been previously removed from the northwest portion of the adjoining property (123-125 Independence Drive) as well as constituents detected in soil samples taken from the site during UST removal. Due to the property's previous agricultural uses, pesticides, herbicides, arsenic, and lead were identified as potential environmental concerns. Further, the 2015 ESA indicated there was potential soil contamination north of the on-site building as well as the potential presence of LBP and ACMs due to the age of the on-site building (Appendix F2).

123 and 125 Independence Drive

Also in 2015, a Phase I ESA was prepared for the property located at 123 and 125 Independence Drive (AEI 2015). Findings from this ESA indicated the presence of a regional groundwater plume containing TCE that has impacted shallow groundwater as well as potential presence of LBPs and ACMs due to the age of the on-site structure.

The 2015 ESA reported that two gasoline USTs were removed from the subject property in 1985. The USTs were 8,000 gallons and 1,000 gallons in size and located to the northwest of the subject property building. Documents indicate the USTs were empty at the time of the tank removal. A groundwater sample was collected from the down-gradient end of the tank pit. The tank pit was reportedly backfilled with excavated soil, except for the most heavily contaminated portions, which were set aside to "air-dry." A product line was still attached to one of the tanks, which severed when the tank was pulled. A small amount of product drained into the pit. The pit was reportedly skimmed before it was filled. The groundwater sample collected from the pit contained 93 parts per million of gasoline. The groundwater sample was not analyzed for any other contaminants, including benzene, toluene, ethyl benzene, and xylenes, and no other sampling was conducted, including the collection of soil samples from the tank excavation or from beneath the dispensers, located to the northeast of the tanks. No closure letter from the County was on file at the SMCEHD, nor was there any documentation indicating further investigations needed to be conducted regarding the former USTs (AEI 2015). This is considered an REC due to the lack of a closure letter and the potential for soil contamination to have occurred during removal of the USTs (Appendix F2),

1205 Chrysler Drive

A Phase 1 ESA was also prepared for the 1205 Chrysler property in 2015 (PES 2015). The report documented regional TCE impacts to groundwater and potential TCE vapor intrusion, the presence of asbestos-containing materials (ACM), and the potential presence of LBP. No RECs were identified. The 2021 ESA reports that this property was subject to soil and groundwater analysis in 2002 under the DTSC's Brownfields and Environmental Restoration Program (Cleanup Program) to investigate the presence of TCE in the groundwater. As discussed further under the GeoTracker heading below, soil and groundwater sampling and analysis demonstrated that the property was highly unlikely to be the source of TCE in the groundwater and that no soil remediation was required. The RQWCB concurred with these findings and issued a No Further Action letter for this site in 2002 (Appendix F2).

127 Independence Drive

A Phase I ESA was prepared for 127 Independence Drive in 2016 (PES 2015b). Findings of this ESA indicated chemical use on site and the presence of isopropyl alcohol, acetone, methanol, hydrochloric acid, and germicidal detergents, all of which appeared to be stored correctly. No RECs were identified for the subject property; however, as previously described for the 123 and 125 Independence Drive properties, the regional TCE plume was noted to

be impacting shallow groundwater within the area. Due to the age of on-site structures, the ESA identified the potential for presence of LBPs and ACMs (Appendix E)

130 Constitution Drive

In 2016, a Phase I ESA was also prepared for the property located at 130 Constitution Drive (PES 2016). Findings of the report indicated on-site soil staining, the presence of the regional TCE groundwater plume, potential presence of LBP, and concentrations of vinyl chloride in exceedance of vapor intrusion risk. ACM was also identified at the property; however, it is managed under an operation and maintenance plan (Appendix E4, PES 2016)

Cortese List

The Hazardous Waste and Substances Sites (Cortese) List is a planning document that provides information about the location of hazardous materials release sites. Government Code section 65962.5 requires the California Environmental Protection Agency to develop an updated Cortese List at least annually. The Department of Toxic Substance Control's (DTSC) is responsible for a portion of the information contained in the Cortese List. Specifically, DTSC's Brownfields and Environmental Restoration Program (Cleanup Program) EnviroStor database which includes information on hazardous waste and the status of remediation. The State Water Resources Control Board's (SWRCB) GeoTracker database includes information on underground storage tanks and solid waste disposal facilities and any associated contamination.

GeoTracker

As noted in the discussion of ESAs prepared for the project site, the SWRCB's GeoTracker database identifies a closed Cleanup Program Site in the southeastern portion of the project site, at 1205 Chrysler Drive associated with former tenants of that property, Krebs Engineers, who occupied the site from 1969 to 1995. In 1997 the SMCEHD notified Krebs Engineers that records showed a potential release of hazardous materials from the site that required investigation and potential clean up. Soil and groundwater sampling was conducted by E2C pursuant to an approved Work Plan for Groundwater Investigation. Based on the soil and groundwater sampling and analysis, E2C concluded that the property was highly unlikely to be the source of TCE in the groundwater and that no soil remediation was required based on the low contaminant concentrations in the soil. The RQWCB concurred with E2C's findings and issued a No Further Action letter for this site in 2002 (Appendix E).

The GeoTracker database identifies an active Cleanup Program Site approximately 300 feet west of the project site, located at the Menlo Portal project site at 115 Independence Drive and 104-110 Constitution Drive. Potential contaminants of concern at this site include arsenic, benzene, dichloroethane, diesel, gasoline, petroleum, and vinyl chloride. The site was formerly used for component manufacturing by Electro Nuclear Laboratories from 1974 to 1975, then occupied by semiconductor manufacturing companies, including Raychem corporation. The site was redeveloped in 2021 including one residential use building and one commercial building. Vapor intrusion was found to be a potentially significant hazard to the Menlo Portal project, which was mitigated by building design and import of clean soil covering the site to a depth of 3 feet (Appendix E). Vapor intrusion was found to be the primary concern associated with redevelopment of the Menlo Portal site. Due to the proximity of the 123 Independence project site to this site and the inferred groundwater flow direction, the VOC concentrations found in the soil and groundwater at the Menlo Portal site is considered a significant environmental condition for the proposed project. Regional groundwater flow is generally to the north towards the San Francisco Bay, however groundwater monitoring at 120 Constitution Drive has shown that groundwater flow fluctuates from north to southeast due to tidal influences typical of the Bay fringe (Appendix E).

The GeoTracker database identifies a second active Cleanup Program Site approximately 0.3 miles east of the project site, located at the Menlo Uptown project site at 141 Jefferson Drive (RWQCB 2021). A Phase II ESA was prepared for that site in 2018. As part of that effort, soil samples were collected, analyzed, and found to contain concentrations of metals, VOCs, organochlorine pesticides, and petroleum hydrocarbons. All of the concentrations were below the environmental screening levels for residential land use. Groundwater and soil vapor samples were also collected and found to contain both VOCs and petroleum hydrocarbons above residential environmental screening levels (LSA 2019). The ESA analysis found that the VOC concentrations encountered at the site were not indicative of widespread or significant contamination. Further, the Menlo Uptown site is cross-gradient from the 123 Independence site (meaning that groundwater is likely to flow from the 123 Independence site towards the Menlo Uptown site) and thus the proximity of the 123 Independence project site to the Menlo Uptown project site is not considered to present any significant environmental conditions for the proposed project.

There is a closed Cleanup Program Site at 4040 Campbell Avenue, approximately 1,500 feet south of the project site. TCE and other VOCs were identified in soil and groundwater at this property. VOCs and petroleum hydrocarbons were used in previous operations at this location and were released from an oil-water separator. Remediation was completed and the property received case closure from the RWQCB. However, groundwater at this property was measured to flow north to northwest, thus the property is up-gradient of the 123 Independence project site, and the VOC-impacted groundwater has the potential to migrate beneath the project site. Therefore, the VOC-impacted groundwater is considered a significant environmental condition for the proposed project.

There are several other historical cleanup sites in the project vicinity, with the nearest being the Moreing Company (1998), 120 Constitution Drive, immediately west of the project site; and Bay Associated (1999), 1150 Chrysler Drive, immediately east of the project site. These cases involved leaking USTs that discharged gasoline contaminants to the groundwater. Both cases are closed and do not appear to present any significant environmental concerns for the proposed project (Appendix F2, RWQCB 2021).

EnviroStor

A review of the DTSCs Envirostor did not reveal a history of hazardous waste releases or documented environmental contamination within 1,000 feet of the project site. The nearest cleanup sites include Menlo Park Sanitation, approximately 0.5 miles north of the project site at 1700 Marsh Road Extension, requiring no further action as of 1985; Menlo Park Proposed School, approximately 0.2 miles east of the project site at 150 Jefferson Drive, requiring no further action as of 2016; and Menlo Tech Site Cleanup Evaluation, approximately 0.3 miles east of the project site at 188 Constitution Drive, referred to the Regional Water Quality Control Board in 2020 (DTSC 2021).

Wildland Fires

According to the California Department of Forestry and Fire Protection's (CAL FIRE) Fire and Resource Assessment Program, the project area is within a Local Responsibility Area (LRA) because it is within the city limits and served by the Menlo Park Fire Department and designated Non-Very High Fire Hazard Severity Zone (CAL FIRE 2008). Therefore, the risk of wildfire at the project site is considered very low. Further, the ConnectMenlo General Plan Update indicates that there are no areas of moderate, high, or very high Fire Hazard Severity within the city or the LRA, (City of Menlo Park 2016b).

4.8.2 Regulatory Framework

Federal Regulations

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) was established in 1970 to consolidate in one agency a variety of federal research, monitoring, standard-setting, and enforcement activities to ensure environmental protection. The EPA's mission is to protect human health and to safeguard the natural environment—air, water, and land—upon which life depends. The EPA works to develop and enforce regulations that implement environmental laws enacted by Congress, is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for using permits and for monitoring and enforcing compliance. Where national standards are not met, the EPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality.

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the EPA to regulate the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the “cradle-to-grave” system of regulating hazardous wastes.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as “Superfund,” were enacted by Congress on December 11, 1980. This law (42 USC 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites, provides for liability of persons responsible for releases of hazardous waste at these sites, and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enables the revision of the National Contingency Plan. The National Contingency Plan (Title 40, Code of Federal Regulations [CFR], Part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The National Contingency Plan also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

Clean Water Act/Spill Prevention, Control, and Countermeasure Rule

The Clean Water Act (33 USC 1251 et seq., formerly known as the Federal Water Pollution Control Act of 1972) was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of waters of the United States. As part of the Clean Water Act, the EPA oversees and enforces the Oil Pollution Prevention regulation contained in 40 CFR 112, which is often referred to as the “SPCC rule” because the regulations describe the requirements for facilities to prepare, amend, and implement spill prevention, control, and countermeasure (SPCC) plans. A facility is subject to SPCC regulations if a single oil storage tank has a capacity greater than 660 gallons, or the total aboveground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the “navigable waters” of the United States.

Other Regulations

Other federal regulations overseen by the EPA relevant to hazardous materials and environmental contamination include 40 CFR Parts 100 to 149 – Water Programs, 40 CFR Parts 239 to 259 – Solid Wastes, and 40 CFR Parts 260 to 279 – Hazardous Waste. These regulations designate hazardous substances under the Clean Water Act; determine the reportable quantity for each substance that is designated as hazardous; and establish quantities of designated substances equal to or greater than the reportable quantities that may be discharged into waters of the United States.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration's (OSHA) mission is to ensure the safety and health of U.S. workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. The OSHA staff establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in 29 CFR 1910.

State Regulations

Hazardous Waste Control Act

The Hazardous Waste Control Act created the state hazardous waste management program, which is similar to but more stringent than the federal RCRA program. The act is implemented by regulations contained in Title 26 CCR, which describes the following required aspects for the proper management of hazardous waste:

- Identification and classification
- Generation and transportation
- Design and permitting of recycling, treatment, storage, and disposal facilities
- Treatment standards
- Operation of facilities and staff training
- Closure of facilities and liability requirements

These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of such waste. Under the Hazardous Waste Control Act and Title 26, the generator of hazardous waste must complete a manifest that accompanies the waste from generator to transporter to the ultimate disposal location. Copies of the manifest must be filed with the California Department of Toxic Substances and Control (DTSC). It is anticipated waste associated with building demolition would be required to comply with this Act.

California Environmental Protection Agency

The California EPA was created in 1991 and unified California's environmental authority in a single cabinet-level agency and brought the California Air Resources Board, State Water Resource Control Board, Regional Water Quality Control Board, CalRecycle, DTSC, Office of Environmental Health Hazard Assessment, and Department of Pesticide Regulation under one agency. These agencies were placed within the California EPA "umbrella" for the protection of human health and the environment and to ensure the coordinated deployment of state resources. Their mission is to restore, protect, and enhance the environment and to ensure public health, environmental quality, and economic vitality.

Department of Toxic Substances and Control

DTSC, a department of California's EPA, is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in the state. DTSC regulates hazardous waste primarily under the authority of the federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

United States Code 65962.5 (commonly referred to as the Cortese List) includes DTSC-listed hazardous waste facilities and sites, U.S. Department of Health Services lists of contaminated drinking water wells, sites listed by the State Water Resource Control Board as having UST leaks or a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

California Office of Emergency Services

To protect public health and safety, and the environment, the California Office of Emergency Services is responsible for establishing and managing statewide standards for business and area plans relating to the handling and release, or threatened release, of hazardous materials. The Office of Emergency Services requires that basic information on hazardous materials handled, used, stored, or disposed of (including location, type, quantity, and health risks) be available to firefighters, public safety officers, and regulatory agencies. Typically, this information should be included in business plans to prevent or mitigate damage to the health and safety of persons and the environment from the release or threatened release of these materials into the workplace and environment. These regulations are covered under Chapter 6.95 of the California Health and Safety Code, Article 1 –Hazardous Materials Release Response and Inventory Program (Sections 25500 to 25520) and Article 2–Hazardous Materials Management (Sections 25531 to 25543.3).

California Occupational Safety and Health Administration

California OSHA is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. The California OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 337–340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

California Highway Patrol

A valid Hazardous Materials Transportation License, issued by the California Highway Patrol, is required by the laws and regulations of State of California Vehicle Code Section 3200.5 for transportation of either:

- Hazardous materials shipments for which the display of placards is required by state regulations
- Hazardous materials shipments of more than 500 pounds, which would require placards if shipping greater amounts in the same manner

Additional requirements on the transportation of explosives, inhalation hazards, and radioactive materials are enforced by the California Highway Patrol under the authority of the State Vehicle Code.

Asbestos-Containing Materials Regulations

State agencies, in conjunction with the federal EPA and OSHA, regulate removal, abatement, and transport procedures for ACMs. Releases of asbestos from industrial, demolition, or construction activities are prohibited by these regulations, which define practices and procedures that must be followed to reduce the risk of release. Medical evaluation and monitoring is required for employees performing activities that could expose them to asbestos. In addition, federal, state, and local agencies must be notified prior to the onset of demolition or construction activities with the potential to release asbestos.

Lead-based Paint Regulations

California OSHA's Lead in Construction Standard is contained in Title 8, Section 1532.1 of the California Code of Regulations. The regulations address the following areas: permissible exposure limits; exposure assessment; compliance methods; respiratory protection; protective clothing and equipment; housekeeping; medical surveillance; medical removal protection; employee information, training, and certification; signage; record keeping; monitoring; and agency notification.

Regional and Local Regulations

San Mateo County Health System Department

San Mateo County Environmental Health Division

The County of San Mateo Environmental Health Division (SMCEHD) provides services to ensure a safe and healthy environment in San Mateo County through education, monitoring, and enforcement of regulatory programs and services for the community. Their services include restaurant and housing inspection, household hazardous waste and medical waste disposal, water protection and water quality monitoring, pollution prevention, and other regulatory activities and services. The SMCEHD conducts inspections, surveillances, or monitoring, or other purposes to protect the present and future public health and safety and the environment as provided in Chapter 6.5 and 6.8 of the California Health and Safety Code and Chapter 4 of Division 7 of the Water Code.

Local Oversight Program

The SMCEHD has been contracted by the state as the Local Oversight Program Agency with jurisdiction within the City. The objective of the Local Oversight Program Agency is to identify and oversee the investigation and remediation of UST petroleum release sites within its jurisdiction. Pursuant to Health and Safety Code Section 25297.1, work performed by the Local Oversight Program Agency shall be consistent with cleanup standards specified by the SWRCB. Corrective action shall comply with all applicable waste discharge requirements, state policies for water quality control, State and Regional Water Board water quality control plans, Health and Safety Code Chapters 6.7, and Chapters 16 of Title 23, California Code of Regulations.

2021 Multijurisdictional Local Hazard Mitigation Plan

In partnership with 36 local governments and special districts, San Mateo County prepared a Multijurisdictional Local Hazard Mitigation Plan (LHMP) that assesses hazard vulnerabilities and identifies mitigation actions to reduce the level of injury, property damage, and community disruption that might otherwise result from such events. The LHMP addresses natural and human-caused hazards, including flooding, drought, wildfire, landslides, severe weather, terrorism, cyber threats, pandemic, and the impact of climate change on hazards, as well as other hazards.

The Multijurisdictional LHMP is presented in two volumes—Volume 1 contains area-wide risk assessments and mitigation actions, and Volume 2 provides a dedicated annex for each planning partner to present jurisdiction-specific components (County of San Mateo 2021a).

The Menlo Park annex of the LHMP identifies the most prevalent hazards in the City, particularly the Bayfront Area, as flooding, sea level rise, earthquakes, and liquefaction. It recognizes that actions and strategies contained in the City's adopted Emergency Operation Plan and Climate Action Plan contribute to mitigating the risks and planning for emergency response. The City provides emergency notifications to residents by providing information on the City website and social media and through participation in the countywide San Mateo County Alert system that provides emergency notifications via voice calls, SMS texts, and email. The City also uses Zonehaven, which is an evacuation platform connected to the San Mateo County Alert system (County of San Mateo 2021a).

City of Menlo Park General Plan

The City's General Plan (specifically the Land Use Element, Open Space/Conservation Element, Noise Element, and Safety Element) contains general goals, policies, and programs that would require local planning and development decisions to consider impacts on hazards and hazardous materials.

Land Use Element

GOAL LU-1: Promote the orderly development of Menlo Park and its surrounding area.

Program LU-1.C: *Infill Development Streamlined Review*. Establish Zoning Ordinance provisions to streamline review of infill development through “uniformly applicable development policies or standards” (per CEQA Guidelines Section 15183.3) that reduce potential adverse environmental effects, such as: regulations governing grading, construction activities, storm water runoff treatment and containment, hazardous materials, and greenhouse gas emissions; and impact fees for public improvements, including safety and law enforcement services, parks and open space, and transit, bicycle, and pedestrian infrastructure

GOAL LU-7: Promote the implementation and maintenance of sustainable development, facilities and services to meet the needs of Menlo Park's residents, businesses, workers, and visitors

Policy LU-7.7: *Hazards*. Avoid development in areas with seismic, flood, fire and other hazards to life or property when potential impacts cannot be mitigated.

Open Space and Conservation Element

Goal OSC-5: Ensure healthy air and water quality

OSC 5.3: *Development in Industrial Areas*. Evaluate development projects in industrial areas for impacts to air and water resources in relation to truck traffic, hazardous materials use and production-level manufacturing per the California Environmental Quality Act (CEQA) and require measures to mitigate potential impacts to less than significant levels.

Safety Element

Goal S-1: Assure a Safe Community. Minimize risk to life and damage to the environment and property from natural and human-caused hazards, and assure community emergency preparedness and a high level of public safety services and facilities.

Policy S-1.3: Hazard Data and Standards. Integrate hazard data (geotechnical, flood, fire, etc.) and risk evaluations into the development review process and maintain, develop and adopt up-to-date standards to reduce the level of risk from natural and human-caused hazards for all land use.

Policy S1.5: New Habitable Structures. Require that all new habitable structures to incorporate adequate hazard mitigation measures to reduce identified risks from natural and human-caused hazards.

Policy S1.17: Potential Exposure of New Residential Development to Hazardous Materials. Minimize risk associated with hazardous materials by assessing exposure to hazardous materials of new residential development and sensitive populations near existing industrial and manufacturing areas. Minimize risk associated with hazardous materials.

Policy S1.18: Potential Hazardous Materials Conditions Investigation. Continue to require developers to conduct an investigation of soils, groundwater and buildings affected by hazardous-material potentially released from prior land uses in areas historically used for commercial or industrial uses, and to identify and implement mitigation measures to avoid adversely affecting the environment or the health and safety of residents or new uses.

Policy S1.19: Disposal of Existing Hazardous Materials on Sites Planned for Housing. Continue to require that sites planned for housing be cleared of hazardous materials (paint, solvents, chlorine, etc.) and the hazardous materials disposed in compliance with State and Federal laws.

Policy S1.37: Emergency Connectors and Evacuation Routes. Maintain a system of emergency connectors and evacuation routes as part of the City's disaster planning.

Program S1.D: Require Early Investigation of Potential Hazard Conditions. Require that potential geologic, seismic, soils, and/or hydrologic problems confronting public or private development be thoroughly investigated at the earliest stages of the design process, and that these topics be comprehensively evaluated in the environmental review process by persons of competent technical expertise.

Program S1.J: Require Health and Safety Plan for Hazardous Materials. Require the preparation of health and safety plans to be used to protect the general public and all workers in construction areas from potentially hazardous materials. The plan shall describe the practices and procedures to protect worker health in the event of an accidental release of hazardous materials or if previously undiscovered hazardous materials are encountered during construction. The plan shall include items such as spill prevention, cleanup and evacuation procedures. The plan will help protect the public and workers by providing procedures and contingencies that will help reduce the exposure to hazardous materials.

City of Menlo Park Emergency Operations Plan

The City of Menlo Park 2014 Emergency Operations Plan (EOP) describes how the City will manage and coordinate resources and personnel responding to a range of “extraordinary” emergency situations including natural disasters and technological incidents. The operational concepts reflected in the EOP focus on potential large-scale disasters which can generate unique situations requiring expanded emergency responses. It uses principles from the Federal National Incident Management System, the California Standardized Emergency Management System, and the Incident Command System to ensure a comprehensive and effective strategy for providing a coordinated and efficient response to major emergencies. The EOP defines emergency response phases and emergency levels; specifies policies and general procedures, including protocols for communication between emergency service providers and for communication with the public; defines and delegates tasks for emergency staff; and provides for coordination of planning efforts. (City of Menlo Park 2014).

Menlo Park Hazardous Materials Waste Disposal

Household hazardous waste is waste that is toxic, corrosive, flammable, or reactive based on its chemical properties and such materials must be disposed of properly to minimize environmental hazards. This includes common household items such as aerosol cans, automotive fluids, batteries, cleaners, fluorescents (compact and tubes), insecticides, paint, solvents, and thinner. The Public Recycling Center at the Shoreway Environmental Center accepts household hazardous waste for free. Items such as batteries, fluorescent lighting tubes, cooking oil, latex paint, used motor oil, used oil filters, antifreeze, and electronics can be dropped off at this location. In addition, City residents may also drop off household hazardous waste at the San Mateo County Household Hazardous Waste facility free of charge by appointment. In partnership with the County, the City also periodically holds Household Hazardous Waste Collection Events, allowing residents to drop-off household hazardous waste at local temporary collection sites (City of Menlo Park 2022b).

City residents in single-family homes can place Menlo Park residents in single-family homes in the ReThink Waste service area can place household batteries and cell phones in a clear zip lock bag and place it on top of their garbage cart for pickup on their regular collection day. In multifamily housing, Recology San Mateo will provide a free collection bin for household batteries and cell phones (City of Menlo Park 2022a).

4.8.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts from hazards and hazardous materials are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hazards and hazardous materials would occur if the project would:

- A. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- B. 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.
- C. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.

- D. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.
- E. Be located within an airport land use plan, be within two miles of a public airport, and would result in a safety hazard or excessive noise for people residing or working in the project area.
- F. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- G. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.
- H. Result in cumulative impacts related to hazards and hazardous materials,

4.8.4 Impacts and Mitigation Measures

Methodology

The following reports and data sources document potentially hazardous conditions at the project site and were reviewed for this analysis:

- Available literature, including documents published by federal, state, County, and City agencies,
- 119, 123-125, and 127 Independence Drive, 1205 Chrysler Drive, and 130 Constitution Drive Phase I ESA prepared by PES in February 2021 (Appendix F2),
- 123 and 125 Independence Drive Phase I ESA prepared by AEI Consultants in January 2015,
- 127 Independence Drive Phase I ESA prepared by PES Environmental October 2015,
- 130 Constitution Drive Phase I ESA prepared by PES Environmental in January 2016, and
- California Environmental Protection Agency's Cortese List Database (SWRCB 2021 and DTSC 2021)

Project construction and operation were evaluated against the hazardous materials information gathered from these sources to determine whether any risks to public health and safety or other conflicts would occur. Further, this analysis assumes project compliance with federal, state, and local regulations governing hazards and hazardous materials.

Project Impacts

Impact 4.8-1 Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Project implementation involves demolition of existing on-site structures and construction of new residential development and associated amenities. Building debris would be removed from the site and transported to the Shoreway Environmental Center for recycling and disposal. As discussed below under Impact 4.8-2, demolition of existing buildings could result in release of hazardous materials (e.g., asbestos or lead paint) into the environment. However, project construction would be short-term and would not result in the long-term routine transport of hazardous materials.

Project construction activities would involve the temporary storage, use, and transport of hazardous materials (e.g., fuels, lubricants, paint, solvents, cleaners). Transportation of hazardous materials on area roadways is regulated

by the California Highway Patrol and California Department of Transportation, whereas use of these materials is regulated by DTSC, as outlined in CCR Title 22. The City and any construction contractors would be required to use, store, and transport hazardous materials in compliance with federal, state, and local (i.e., general plan policies) regulations during construction. Specifically, general plan policies S-1.16 and S-1.19, further described in Section 4.8.2, Regulatory Framework, reinforce compliance with federal and state requirements governing use, storage, transportation, and disposal of hazardous materials. The ConnectMenlo EIR found that compliance with regulatory requirements would ensure that construction projects would not cause significant impacts associated with use, transport, and storage of hazardous materials (City of Menlo Park 2016b). Any disposal of hazardous materials would occur in a manner consistent with applicable regulations and at an appropriate off-site disposal facility. In addition, San Mateo County Environmental Services shall be notified, as the designated CUPA, if evidence of previously undiscovered soil or groundwater contamination (e.g., stained soil, odorous groundwater) is encountered during project construction and ground-disturbing activities. Compliance with existing regulations that govern the transportation of hazardous materials and the use and disposal of such materials would minimize the potential for the proposed project to result in spills or leaks that could create a significant hazard to the public or the environment, and that if spills or leaks do occur, they are properly and promptly cleaned up and the materials disposed of at an appropriate waste-handling facility.

The project would construct residential buildings and associated site improvements. The ConnectMenlo EIR determined that these types of land uses typically do not involve transport, use, or disposal of significant quantities of hazardous materials (City of Menlo Park 2016b). Generally, small quantities of household hazardous materials, such as paints, cleaning chemicals, and fertilizers, would be used for routine maintenance and landscaping. As discussed in Section 4.8.2, the City and County provide residents with several methods for properly disposing of household hazardous waste. Any storage or use of hazardous materials by the property manager for the proposed apartment building during operation of the project would be required to comply with appropriate regulatory agency standards designed to avoid releases of hazardous materials.

Because construction and operation of the project would comply with existing hazardous materials regulations, impacts related to creation of significant hazards to the public through routine transport, use, disposal, and risk of upset would not occur. Therefore, this impact would be **less than significant**, consistent with the findings of the ConnectMenlo EIR.

Mitigation Measures

No mitigation measures are required.

Impact 4.8-2	Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
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Project implementation would involve demolition of existing on-site buildings and construction of new residences, associated parking, and landscaping. Earth moving activities associated with project construction could result in disturbance of known hazardous materials and conditions within the project site. Further, building demolition could result in release of ACM and LBP from some of the existing structures. This could expose construction workers and site neighbors to hazards associated with airborne asbestos and lead.

Compliance with federal and state requirements governing hazardous materials as well as local regulations and policies (i.e., general plan policies) described in Section 4.8.2 would ensure that construction activities would not

disturb or otherwise release any existing hazardous conditions at the site. Specifically, compliance with general plan policies S1.17, S1.18, and S1.19 would reduce risks associated with hazardous material exposure through site-specific assessment, soil, groundwater, and building investigations, as well as site clearing and appropriate disposal of known hazardous materials. Further, General Plan Program S1.J commits the City to requiring preparation and implementation of a Hazardous Materials Health and Safety Plan which would outline practices and procedures to protect worker health in the event of accidental hazardous material release as well as spill prevention, cleanup, and evacuation procedures.

As required by policy S-1.18, a Phase I ESA was prepared for the project site, as discussed in Section 4.8.1. The ESA identified two RECs at the project site, including the presence of TCE, vinyl chloride, and other VOCs in groundwater and soil vapor and two USTs that were previously removed from the project site and have not undergone appropriate closure protocols with SMCEHD or DTSC. The ESA also identified several other environmental concerns, including potential presence of residual agricultural chemicals, documented and potential presence of ACM in the existing buildings, potential presence of LBP in the existing buildings, and staining on the asphalt surface in the vicinity of hazardous materials storage at 119 Independence Drive and 130 Constitution Drive.

Because two RECs and several other environmental concerns have been identified within the project site, project implementation could result in the release of hazardous materials during demolition due to potential upset and/or accident conditions. Impacts would be **potentially significant**.

Mitigation Measures

The ConnectMenlo EIR identified Mitigation Measures (MMs) HAZ-4a and HAZ-4b, which are presented below as MMs 4.8a and 4.8b, to reduce impacts associated with potential exposure to hazardous soil vapor and groundwater conditions during project construction and operation. These mitigation measures are applicable to the proposed project. In addition, MM 4.8c implements General Plan Program S1.J by requiring preparation of a Hazardous Materials Health and Safety Plan and specifies that this plan must include provisions for conducting surveys to identify ACM and LBP and ensuring compliance with applicable state and federal regulations. Implementation of these measures would ensure that potential impacts of the proposed project due to the RECs identified for the project site and demolition of buildings that may contain ACM and LBP would be reduced to a **less-than-significant** level, consistent with the findings of the ConnectMenlo EIR.

MM 4.8a Construction at the sites of any site in the City with known contamination, shall be conducted under a project-specific Environmental Site Management Plan (ESMP) that is prepared in consultation with the Regional Water Quality Control Board (RWQCB) or the Department of Toxic Substances Control (DTSC), as appropriate. The purpose of the ESMP is to protect construction workers, the general public, the environment, and future site occupants from subsurface hazardous materials previously identified at the site and to address the possibility of encountering unknown contamination or hazards in the subsurface. The ESMP shall summarize soil and groundwater analytical data collected on the project site during past investigations; identify management options for excavated soil and groundwater, if contaminated media are encountered during deep excavations; and identify monitoring, irrigation, or other wells requiring proper abandonment in compliance with local, State, and federal laws, policies, and regulations. (ConnectMenlo EIR MM-HAZ-4a)

The ESMP shall include measures for identifying, testing, and managing soil and groundwater suspected of or known to contain hazardous materials. The ESMP shall: (1) provide procedures

for evaluating, handling, storing, testing, and disposing of soil and groundwater during project excavation and dewatering activities, respectively; (2) describe required worker health and safety provisions for all workers potentially exposed to hazardous materials in accordance with State and federal worker safety regulations; and (3) designate personnel responsible for implementation of the ESMP.

MM 4.8b For those sites throughout the city with potential residual contamination in soil, gas, or groundwater that are planned for redevelopment with an overlying occupied building, a vapor intrusion assessment shall be performed by a licensed environmental professional. If the results of the vapor intrusion assessment indicate the potential for significant vapor intrusion into an occupied building, project design shall include vapor controls or source removal, as appropriate, in accordance with regulatory agency requirements. Soil vapor mitigations or controls could include vapor barriers, passive venting, and/or active venting. The vapor intrusion assessment and associated vapor controls or source removal can be incorporated into the ESMP required under MM 4.8a. (ConnectMenlo EIR MM HAZ-4b)

MM 4.8c Prior to commencement of any demolition or construction activities, the project applicant shall prepare a Hazardous Materials Health and Safety Plan that identifies required practices and procedures to protect the general public and construction workers from potentially hazardous materials and accidental release of hazardous materials. The practices and procedures shall include spill prevention, cleanup and evacuation procedures as well as procedures to be followed in the event that previously undiscovered hazardous materials are encountered during construction. The Hazardous Materials Health and Safety Plan shall demonstrate compliance with California Code of Regulations, Title 8, Chapter 4: Subchapter 4: Construction Safety Orders; Subchapter 5: Electrical Safety Orders; and Subchapter 7: General Industry Safety Orders as well as California Health and Safety Code, Section 25100 et seq.: Hazardous Waste Control Act.

The Hazardous Materials Health and Safety Plan shall also include provisions for completion of a comprehensive survey within each existing building to identify asbestos-containing materials (ACM) and lead-based paints (LBP) prior to any demolition activities and shall define procedures for managing demolition activities such that ACM and LBP are not released into the air and worker exposure to ACM and LBP is avoided. These procedures shall be sufficient to ensure that demolition of buildings containing ACM and/or LBP and disposal of these materials will be conducted in accordance with local, state and federal regulations, including the U.S. Environmental Protection Agency's (EPA's) Asbestos National Emissions Standards for Hazardous Air Pollutants, the California Occupational Safety and Health Administration's Construction Lead Standard (8 CCR 1532.1), California Department of Toxic Substances Control and EPA requirements for disposal of hazardous waste, and Bay Area Air Quality Management District (BAAQMD) Regulation 11, Hazardous Pollutants Rule 2: Asbestos Demolition, Renovation And Manufacturing. At least 10 days prior to demolition, the project applicant and/or construction contractor shall submit an Asbestos Notification to BAAQMD and obtain an Asbestos Demolition/Renovation job number. Disposal of any ACM and/or LBP found on the site shall be carried out by a contractor trained and qualified to conduct lead- or asbestos-related construction work and in accordance with the appropriate state and federal standards to ensure that these materials are not released into the air in the project vicinity.

Impact 4.8-3 Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

As noted in Chapter 3, Project Description, implementation of the project would involve demolition of existing buildings and construction of new residences, associated parking, and landscaping. Several schools are located near the project site, with the nearest school being the TIDE Academy, located approximately 0.2 miles to the southeast. Other schools in the vicinity of the project site include Belle Haven School, approximately 1 mile to the southeast; Beechwood School, approximately 0.5 miles to the southeast; and Menlo-Atherton High School, located approximately 1.7 miles south. The site of the Menlo Park Community Campus is also located approximately 0.5 miles to the southeast.

Operation of the project would be similar to other residential uses in the project area. Once operational, the project would not utilize hazardous or acutely hazardous materials beyond those normally associated with residential development (i.e., household cleaners, landscaping products). Thus, project operation would not result in hazardous emissions, materials, or substances within the vicinity of the existing schools.

Construction of the project would be similar to other redevelopment projects in the vicinity. As described in Impacts 4.8-1 and 4.8-2, any use, storage, transport, and/or disposal of hazardous materials would occur in compliance with local, state, and federal regulations during construction. Further, project buildout would require preparation and implementation of a Hazardous Materials Health and Safety Plan, as required by MM 4.8c, consistent with General Plan Program S1.J. The health and safety plan must include best practices and procedures related to spill prevention, cleanup, and evacuation procedures during construction.

As discussed in Section 4.2, Air Quality, a Health Risk Assessment (HRA) was prepared to evaluate the potential for project construction to cause a significant “incremental cancer risk,” which is the net increased likelihood that a person continuously exposed to concentrations of toxic air contaminants (TACs) resulting from a project over a 9-year, 30-year, and 70-year exposure period would contract cancer. In addition, some TACs have non-carcinogenic effects. TACs that would potentially be emitted during construction activities would be diesel particulate matter emitted from heavy-duty construction equipment and heavy-duty trucks.

As shown in Table 4.2-8, the results of the HRA demonstrate that the TAC exposure from construction diesel exhaust emissions would result in an on-site cancer risk above the 10 in 1 million threshold for the project. The Chronic Hazard Index for the project would be less than one and the maximum PM_{2.5} concentration would be 0.19 micrograms per cubic meter (µg/m³). Based on these results, the HRA concludes that TAC emissions from construction activities associated with the project may expose sensitive receptors to substantial pollutant concentrations of TACs and would result in a potentially significant impact. The HRA results identify TAC exposure at and immediately adjacent to the project site. TAC exposure would be less at sites that are not immediately adjacent, such as at the TIDE Academy and other schools located further from the project site. However, there is a potential for students and employees at TIDE Academy to be exposed to hazardous TAC emissions. Thus, this impact is considered **potentially significant**.

Mitigation Measures

As discussed in Section 4.2, the impact associated with TAC exposure at and immediately adjacent to the project site would be reduced to a less than significant level with implementation of MM 4.2b, which establishes minimum specifications for construction equipment to reduce TAC emissions. Implementation of MM 4.2b would also reduce the project impact of causing hazardous emissions within 0.25 miles of an existing school.

MM 4.2a The project must implement MM 4.2b, as presented in Section 4.2. No additional mitigation measures are required.

Impact 4.8-4 Would the Project be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

As discussed in Section 4.8.1, Environmental Setting, and Impact 4.8-2, the Phase I ESA for the project identifies two RECs and several other environmental concerns related to hazardous materials and project implementation could cause a significant hazard to the public or the environment if those concerns are not appropriately managed as required under MMs 4.8a, 4.8b, and 4.8c, as identified above. However, the SWRCB GeoTracker website does not identify any active hazards or contamination related to USTs or solid waste disposal facilities within the project site or surrounding area (SWRCB 2021). Further, DTSC's Envirostor website also does not identify any hazards related to any cleanup sites within the project site (DTSC 2021). As such, the project site is not included on a list of hazardous-materials sites compiled pursuant to Government Code Section 65962.5 (Cortese List) and **no impact** would occur.

Mitigation Measures

No mitigation measures are required.

Impact 4.8-5 Would the Project be located within an airport land use plan, be within two miles of a public airport, and would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?

As described in Section 4.8.1, Environmental Setting, the project site is located within 5 miles of the Palo Alto airport; however, it is not within the airport's Comprehensive Land Use Plan AIA. The project site is also outside of the San Carlos Airport AIA which is located approximately 5 miles north. As such, project implementation would not result in an aviation related safety or noise hazard for people residing or working in the project area. **No impact** would occur.

Mitigation Measures

No mitigation measures are required.

Impact 4.8-6 Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The project involves construction and operation of residential uses and associated site improvements. The project would place new residents within an area subject to potential emergency conditions, such as flooding and earthquakes, but would not exacerbate the potential for such conditions to occur and would not create potential for any new emergency conditions to occur.

Further, the project would not modify any public streets. Vehicular access to the proposed apartment building would be provided from a single driveway on Constitution Drive. The townhomes would be accessed from one driveway on Chrysler Drive and two driveways on Independence Drive. There are no emergency evacuation routes defined in the City's EOP, however, as discussed in Section 4.14, the Transportation Impact Analysis for this project found that the project would have minimal effects on vehicular queuing and all queues are expected to be within all available

storage lengths (Appendix J1). As discussed in Section 4.11 Noise, the ConnectMenlo EIR includes MM NOISE-1c, which requires that construction traffic use haul routes approved by the City. This would ensure that construction traffic does not interfere with emergency response and evacuation routes.

Therefore, the project would not impair implementation of or require amendment of the LHMP or EOP and **no impact** related to impairment or interference of an adopted emergency response or evacuation plan would occur.

Mitigation Measures

No mitigation measures are required.

Impact 4.8-7 Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

As noted above, the City does not contain areas of moderate, high, or very high Fire Hazard Severity for the LRA. As such, the project site is not located within a high or moderate fire hazard severity zone. The project would involve residential development on a site that is surrounded by urban development within the City and would be served by existing City fire protection services. Buildout of the project would comply with existing regulations related to fire safety, including the California Building Code, California Fire Code, and the Menlo Park Fire Protection District Code. Therefore, the project would not expose people or structures to increased risks related to wildland fires and **no impact** related to risk, loss, or injury involving wildfires would occur.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

Impact 4.8-8 Would the Project result in cumulative impacts related to hazards and hazardous materials or emergency response and evacuation?

Hazards

Effects associated with exposure to physical hazards is a site-specific environmental concern. Introduction of new land uses to a project vicinity generally does not exacerbate the potential for physical hazards to occur. The project site is neither included on a list of hazardous-materials sites compiled pursuant to Government Code Section 65962.5 (Cortese List), nor located within an AIA, nor located within an area of moderate, high, or very high Fire Hazard Severity. Thus, there are no cumulative environmental effects associated with physical hazards to which the project could contribute.

Hazardous Materials

The cumulative context for hazardous materials is considered local, generally limited to the project site, properties within 1,000 feet of the project site, and properties with contaminated groundwater that are upgradient of the site. Though some hazardous materials releases can cover a large area and interact with other releases (e.g., atmospheric contamination, contamination of groundwater aquifers), incidents of hazardous materials contamination are typically isolated to a small area, such as leaking underground storage tank sites or release of contaminants at individual businesses. Because of this, isolated areas of contamination typically do not interact in a cumulative manner with other sites of hazardous materials contamination.

The project involves construction and operation of residential uses and associated site improvements. The proposed land use is consistent with the site's land use and zoning designations as adopted under ConnectMenlo. The ConnectMenlo EIR found that with implementation of MMs 4.8a and 4.8b (ConnectMenlo EIR MMs HAZ-4a and HAZ-4b), there would be no significant cumulative impacts associated with hazards and hazardous materials.

While it is possible that construction activities associated with project development could result in the accidental disturbance and/or release of hazardous materials, implementation of MMs 4.8a, 4.8b, and 4.8c would provide for appropriate remediation and treatment of any contamination within the bounds of the project site prior to and during project construction. These MMs would therefore ensure that the project would not create a new potential cumulative hazardous material impact. Further, the project would not create a new site of contamination or contribute substantially to a hazardous condition in the general project area.

Future projects within the area could add uses that may use, store, and/or generate hazardous materials. However, these projects would be subject to the same hazardous materials laws and regulations as the project and would be required to implement project-specific mitigation consistent with applicable laws and regulations to reduce any significant hazards and hazardous materials impacts. Any hazardous materials stored on site (at the project site and related sites) would be used/stored in compliance with applicable federal and state laws related to the storage of hazardous materials, thereby limiting their potential contribution to less than cumulatively considerable, similar to the proposed project. Therefore, cumulative hazardous materials impacts would be **less than significant**, consistent with the findings of the ConnectMenlo EIR.

Emergency Response and Evacuation

The project involves construction and operation of residential uses and associated site improvements. The proposed land use is consistent with the site's land use and zoning designations as adopted under ConnectMenlo. As discussed in Chapter 4 Environmental Analysis, this project would result in the number of new dwelling units in the Bayfront Area exceeding the amount evaluated in the ConnectMenlo EIR; however, as discussed in Impact 4.8-6, the proposed project would not affect or alter any public streets and would not create traffic volumes and patterns that would interfere with regional and local emergency response and evacuation plans. Therefore, cumulative emergency response and evacuation impacts would be **less than significant**, consistent with the findings of the ConnectMenlo EIR.

Mitigation Measures

No additional mitigation measures are required.

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4.9 Hydrology and Water Quality

The following analysis describes the existing hydrology and water quality resources associated with the proposed 123 Independence Drive Residential Project (project; proposed project); identifies the applicable regulatory framework; evaluates potential impacts of the project on hydrology and water quality resources; describes measures to avoid, minimize, and/or mitigate these impacts; and identifies the level of significance after mitigation.

As discussed in Chapter 2, Introduction, and Section 4.0, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this environmental impact report (EIR), one in January and February 2021, and one in September and October 2021. No comments related to hydrology and water quality were received in response to the NOPs or during the scoping sessions. Both NOPs and the comments received in response to them are provided in Appendix A of this EIR.

The primary sources reviewed to prepare this section include the ConnectMenlo General Plan Update (City of Menlo Park 2016a), the ConnectMenlo General Plan Update EIR (City of Menlo Park 2016b), and the project Hydrology Report (Appendix G1) and Stormwater Management Plan (Appendix G2), both prepared by Kier & Wright in January 2022.

4.9.1 Environmental Setting

Surface Hydrology

Most of the Bayfront Area of the City of Menlo Park (the City), including the project site, is located within the Atherton Creek Watershed. Atherton Creek flows in its historical position from its headwaters just west of Interstate 280 to the Alameda de las Pulgas. Downstream of the Alameda de las Pulgas, Atherton Creek flows through a concrete channel to El Camino Real and then through a combination of concrete channels and culverts until it discharges into Bayfront Canal near Marsh Road. There are several small tributary creeks that drain into Atherton Creek above Alameda de las Pulgas, but farther downstream the drainage network is comprised of underground culverts or storm drains (County of San Mateo n.d.; 2019). Given the systems of channels, culverts, and storm drains, there is no riparian vegetation associated with the lower reaches of Atherton Creek.

The Bayfront Canal watershed is located adjacent to the northern and western edges of the Atherton Creek watershed. The Bayfront Canal is located north of US 101, along the southern edge of the salt ponds. It begins in Redwood City and runs west to east until it discharges through a tide gate structure into Flood Slough, which in turn discharges into San Francisco Bay (the Bay) adjacent to Bedwell Bayfront Park. The combined area of the Bayfront Canal and Atherton Creek watersheds is 8.6 square miles (County of San Mateo 2019).

East of the Atherton Creek watershed, the Ravenswood Slough watershed drains the southeast portion of the City, while most of the central and eastern portions of the City are located within the approximately 45-square-mile San Francisquito Creek watershed. San Francisquito Creek begins in the Santa Cruz Mountains west of the City and flows northeasterly, forming the eastern boundary of the City, and flows through East Palo Alto before emptying into the southwest portion of the Bay.

Climate

The project is located within a region characterized by a Mediterranean climate with cool, wet winters and warm, dry summers. The average low temperature of 48.1° F occurs during December and January and the average high

temperature of 66.6° F occurs in August (City of Menlo Park 2016b). The average annual rainfall within the Bayfront Canal-Atherton Channel watersheds is 20.6 inches, with the southwestern portion of the Atherton Channel watershed receiving the highest amount of direct precipitation (24 inches and greater) and the northeastern portion receiving lesser volumes (20 inches and below) (County of San Mateo 2019), with the majority of precipitation occurring between November and April (City of Menlo Park 2016b). The precipitation received in the southwestern portion of the watershed flows through Atherton Creek and into Atherton Channel and thus contributes to the severity and frequency of flood events in the Bayfront Area, as discussed below. In addition, the Bayfront Area and adjacent neighborhoods are highly urbanized and contain a high degree of impervious surface, which results in greater amounts of stormwater runoff flowing into Bayfront Canal and Atherton Channel.

Flooding

The project site, and much of the Bayfront Area, is within the 100-year floodplain. The low elevation of the Bayfront Area and the tidal influences at the points of discharge from Atherton Channel and Bayfront Canal limit the ability of the watersheds to efficiently discharge and safely detain stormwater. Additionally, both Atherton Channel and Bayfront Canal have capacity constraints that contribute to an increased frequency of flooding for areas along both waterways. During intense rain events, flow from Atherton Channel can spill directly into the North Fair Oaks and Friendly Acres neighborhoods before reaching the Bayfront Canal. The flooding can impede travel on local roads, including Haven Avenue and Marsh Road. In addition to the capacity constraints within the canal and channel, the operation of the tidal gates into Flood Slough also contributes to flooding because the gates are closed during periods of high tide to prevent tide waters from flowing back into the Bayfront Canal. However, when rainfall occurs during the high tide, the Bayfront Canal cannot discharge into Flood Slough until the Bayfront Canal exceeds the tidal elevation. Forecasts for sea-level rise indicate the severity and frequency of tidally influenced flooding in the watershed will increase with time (County of San Mateo 2019).

San Mateo County (the County) and the Cities of Menlo Park and Redwood City have engaged in a variety of assessment, planning, and improvement implementation efforts to address the flooding concerns within the Bayfront Canal-Atherton Channel watershed. This includes installing two 5-foot by 8-foot box culverts to divert stormwater from Bayfront Canal into salt ponds along Ravenswood Slough and installing a diversion structure (composed of a weir and trash rack) to accept flow that would otherwise pass through the tide gates and convey it first to a forebay and then to two salt ponds via a proposed siphon (County of San Mateo 2019).

In addition, the City of Redwood City is partnering with the Coastal Conservancy to implement the Salt Pond Restoration Project to restore 15,100 acres of industrial salt ponds to tidal wetlands and other habitats and serve as stormwater detention for the Bayfront Canal and Atherton Channel drainage areas (City of Menlo Park 2016b). The Salt Pond Restoration Project, which is considered a 50-year effort, was launched in 2003. Since then, nearly 3,040 out of 7,500 acres of habitat have been restored (707 acres of which have been enhanced for wildlife), 6.7 miles of trails have opened for public access, and current flood protection levels continue to be maintained within the San Francisco Bay. The first island ponds were opened up to Bay tides in 2006. In 2019, Phase II construction activities began and in 2021 several additional ponds were opened to Bay tides and speed salt marsh growth. Phase II construction activities continue to progress as other partner projects, such as the South San Francisco Bay Shorelines Project, evolve to protect established communities from sea level rise concerns (South Bay Restoration 2022).

Sea Level Rise

It is expected that increases in average global temperatures due to climate change will lead to increases in sea level, which could expose low-lying areas near oceans and bays to inundation. Specifically, the National Research

Council predicts a range of sea level rise around the San Francisco Bay of between 5 and 24 inches by 2050 and between 17 and 66 inches by 2100, while the San Francisco Bay Conservation and Development Commission (BCDC) predicts a sea level rise of 16 inches by 2050 and 55 inches by 2100 (City of Menlo Park 2016b). BCDC encourages local lead agencies to ensure that development projects in low-lying areas that are outside of BCDC jurisdiction incorporate design measures to provide protection from flooding due to sea level rise, including consideration of the potential sea level both at the mid-century point and at the end of the century.

As a member of the San Francisquito Creek Joint Powers Authority, the City of Menlo Park is participating in the Strategy to Advance Flood Protection, Ecosystems, and Recreation (SAFER) Bay Project, which is intended to protect nearly 5,000 properties from tidal flooding and restore more than 1,000 acres of historic marshlands as well as address the impact of sea level rise (SFCJPA 2022).

Storm Drainage and Stormwater Quality

The City provides stormwater drainage and management services in the project area, with stormwater infrastructure managed by the Menlo Park Public Works Department. The project site is drained by an existing on-site storm drain system that collects runoff from the building roofs, surface parking lots, and other hardscape areas into below-grade storm drains and discharges directly to storm drain mains within the adjacent streets. These existing mains include a 24-inch-diameter line on Constitution Drive, an 18-inch-diameter line on Independence Drive, and a 54-inch-diameter line on Chrysler Drive. These lines contribute flows to the Belle Haven Storm Drain system and discharge to the Bay.

The City requires that all stormwater be treated on site through Low Impact Development features such as biological treatments, detention basins, and rain gardens. If the geological conditions of a development site do not allow these kinds of biological treatments (e.g., clay layers), the City requires mechanical treatment be installed and maintained on site at the owner's expense. The City conducts engineering reviews of private projects to ensure designs are consistent with City specifications.

Under the proposed project, the redeveloped site would be drained by a new on-site storm drain system, which must meet stormwater quality control requirements outlined in the C.3 Regulated Projects Guide of the San Mateo County Water Pollution Prevention Program, as discussed in Section 4.9.2, Regulatory Framework. Similar to the existing on-site system, runoff would be collected from building roofs, surface circulation and parking areas, and other hardscape areas. Within the project site, this runoff would be conveyed to biotreatment ponds and planters for stormwater treatment. After treatment, stormwater would be routed to the existing storm drain network within public streets along the project site frontages.

Groundwater

The project lies within the San Mateo Plain Groundwater Subbasin (groundwater basin number 2-009.03; DWR 2004; or "subbasin") of the Santa Clara Valley Groundwater Basin. The subbasin is not adjudicated, nor has it been found by the California Department of Water Resources to be in a condition of overdraft. The San Mateo subbasin is approximately 38,000 acres and is bounded by the Santa Cruz Mountains to the west-southwest, San Francisco Bay to the north-northeast, San Francisquito Creek and the Santa Clara subbasin to the south-southwest, and the Westside basin to the north-northwest (City of Menlo Park 2016b).

The subbasin is filled with alluvial fan deposits formed by tributaries to San Francisco Bay that drained across the basin and toward the center of the Bay. These alluvial fan deposits are interbedded with thick clay aquitards or

confining layers and comprise the main water bearing formations within the subbasin. The major water bearing formation of the subbasin is the Quaternary alluvium, from which all larger yielding wells acquire their water. The Santa Clara Formation underlies the Quaternary alluvium and is the other water bearing formation of the subbasin. In general, the groundwater system is unconfined in the higher elevations, and confined or semiconfined at lower elevations closer to San Francisco Bay (City of Menlo Park 2021).

Natural recharge occurs by infiltration of water from streams that enter the valley from the upland areas within the drainage basin, including San Francisquito Creek, San Mateo Creek, and other smaller creeks, and by percolation of precipitation that falls directly on the land surface. Additional recharge occurs as a result of infiltration of applied irrigation water. Subbasin outflows include limited municipal and private well pumping and groundwater outflows across subbasin boundaries (City of Menlo Park 2021).

Although the San Mateo subbasin was used as a water source for irrigation needs in the first half of the twentieth century, use of the Hetch Hetchy reservoir beginning in 1940 and surface water deliveries from the State of California beginning in 1965 have reduced the region's demand for groundwater, and water levels within the basin have returned to pre-1960 conditions (DWR 2004). This subbasin is not considered critically overdrafted and is designated as low priority under the California Sustainable Groundwater Management Act. There are approximately 348 wells operating within the subbasin, 10 of which are used for water supply. The subbasin accounts for approximately 10 percent of the water supply in the region (Groundwater Exchange 2022).

The Phase I Environmental Site Assessment prepared for the project site (Appendix F2) found that there is a groundwater plume in the project vicinity that is contaminated with volatile organic compounds, primarily trichloroethene and vinyl chloride. This condition and the associated environmental effects are discussed in Section 4.8, Hazards and Hazardous Materials.

Hydrologic Hazards

The northern portion of the City, which consists mainly of sloughs and undeveloped land, is located within a tsunami inundation zone. According to the Governor's Office of Emergency Services tsunami and dam inundation maps for emergency planning, all proposed areas of future development, including the Bayfront Area, are outside of an inundation zone associated with potential dam failure or tsunami. While it is possible that a seiche could occur within the Bay as a result of an earthquake event or other disturbance, any flooding associated with a seiche event would occur within areas susceptible to other hydrologic flooding (i.e., dam or tsunami). Because the Bayfront area, including project site, is located outside of mapped tsunami and dam-inundation zones, it is not expected that this area would be exposed to any potential flooding resulting from a seiche. Similarly, there is no potential for the project site to be affected by mudflow due to the generally flat topography of the Bayfront Area and most of the City and because there are no areas within the City designated to be potentially affected by rainfall-induced landslides and debris flow source areas (City of Menlo Park 2016b).

4.9.2 Regulatory Framework

Federal Regulations

Clean Water Act

The Clean Water Act (CWA), as amended by the Water Quality Act of 1987, is the major federal legislation governing water quality (33 USC, Section 1251 et seq.). The objective of the CWA is "to restore and maintain the chemical,

physical, and biological integrity of the Nation's waters." The CWA establishes basic guidelines for regulating discharges of both point and non-point sources of pollutants into the waters of the United States.¹ The CWA requires that states adopt water quality standards to protect public health, enhance the quality of water resources, and ensure implementation of the CWA. Commonly relevant sections of the act are as follows:

- **Sections 303 and 304** provide for water quality standards, criteria, and guidelines. Under Section 303(d) of the CWA, the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. California is required to establish total maximum daily loads (TMDLs) for each pollutant/stressor. A TMDL defines how much of a specific pollutant/stressor a given water body can tolerate and still meet relevant water quality standards. Once a water body is placed on the Section 303(d) List of Water Quality Limited Segments, it remains on the list until a TMDL is adopted and the water quality standards are attained, or there is sufficient data to demonstrate that water quality standards have been met and delisting from the Section 303(d) list should take place.
- **Section 401 (Water Quality Certification)** indicates that a federal agency may not issue a permit or license to conduct any activity that may result in any discharge into waters of the United States unless a Section 401 water quality certification is issued, verifying compliance with water quality requirements, or waiving such a certification. States where the discharge would originate are generally responsible for issuing water quality certifications. CWA Section 402 and 404 permits (see description below) are subject to Section 401 certification.
- **Section 402 (National Pollutant Discharge Elimination System)** establishes the National Pollutant Discharge Elimination System (NPDES), a permitting system for the discharge of any pollutant (except for dredged or fill material) into waters of the United States. This program regulates all such discharges, including stormwater discharges associated with municipal drainage systems, construction activities, industrial operations, and "point sources" (such as wastewater treatment plant discharges and other direct discharges to water bodies). The intent of the NPDES program is to protect surface water quality.

This permit program is administered by the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs), who have several programs that implement individual and general permits related to construction activities, stormwater runoff quality, and various kinds of non-stormwater discharges. The NPDES General Construction Permit is discussed further under the State Regulations subheading. In general, in California, a NPDES permit also provides waste discharge requirements, although waste discharge requirements can be issued for discharges that are not within the coverage of the Section 402 NPDES program.

The Municipal Stormwater Permitting Program under CWA Section 402 regulates stormwater discharges from municipal separate storm sewer systems. The City's Stormwater Management Program is discussed under the Local Regulations subheading.

The City of Menlo Park lies within the jurisdiction of San Francisco RWQCB (Region 2) and is subject to the waste discharge requirements of the Municipal Regional Stormwater Permit (MRP; Order No. R2-2015-0049) and NPDES Permit No. CAS612008. The San Mateo County permittees include San Mateo County, the San Mateo County Flood District, 15 cities, and 5 towns, including the City of Menlo Park. Under Provision C.3 of the MRP, the co-permittees use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects.

¹ Point-source discharges are those emanating from a pipe or discrete location/process, such as an industrial process or wastewater discharge. Non-point source pollutants are those that originate from numerous diffuse sources and land uses, and which can accumulate in stormwater runoff or in groundwater.

- **Section 404 (Discharge of Dredged or Fill Material into Waters of the United States)** establishes a permit program for the discharge of dredged or fill material into waters of the United States. This permit program is jointly administered by the U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (EPA). Section 4.3, Biological Resources, addresses this requirement in greater detail. A Section 401 water quality certification generally is necessary for a Section 404 permit.

Numerous agencies have responsibilities for administration and enforcement of the CWA. At the federal level, this includes the EPA, USACE, and the major federal land management agencies such as the U.S. Forest Service and Bureau of Land Management. At the state level, with the exception of tribal lands, the California Environmental Protection Agency and its sub-agencies, including the SWRCB and the nine RWQCBs, have been delegated primary responsibility for administering and enforcing certain provisions of the CWA. At the local level, the San Francisco Bay RWQCB and the County both have enforcement and implementation responsibilities under the CWA.

Federal Antidegradation Policy

The federal Antidegradation Policy (40 CFR 131.12), first included in EPA's regulations in 1983, is designed to protect water quality and water resources. The policy requires states to develop statewide antidegradation policies and identify methods for implementing those policies. State antidegradation policies and implementation measures must include the following provisions: (1) existing instream uses and the water quality necessary to protect those uses shall be maintained and protected; (2) where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development; and (3) where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected. State permitting actions must be consistent with the federal Antidegradation Policy.

State Regulations

Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act (Porter-Cologne Act; codified in the California Water Code, Section 13000 et seq.) is the primary water quality control law for California. Whereas the CWA applies to all waters of the United States, the Porter–Cologne Act applies to waters of the state, which includes surface water, isolated wetlands, and groundwater in addition to federal waters. It is implemented by the SWRCB and the nine RWQCBs, who are required to adopt and periodically update water quality control plans (Basin Plans). Basin Plans are the regional water quality control plan that detail beneficial uses, water quality objectives, and implementation programs as required under the CWA and the Porter-Cologne Act.

In addition, the RWQCBs have the authority to conduct, order, and oversee investigation and cleanup where discharges or threatened discharges of waste to waters of the state could cause pollution or nuisance, including impacts to public health and the environment. The act requires a Report of Waste Discharge for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or groundwater of the state. For discharges directly to surface water (waters of the United States) from a point source, an NPDES permit is required, which is issued under both state and federal law; for other types of discharges, such as waste discharges to land (e.g., spoils disposal and storage), erosion from soil disturbance, or discharges to waters of the state (e.g., groundwater and isolated wetlands), waste discharge requirements are required and are issued exclusively under state law. Waste discharge requirements typically require many of the same best management practices (BMPs) and pollution control technologies as NPDES permits.

Construction General Permit (SWRCB Order 2009-0009-DWQ, as amended). For stormwater discharges associated with construction activity in the State of California, the SWRCB has adopted the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) to avoid and minimize water quality impacts attributable to such activities. The Construction General Permit applies to all projects in which construction activity disturbs 1 acre or more of soil. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling and excavation. The Construction General Permit requires the development and implementation of a stormwater pollution prevention plan (SWPPP), which must address the following:

- Plans for implementation of structural and operational BMPs to prevent and control impacts to surface water during construction
- Inspection and maintenance of BMPs throughout all phases of construction
- Monitoring of runoff quality during all phases of construction
- Prevention and control of post-construction impacts to runoff quality

Further, the SWPPP must be prepared and implemented by qualified individuals as defined by the SWRCB. The project applicant must submit a Notice of Intent to the SWRCB to be covered by a NPDES permit and prepare the SWPPP prior to the beginning of construction.

California Antidegradation Policy

The California Antidegradation Policy, otherwise known as the Statement of Policy with Respect to Maintaining High Quality Water in California, was adopted by the SWRCB (State Board Resolution No. 68-16) in 1968. Unlike the federal Antidegradation Policy, the California Antidegradation Policy applies to all waters of the state, not just surface waters. The policy requires that, with limited exceptions, whenever the existing quality of a water body is better than the quality established in individual basin plans, such high-quality water must be maintained and discharges to that water body must not unreasonably affect any present or anticipated beneficial use of the water resource.

Sustainable Groundwater Management Act

In 2014, California enacted the Sustainable Groundwater Management Act (California Water Code Sections 10720 et seq.) to bring the state's groundwater basins into a more sustainable regime of pumping and recharge. The legislation provides for the sustainable management of groundwater through the formation of local groundwater sustainability agencies and the development and implementation of Groundwater Sustainability Plans. As the San Mateo subbasin is designed low priority under this Act, a Groundwater Sustainability Plan for the subbasin is encouraged but not required.

Regional and Local Regulations

Water Quality Control Plan for the San Francisco Bay Basin

As noted in the State Regulations discussion, the primary enforcement authority for the Porter-Cologne Act and portions of the CWA has been given to the SWRCB and its nine RWQCBs. The SWRCB provides state-level coordination of the water quality control program by establishing statewide policies and plans for implementation of state and federal regulations. Each of the nine RWQCBs are responsible for adopting and implementing Basin Plans that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems. The San Francisco RWQCB (SFRWQCB) is responsible for the protection of the beneficial uses of waters draining to the San Francisco Bay.

The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) addresses water quality within the San Francisco Bay Region, which covers a total of 4,603 square miles, including 1,100 square miles of the San Francisco Bay Estuary. This is the “largest estuary on the west coast of the United States, where fresh waters from California’s Central Valley mix with the saline waters of the Pacific Ocean” (SFRWQCB 2017). The San Francisco Bay supports a diverse and productive ecosystem. It includes deepwater channels, tidelands, marshlands, freshwater streams, and rivers that provide a wide variety of habitats for plants and wildlife.

The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Beneficial uses of inland surface waters within the San Francisco Bay Basin include municipal and domestic supply, agricultural and industrial process supply, recreational uses, groundwater recharge, wildlife and freshwater (cold and warm) habitat, preservation of rare and endangered species, and fish migration and spawning (SFRWQCB 2017). In addition, the estuary also supports estuarine habitat and navigation, as well as most of the beneficial uses identified for inland surface waters.

San Mateo Countywide Water Pollution Prevention Program

The San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) is a partnership of the City/County Association of Governments, each incorporated city and town within San Mateo County, and the County of San Mateo, which share a common NPDES permit. This partnership also relies on each of the municipalities to implement local stormwater pollution prevention and control activities for its own local storm drain systems. The SMCWPPP’s Stormwater Management Plan, in conjunction with NPDES permit adopted by the Water Board, is designed to enable SMCWPPP to meet the requirements of the CWA by identifying priorities, key elements, strategies, and evaluation methods to implement the SMCWPPP. This includes specific measures and actions to reduce pollution from construction sites, as well as actions to address industrial sites, illegal discharges and illicit connections, and municipal operations. The Stormwater Management Plan also includes a public education effort, target pollutant reduction strategies, and watershed assessment and monitoring.

City of Menlo Park General Plan

The City’s General Plan (specifically the Land Use Element, Open Space/Conservation Element, Noise Element, and Safety Element) contains general goals, policies, and programs that would require local planning and development decisions to consider impacts on hydrology and water quality.

Goal LU-6: Preserve open-space lands for recreation; protect natural resources and air and water quality; and protect and enhance scenic qualities.

Policy LU-6.11: Baylands Preservation. Allow development near the Bay only in already developed areas.

Goal LU-7: Promote the implementation and maintenance of sustainable development, facilities and services to meet the needs of Menlo Park’s residents, businesses, workers, and visitors.

Policy LU-7.7: Hazards. Avoid development in areas with seismic, flood, fire and other hazards to life or property when potential impacts cannot be mitigated.

Goal OSC-5: Ensure healthy air and water quality.

Policy OSC-5.1: Air and Water Quality Standards. Continue to apply standards and policies established by the Bay Area Air Quality Management District (BAAQMD), San Mateo Countywide Water Pollution Prevention Program (SMCWPPP), and City of Menlo Park Climate Action Plan through the California Environmental Quality Act (CEQA) process and other means as applicable.

Goal S-1: Assure a safe community.

Policy S-1.5: New Habitable Structures. Require that all new habitable structures incorporate adequate hazard mitigation measures to reduce identified risks from natural and human-caused hazards.

Policy S-1.10: Safety Review of Development Projects. Continue to require hazard mitigation, crime prevention, fire prevention and adequate access for emergency vehicles in new development.

Program S-1.D: Require Early Investigation of Potential Hazard Conditions. Require that potential geologic, seismic, soils, and/or hydrologic problems confronting public or private development be thoroughly investigated at the earliest stages of the design process, and that these topics be comprehensively evaluated in the environmental review process by persons of competent technical expertise.

Policy S-1.26: Erosion and Sediment Control. Continue to require the use of best management practices for erosion and sediment control measures with proposed development in compliance with applicable regional regulations.

Policy S-1.27: Regional Water Quality Control Board (RWQCB) Requirements. Enforce stormwater pollution prevention practices and appropriate watershed management plans in the RWQCB general National Pollutant Discharge Elimination System requirements, the San Mateo County Water Pollution Prevention Program and the City's Stormwater Management Program. Revise, as necessary, City plans so they integrate water quality and watershed protection with water supply, flood control, habitat protection, groundwater recharge, and other sustainable development principles and policies.

Policy S-1.28: Sea Level Rise. Consider sea level rise in siting new facilities or residences within potentially affected areas.

City of Menlo Park Municipal Code

Flood Damage Prevention

Municipal Code Chapter 12.42 Flood Damage Prevention is intended to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas. The project would require a development permit in areas of special flood hazards (Section 12.42.32).

This chapter contains standards for any construction projects in areas of special flood hazard and coastal high hazard areas. The City designates special flood hazard areas based on the Flood Insurance Study, FIRMs, and Flood Boundary and Floodway Maps. In these areas, the City requires using flood-resistant construction materials and utility equipment as well as construction methods that minimize flood damage.

Any construction projects within the special flood hazard area must comply with the Engineering Division's Plan Review Checklist to Comply with FEMA Requirements. The application package must include certification from a licensed engineer or architect that the plans comply with the City's Flood Damage Prevention Code, plans showing the location and elevation of the project, proposed elevation of the 1-percent chance storm Base Flood Elevation in relationship to the lowest floor of all structures, on-site drainage plan that shows how flood waters will be directed around the structures, and a statement that a finished construction elevation certificate will be provided at project completion. Variances may be issued for the repair, rehabilitation, or restoration of historic structures, as listed in the National Register of Historic Places or the State Inventory of Historic Places.

Storm Water Management Program.

Chapter 7.42, Storm Water Management Program, is intended to protect and enhance the water quality of watercourses, water bodies, and wetlands consistent with the CWA by requiring new development or redevelopment projects use BMPs to achieve these goals. Specifically, this chapter seeks to:

- a. Eliminate non-storm water discharges to the municipal separate storm sewer;
- b. Control the discharge to municipal separate storm sewers from spills, dumping or disposal of materials other than storm water; and
- c. Reduce pollutants in storm water discharges to the maximum extent practicable.

4.9.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts with regard to hydrology and water quality are based on Appendix G and Section 15130 of the CEQA Guidelines. A significant impact related to hydrology and water quality would occur if the project would:

- A. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.
- B. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- C. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - I. Result in substantial erosion or siltation on- or off-site.
 - II. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite.
 - III. 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.
 - IV. Impede or redirect flood flows.
- D. Risk release of pollutants due to project inundation in a flood hazard, tsunami, or seiche zone.
- E. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.
- F. Result in cumulatively considerable hydrological or water quality impacts.

4.9.4 Impacts and Mitigation Measures

Methodology

The project setting and impact analysis was developed by reviewing information relating to hydrology and water quality in proximity to the project site. Information reviewed for this section included ConnectMenlo General Plan Update, the ConnectMenlo General Plan Update Draft EIR, the ConnectMenlo General Plan Update Final EIR and the City of Menlo Park Municipal Code. Additionally, the site-specific Hydrology Report (Appendix G1) and Stormwater Management Plan (Appendix G2), both prepared by Kier & Wright in January 2022 were reviewed in preparation of this section. The Hydrology Report defines the existing and proposed drainage conditions, including identifying drainage basins within the site and the amount that the project would reduce the impervious surface area within the project site. The Stormwater Management Plan defines and describes the stormwater treatment measures incorporated in the project design, including identifying the size of the area treated by each measure.

Project Impacts

Impact 4.9-1 Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

The proposed project would redevelop the project site by demolishing five existing commercial (office) and industrial buildings and constructing a multi-family residential development. Project construction and operation have the potential to impact water quality in the surrounding area. The project site does not currently contain any stormwater treatment measures. The project site is located in the Bayfront Area of Menlo Park. Runoff from the site drains into a 24-inch stormwater line in Constitution Drive, an 18-inch line on Independence Drive, and a 54-inch mainline in Chrysler Drive and is then conveyed to the Atherton Channel (Appendix G1). The Atherton Channel flows through a concrete channel to El Camino Real and a combination of concrete channels and culverts until it discharges into Bayfront Canal near Marsh Road.

Potential sources of pollutants during demolition and construction include sediment erosion from ground-disturbing activities, fuels, oils, lubricants, and other hazardous substances used during construction. In compliance with the NPDES General Construction Permit, a SWPPP would be prepared for the project that specifies BMPs to be implemented during construction to minimize impacts to water quality.

Due to the residential nature of the project, long-term operation of the project is not expected to release a substantial amount of pollutants in the form of hazardous materials or sediment. The only hazardous materials anticipated from project operation would be for transport, use, or disposal of routinely used household products such as cleaners, paint, solvents, motor oil/automotive products, and batteries, as well as pool and landscape maintenance products, typical of residential land uses. Runoff from the project site would be collected and treated through biotreatment ponds and flow-through planters. The size and design of the ponds and planters were determined based on the size of the drainage basin each serves and the extent of impervious surfaces within that basin, and each is sized slightly larger than the required size under the San Mateo County C3 Manual guidelines (Appendix G2). By incorporating the on-site stormwater treatment measures into the site design, the project demonstrates compliance with Chapter 7.42, Storm Water Management Program, of the City's Municipal Code as well as General Plan Policies OSC-5.1, S-1.26, and S-1.27

Through implementation of SWPPP, BMPs, and site design, pollutants from project construction and operation would be treated and would not adversely affect surface or ground water resources. Therefore, the development of the proposed project would not lead to the degradation of surface of groundwater quality, Impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.9-2 Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

As discussed above, the project lies within the San Mateo Plain Groundwater Subbasin (groundwater basin number 2-009.03; DWR 2004; or “subbasin”) of the Santa Clara Valley Groundwater Basin, which is not in critical overdraft and is designated as low priority under the California Sustainable Groundwater Management Act. Groundwater supplied through the San Mateo Plain Groundwater Subbasin accounts for approximately 10 percent of the water supply in the region (Groundwater Exchange 2022). Water supply servicing the project site is provided from Menlo Park Municipal Water (MPMW) (City of Menlo Park 2022), which purchases water from the San Francisco Public Utilities Commission. All of the water that MPMW purchases is sourced from surface water from the Hetch Hetchy reservoir and San Mateo County reservoirs (BAWSCA 2022). MPMW does not utilize groundwater as a potable water source outside of emergency conditions.

The 123 Independence Water Budget Summary (Appendix K1) identifies that the project would require 16.94 million gallons of water annually (approximately 46,422 gallons per day). This includes 16.16 million gallons for indoor water use and 0.78 million gallons for outdoor water use. As discussed in Section 4.16, Utilities and Service Systems, MPMW has sufficient water in normal water years to meet projected demand through 2040; however, in the case that there are multiple dry years, MPMW would implement MPMW’s Water Shortage Contingency Plan. This plan identifies a range of actions and strategies to reduce water demand and augment water supplies. The use of emergency groundwater wells is identified for supply augmentation only at water shortage level 5 (MPMW 2021).

Currently 86.5 percent of the project site is covered in impervious surfaces. The project proposes the redevelopment of the site to 432 residential uses (a mix of townhomes and apartments), open space, and parking structures. The proposed project would result in a reduction of 6,739 square feet of impervious area, resulting in only 84.6 percent of the project site being impervious after project implementation (Appendix G2). The reduction in impervious area on the project site would allow for more water to infiltrate the soil within the project site.

Because the project would not consume groundwater, except in cases of severe drought, and would increase the potential for groundwater recharge by reducing the extent of impervious surfaces within the project site, the project would have a **less-than-significant** impact on groundwater resources.

Mitigation Measures

No mitigation is required.

Impact 4.9-3 Would the project 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?

Stormwater within the project site currently is directed to existing stormwater lines along Constitution Drive, Independence Drive, and Chrysler Drive, which drain to the Atherton Channel (Appendix G1). The proposed project would alter the drainage patterns on site by reducing the extent of impervious surfaces within the site and by importing soil to raise the ground above the base flood elevation.

Within the site, runoff would not flow across exposed dirt and thus would not cause erosion on site. All stormwater runoff would be routed through biotreatment ponds and flow-through planters before being collected within the existing stormwater lines surrounding the site. Thus, the water discharged from the site would not carry excessive amounts of sediment that could be then deposited in the Atherton Channel or the Bay. The portion of the Atherton Channel that receives stormwater from the project site is concrete and thus not subject to erosion. By incorporating the on-site stormwater treatment measures into the site design, the project demonstrates compliance with Chapter 7.42, Storm Water Management Program, of the City's Municipal Code as well as General Plan Policies OSC-5.1, S-1.26, and S-1.27.

The project would alter drainage patterns only within the project site and would not alter the course of a stream or river or result in substantial erosion or siltation. Thus, the project would have **no impact**.

Mitigation Measures

No mitigation measures are required.

Impact 4.9-4 Would the project 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Stormwater from the project site currently is directed to existing lines along Constitution Drive, Independence Drive, and Chrysler Drive, which drain to the Atherton Channel (Appendix G1). The project is located within FEMA Zone AE and subject to the 100- year flood. Further, the project site is subject to sea level rise. The project would involve importing fill material sufficient to ensure that the final floor elevation of all proposed ground-level residential units would be at least 2 feet above the 5-foot FEMA floodplain, per the requirements of Menlo Park Municipal Code Section 16.45.130(4), Municipal Code Chapter 12.42 Flood Damage Prevention, and General Plan Policy S-1.28. The current site grade varies from approximately 7.8 feet to 9.8 feet and the finished grade for the proposed development would be at approximately 13 feet, which is approximately 2.6 feet above the 5-foot FEMA floodplain. While this would result in a change to the drainage conditions within the project site, as discussed under Impact 4.9-3, the project would not alter drainage patterns outside of the project site. The overall flow rate of stormwater leaving the project site and entering the Atherton Channel would be reduced due to the reduction of impervious area within the project site. As discussed in Section 4.9.1, both of these channels have capacity constraints that contribute to an increased frequency of flooding for areas along both waterways. For the stretches of these channels downstream of the point at which stormwater in the 54-inch mainline in Chrysler Drive discharges into Atherton Channel, the reduced rate and volume of stormwater runoff from the project site would slightly reduce the potential for flooding to occur compared to existing conditions. The changes in drainage as a result of project implementation would have **no impact** related to increased potential for flooding on- or off-site.

Mitigation Measures

No mitigation measures are required.

Impact 4.9-5 Would the project 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 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?

As discussed in Impact 4.9-4, the total volume and flow of runoff leaving the site and entering the Atherton Channel would be less than under the existing conditions due to the decreased extent of impervious surfaces on the project site (Appendix G1). Thus, the project would not create or contribute runoff water that would exceed the capacity of the City's stormwater drainage system and for the stretches of the Atherton and Bay channels downstream of the point at which stormwater from the project site discharges into Atherton Channel, the reduced rate and volume of stormwater runoff from the project site would slightly reduce the potential for flooding to occur compared to existing conditions.

The project site does not currently contain any stormwater treatment measures. The project would demolish five buildings that are currently located on the project site and construct 432 townhomes and apartments. Potential sources of pollutants during project demolition and construction include sediment erosion from ground-disturbing activities on the project site, fuels, oils, lubricants, and other hazardous substances used during construction. In compliance with the NPDES General Construction Permit, a SWPPP would be prepared for the project that would specify BMPs that would be implemented during construction to minimize impacts to water quality. By incorporating the on-site stormwater treatment measures into the site design, the project demonstrates compliance with Chapter 7.42, Storm Water Management Program, of the City's Municipal Code as well as General Plan Policies OSC-5.1, S-1.26, and S-1.27.

Due to the residential nature of the project, project operation is not expected to release a substantial number of pollutants from the project site. The only hazardous materials anticipated from project operation would be for transport, use, or disposal of routinely used household products such as cleaners, paint, solvents, motor oil/automotive products, batteries and garden maintenance products, typical of residential land uses. As discussed in Appendix G2, all stormwater runoff from the project site would be collected and treated in biotreatment ponds and flow through planters sized according to San Mateo County C3 Manual guidelines. This stormwater treatment would provide for filtration of pollutants out of the stormwater before it is discharged to the stormwater lines surrounding the project site.

Through implementation of the SWPPP, BMPs, and site design, pollutants from project construction and operation would be treated and remain on site. Therefore, development of the proposed project would reduce, rather than increase the amount of pollutants leaving the project site.

The project would have **no impacts** associated with contributing stormwater runoff that would exceed the capacity of the City's stormwater drainage systems and associated with creating substantial additional sources of polluted runoff.

Mitigation Measures

No mitigation measures are required.

Impact 4.9-6 Would the project 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 impede or redirect flood flows?

As discussed above under Impact 4.9-4, stormwater from the project site currently is directed to existing lines along Constitution Drive, Independence Drive, and Chrysler Drive, which drain to the Atherton Channel (Appendix G1). The project site is located within FEMA Zone AE and subject to the 100- year flood as well as sea level rise. As part of the project, fill material would be imported sufficient to ensure that the final floor elevation of all proposed ground-level residential units would be approximately 2.6 feet above the 5-foot FEMA floodplain, consistent with the requirements of Menlo Park Municipal Code Section 16.45.130(4). In addition, the project would result in a reduction in the amount of impervious surfaces on the project site compared to existing conditions. These elements of the project would alter the drainage pattern within the project site. Because the project site is located within a 100-year flood zone, the project applicant would be required to submit an on-site drainage plan to the City and FEMA to show how flood waters would be directed around new site structures and would not adversely affect surrounding neighboring properties. Further, the project would be required to comply with the requirements outlined under provision C.3 of the Municipal Regional Stormwater Permit (MRP), which requires appropriate site design and stormwater treatment measures to address and prevent increases in runoff flows from new development projects. Compliance with existing regulations, City municipal code requirements, as well as general plan policies and programs intended to reduce and/or prevent adverse flooding onto neighboring properties, would ensure that project implementation would not impede or redirect flood flows. Impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.9-7 Would the project risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones?

As discussed above under Impact 4.9-5, the project is located within FEMA Zone AE and subject to the 100- year flood. The project is not located within a tsunami hazard or seiche zones (CGS 2021). As part of the project, the project site will be raised out of the base flood elevation, reducing on-site flood risk. To reduce impacts from pollutants from the project site, the project would implement a SWPPP, BMPs, and the proposed site design, which would capture and treat pollutants from project construction and operation. With the project site being raised out of base flood elevation and implementation of a SWPPP and site specific BMPs, the project would not risk the release of pollutants due to flooding. Impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.9-8 Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Water Quality Plans that the project would be required to comply with include the Water Quality Control Plan for the San Francisco Bay Basin, the SMCWPPP, and the City of Menlo Park Storm Water Management Program. As described above, the Water Quality Control Plan for the San Francisco Bay Basin designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The SMCWPPP includes specific measures and actions to reduce pollution from construction sites, as well as actions to address industrial sites, illegal discharges and illicit connections, and municipal operations. The City of Menlo Park Storm Water Management Program is intended to protect and enhance the water quality of watercourses, water bodies, and wetlands consistent with the CWA by

requiring new development or redevelopment projects use BMPs to achieve these goals. Specifically, this program seeks to: eliminate non-stormwater discharges to the municipal separate storm sewer; control the discharge to municipal separate storm sewers from spills, dumping or disposal of materials other than stormwater; and reduce pollutants in stormwater discharges to the maximum extent practicable.

As discussed under Impact 4.9-1, potential sources of pollutants during project demolition and construction include sediment erosion from ground-disturbing activities on the project site, fuels, oils, lubricants, and other hazardous substances used during construction. In compliance with the NPDES General Construction Permit, a SWPPP would be prepared for the project that would identify BMPs to be implemented during construction to minimize impacts to water quality. The only hazardous materials anticipated from project operation would be routinely used household products such as cleaners, paint, solvents, motor oil/automotive products, batteries and landscape maintenance products, typical of residential land uses. As discussed in Appendix G2, pollutants from the project site would be collected and treated through biotreatment ponds and flow through planters that would be sized according to San Mateo County C3 Manual guidelines. Through the implementation of SWPPP, BMPs, and site design, pollutants from project construction and operation would be treated and remain on site and would not conflict with a water quality control plan.

As discussed under Impact 4.9-2, the project lies within the San Mateo Plain Groundwater Subbasin (groundwater basin number 2-009.03; DWR 2004; or “subbasin”) of the Santa Clara Valley Groundwater Basin, which is not in critical overdraft and is designated as low priority under the California Sustainable Groundwater Management Act and does not have a sustainable groundwater management plan.

The project would not conflict with or obstruct a water quality control plan or sustainable groundwater management plan. Impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.9-9 Would the project result in cumulatively considerable hydrological or water quality impacts?

The ConnectMenlo EIR evaluated potential cumulative hydrology and water quality impacts that could arise from future development under the City’s General Plan and concluded that impacts would remain less than significant because development projects would be required to comply with City Municipal Code, General Plan policies, and federal, state, and local water quality regulations. The ConnectMenlo EIR found that compliance with these requirements would reduce the cumulative impacts of land development related to drainage alterations, groundwater, flood hazards, and water quality to less than significant levels (City of Menlo Park 2016b). Thus, there are no significant hydrology and water quality cumulative impacts to which the project could contribute.

The project design includes BMPs that are sized slightly larger than required under the San Mateo County C3 Manual guidelines, and as discussed throughout this section, the project would comply with all applicable water quality regulations. Specifically, by incorporating the on-site stormwater treatment measures into the site design, the project demonstrates compliance with Chapter 7.42, Storm Water Management Program, of the City’s Municipal Code as well as General Plan Policies OSC-5.1, S-1.26, and S-1.27. Further, there are no stormwater treatment measures at the project site currently and the proposed project would reduce the extent of impervious surfaces at the project site. Thus, the proposed project would improve water quality and reduce runoff compared to the existing conditions.

Although the project would construct more residential units than were evaluated under the ConnectMenlo EIR, the project would not expand the development area or footprint of development that was evaluated in that EIR. Thus, the conclusions of the ConnectMenlo EIR regarding the potential for significant cumulative impacts associated with hydrology and water quality remain applicable to the proposed project. The project would have **no impact** in terms of resulting in a cumulative considerable contribution to cumulate hydrological and water quality impacts.

Mitigation Measures

No mitigation measures are required.

4.9.5 References

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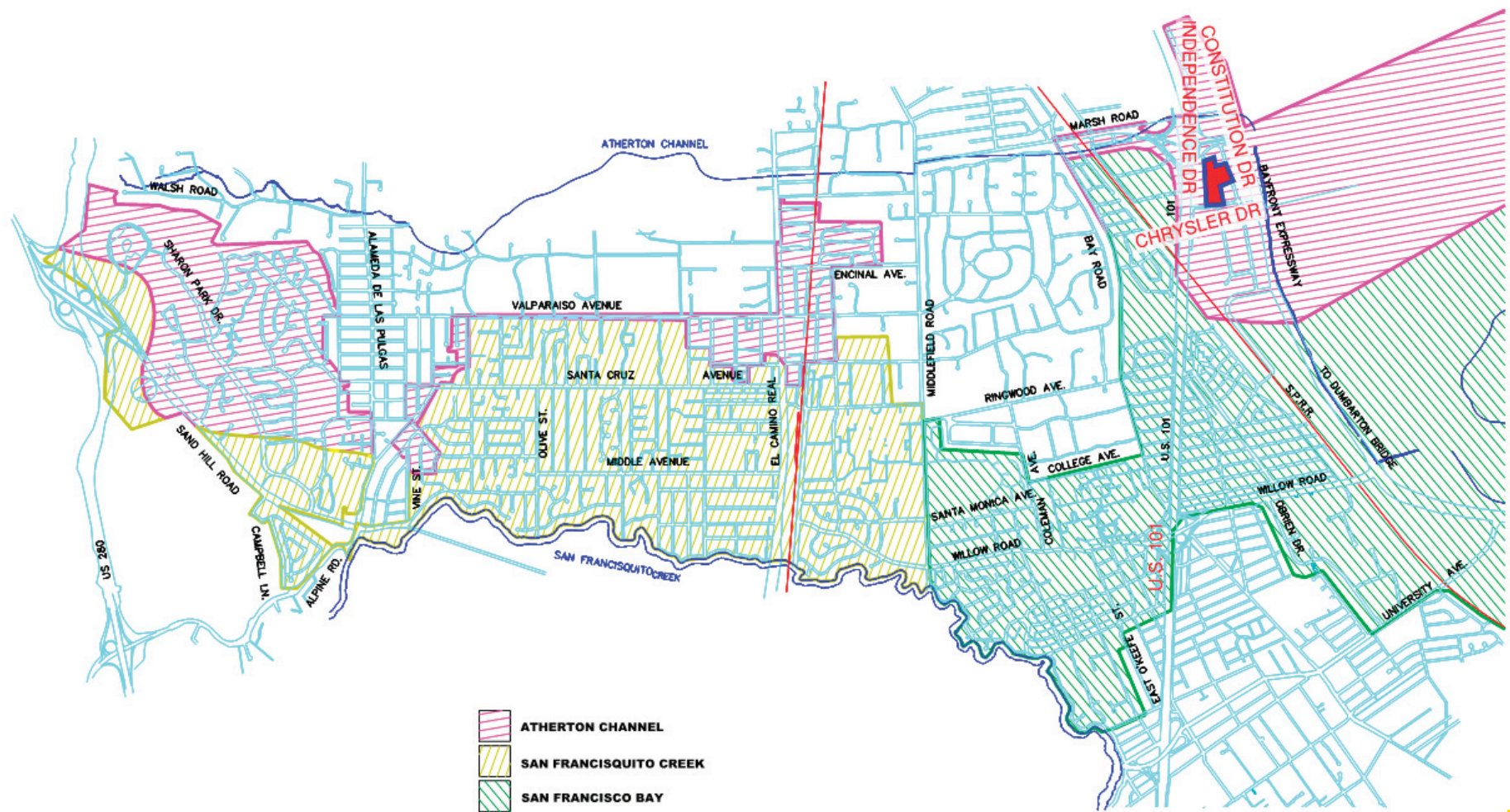
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SOURCE: Kier+Wright 2020

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SOURCE: Kier+Wright 2022

FIGURE 4.9-2

Existing Site Drainage

123 Independence Drive Residential Project

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4.10 Land Use and Planning

This section describes the land use designations and zoning for 123 Independence Drive Residential Project (project; proposed project) and evaluates the potential effects on general land use compatibility and consistency with the Menlo Park General Plan Update (ConnectMenlo; City of Menlo Park 2016a) goals and policies and other relevant planning documents.

As discussed in Chapter 2, Introduction, and Chapter 4, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this environmental impact report (EIR), one in January and February 2021, and one in September and October 2021. None of the written or verbal comments received in response to the NOPs address land use and planning. Both NOPs and the comments received in response to them are provided in Appendix A of this EIR.

The primary sources reviewed to prepare this section include the ConnectMenlo General Plan Update (City of Menlo Park 2016a), the ConnectMenlo General Plan Update EIR (City of Menlo Park 2016b), the City of Menlo Park (City) Municipal Code (City of Menlo Park 2021), and Plan Bay Area 2050 (MTC/ABAG 2021).

4.10.1 Environmental Setting

The proposed project entails the demolition of five existing office and industrial buildings (a total of approximately 103,900 square feet) and the construction of approximately 316 rental apartments and 116 for-sale townhomes. As shown on Figure 3-3, Existing Site Conditions, the 8.15-acre project site is located on the northwest side of the intersection at Independence Drive and Chrysler Drive. The site is bounded on the north side by Constitution Drive and Marsh Road is 560 feet northwest of the parcels. Vegetation on the project site consists of approximately 48,000 square feet of decorative landscape areas bordering the edges of the parcel boundaries along Independence Drive. The interior of the site is almost exclusively hardscape, consisting of approximately 307,326 square feet of impervious surfaces (Appendix G1).

Existing Development On Site

The project site has been developed with single-story office and industrial buildings, surface parking, and limited landscaping since the 1960s. The western-most building on Independence Drive, 119 Independence Drive, is a concrete building approximately 16 feet in height, encompassing 12,996 square feet. To the west, at 123 and 125 Independence Drive is another concrete building approximately 20 feet in height, encompassing approximately 12,335 square feet. 127 Independence Drive is approximately 19 feet in height, encompassing approximately 13,822 square feet. To the west of 127 Independence Drive, at the corner of Independence Drive and Chrysler Drive, is 1205 Chrysler Drive, which is approximately 17 feet in height, encompassing approximately 39,302 square feet. Finally, 130 Constitution Drive is located to the north of 127 Independence Drive. This building is approximately 25 feet in height, encompassing approximately 25,528 square feet.

Land Use and Zoning Designations

Land use and zoning designations are determined by ConnectMenlo and the Menlo Park Municipal Code, respectively (City of Menlo Park 2016a, 2021). The project does not propose any changes to the zoning or land use designations for the project site.

As shown on Figure 3-4, General Plan and Zoning Designations, under ConnectMenlo, the project site is designated Mixed Use Residential within the Bayfront Area on the City's Land Use Designations Map. According to ConnectMenlo, this designation is intended to promote live/work/play environments oriented toward pedestrians, transit, and bicycle use, especially for commuting to nearby jobs (City of Menlo Park 2016a). This designation provides for higher density housing to meet the needs of all income levels and allows mixed use developments with integrated or stand-alone supportive sales and service uses and uses that are consistent with the Office Designation.

Figure 3-4 also shows that the project site is within the Residential-Mixed Use-Bonus (R-MU-B) Zoning District. The purpose and intent of the residential mixed use district is to (1) provide high-density housing to complement nearby employment; (2) encourage mixed-use development with a quality living environment and neighborhood-serving retail and services on the ground floor that are oriented to the public and promote a live/work/play environment with pedestrian activity; and (3) blend with and complement existing neighborhoods through site regulations and design standards that minimize impacts to adjacent uses (City of Menlo Park 2021).

4.10.2 Regulatory Framework

Federal Regulations

There are no federal land use plans, policies, regulations, or laws applicable to the proposed project.

State Regulations

Senate Bill 375

In order to aid in reaching the greenhouse gas (GHG) reduction goals set by Assembly Bill (AB) 32 (refer to Section 4.7, Greenhouse Gas Emissions, in this Draft EIR), Senate Bill (SB) 375 directs the California Air Resources Board (CARB) to set regional targets for reducing GHG emissions from cars and light trucks for 2020 and 2035 and to update those targets every 8 years. SB 375 requires the state's 18 regional metropolitan planning organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan (RTP) or an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved. CARB adopted the original SB 375 targets for the regional MPOs in 2010 and updated these in 2018. The original targets for the San Francisco Bay Area (Bay Area) were a 7 percent reduction in per capita passenger vehicle greenhouse gas emissions by 2020 and a 15 percent reduction by 2035; these were updated to a 10 percent reduction by 2020 and a 19 percent reduction by 2035 (CARB 2022). The SCS for the Bay Area is Plan Bay Area 2050, which was adopted by the Metropolitan Transportation Commission (MTC), which is the MPO for the Bay Area, and ABAG in 2021 and is discussed further under the Regional and Local Regulations section below.

Pursuant to California Government Code, Section 65080(b)(2)(K), an SCS does not: (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

Regional and Local Regulations

Association of Bay Area Governments Projections 2013

ABAG is the official comprehensive planning agency for the San Francisco Bay region, which includes the counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. ABAG primarily deals with regional land use, housing, environmental quality, and economic development. ABAG is responsible for taking the overall regional housing needs allocation provided by the State and allocating that housing need by income level across its jurisdiction. The relationship of the project's potential residential population and proposed below market rate units to ABAG's projections are discussed in Chapter 4.12, Population and Housing, of this Draft EIR.

ABAG produces growth forecasts that are informed by the general plans, zoning regulations, and growth management programs of local jurisdictions and are relied upon by other regional agencies, including the MTC and the Bay Area Air Quality Management District, to make project funding and regulatory decisions. For example, the ABAG projections are the basis for the regional Ozone Attainment Plan and RTP, each of which are discussed in Chapters 4.2, Air Quality, and 4.14, Transportation, of this Draft EIR.

The ABAG projections are also developed to reflect the impact of “smart growth” policies and incentives that could be used to shift development patterns from historical trends toward a better jobs-housing balance, increased preservation of open space, and greater development and redevelopment in urban core and transit-accessible areas throughout the ABAG region.

Plan Bay Area, Strategy for a Sustainable Region

The MTC and ABAG's Plan Bay Area 2050 is the Bay Area's RTP/SCS (MTC and ABAG 2021). The SCS describes a transportation and land use/housing strategy and development pattern for the region intended to reduce GHG emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by CARB. Plan Bay Area 2050 addresses transportation mobility and accessibility needs, land development, and greenhouse gas emissions reduction requirements and targets through 2050. A key focus in Plan Bay Area 2050 is understanding interrelated elements of housing, the economy, transportation, and the environment and identifying feasible strategies to improve conditions throughout the Bay Area (MTC and ABAG 2021). It does not mandate any changes to local zoning rules, general plans, or processes for reviewing projects; nor is the plan an enforceable direct or indirect cap on development locations or targets in the region. Achievement of the transportation and environmental strategies described in Plan Bay Area 2050, including a regional land use plan that supports transit as well as support for active and shared modes of travel are forecasted to lower the share of Bay Area residents that drive to work alone from 50 percent in 2015 to 33 percent in 2050. This would significantly reduce greenhouse gas emissions from transportation. Implementation of this and other strategies identified in Plan Bay Area 2050 would support the region in achieving the state mandate of a 19 percent reduction in per capita greenhouse gas emissions by 2035 and continuing reductions through 2050.

City of Menlo Park General Plan

The City of Menlo Park's first City-wide planning document was a Master Plan adopted in 1952. This was updated as a General Plan in 1966. A comprehensive update was adopted as the “Toward 2000” General Plan in 1974; it included the City's first Open Space and Conservation Element. As required by state law, a Safety Element was added in 1976

and a Noise Element was added in 1978. Since then, the City has periodically updated the General Plan, with the most recent update to the Land Use and Circulation Elements, an effort referred to as ConnectMenlo, adopted in 2016.

The General Plan updates made through the ConnectMenlo process were primarily focused on the Bayfront Area of the City and resulted in an increased development potential within this area. Prior to the update, the City determined that there were approximately 13,000 housing units and 14.5 million square feet of non-residential development in the City, and that the land use and zoning designations applied to properties throughout the City could support additional development of approximately 1,000 dwelling units and 1.8 million square feet of non-residential development. The changes to the land use and zoning designations and adopted under ConnectMenlo would accommodate a further increase of 4,500 dwelling units, 400 hotel rooms, and 2.3 million non-residential square feet within the Bayfront Area (City of Menlo Park 2016a).

The General Plan describes the Bayfront Area designation as being intended to create live/work/play environments by encouraging “office, research and development, residential, commercial uses, and hotels, all in close proximity or integrated with one another. These designations are intended to foster innovation and emerging technologies; promote the creation of an employment district with travel patterns that are oriented toward pedestrian, transit, and bicycle use; and provide amenities to surrounding neighborhoods and fiscal support to the City leveraged through development intensity bonuses” (City of Menlo Park 2016a).

The General Plan contains nine Guiding Principles, which are summarized below:

- **Citywide Equity** – protecting existing neighborhoods, ensuring equal access to services and amenities, and limiting displacement of current residents
- **Healthy Community** – providing residents with healthy and well-maintained living spaces, high quality of life, pedestrian and bicycle infrastructure, and access to emergency and policing services
- **Competitive and Innovative Business Destination** – support for entrepreneurship, emerging technologies, and economic activity
- **Corporate Contribution** – ensure development supports physical benefits to adjacent neighborhoods
- **Youth Support and Education Excellence** – provide access to youth services, education, and training
- **Great Transportation Options** – ensure connectivity, safety, and convenience for all transportation modes
- **Complete Neighborhoods and Commercial Corridors** – neighborhoods are complete communities, vibrant commercial corridors serve adjacent neighborhoods
- **Accessible Open Space** – provide safe and convenient access to a range of parks and open space
- **Sustainable Environmental Planning** – address climate change, adapt to sea-level rise, protect and conserve resources

Land Use Element

Goal LU-1: Promote the orderly development of Menlo Park and its surrounding area.

Goal LU-2: Maintain and enhance the character, variety and stability of Menlo Park’s residential neighborhoods.

Policy LU-2.1: Neighborhood Compatibility. Ensure that new residential development possesses high-quality design that is compatible with the scale, look, and feel of the surrounding neighborhood and that respects the city’s residential character

Policy LU-2.2: Open Space. Require accessible, attractive open space that is well maintained and uses sustainable practices and materials in all new multiple dwelling and mixed-use development

Policy LU-2.5: Below-Market Rate Housing. Require residential developments of five or more units to comply with the provisions of the City's Below-Market Rate (BMR) Housing Program, including eligibility for increased density above the number of market rate dwellings otherwise permitted by the applicable zoning and other exceptions and incentives.

Policy LU-2.9: Compatible Uses. Promote residential uses in mixed-use arrangements and the clustering of compatible uses such as employment centers, shopping areas, open space and parks, within easy walking and bicycling distance of each other and transit stops

Goal LU-6: Preserve open-space lands for recreation; protect natural resources and air and water quality; and protect and enhance scenic qualities.

Policy LU-6.2: Open Space in New Development. Require new nonresidential, mixed use, and multiple dwelling development of a certain minimum scale to provide ample open space in the form of plazas, greens, community gardens, and parks whose frequent use is encouraged through thoughtful placement and design.

Policy LU-6.3: Public Open Space Design. Promote public open space design that encourages active and passive uses, and use during daytime and appropriate nighttime hours to improve quality of life.

Policy LU-6.8: Landscaping in Development. Encourage extensive and appropriate landscaping in public and private development to maintain the City's tree canopy and to promote sustainability and healthy living, particularly through increased trees and water-efficient landscaping in large parking areas and in the public right-of-way.

Goal LU-7: Promote the implementation and maintenance of sustainable development, facilities and services to meet the needs of Menlo Park's residents, businesses, workers, and visitors.

Policy LU-7.1: Sustainability. Promote sustainable site planning, development, landscaping, and operational practices that conserve resources and minimize waste.

Housing Element

Goal H-4: New Housing. Use land efficiently to meet housing needs for a variety of income levels, implement sustainable development practices and blend well-designed new housing into the community.

Policy H-4.3: Housing Design. Review proposed new housing in order to achieve excellence in development design through an efficient process and will encourage infill development on vacant and underutilized sites that is harmonious with the character of Menlo Park residential neighborhoods. New construction in existing neighborhoods shall be designed to emphasize the preservation and improvement of the stability and character of the individual neighborhood.

The City will also encourage innovation design that creates housing opportunities that are complementary to the location of the development. It is the City's intent to enhance neighborhood identity and sense of community by ensuring that all new housing will (1) have a sensitive transition with the surrounding area, (2) avoid unreasonably affecting the privacy of neighboring properties, or (3) avoid impairing access to light and air structures on neighboring properties.

City of Menlo Park Municipal Code

Zoning Ordinance

The purpose of the City Zoning Ordinance (Title 16 of the Menlo Park Municipal Code), as stated in Section 16.02.020, is to “preserve and extend the charm and beauty inherent to the residential character of the city; to regulate and limit the density of population; encourage the most appropriate use of land; to conserve land and stabilize the value of property; to provide adequate open space for light, air and fire protection; to lessen traffic congestion; to facilitate the provision of community facilities; to encourage tree and shrub planting; to encourage building construction of pleasing design; to provide the economic and social advantages of a planned community.” Proposed land uses, buildings, structures, and land division must comply with the regulations as set forth in the Zoning Ordinance.

As previously indicated, the project site is located within the Residential-Mixed Use-Bonus (R-MU-B) Zoning District. Under Sections 16.45.060 and 16.45.070 of the City Zoning Ordinance, bonus level development is intended to allow a project to develop at a greater level of intensity with an increase in density, floor area ratio and/or height in exchange for the provision of community amenities. As a threshold requirement for utilizing bonus level development in the R-MU-B zoning district, the project sponsor must construct the below market rate units required pursuant to Chapter 16.96 of the Zoning Ordinance on site rather than utilizing an alternative means of compliance per Zoning Ordinance Section 16.96.070, unless otherwise approved by the City Council. To be eligible for the bonus level of development, a minimum of 15 percent of the total units must be provided on site for affordable housing units in accordance with the City’s below-market-rate housing ordinance and guidelines.

Projects proposing bonus level development in the residential mixed use district must also obtain a use permit per Chapter 16.82 of the Zoning Ordinance.

Architectural Control

Chapter 16.68, Buildings, includes Section 16.68.020, Architectural Control, which sets forth the standards requiring architectural control review for development in the City. Under Section 16.68.020, the planning commission, architectural committee, or community development director would review architectural drawings, including elevations of the proposed building or structure, proposed landscaping or other treatment of the grounds around such building or structure, and proposed design of, and access to, required parking facilities for all building permit applications, with the exception of single-family dwellings, duplexes, and accessory buildings. Applications are only approved where specified findings are made.

4.10.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to land use and planning are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to land use and planning would occur if the project would:

- A. Physically divide an established community.
- B. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.
- C. Make a cumulatively considerable contribution to a significant cumulative impact related to land use and planning.

4.10.4 Impacts and Mitigation Measures

Methodology

The following assessment of land use impacts is based on a review of applicable plan, policy, and regulatory documents, as well as consultation with City of Menlo Park Planning Department staff. Information related to land uses was reviewed in light of the proposed project to evaluate the project's consistency with relevant plans and policies, and to determine land use compatibility.

The first impact discussed in this section relates to the project's compatibility with surrounding land uses (current and planned) and its potential for physical division of the community. The second impact relates to the conformance of the proposed project with all applicable land use plans, policies, and regulations other City plans as they relate to the protection of environmental resources, including those resource policies and environmental issue areas covered in other sections of this EIR. Where mitigation measures are necessary to ensure compliance with the City's policies required for the protection of environmental resources, those measures are referenced in the second impact discussion. The full text of each mitigation measure is presented in each of the sections of this EIR and is not repeated here.

Project Impacts

Impact 4.10-1 Would the project physically divide an established community?

The project site currently consists of five office and industrial buildings surrounded by existing commercial uses. As described in Chapter 3, Project Description, the project proposes redevelopment of the project site to include demolition of the existing buildings and construction of 432 apartments and townhomes and associated parking and landscaping. The proposed project uses are consistent with the existing R-MU-B zoning. Currently, the immediate project vicinity, including the project site, consists primarily of commercial and industrial land uses, including offices, hotels, and warehouses. However, there are several redevelopment projects in the Bayfront Area that have been approved or are under review. Many of these projects would introduce residential land uses to the area, as anticipated under the ConnectMenlo General Plan Update. The residential uses proposed under the 123 Independence project would be consistent with the land use and zoning designations for the project site and would be compatible with the other planned residential development in the vicinity. This project would not construct any barriers or new roads that could physically divide the planned residential land uses and mixed-use community; and it would not impede pedestrian, bicycle, or vehicle movement in the project vicinity. The proposed project includes a publicly accessible paseo and park that would contribute to the interconnectedness of the mixed-use community envisioned for the Bayfront Area. **No impact** would occur.

Mitigation Measures

No mitigation measures are required.

Impact 4.10-2 Would the project 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?

As discussed in Chapter 3, the project proposes to redevelop the project site by demolishing existing office and industrial buildings and constructing residential buildings to include 316 apartments and 116 townhomes. The project would also develop associated parking and landscaping, including a publicly accessible paseo and park.

Each of the environmental resource topic sections within Chapter 4 of this EIR identifies plans, policies, and regulations that are applicable to analysis of the proposed project's environmental effects. As demonstrated throughout each of the environmental analysis sections, the project would not conflict with applicable plans, policies, and regulations related to environmental effects. The following consistency analysis first addresses land use and housing, evaluating the project's consistency with applicable General Plan goals and policies in Table 4.10-1 and with Plan Bay Area 2050. This analysis is followed by broader discussions of the project's consistency with General Plan, municipal code, and other environmental resource regulatory requirements for other environmental resources considered in this EIR.

Land Use and Housing

Menlo Park General Plan

Table 4.10-1. General Plan Land Use and Housing Consistency

Applicable General Plan Goals and Policies	Project Consistency Determination
Land Use Element	
Goal LU-1: Promote the orderly development of Menlo Park and its surrounding area.	Consistent. The project site has been designated by the General Plan as mixed use residential. The project proposes redevelopment of the project site from office and industrial uses to a multi-family residential development. This type of development is consistent with the planned development for the area.
Goal LU-2: Maintain and enhance the character, variety and stability of Menlo Park's residential neighborhoods.	Consistent. The project site currently consists of office and industrial development and would redevelop the site into a multi-family residential development. The project would enhance the community through landscaping and open space provided on the project site.
Policy LU-2.1: Neighborhood Compatibility. Ensure that new residential development possesses high-quality design that is compatible with the scale, look, and feel of the surrounding neighborhood and that respects the city's residential character.	Consistent. The project site is designated as mixed use residential in the general plan and has consistent zoning of R-MU-B. The project would be consistent with the land uses surrounding the project. The project proposes a mix of townhomes and apartment buildings. The height of the townhomes and apartments would range from 44 feet to 75 feet. The mass and scale of the proposed project would be consistent with applicable development standards and compatible with surrounding commercial development.
Policy LU-2.2: Open Space. Require accessible, attractive open space that is well maintained and uses sustainable practices and materials in all new multiple dwelling and mixed-use development.	Consistent. As shown on Figure 3-7, Proposed Open Space, a publicly accessible paseo (14,209 square feet) and park (11,945 square feet) would be provided within Lot 1, which would consist of 0.59 acres located generally between Lots A, B, and C. The park would provide opportunities for passive recreation and would

Table 4.10-1. General Plan Land Use and Housing Consistency

Applicable General Plan Goals and Policies	Project Consistency Determination
	serve as a community gathering space. Landscaping for the open space areas would be consistent with the City's Water Efficient Landscaping Ordinance.
Policy LU-2.5: Below-Market Rate Housing. Require residential developments of five or more units to comply with the provisions of the City's Below-Market Rate (BMR) Housing Program, including eligibility for increased density above the number of market rate dwellings otherwise permitted by the applicable zoning and other exceptions and incentives.	Consistent. The project would provide 432 multifamily residential units. Of the 432 units, 56 of the 316 apartment units and 18 of the 116 of the townhomes would be below market rate, representing 17 percent of the proposed units, in compliance with the Below Market Rate Housing Program.
Policy LU-2.9: Compatible Uses. Promote residential uses in mixed-use arrangements and the clustering of compatible uses such as employment centers, shopping areas, open space and parks, within easy walking and bicycling distance of each other and transit stops.	Consistent. The project site is located within the Bayfront Area of the City which has been designated as an area that will provide for mixed use development, employment centers, and recreational opportunities (City of Menlo Park 2016). The project would comply with this policy by providing 432 residential units (apartments and townhomes) and both public and private open space in an area with existing commercial development. As discussed in Section 4.14, Transportation, the proposed project would provide safe and convenient access to existing bicycle and pedestrian facilities, as well as provide adequate pedestrian facilities on-site and along the project's frontage.
Goal LU-6: Preserve open-space lands for recreation; protect natural resources and air and water quality; and protect and enhance scenic qualities.	Consistent. The project site currently is developed with five existing office and industrial buildings with no open space. The project proposes a multi-family residential development that would include apartments, townhomes, and both public and private open space, as shown in Figure 3-7. As discussed in Section 4.1, Aesthetics, the project would be consistent with applicable development standards related to scenic qualities; as discussed in Section 4.2, the project would not result in adverse air quality effects; and as discussed in Section 4.9, the project would not result in adverse water quality effects.
Policy LU-6.2: Open Space in New Development. Require new nonresidential, mixed use, and multiple dwelling development of a certain minimum scale to provide ample open space in the form of plazas, greens, community gardens, and parks whose frequent use is encouraged through thoughtful placement and design.	Consistent. As shown on Figure 3-7, the proposed project includes a publicly accessible paseo (14,209 square feet) and park (11,945 square feet), as well as a mixture of private open space patios and balconies.
Policy LU-6.3: Public Open Space Design. Promote public open space design that encourages active and passive uses, and use during daytime and appropriate nighttime hours to improve quality of life.	Consistent. The proposed combination of paseo, park, and private patios and balconies would provide opportunities for passive recreation and community gathering.
Policy LU-6.8: Landscaping in Development. Encourage extensive and appropriate landscaping in public and private development to maintain the City's	Consistent. As described in Chapter 3, Project Description, the proposed project would include planting 353 trees and a range of landscaping

Table 4.10-1. General Plan Land Use and Housing Consistency

Applicable General Plan Goals and Policies	Project Consistency Determination
tree canopy and to promote sustainability and healthy living, particularly through increased trees and water-efficient landscaping in large parking areas and in the public right-of-way.	treatments. Landscaping for the open space areas would be consistent with the City's Water Efficient Landscaping Ordinance.
Goal LU-7: Promote the implementation and maintenance of sustainable development, facilities and services to meet the needs of Menlo Park's residents, businesses, workers, and visitors.	Consistent. As described in Chapter 3, the project includes a range of sustainable features that would be incorporated in each dwelling unit. As discussed in Sections 4.11, Public Services, and Section 4.16, Utilities and Service Systems, the project would not create demands for facilities and services that would exceed existing and planned capacity.
Policy LU-7.1: Sustainability. Promote sustainable site planning, development, landscaping, and operational practices that conserve resources and minimize waste.	Consistent. As described in Chapter 3, the project includes a range of sustainable features that would be incorporated in each dwelling unit to reduce energy and water consumption as well as generation of wastewater and solid waste. Landscaping would be consistent with the City's Water Efficient Landscaping Ordinance.
Housing Element	
Goal H-4: New Housing. Use land efficiently to meet housing needs for a variety of income levels, implement sustainable development practices and blend well-designed new housing into the community.	Consistent. The project site is designated as mixed use residential in the general plan and has consistent zoning of R-MU-B. The project would be consistent with the land uses surrounding the project. The project proposes a mix of townhomes and apartment buildings. The project would provide a total of 432 multifamily residential units. Of the 432 units, 56 of the 316 apartment units and 18 of the 116 of the townhomes would be below market rate, representing 17 percent of the proposed units, in compliance with the Below Market Rate Housing Program.
<p>Policy H-4.3: Housing Design. Review proposed new housing in order to achieve excellence in development design through an efficient process and will encourage infill development on vacant and underutilized sites that is harmonious with the character of Menlo Park residential neighborhoods. New construction in existing neighborhoods shall be designed to emphasize the preservation and improvement of the stability and character of the individual neighborhood.</p> <p>The City will also encourage innovative design that creates housing opportunities that are complementary to the location of the development. It is the City's intent to enhance neighborhood identity and sense of community by ensuring that all new housing will (1) have a sensitive transition with the surrounding area, (2) avoid unreasonably affecting the privacy of neighboring properties, or (3) avoid impairing access to light and air of structures on neighboring properties.</p>	Consistent. The project proposes to replace existing office and industrial buildings with a multi-family residential development. The project would enhance the community through landscaping and open space provided on the project site. As discussed in Section 4.1, the project design complies with the City's development standards for bonus-level development in the R-MU-B zoning district.

As shown in Table 4.10-1, the proposed project would not result in a significant environmental impact due to a conflict with the City's General Plan Land Use Element and Housing Element goals and policies that were adopted for the purpose of avoiding or minimizing environmental effects of new development. Goals and policies not referenced above are not relevant to this discussion as they do not apply to individual projects or mitigating environmental effects. Instead, these goals pertain to overall goals of the City related to sustainability, strong neighborhoods, education, business, and public services. Project implementation would not impede the City's ability to achieve these goals.

Plan Bay Area, Strategy for a Sustainable Region

As discussed in Section 4.10.2, the SCS for the project region is Plan Bay Area 2050. This document is not a land use plan and does not mandate any specific actions from local municipalities, such as changes to zoning rules, general plans, or project review processes. Instead, Plan Bay Area 2050 consists of 35 strategies to improve conditions throughout the Bay Area for housing, the economy, transportation, and the environment. Not all strategies are applicable to the proposed project because they are not applicable to individual projects or are not relevant to residential projects.

Table 4.10-2. Plan Bay Area Consistency

Applicable Plan Bay Area Strategies	Project Consistency Determination
Housing Strategies	
H3 Mix of Housing Densities and Types	Consistent. The project would provide 316 apartments and 116 townhomes.
H4 Deed Restricted Homes	Consistent. The project would provide 74 BMR housing units that would be deed restricted to remain affordable for 55 years.
H5 Integrate Affordable Housing into Major Housing Projects	<p>Consistent. The project would provide 56 BMR apartments that would be integrated with the market rate apartments, having the same average size as the market-rate units, indistinguishable from the exterior, and contain standard appliances common to new units (The Sobrato Organization 2022).</p> <p>The project would also provide 18 BMR townhomes on a single parcel located near the center of the project site. The project requests a concession from the City's BMR requirements under the State Density Bonus Law to cluster the BMR townhomes on one parcel. Placing all of the affordable townhomes on a single parcel would allow a non-profit affordable housing developer with expertise in affordable, for-sale housing to oversee that portion of the project (The Sobrato Organization 2022). Although the BMR units would be grouped on a single parcel, the BMR units would be provided within a cohesively designed community and would have the same quality and level of detail of architecture as the market rate units</p>

Table 4.10-2. Plan Bay Area Consistency

Applicable Plan Bay Area Strategies	Project Consistency Determination
Environmental Strategies	
EN1 – Adaptation to Sea Level Rise	Consistent. The project is within an area subject to sea level rise and would import fill material sufficient to ensure that the final floor elevation of all proposed ground-level residential units would be at least 2 feet above the 5-foot FEMA floodplain, consistent with the City's Municipal Code.
EN4 – Maintaining Urban Growth Boundaries	Consistent. The project site is within the Plan Bay Area 2050 Rural Urban Growth Boundary and has been developed since the 1960s with five office and industrial buildings. The project would redevelop an infill site and would not expand the City's growth boundaries.

Other Environmental Resources

Aesthetics

As detailed in Impact 4.1-1, the proposed project would comply with City policies and ordinances adopted to maintain the aesthetic goals set by the City. The project site is not located within a City-designated scenic vista or corridor, and would not adversely affect a scenic vista or corridor, so the primary regulations under consideration are the development standards outlined in the Municipal Code and General Plan. The project design incorporates public and private open spaces and complies with the City's development standards as demonstrated in Table 4.1-1. Compliance with these standards would be verified through the City's Architectural Control process.

Air Quality

As detailed in Impact 4.2-5, the proposed project would not conflict with federal or state laws, policies, and regulations that protect air quality. Emissions of criteria air pollutants during construction and operation would remain below the Bay Area Air Quality Management District thresholds. Mitigation Measure (MM) 4.2a requires implementation of best management practices to minimize fugitive dust emissions during construction and MM 4.2b requires use of lower-polluting engines for 50-horsepower or greater diesel-powered equipment to ensure that nearby sensitive receptors are not exposed to significant levels of Toxic Air Contaminants.

Biological Resources

As discussed in Impact 4.3-5, the proposed project would not conflict with City policies or ordinances that protect biological resources. There are no special-status plant or wildlife species, sensitive natural communities, or aquatic resources within the project site. Additionally, since the project would redevelop a site that has been developed since the 1960s, it would comply with General Plan policy LU6.11 regarding Bayland preservation.

Removal of all of the heritage trees within the project site is unavoidable due to the need to raise the ground elevation but would be mitigated through a Tree Planting Plan as shown in Figure 3-9. In compliance with the City's Heritage Tree Preservation ordinance in effect at the time that the project's preliminary application was submitted, the Tree Planting Plan provides for replacement of heritage trees at a 1:1 ratio. The project design incorporates landscaping and open space, which would provide for maintaining the City's tree canopy to promote sustainability and healthy living, as well as provide support for urbanized wildlife species.

The Menlo Park General Plan includes policies and implementing programs intended to reduce the amount of bird mortality due to birds flying into windows and building façades. These requirements are further defined in Chapter 16.44.130(6) of the Municipal Code. The proposed project has been designed to comply with these policies. MM 4.3a defines procedures that must be implemented prior to and during construction to ensure that significant effects to special-status bat species are avoided.

Cultural Resources and Tribal Cultural Resources

The site is currently developed and does not contain any known cultural, tribal cultural, historic, or archaeological resources. With implementation of MMs 4.4a, 4.4b, and 4.15a, the proposed project would comply with General Plan Goal OSC-3.1 regarding the protection and enhancement of historic resources. These measures require additional site testing after demolition and pavement removal; they also establish protocol and performance criteria for resource evaluation and treatment when warranted.

Energy

As described in Impacts 4.5-3, the proposed project complies with all policies and regulations related to optimizing energy. Project development would result in the use of renewable and non-renewable resources during construction and operation, but energy-saving measures would be taken in accordance with the energy standards in Title 24, part 11 of the California Building Standard Code.

The City of Menlo Park General Plan emphasizes the importance of promoting near zero-emission modes of travel and living for land use projects. The project would adhere to policies CIRC-3.1 and CIRC-4.2 by integrating electric-vehicle charging stations and bike paths into the project design. Additionally, the project would be in accordance with the City of Menlo Park Municipal Code Section 16.45.130 because at least 100,001 square feet would meet LEED Gold standards and 100 percent of the project's energy demand would be met through on-site generation and/or renewable energy sources or be offset through the purchase of certified renewable energy credits.

Finally, the project would be consistent with state goals (as reflected in bills such as SB 375 and SB 743) to respond to housing demand by building housing near job centers, which results in more efficient use of energy. Providing needed housing close to jobs rather than in other locations, such as the Central Valley, reduces fuel use and promotes the City General Plan.

Geology, Soils, Seismicity, and Paleontological Resources

In accordance with the City's General Plan Policy S-1.7, a site-specific geotechnical investigation was prepared (Appendix F1). As discussed in Impacts 4.6-2 and 4.6-3, the project would not exacerbate potential seismic hazards, including liquefaction, and thus would not result in an adverse environmental effect associated with seismic hazards. To ensure the safety of people and structures within the project site, compliance with the Geotechnical Investigation recommendations and California Building Code would be addressed through the City's Conditions of Approval for the proposed project. As discussed in Impact 4.6-6, implementation of MMs 4.6a and 4.6b would ensure that construction of the project does not cause subsidence on nearby properties or create soil instability within the project site,

Additionally, the project would adhere with Menlo Park Municipal Code Section 16.45.130(4) by importing fill material sufficient to ensure that the final floor elevation of all proposed ground-level residential units would be at least 2 feet above the 5-foot FEMA floodplain.

Greenhouse Gas Emissions

As discussed in Impact 4.7-5, the proposed project would comply with all Federal, State, and local regulations related to greenhouse gas emissions and climate change reduction standards. As discussed in Section 4.14 Transportation, the project would not result in a significant amount of vehicle miles traveled (VMT) because it would implement a Transportation Demand Management (TDM) program, consistent with Menlo Park Municipal Code Section 16.45.090. Further, the project would comply with Menlo Park Municipal Code Chapter 12.16 which requires all new residential buildings to be all electric, enroll in the EPA Energy Star Building Portfolio Manager and submit documentation of compliance, attain indoor and outdoor water use efficiency standards (Appendix K1) and be dual plumbed for the internal use of recycled water, and implement a zero-waste management plan (Appendices K2 and K3). The project would not conflict with any regulations or policies adopted with the purpose of reducing GHG emissions.

Hazards and Hazardous Materials

As discussed in Impact 4.8-5, the project site contains Recognized Environmental Conditions and other concerns related to presence of volatile organic compounds, asbestos-containing materials, and lead-based paint. With implementation of Mitigation Measures 4.8a, 4.8b, 4.8c, the project would comply with the City's policies and ordinances as well as ConnectMenlo EIR Mitigation Measures HAZ-4a and HAZ-4b by preparing an Environmental Site Management Plan, surveying buildings for asbestos and lead prior to demolition and conducting removal and disposal processes for these materials in accordance with state regulations. Further, the project design and mitigation measures respond to the most prevalent hazards in the Bayfront, including Local Hazard Mitigation Plan for San Mateo County which identifies the most prevalent hazards in the City, particularly the Bayfront Area, as including flooding, sea level rise, earthquakes, and liquefaction.

Hydrology and Water Quality

As detailed in Impact 4.9-5, the proposed project would comply with all policies and ordinances relating to hydrology and water quality in the City of Menlo Park, including water quality and stormwater management during construction and operation, sea level rise, and flood damage prevention.

Consistent with the Municipal Regional Stormwater Permit, General Plan Policies OSC-5.1, S-1.26, and S-1.27, and Municipal Code Chapter 7.42, Storm Water Management Program, the proposed site design incorporates water quality Best Management Practices to treat all stormwater before it leaves the site.

Additionally, the final floor elevation of all proposed ground-level residential units would be at least 2 feet above the 5-foot FEMA floodplain, per the requirements of Menlo Park Municipal Code Section 16.45.130(4), Municipal Code Chapter 12.42 Flood Damage Prevention, and General Plan Policy S-1.28.

Noise

A project-specific acoustical analysis has been completed, in compliance with General Plan policies and ConnectMenlo EIR Mitigation Measure NOISE-1. As demonstrated in Section 4.11, the proposed project would comply with all local noise-related policies and ordinances to ensure the development does not have an adverse noise impact on the surrounding community. In accordance with the City of Menlo Park Municipal Code Section 8.06.040, all construction activities would only occur between the hours of 8:00 a.m. and 6:00 p.m. Monday through Friday and no piece of equipment would generate noise in excess of 85 dBA at 50 feet. Additionally, the project design incorporates open spaces, landscaping, and noise reducing materials to comply with General Plan Policy N-1.6.

Population and Housing

As detailed in Section 4.12, the proposed project would comply with all policies and ordinances relating to increasing housing and employment options at the location. The current development on site consists of office and industrial buildings so the project would not result in the displacement of existing housing. Project implementation would increase the housing options in the City of Menlo Park and comply with General Plan Policy H4.2 in the need for housing in the City.

The project proposes to demolish existing office and industrial buildings within the project site and to construct 116 residential townhomes and 316 apartments along with associated parking and on-site amenities and would accommodate approximately 1,110 residents. The project would include providing 56 apartments and 18 townhomes as BMR units to adhere to General Plan Policy H1.7, Menlo Park Municipal Code Chapters 15.36, 16.04, and 16.96 by increasing the access to affordable housing. Additionally, the project would incorporate open space and parks within easy walking and bicycling distance of each other, as required under the R-MU-B zoning district and Mixed-Use General Plan designation, consistent with General Plan Policy LU-2.9.

Public Services and Recreation

As detailed in Section 4.13, the proposed project would comply with all policies and ordinances involved in public services and recreation within the City of Menlo Park. The primary resources addressed for this project include changes to the demand of fire protection, police protection, and schools. The proposed project would accommodate new residents, consistent with the growth projections established under the ConnectMenlo General Plan Update and evaluated in the ConnectMenlo EIR.

Additionally, the proposed project would comply with all applicable Menlo Park Fire Protection District Fire Protection codes and regulations as well as standards related to fire hydrants (e.g., fire-flow requirements, spacing requirements), access points, and other fire code requirements outlined in the Menlo Park Municipal Code.

Transportation

As discussed in Section 4.14, the proposed project would adhere to all policies and regulations related to sustainability, reliability, and safety for all modes of transportation. The proposed project would have green infrastructure, bike lanes, and access to electric vehicle charging stations per the requirements of General Plan Policies CIRC-2.7, CIRC-2.9 CIRC-2.10, CIRC-2.14 and CIRC-6.1. Additionally, the project proposes to implement a Transportation Demand Management Plan (Appendix J2) as required by Menlo Park Municipal Code Chapter 16.45.090.

Utilities and Service Systems

As discussed in Section 4.16, the proposed project would comply with all laws, policies, and ordinances relating to utilities and service systems. Because the site is currently developed, the majority of the necessary utility infrastructure is already present within or adjacent to the site in the project area and is not expected to require new or upgraded infrastructure. Further, the new residential population that the project would accommodate is consistent with growth projections established under the ConnectMenlo General Plan Update and evaluated in the ConnectMenlo EIR. The project proposes to implement project-specific Zero Waste Management Plans (Appendices K1 and K2) to reduce solid waste generation over the life of the project.

Conclusion

Based on the considerations outlined above, the proposed project would not conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, project impacts related to land use and planning are determined to be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

The geographic scope or cumulative context for evaluation of potential cumulative impacts related to land use and planning includes buildout of the Menlo Park General Plan, particularly development in the Bayfront Area, as well as development on lands adjacent to the City including East Palo Alto, Palo Alto, Stanford, Atherton, North Fair Oaks, and Redwood City and unincorporated areas of San Mateo County

Impact 4.10-3 Would the project make a cumulatively considerable contribution to a significant cumulative impact related to land use and planning?

As discussed in the ConnectMenlo EIR Impact LU-4, development of past, current, and future projects affects Menlo Park and surrounding areas. However, the City and surrounding areas implement general plans and regulations to guide development and growth within their respective jurisdictions. The ConnectMenlo EIR determined that implementation of ConnectMenlo would not divide an established community or conflict with established plans, policies, and regulations and that implementation of Mitigation Measure LU-2 (requiring projects to demonstrate consistency with the City General Plan and zoning standards prior to approval) would ensure that future projects in Menlo Park would be consistent with City General Plan policies (Table 3.1-4). The ConnectMenlo EIR also determined that buildout of the General Plan would be consistent with existing and proposed changes in other local and regional plans and that development in surrounding cities and the San Mateo County region is taking place in already-urbanized areas and therefore would not require significant land use changes that would create land use conflicts or divide communities. The ConnectMenlo EIR concluded that cumulative impacts related to land use changes would be less than significant with mitigation, thus there is no significant cumulative impact to which the project could contribute.

Where an individual project is consistent with the local jurisdiction's General Plan, zoning ordinance, and other planning documents, the potential to create land use conflicts or divide communities is not an additive effect. Because the General Plan defines the City's anticipated long-range land use development and conservation scenario, the evaluation of project consistency with that plan addresses both project-specific and potential cumulative impacts. The analysis in impacts 4.10-1 and 4.10-2 consider the proposed project's compatibility with surrounding land uses and consistency with the General Plan and other applicable land use regulations. The analysis in these two impacts demonstrates that the project would have less than significant effects related to land use and planning. The proposed project is consistent with the land use and zoning designations of the project site.

As discussed in Section 4.0, Environmental Analysis, the proposed project, in combination with other current and pending development projects in the Bayfront area, would result in a total of 3,248 new multi-family units, which is within the maximum number of units permitted under the General Plan but 98 units greater than the development projections for multi-family units evaluated in the ConnectMenlo EIR. These additional units are integrated with the

other 334 dwelling units proposed to be constructed on the project site and thus would have no effect related to dividing established communities, consistent with the analysis in Impact 4.10-1. Similarly, the analysis in Impact 4.10-2 considers the effects from development of the full project (432 dwelling units). The additional 98 units would not create any conflicts with land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating environmental effects. Additionally, the potential physical environmental effects associated with those additional 98 units are evaluated throughout this EIR and all significant or potentially significant impacts would be reduced to less-than-significant levels with implementation of the mitigation measures included in this EIR. Thus, the proposed project would not create a new cumulative impact and cumulative land use and planning impacts would remain **less than significant**, consistent with the findings of the ConnectMenlo EIR.

4.10.5 References Cited

City of Menlo Park. 2016a. General Plan: *ConnectMenlo, Menlo Park Land Use and Mobility Update*. November 29, 2016.

City of Menlo Park. 2016b. *ConnectMenlo: General Plan Land Use and Circulation Elements and M-2 Area Zoning Update EIR*. Draft. SCH No. 2015062054. Prepared by PlaceWorks for the City of Menlo Park. June 1, 2016. <https://beta.menlopark.org/Government/Departments/Community-Development/Planning-Division/Comprehensive-planning/ConnectMenlo/Environmental-Impact-Report>.

City of Menlo Park. 2021. Menlo Park Municipal Code. Last amended through Ordinance 1079. November 16, 2021.

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4.11 Noise

This section describes the existing noise conditions of the 123 Independence Drive Residential Project (project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the project.

As discussed in Chapter 2, Introduction, and Section 4.0, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this environmental impact report (EIR), one in January and February 2021, and one in September and October 2021. The Sequoia Union High School District submitted a comment letter raising concern about possible traffic noise impacts to local schools. Both NOPs and the comments received in response to them are provided in Appendix A of this EIR.

The primary sources reviewed to prepare this section include the ConnectMenlo General Plan Update (City of Menlo Park 2016a), the ConnectMenlo General Plan Update Draft EIR (City of Menlo Park 2016b), the ConnectMenlo General Plan Update Final EIR (City of Menlo Park 2016c), and the Noise Calculations and Specifications prepared by Dudek in September 2022 (Appendix G).

4.11.1 Environmental Setting

Characteristics of Environmental Noise

Fundamentals of Acoustics

Noise is generally defined as loud, unpleasant, unexpected, or undesired sound that disrupts or interferes with normal human activities. Although exposure to high noise levels over an extended period has been demonstrated to cause hearing loss, the principal human response to noise is annoyance. The response of individuals to similar noise events is diverse and influenced by the type of noise, the perceived importance of the noise, its appropriateness in the setting, the time of day, the type of activity during which the noise occurs, and the sensitivity of the individual.

Sound is a physical phenomenon consisting of minute vibrations that travel through a medium, such as air, and are sensed by the human ear. Sound is generally characterized by a number of variables including frequency and level. Frequency describes the sound's pitch and is measured in Hertz (Hz), while intensity describes the sound's loudness and is measured in decibels (dB). Decibels are measured using a logarithmic scale. A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. Normal speech has a sound level of approximately 60 dB. Sound levels above approximately 120 dB begin to be felt inside the human ear as discomfort and eventually pain at still higher levels. The minimum change in the sound level of individual events that an average human ear can detect is approximately 3 dB. An increase (or decrease) in sound level of approximately 10 dB is usually perceived by the average person as a doubling (or halving) of the sound's loudness, this relation holds true for loud sounds and for quieter sounds.

Because of the logarithmic nature of the decibel unit, sound levels cannot be added or subtracted directly and are somewhat cumbersome to handle mathematically. However, some simple rules of thumb are useful in dealing with sound levels. First, if a sound's source is doubled, the sound level increases by 3 dB, regardless of the initial sound level. Thus, for example:

$$\begin{aligned}60 \text{ dB} + 60 \text{ dB} &= 63 \text{ dB, and} \\80 \text{ dB} + 80 \text{ dB} &= 83 \text{ dB}\end{aligned}$$

Hertz is a measure of how many times each second the crest of a sound pressure wave passes a fixed point. For example, when a drummer beats a drum, the skin of the drum vibrates a number of times per second. A particular tone that makes the drum vibrate 100 times per second generates a sound pressure wave that is oscillating at 100 Hz; this pressure oscillation is perceived as a tonal pitch of 100 Hz. Sound frequencies between 20 Hz and 20,000 Hz are within the range of sensitivity of the human ear.

Sound from a tuning fork (a pure tone) contains a single frequency. In contrast, most sounds one hears in the environment consist of a broad band of frequencies differing in sound level. The method commonly used to quantify environmental sounds consists of evaluating all of the frequencies of a sound according to a weighting system that reflects the fact that human hearing is less sensitive at low frequencies and extremely high frequencies than at the mid-range frequencies. This is called “A” weighting, and the decibel level measured is called the A-weighted sound level (dBA). In practice, the level of a noise source is conveniently measured using a sound level meter that includes a filter corresponding to the dBA curve, which de-emphasizes low and high frequencies of sound in a manner similar to the human ear.

Although the A-weighted sound level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from several sources that creates a relatively steady background noise in which no particular source is identifiable. A single descriptor called the equivalent sound level (L_{eq}) represents the “equivalent” constant sound level that would have to be produced by a given source to equal the fluctuating level measured. L_{eq} is the mean A-weighted sound level during a measured time interval. In addition, it is often desirable to know the acoustic range of the noise source being measured. This is accomplished through the L_{max} and L_{min} indicators. They represent the maximum and minimum noise levels measured.

To describe the time-varying character of environmental noise, the statistical noise descriptors L_{10} , L_{50} , and L_{90} are commonly used. They are the noise levels equaled or exceeded during 10 percent, 50 percent, and 90 percent of a stated time. Sound levels associated with the L_{10} typically describe transient or short-term events, while levels associated with the L_{90} describe the steady-state (or most prevalent) noise conditions.

Another sound measure known as the day/night average noise level (L_{dn}) is defined as the A-weighted average sound level for a 24-hour day. It is calculated by adding a 10 dBA penalty to sound levels in the night (10 p.m. to 7 a.m.) to compensate for the increased sensitivity to noise during the quieter evening and nighttime hours. The L_{dn} measure is used by agencies such as the U.S. Department of Housing and Urban Development and the State of California to define acceptable land use compatibility with respect to noise.

Community Noise

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), over a given time period (usually 1 hour). The L_{eq} is the foundation of the day/night average noise descriptor (L_{dn}) and shows very good correlation with community response to noise for the average person.

The L_{dn} is based on the average noise level over a 24-hour day, with a +10 dB weighting applied to noise occurring during nighttime (10 p.m. to 7 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it

tends to disguise short-term variations in the noise environment. Where short-term noise sources are an issue, noise impacts may be assessed in terms of maximum noise levels, hourly averages, or other statistical descriptors.

Perception of Loudness

The perceived loudness of sounds and corresponding reactions to noise are dependent on many factors, including sound pressure level, duration of intrusive sound, frequency of occurrence, time of occurrence, and frequency content. As mentioned above, however, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighing the frequency response of a sound level meter by means of the standardized A-weighting network. Table 4.11-1 shows examples of noise levels for several common noise sources and environments.

Table 4.11-1. Typical Sound Levels in the Environment and Industry

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
—	110	Rock band
Jet flyover at 300 meters (1,000 feet)	100	—
Gas lawn mower at 1 meter (3 feet)	90	—
Diesel truck at 15 meters (50 feet), at 80 kph (50 mph)	80	Food blender at 1 meter (3 feet) Garbage disposal at 1 meter (3 feet)
Noisy urban area, daytime gas lawn mower at 30 meters (100 feet)	70	Vacuum cleaner at 3 meters (10 feet)
Commercial area, heavy traffic at 90 meters (300 feet)	60	Normal speech at 1 meter (3 feet)
Quiet urban daytime	50	Large business office Dishwasher, next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime	30	Library
Quiet rural night time	20	Bedroom at night, concert hall (background)
—	10	Broadcast/recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: Caltrans 2013.

Notes: dBA = A-weighted decibels; kph = kilometers per hour; mph = miles per hour.

Sound Propagation

It is commonly understood that sound decreases with distance. However, the propagation of sound is dependent on considerably more variables than distance alone. Those variables include the type of noise source (point, moving point, or line sources), the directionality of the noise source, the frequency content of the source (low frequency sound is absorbed in the atmosphere at a slower rate than high-frequency sound and therefore carries farther), atmospheric conditions (wind, temperature, humidity, gradients), ground type (e.g., dirt, grass fields, concrete), shielding (structures, noise barriers, topography), and vegetation.

For the purposes of assessing noise sources within the project site, traffic on public roadways is considered a “moving point” source. The sound level decay rate for this type of source is 4.5 dB per doubling of distance from the source.

Psychological and Physiological Effects of Noise

Human reactions to noise can vary based on the setting, time of day, and sound level. At lower sound levels, noise that is perceived as excessive can cause annoyance and interference with typical activities, such as conversation, using radio or television, and sleeping. At higher sound levels, physiological effects can occur. Specifically, prolonged noise exposure in excess of 75 dBA increases body tensions which can affect blood pressure and functions of the heart and nervous system. Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA, and extended periods of noise exposure above 90 dBA results in permanent cell damage. This is the primary reason for federal and state regulations for employee hearing protection in the workplace.

Vibration

According to the Federal Transit Administration’s (FTA’s) Noise and Vibration Impact Assessment Guidelines (FTA 2018), groundborne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard. Some common sources of groundborne vibration are trains, buses on rough roads, and construction activities such as blasting, pile driving, and operating heavy earth-moving equipment.

The effects of groundborne vibration include “feelable” movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings.

Vibration can be described in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities (PPV) (inches/second). Table 4.11-2 shows expected responses to different levels of groundborne vibration.

Table 4.11-2. Effects of Various Vibration Levels on Buildings

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

Source: Caltrans 2013.

Notes: PPV = peak particle velocity; in/sec = inches per second.

Noise and Vibration Sensitive Receptors

Certain land uses are particularly sensitive to noise and vibration, including residential, school, and open space/recreation areas where quiet environments are necessary for enjoyment, public health, and safety. Sensitive receptors in the vicinity of the project site include Hotel Nia, located directly south of the project site, and TIDE Academy, approximately 0.2 miles to the east.

Existing Noise Sources

The Bayfront Area is developed with commercial, light industrial and some institutional land uses. Noise sources within the Bayfront Area include heating, ventilation, and air conditioning systems, loading docks, trash compactors, and machinery required for manufacturing or other industrial processes.

The project site is exposed to noise from major roadways within and surrounding the Bayfront Area, including US 101, State Route 84 (Bayfront Expressway), and Marsh Road. It is also exposed to noise from the adjacent streets, Independence Drive, Constitution Drive, and Chrysler Drive, which carry truck traffic associated with commercial and industrial land uses in the Bayfront Area.

Although there are several airports and airfields in the communities surrounding the City, none of these facilities are located within 2 miles of the project site, and the site does not fall within the airport land use planning areas, runway protection zones, or the 55 dBA community noise equivalent level (CNEL) noise contours of any of these facilities.

Existing Ambient Noise Levels

Sound level measurements were conducted from November 16, 2021, to November 17, 2021, to document the existing noise environment adjacent to the project area to establish baseline noise conditions against which to compare proposed project noise levels. Specific consideration was given to document noise levels in the vicinity of nearby noise-sensitive receptors and existing periodic noise source levels. All noise measurements were performed in accordance with American National Standards Institute (ANSI) and American Standards for Testing and Measurement (ASTM) guidelines, at three locations in proposed project area, as shown on Figure 4.11.1.

Noise measurements were performed using SoftdB Picollo II, Type 2 integrating sound level meters (SLMs). Field calibrations were performed on the SLMs with an acoustic calibrator before and after the measurements. All instrumentation components, including microphones, preamplifiers and field calibrators have laboratory certified calibrations traceable to the National Institute of Standards and Technology. The equipment used meets all pertinent specifications of the ANSI for Type 2 SLMs (ANSI S1.4-1983 [R2006]). Meteorological conditions during the monitoring periods were fair with temperatures ranging from 59 to 63 degrees Fahrenheit (F), light winds were 0 to 7 mph, and partly cloudy skies during the November 16th short-term monitoring surveys. During the November 16th through 17th, long-term monitoring period temperatures ranged from approximately 46 to 68 degrees F, with winds from 0 to 8 mph, and partly cloudy skies. No precipitation was experienced during the monitoring periods.

Long-term noise monitoring (24 hour) was performed at one location in the project area, from November 16, 2021, to November 17, 2021, adjacent to the project boundary. The long-term noise monitoring equipment was configured to operate in a continuous manner, cataloging all noise metrics pertinent to identification and evaluation of noise levels (i.e., L_{eq} , L_{max} , L_n , etc.) in the project vicinity.

Short-term noise monitoring was conducted at two locations to characterize noise levels generated from traffic and to provide additional insight into the existing ambient noise environment. Site ST-1 was located at the approximate setback distance of the Hotel Nia pool area from Highway 101. Site ST-2 was located at the northern corner of the TIDE Academy, Sequoia Union Highschool. Short-term monitoring at location ST-1 included concurrent manual traffic counts and vehicle classification during the measurement period to aid in quantifying traffic noise levels. Monitoring equipment was configured to catalog pertinent noise metrics as identified above. Ambient noise levels recorded at the noise monitoring locations are presented in Table 4.11 3 and shown in Figure 4.11-1.

Table 4.11-3. Existing Noise Measurements

Site	Location	Date/ Time ¹	L _{dn}	Measured Noise Levels (dBA)					
				Daytime			Nighttime		
				L _{eq}	L _{max}	L ₉₀	L _{eq}	L _{max}	L ₉₀
LT-1	Southwestern portion of the project, adjacent to Independence Dr.	11/16/21 2:00 p.m.	68.0	62.9	75.8	60.3	61.3	74.4	57.6
ST-1	Approximate setback of Hotel Nia pool area	11/16/21 2:05 p.m.	69.7 ²	64.1	68.7	62.7	-	-	-
ST-2	Northern corner of the TIDE Academy, Sequoia Union Highschool	11/16/21 3:50 p.m.	59.9 ²	58.2	70.5	51.9	-	-	-

Source: Collected by Dudek 2021.

Note: dBA = A-weighted decibel; L_{dn} = Day/night average sound level.

¹ Long-term measurement was for a duration of 24-hours, Short-term measurements were performed for a duration of 15-minutes.

² L_{dn} values for short-term measurement locations are calculated based on the offset from the long-term data.

The primary noise source affecting the long-term noise monitoring location was vehicular traffic on the regional roadway network (e.g., Hwy 101, SR 84). Additional noise sources experienced during noise-monitoring included emergency vehicles, pedestrians conversing, and distant aircraft overflights. Ambient noise level exposure at the long-term monitoring location was dependent on the relative distance from nearby roadways to noise measurement location and shielding provided by nearby existing structures. During the long-term noise monitoring, the average day-night (L_{dn}) noise level was approximately 68 dBA L_{dn}. The existing ambient noise levels at the long-term monitoring location was found to exceed the City of Menlo Park General Plan “normally acceptable” land use noise compatibility guidelines and fall within the “conditionally acceptable” noise exposure for residential land uses.

Short-term noise levels measured at location ST-1 experienced average noise levels of approximately 69.7 dBA L_{eq}, with background ambient (L₉₀) noise levels of approximately 62.7 dBA L₉₀ and maximum noise levels of 68.7 dBA L_{max}. Noise level exposure at site ST-1 was primarily driven by vehicular traffic on Highway 101, with distant aircraft and vehicles accessing the hotel parking lot contributing to a lesser degree.

Short-term noise levels measured at location ST-2 experienced average noise levels of approximately 58.2 dBA L_{eq}, with background ambient (L₉₀) noise levels of approximately 51.9 dBA L₉₀ and maximum noise levels of 70.5 dBA L_{max}. Noise level exposure at site ST-2 was also primarily driven by vehicular traffic on Highway 101, but experiences substantial shielding provided by surrounding buildings, with pedestrians and distant aircraft contributing to a lesser degree.

Existing Traffic Noise

Existing traffic noise levels were modeled for roadway segments in the project vicinity based on the Federal Highway Administration (FHWA) Highway Traffic Noise Model 2.5 (TNM 2.5) prediction methodologies (FHWA

2004), and traffic data provided in the traffic analysis prepared for the project (Appendix J1) and the most recent California Department of Transportation traffic count data. The FHWA TNM 2.5 incorporates state-of-the-art sound emissions and sound propagation algorithms, based on well-established theory and accepted international standards. The acoustical algorithms contained within the FHWA TNM 2.5 have been validated with respect to carefully conducted noise measurement programs and show excellent agreement in most cases for sites with and without noise barriers. The noise modeling accounted for factors such as vehicle volume, speed, vehicle type, roadway configuration, distance to the receiver, and propagation over different types of ground (acoustically soft and hard ground).

Modeled existing traffic noise levels are summarized in Table 4.11-4, at the building facades and the outdoor activity area of noise-sensitive receptors in proximity to the respective roadway segment. The extent to which existing land uses in the project vicinity are affected by existing traffic noise depends on their respective proximity to the roadways, shielding provided by intervening objects and their individual sensitivity to noise. As shown in Table 4.11-5, existing traffic noise levels within outdoor activity areas of noise-sensitive land uses adjacent to major roadway segments in the project vicinity ranged from approximately 47 to 64 dBA L_{dn} .

Table 4.11-4. Modeled Existing Traffic Noise Levels

No.	Description	Modeled Noise Levels (dBA)	
		L_{eq}	L_{dn}
P1	LT1 – Western project site	63.8	66.3
P2	ST1 – Adjacent to Hotel Nia Western Façade and Pool Area	71.2	73.7
P3	ST2 – TIDE Academy, Sequoia Union Highschool	62.5	65.0
P4	Hotel Nia Pool Area (within barrier)	62.4	64.9
P5	Hotel Nia Northeastern Façade	55.5	58.0
P6	Elan Apartments Western Façade	66.5	69.0
P7	Elan Outdoor Activity Area	50.0	52.5
P8	Menlo Portal Eastern Façade	59.1	61.6
P9	Menlo Portal Eastern Outdoor Activity Area	59.1	61.6

Source: Collected by Dudek 2022.

Note: dBA = A-weighted decibel; L_{eq} = equivalent hourly average noise level; L_{dn} = Day/night average sound level.

1 Receiver locations are shown on Figure 4.11-2.

Existing Vibration

The existing vibration environment, similar to that of the noise environment, is dominated by transportation-related vibration from roadways adjacent to the proposed project area. Heavy truck traffic can generate groundborne vibration, which varies considerably depending on vehicle type, weight, and pavement conditions. However, groundborne vibration levels generated from vehicular traffic are not typically perceptible outside of the roadway right-of-way.

4.11.2 Regulatory Framework

Federal Regulations

Federal Noise Control Act

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. After its inception, the EPA Office of Noise Abatement and Control issued the Federal Noise Control Act of 1972, establishing programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at more local levels of government and responsibilities for regulating noise control policies were transferred to state and local governments. Thus, there are no federal noise regulations directly applicable to the proposed project.

However, noise control guidelines and regulations contained in the EPA rulings in prior years are still adhered to by designated federal agencies where relevant and are often relied upon in noise impact analyses conducted in California. This includes EPA guidelines regarding noise levels identified as a requisite to protect public health and welfare related to noise in its document entitled “Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.” This document notes that the guidance provided therein was based on the best available information at the time, and that more investigations and analysis was needed. Additional research has been conducted since that document was prepared. Current guidance from the National Institutes of Health provides that “sounds of less than 75 decibels, even after long exposure, are unlikely to cause hearing loss. However, long or repeated exposure to sounds at or above 85 decibels can cause hearing loss” (NIH 2016).

Federal Interagency Committee on Noise

In order to determine a significant increase in noise exposure from the existing conditions to existing plus project condition or cumulative to cumulative plus project, the values in Table 4.11-5 are used as recommendations based on studies by the Federal Interagency Committee on Noise (FICON). The FICON studies assessed the annoyance effects of changes in ambient noise levels resulting from aircraft operations. The 2000 FICON findings provide some guidance as to the significance of changes in ambient noise levels due to transportation noise sources. The FICON recommendations are based on studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the noise. Annoyance is a summary measure of the general adverse reaction of people to noise that interferes with speech and conversation, sleep, or the desire for a tranquil environment.

The rationale for the FICON recommendations is that it is possible to consistently describe the annoyance of people exposed to transportation noise in terms of L_{dn} . The changes in noise exposure relative to existing noise levels, as shown in Table 4.11-5, are considered to be changes that are sufficient to cause annoyance and potentially to interfere with normal activities at sensitive land uses. Although the FICON recommendations were specifically developed to address aircraft noise impacts, they are used in this analysis for traffic noise described in terms of L_{dn} .

As shown in Table 4.11-5, an increase in noise from similar sources of 5 dB or more would be noticeable where the ambient level is less than 60 dBA. Where the ambient level is between 60 and 65 dBA, an increase in noise of 3 dB or more would be noticeable, and an increase of 1.5 dB or more would be noticeable where the ambient noise level exceeds 65 dBA L_{dn} . The rationale for the criteria shown in Table 4.11-5 is that, as ambient noise levels increase, a smaller increase in noise resulting from a project would be noticeable.

Table 4.11-5. Measures of Substantial Increase for Transportation Noise Exposure

Ambient Noise Level Without Project	Significant Impact Occurs if the Project Increases Ambient Noise Levels by:
<60 dBA	+ 5 dB or more
<60–65 dBA	+ 3 dB or more
>65 dBA	+ 1.5 dB or more

Source: FICON 2000.

Notes: dBA = A-weighted decibel; dB = decibel.

State Regulations

California Noise Control Act of 1973

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, declares that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also identifies a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the state to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

Governor's Office of Planning and Research General Plan Guidelines

The Governor's Office of Planning and Research published the State of California General Plan Guidelines (OPR 2003), which provides guidance for the acceptable noise level exposure for various types of land uses, as summarized in Table 4.11-6. The guidelines also present adjustment factors that may be used to help craft noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

Table 4.11-6. Summary of Land Use Noise Compatibility Guidelines

Land Use Category	Community Noise Exposure (dBA L _{dn})			
	Normally Acceptable ¹	Conditionally Acceptable ²	Normally Unacceptable ³	Clearly Unacceptable ⁴
Residential—Low-Density Single-Family, Duplex, Mobile Home	<60	55–70	70–75	75+
Residential—Multifamily	<65	60–70	70–75	75+
Transient Lodging—Motel, Hotel	<65	60–70	70–80	80+
Schools, Libraries, Churches, Hospitals, Nursing Homes	<70	60–70	70–80	80+
Auditoriums, Concert Halls, Amphitheaters	—	<70	65+	—
Sports Arena, Outdoor Spectator Sports	—	<75	70+	—
Playgrounds, Neighborhood Parks	<70	—	67.5–75	72.5+
Golf Courses, Riding Stables, Water Recreation, Cemeteries	<75	—	70–80	80+

Table 4.11-6. Summary of Land Use Noise Compatibility Guidelines

Land Use Category	Community Noise Exposure (dBA L _{dn})			
	Normally Acceptable ¹	Conditionally Acceptable ²	Normally Unacceptable ³	Clearly Unacceptable ⁴
Office Building, Business Commercial, and Professional	<70	67.5–77.5	75+	—
Industrial, Manufacturing, Utilities, Agriculture	<75	70–80	75+	—

Source: OPR 2003.

Notes: dBA = A-weighted decibels; L_{dn} = day-night average noise level.

- ¹ Specified land use is satisfactory, based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
- ² New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.
- ³ New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Outdoor areas must be shielded.
- ⁴ New construction or development should generally not be undertaken.

Generally, residential uses are considered to be acceptable in areas where exterior noise levels do not exceed 60 dBA L_{dn}. Residential uses are normally unacceptable in areas exceeding 70 dBA L_{dn} and conditionally acceptable within 55 to 70 dBA L_{dn}. Schools are normally acceptable in areas up to 70 dBA L_{dn} and normally unacceptable in areas exceeding 70 dBA L_{dn}. Commercial uses are normally acceptable in areas up to 70 dBA L_{dn}. Between 67.5 and 77.5 dBA L_{dn}, commercial uses are conditionally acceptable, depending on the noise insulation features and the noise reduction requirements.

Caltrans Guideline– Vibration Damage Potential Threshold Criteria

There are no state standards for vibration; however, California Department of Transportation (Caltrans) compiled a synthesis of research on the effects of vibration with thresholds ranging from 0.08 in/sec PPV to 4.0 in/sec PPV for “fragile historic buildings” and “structures of substantial construction,” respectively. Based on the synthesis of research, Caltrans developed recommendations for guideline threshold criteria of 0.3 in/sec PPV for older residential structures and 0.25 in/sec PPV for historic buildings and some old buildings exposed to continuous/frequent intermittent sources. For extremely fragile historic buildings, ruins, and ancient monuments, Caltrans recommends a threshold of 0.08 in/sec PPV (Caltrans 2020).

State of California Building Code

The California Building Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations (CCR), provides standards for building design, including noise insulation standards. The CBC is updated every 3 years. The 2019 CBC has been adopted for use by the City of Menlo Park, according to Section 12.04.010 of the City’s Municipal Code. For new residential dwellings, the CBC defines the acceptable interior noise limit as 45 dBA CNEL or L_{dn}. Where buildings would be exposed to more than 60 dBA CNEL, the CBC requires that an acoustical study be completed to demonstrate that the structure has been designed with sufficient noise control measures to limit interior noise in habitable rooms to acceptable noise levels.

California Department of Transportation – Vibration

There are no state standards or regulations for vibration; however, the California Department of Transportation (Caltrans) has developed a compendium of research to use as the basis for recommendations that can serve as a quantified standard in the absence of such limits at the local jurisdictional level. In the Transportation and Construction Vibration Guidance Manual, Caltrans recommends a vibration velocity threshold of 0.2 in/sec PPV for assessing “annoying” vibration impacts to occupants of residential structures. For the protection from structural damage Caltrans recommends a threshold of 0.3 in/sec PPV for older residential structures and 0.25 in/sec PPV for historic building and some old buildings (Caltrans 2020).

Regional and Local Regulations

City of Menlo Park General Plan

The City’s General Plan Noise Element contains the following goals and policies related to the evaluation of the project’s noise impacts.

Goal N-1: Achieve acceptable noise levels.

Policy N-1.1: Compliance with Noise Standards. Consider the compatibility of proposed land uses with the noise environment when preparing or revising community and/or specific plans. Require new projects to comply with the noise standards of local, regional, and building code regulations, including but not limited to the City’s Municipal Code, Title 24 of the California Code of Regulations, and subdivision and zoning codes.

Policy N-1.2: Land Use Compatibility Noise Standards. Protect people in new development from excessive noise by applying the City’s Land Use Compatibility Noise Standards for New Development¹ to the siting and required mitigation for new uses in existing noise environments.

Policy N-1.4: Noise Sensitive Uses. Protect existing residential neighborhoods and noise sensitive uses from unacceptable noise levels and vibration impacts. Noise sensitive uses include, but are not limited to, hospitals, schools, religious facilities, convalescent homes and businesses with highly sensitive equipment. Discourage the siting of noise-sensitive uses in areas in excess of 65 dBA CNEL without appropriate mitigation and locate noise sensitive uses away from noise sources unless mitigation measures are included in development plans.

Policy N-1.6: Noise Reduction Measures. Encourage the use of construction methods, state-of-the-art noise abating materials and technology and creative site design including, but not limited to, open space, earthen berms, parking, accessory buildings, and landscaping to buffer new and existing development from noise and to reduce potential conflicts between ambient noise levels and noise-sensitive land uses. Use sound walls only when other methods are not practical or when recommended by an acoustical expert.

¹ Menlo Park General Plan Land Use Compatibility Noise Standards chart is consistent with the California OPR land use compatibility noise standards presented in Table 4.11-5.

Policy N-1.8: Potential Annoying or Harmful Noise. Preclude the generation of annoying or harmful noise on stationary noise sources, such as construction and property maintenance activity and mechanical equipment.

Policy N-1.10: Nuisance Noise. Minimize impacts from noise levels that exceed community sound levels through enforcement of the City's Noise Ordinance. Control unnecessary, excessive and annoying noises within the City where not preempted by Federal and State control through implementation and updating of the Noise Ordinance.

Policy N-1.D: Minimize Construction Activity Noise. Minimize the exposure of nearby properties to excessive noise levels from construction-related activity through CEQA [California Environmental Quality Act] review, conditions of approval and enforcement of the City's Noise Ordinance.

City of Menlo Park Municipal Code

Chapter 8.06 of the City's Municipal Code contains noise limitations and exclusions for land uses within the City. This Chapter concerns noise limits that constitute a noise disturbance, measured primarily at residential land uses. It also specifies standard procedures for conducting noise measurements, with specifications for sound-meter settings and placement. In addition, Municipal Code Chapter 16, Zoning, regulates noise associated with roof-mounted equipment. The following Municipal Code sections govern the analysis of the project's potential noise impacts.

8.06.030 Noise Limitations

Except as otherwise permitted in this chapter, any source of sound in excess of the sound-level limits set forth in Section 8.06.030 shall constitute a noise disturbance. For purposes of determining sound levels from any source of sound, sound level measurements shall be made at a point on the receiving property nearest where the sound source at issue generates the highest sound level.

1. For all sources of sound measured from any residential property:
 - a. "Nighttime" hours (10:00 p.m. to 7:00 a.m.) – 50 dBA
 - b. "Daytime" hours (7:00 a.m. to 10:00 p.m.) – 60 dBA

8.06.040 Exceptions

- a. Construction Activities
 1. Construction activities between the hours 8:00 a.m. and 6:00 p.m. Monday through Friday.
 2. Notwithstanding any other provisions set forth above, all powered equipment shall comply with the limits set forth in Section 8.06.040 (b).
- b. Powered Equipment
 1. Powered equipment used on a temporary, occasional, or infrequent basis operated between the hours of 8:00 a.m. and 6:00 p.m. Monday through Friday. No piece of equipment shall generate noise in excess of 85 dBA at 50 feet.
- c. Deliveries
 1. Deliveries to food retailers and restaurants.

2. Deliveries to other commercial and industrial businesses between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday and 9:00 a.m. to 5:00 p.m. Saturdays, Sundays, and holidays.

8.06.050 Exemptions

- a. Sound Generated by Motor Vehicles. Sound generated by motor vehicles, trucks, and operated on streets and highways; aircraft, trains; and other public transportation.
 1. This exemption shall not apply to the operation of any vehicle (such as attached refrigeration and/or heating units or any attached auxiliary equipment) for a period in excess of 10 minutes in any hour while the vehicle is stationary, for reasons other than traffic congestion.

16.08.095 Roof-mounted equipment.

Mechanical equipment, such as air-conditioning equipment, ventilation fans, vents, ducting, or similar equipment, may be placed on the roof of a building, provided that such equipment is screened from view as observed at an eye level horizontal to the top of the roof-mounted equipment, except for the SP-ECR/D district, which has unique screening requirements, and all sounds emitted by such equipment shall not exceed fifty (50) decibels at a distance of fifty (50) feet from such equipment (Ord. 979, Section 3 (part), 2012: Ord.819 Section 1 (part), 1991).

4.11.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts related to noise are based on Appendix G and Section 15130 of the CEQA Guidelines. A significant impact related to noise would occur if the project would:

- A. 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.
- B. Result in generation of excessive groundborne vibration or groundborne noise levels.
- C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.
- D. Result in cumulatively considerable noise impacts.

Methods of Analysis

Construction Noise

Construction-related noise effects were assessed with respect to nearby noise-sensitive receptors and their relative exposure (accounting for intervening topography, or barriers), based on application of FHWA Roadway Construction Noise Model and FTA reference noise level data, usage-factors and calculation methods. Construction noise was modeled for the various construction stages, based on information provided by the project proponent on the equipment that is anticipated to be used during a given stage of construction. Combining the noise level from the two or three loudest pieces of equipment and assuming they are all operating very close to one another and very near the closest offsite sensitive receptor results in a reasonably representative worst-case combined noise level.

Construction noise taking place from 8:00 a.m. to 6:00 p.m. is considered exempt from the general quantitative noise standards of the City, except for the noise limit on individual powered equipment of 85 dBA at 50 feet. An analysis to determine if equipment proposed for project construction would comply with this threshold is also included. In addition, despite the exemption for daytime construction noise, construction activities that are exempt from specified noise limitations in the Menlo Park Municipal Code could still result in a significant physical impact on the environment. Therefore, construction noise generated during daytime hours is compared to the existing ambient noise level to estimate temporary increases in noise over the existing ambient level. An evaluation is conducted to determine if a 10 dB increase over the existing ambient noise, perceived as a doubling of loudness, would be expected to occur at nearby noise-sensitive land uses.

Traffic Noise Impact Assessment

Traffic noise modeling involved the calculation of baseline and cumulative traffic noise levels along roadway segments where the proposed project elements would contribute additional vehicle trips, based on traffic data developed as part of the traffic analysis prepared for the project (Appendix J1). Traffic noise levels were calculated based on the FHWA TNM 2.5 prediction algorithms (FHWA 2004). Traffic noise levels were modeled for Existing No Project (2022) and Existing Plus-Project conditions (2022). Modeling outputs for the Plus Project scenario were evaluated against the existing (2022) conditions to determine the potential for an increase of traffic noise levels and exceedance of applicable noise level criteria and impact thresholds.

To determine existing L_{dn} traffic noise levels in the project vicinity, the average daily traffic volumes for roadways in the immediate vicinity of the project site were used as inputs to the noise model. Traffic data was provided directly in the form of segment volumes and in the form of “peak-hour” intersection turning movement volumes (Appendix J1). Standard assumptions were used and inputs to the model were made to reflect diurnal traffic patterns and vehicle classifications (i.e., small automobiles, medium trucks, heavy trucks, motorcycles and buses).

Other Operational Noise Sources

Groundborne vibration impacts were qualitatively assessed based on existing reference documentation (e.g., vibration levels produced by specific construction equipment operations), through the application of Caltrans methodology outlined within the Transportation- and Construction- Induced Vibration Guidance Manual and the relative distance to potentially sensitive receptors from a given vibration source.

Threshold Significance Criteria Not Applicable to the Proposed Project

Private Airstrip or Public Airport

Although there are several airports and airfields in the communities surrounding the City, none of these facilities are located within 2 miles of the project site, and the site does not fall within the airport land use planning areas, runway protection zones, or the 55 dBA community noise equivalent level (CNEL) noise contours of any of these facilities.

The topic of aircraft noise from public use airports and private airstrips was discussed in the ConnectMenlo EIR as Impact NOISE-5 (page 4.10-38) and Impact NOISE-6 (page 4.10-38). It was determined that there would be no impact related to aircraft noise (City of Menlo Park 2016b).

4.11.4 Impacts and Mitigation Measures

Impact 4.11-1 Would the project 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?

Construction Noise

The proposed project would generate noise associated with the operation of heavy construction equipment and construction related activities in the vicinity of the project area. Construction noise levels in the vicinity of the project area would fluctuate depending on the particular type, number, and duration of usage for the various pieces of equipment, as well as the relative exposure and distance between the source and receptors.

The effects of construction noise depend largely on the types of construction activities occurring on any given day, noise levels generated by those activities, distances to noise-sensitive receptors, and the existing ambient noise environment in the vicinity of the receiver. The City defines ambient noise as the average of the predominant noise source in the environment. Here, ambient noise is dependent on the average traffic noise, which is the primary contributor to the noise environment in the area of the proposed project. Construction generally occurs in several discrete stages, with each stage varying the equipment mix and the associated noise. These stages alter the characteristics of the noise environment on the project site and in the surrounding community for the duration of construction. The proposed project is anticipated to include demolition, site preparation, grading, building construction, paving and architectural coating.

To assess noise levels associated with the various equipment types and operations, construction equipment can be considered to operate in two modes, mobile and stationary. Mobile equipment sources move around a construction site performing tasks in a recurring manner (e.g., loaders, graders, dozers). Stationary equipment operates in a given location for an extended period of time to perform continuous or periodic operations (e.g., compressor or generator). Thus, it is necessary to determine the location of stationary sources during specific stages of construction, and the effective acoustical center of operations for mobile equipment during various stages of the construction process. The effective acoustical center is the idealized point from which the energy sum of all construction activity noise near and far would appear to originate. As one increases the distance between equipment and/or between areas with simultaneous construction activity, dispersion and distance attenuation reduce the effects of separate noise sources added together.

Operational characteristics of heavy construction equipment are additionally typified by short periods of full-power operation followed by periods of operation at lower power, idling, or powered-off conditions. These characteristics are accounted for through the application of typical usage factors (operational percentage) applied to the FHWA and FTA reference maximum noise levels, usage factors and resulting L_{eq} . Noise levels from various types of construction equipment is provided in Table 4.11-7.

Table 4.11-7. Noise Levels from Construction Equipment

Equipment Type	Usage Factor (%)	Noise Levels, (dBA) at 50 feet	
		L_{max}	L_{eq}
Air Compressor	40	80	76
Backhoe	40	80	76

Table 4.11-7. Noise Levels from Construction Equipment

Equipment Type	Usage Factor (%)	Noise Levels, (dBA) at 50 feet	
		L _{max}	L _{eq}
Compactor	20	80	73
Concrete Pump	20	82	75
Concrete Saw	20	90	83
Crane, Mobile	16	85	77
Dozer	40	85	81
Forklift	40	85	81
Front-End Loader	40	80	76
Generator	50	82	79
Grader	40	85	81
Mounted Impact Hammer (Hoe Ram)	20	90	83
Paver	50	85	82
Pneumatic Tools	50	85	82
Rock Drill	20	85	78
Roller	20	85	78
Scraper	40	85	81
Trucks (Flatbed)	40	84	80
Water Pump	50	77	74
Welder	40	73	69

Source: DOT 2008, FTA 2018.

Notes: dBA = A-weighted decibels; L_{max} = day-night average noise level.

All equipment fitted with a properly maintained and operational noise control device, per manufacturer specifications.

The Menlo Park Municipal Code Section 8.06.040 subsections (a) and (b) addresses construction noise and states that individual pieces of construction equipment shall not exceed 85 dBA L_{eq} at a distance of 50 feet from the source. As shown in Table 4.11-7, noise from the individual pieces of equipment associated with project construction would not be expected to exceed the 85 dBA L_{eq}, 50-foot threshold. Because individual power equipment proposed for project construction would comply with this limit, impacts related to individual equipment noise exceedances would **be less than significant**.

Although specific building design and construction requirements for buildout of the project are currently unknown, it is anticipated that development of the various project elements would incorporate the use of typical construction sources such as backhoes, compressors, bulldozers, excavators, loaders and other related equipment based on assumptions provided by the project proponent. The project is not anticipated to require the use of blasting or driven piles, and where additional foundational support is necessary displacement auger cast piles will be used. Based on the reference noise levels, usage rates, and operational characteristics discussed above, overall hourly average noise levels attributable to project construction activities were calculated by construction stage and are provided in Table 4.11-8. Construction noise levels presented in Table 4.11-8 for the nearby noise sensitive receptors, based on the representative distance from the acoustical center of the proposed project construction activities to the property line of the receptor.

Table 4.11-8. Construction Noise Levels at Representative Receptor Locations

Receiver ¹		Construction Noise Level, L_{eq} dBA (increase over ambient), increase over threshold					
No.	Description	Demolition	Site Prep.	Grading	Building Const.	Paving	Arch. Coating
P2	Hotel Nia Western Façade and Pool Area, ST1 (494 feet ²)	61 (0), 0	65 (0), 0	66 (0), 0	60 (0), 0	63 (0), 0	58 (0), 0
P3	TIDE Academy, Sequoia Union Highschool, ST2 (856 feet ²)	56 (0), 0	60 (0), 0	61 (0), 0	56 (0), 0	59 (0), 0	53 (0), 0
P4	Hotel Nia Pool Area (within barrier) (441 feet ²)	62 (0), 0	66 (3.6), 0	67 (4.6), 0	61 (0), 0	64 (1.6), 0	59 (0), 0
P5	Hotel Nia Northeastern Façade (314 feet ²)	65 (9.5), 0	68 (12.5) 2.5	70 (14.5) 4.5	64 (8.5), 0	67 (11.5) 1.5	62 (6.5), 0
P6	Elan Apartments Western Façade (1,674 feet ²)	50 (0), 0	54 (0), 0	55 (0), 0	50 (0), 0	53 (0), 0	47 (0), 0
P7	Elan Outdoor Activity Area (1,774 feet ²)	50 (0), 0	53 (3), 0	55 (5), 0	49 (0), 0	52 (2), 0	47 (0), 0
P8	Menlo Portal Eastern Façade (124 feet ²)	73 (14) , 4	77 (18) , 8	78 (19) , 9	72 (14) , 4	75 (16) , 6	70 (11) , 1
P9	Menlo Portal Eastern Outdoor Activity Area (352 feet ²)	49 (0), 0	52 (0), 0	54 (0), 0	48 (0), 0	51 (0), 0	46 (0), 0

Source: Appendix H.

Notes:

dBA = A-weighted decibels; L_{eq} = equivalent hourly average noise level.

¹ Receiver locations are shown on Figure 4.11-2.

² Approximate distance from acoustical center of construction site to the noise sensitive land use (NSLU).

³ Bold indicates a noise level that will increase ambient conditions by more than 10 dBA.

As indicated in Table 4.11-8, noise levels for project construction activity are predicted to generate noise levels ranging from approximately 47 to 78 dBA L_{eq} at the nearest noise-sensitive receptors surrounding the project. The construction noise modeling indicates that the grading stage of the proposed project would have the potential to produce the highest sound levels, ranging from 55 to 78 dBA L_{eq} at nearby sensitive receptors. The Municipal Code provides an exception for construction activities performed between the hours of 8:00 a.m. and 6:00 p.m. Monday through Friday. The ConnectMenlo EIR found that construction noise effects would be less than significant when these construction hours are maintained and other typical construction noise control measures are implemented, as required under ConnectMenlo EIR Mitigation Measure (MM) NOISE-1b. However, while the majority of the construction activities are anticipated to be performed during these exempt hours, it is unknown what construction activities may be necessary during non-exempt time periods. Noise levels generated during these non-exempt hours would be subject to the Menlo Park Municipal Code noise limits of 60 dBA L_{eq} threshold during the hours of 7:00 a.m. to 10:00 p.m. and 50 dBA L_{eq} threshold during the hours of 10:00 p.m. to 7:00 a.m. As the modeled construction noise levels would exceed the City of Menlo Park exterior noise level standards during non-exempt time periods, construction noise impacts would be **potentially significant**.

In addition to the Municipal Code absolute noise level thresholds, the construction activities must be evaluated to determine if they would result in a significant increase over the ambient noise levels. This analysis is performed by

comparing the modeled construction noise levels at the nearby noise-sensitive receivers to the estimated existing ambient noise levels at the respective receivers. The increase resulting from the modeled construction noise levels over the ambient is provided in Table 4.11-8, in parenthesis for each receiver location and construction stage. As shown, the construction activities are calculated to result in increases over ambient ranging from 0 to 19 dBA.

As described previously, human sound perception is such that a change in sound level 3 dB is barely noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving the sound level as it increases or decreases, respectively. Therefore, an increase in noise of 10 dB or more would be considered substantial. The outdoor activity areas of the nearby noise-sensitive receptors would experience changes of 0 to 5 dB and would not result in a significant increase due to construction noise associated with the proposed project. Project construction operations could result in an increase up to approximately 15 dBA over ambient at the building façade of Hotel Nia and up to 19 dBA over ambient at the eastern building façade of the proposed Menlo Portal project. It should be noted that these larger increases in temporary ambient noise exposure would occur at the exterior of the building facades and would be reduced by 15 to 25 dB or more, depending on building construction and if windows are open or closed. Depending on the construction of the individual buildings and their respective interior background noise levels, changes experienced within the occupied units may be consistent with the presented calculations or minimized in comparison to the calculated increases presented in Table 4.11-8. Despite such potential reductions, temporary increases in noise from project construction activities would be considered **potentially significant**.

Mitigation Measures

Compliance with ConnectMenlo EIR Mitigation Measure (MM) NOISE-1c would help to ensure that construction activity associated with the proposed project would comply with the Menlo Park Municipal Code and regulations pertaining to construction noise. However, ConnectMenlo EIR MM NOISE-1c precludes any construction activity from occurring outside of daytime hours; and the proposed project may deviate from those hour restrictions, which could result in a potentially significant impact. ConnectMenlo EIR MM NOISE-1c is included below as MM 4.11a but has been modified to omit the daytime hour construction restriction. Mitigation Measure 4.11b is also required to ensure that construction activities would comply with the applicable construction noise requirements of the City. Specifically, construction noise during daytime hours would be limited such that a 10 dB increase over the ambient noise level would not occur at the nearest sensitive land uses (i.e., Hotel Nia). Construction occurring outside ordinary daytime construction hours (i.e., 8:00 a.m. to 6:00 p.m. weekdays) would either not be allowed or would be required to result in an increase no greater than 10 dB over the ambient level and quantitative limits of 60 dBA L_{eq} between 7:00 a.m. and 10:00 p.m., and 50 dBA L_{eq} between 10:00 p.m. and 7:00 a.m. at the nearby noise-sensitive land uses during specified days and times.

As indicated in MM 4.11b, the effectiveness of noise attenuation measures shall be monitored by taking noise measurements at nearby noise-sensitive land uses during construction. As such, MM 4.11b requires that the noise increase would not exceed 10 dB at Tide Academy. In addition, construction occurring outside ordinary daytime construction hours (i.e., 8:00 a.m. to 6:00 p.m. weekdays) would either not be allowed or required to comply with the applicable noise threshold of an increase no greater than 10 dB over the ambient level and quantitative limits of 60 dBA L_{eq} between 7:00 a.m. and 10:00 p.m., and 50 dBA L_{eq} between 10:00 p.m. and 7:00 a.m. at the nearest sensitive land use during specified days and times.

With implementation of MMs 4.11a (ConnectMenlo Mitigation Measure NOISE-1c) and 4.11b, project construction would not be expected to violate relevant requirements related to construction noise in Menlo Park. Impacts related to construction noise would be less than significant with mitigation.

MM 4.11a Project applicants shall minimize the exposure of nearby properties to excessive noise levels from construction related activity through CEQA review, conditions of approval and/or enforcement of the City's Noise Ordinance. Prior to issuance of demolition, grading, and/or building permits for development projects, a note shall be provided on development plans indicating that during ongoing grading, demolition, and construction, the property owner/developer shall be responsible for requiring contractors to implement the following measures to limit construction related noise:

- All internal combustion engines on construction equipment and trucks are fitted with properly maintained mufflers, air intake silencers, and/or engine shrouds that are no less effective than as originally equipped by the manufacturer.
- Stationary equipment such as generators and air compressors shall be located as far as feasible from nearby noise-sensitive uses.
- Stockpiling is located as far as feasible from nearby noise-sensitive receptors.
- Limit unnecessary engine idling to the extent feasible.
- Limit the use of public address systems.
- Construction traffic shall be limited to the haul routes established by the City of Menlo Park.

(Modified ConnectMenlo MM NOISE-1c)

MM 4.11b **Construction Noise Control Plan.** The project sponsor shall develop a noise control plan for construction at the project site. The plan shall require compliance with Section 8.06 of the Menlo Park Municipal Code and include measures to ensure compliance with the 60 dBA L_{eq} limit during the hours of 7:00 a.m. to 8:00 a.m. and the 50 dBA L_{eq} limit during the hours of 10:00 p.m. to 7:00 a.m. In addition, the plan shall include measures to ensure that construction noise will not result in a 10 dB increase over the ambient noise level at nearby sensitive receptors.

The plan shall specify the noise-reducing construction practices that will be employed to reduce noise from construction activities in Menlo Park and shall demonstrate that compliance with these standards will be achievable. The measures specified by the Project Sponsor shall be reviewed and approved by the City prior to issuance of building permits. Measures to reduce noise may include, but are not limited to, the following:

- The noise control plan shall demonstrate that noise levels during construction on the project site will meet the standards of this mitigation measure at sensitive receptors while those receptors are in use.
- The noise control plan shall demonstrate that any construction activities taking place outside of normal construction hours of 8:00 a.m. to 6:00 p.m. Monday through Friday shall comply with the 60 dBA L_{eq} limit during the hours of 7:00 a.m. to 8:00 a.m. and the 50 dBA L_{eq} limit during the hours of 10:00 p.m. to 7:00 a.m.
- The plan shall demonstrate that that combined construction noise would not result in a 10 dBA increase over the ambient noise level at nearby sensitive receptors.
- The contractor shall ensure that construction equipment will be equipped with mufflers. In addition, construction equipment must use the best available noise control techniques (e.g., improved mufflers, intake silencers, ducts, engine enclosures, acoustically attenuating shields, shrouds) on equipment and trucks used for Project construction.

- All construction activities shall be conducted only at an adequate distance, or otherwise shielded with sound barriers, as determined in the noise control plan, from noise-sensitive receptors when working outside the normal construction hours of 8:00 a.m. to 6:00 p.m. Monday through Friday to ensure compliance with the Menlo Park Municipal Code and this mitigation measure.
- Stationary construction noise source with the potential to generate noise levels exceeding the applicable thresholds, shall be located at an adequate distance, or otherwise shielded with temporary sound barriers, from sensitive receptors to ensure compliance with the Menlo Park Municipal Code and this mitigation measure.
- Temporary noise barriers (height to be determined) shall be installed around construction on the Project site to reduce construction noise from equipment used outside the normal construction hours of 8:00 a.m. to 6:00 p.m. on weekdays. The installation of barriers would help reduce overall construction noise to less than 50 dBA L_{eq} for work occurring between 6:00 a.m. and 7:00 a.m. and 60 dBA L_{eq} for work occurring between 7:00 a.m. and 8:00 a.m., as measured at the applicable property lines of the adjacent uses, such that a 10 dB increase over ambient would not occur at nearby sensitive land uses. However, confirmation of the noise reduction would be required (per the last bullet of this measure, below). If the Project Sponsor can demonstrate, through an acoustical analysis, that construction noise would not exceed the allowable limits during non-exempt hours, as measured at the applicable property lines of the adjacent uses without barriers, then temporary noise barriers shall not be required.
- The effectiveness of noise attenuation measures shall be monitored by taking noise measurements at nearby noise-sensitive land uses during construction activities to ensure that the project is not causing an increase over ambient levels greater than 10 dB and compliance with the 50 and 60 dBA L_{eq} standards, which apply outside the construction exception hours of 8:00 a.m. and 6:00 p.m. Monday through Friday.

Long-Term/Operational Noise

Traffic Noise

The topic of potential traffic noise effects was discussed in the ConnectMenlo EIR as Impact NOISE-3. It was determined that implementation of ConnectMenlo would not result in a substantial permanent increase in ambient noise on any of the identified roadway segments. No mitigation measures were recommended.

The proposed project would result in the creation of additional vehicle trips on local roadways in the vicinity of the project (e.g., Independence Drive, Constitution Drive, Chrysler Drive, etc.), which could result in increased traffic noise levels at noise-sensitive land uses adjacent to area roadways. Potential off-site noise impacts resulting from the increase in vehicular traffic on the local roadway network, associated with long-term operations of the proposed project, were evaluated under Existing (2022) no Project and plus Project scenarios. Traffic volumes and the distribution of those volumes were obtained from the Transportation Impact Analysis prepared for the project (Appendix J1) and Caltrans traffic volume counts. Average vehicle speeds on local area roadways were assumed to be consistent with posted speed limits and remain as such with or without implementation of the proposed project.

Table 4.11-9 summarizes modeled L_{dn} traffic noise levels for the Existing (2022) scenarios, at prediction receiver locations representing the outdoor activity areas of noise-sensitive land-uses adjacent to roadway segments in the project vicinity. The table also presents the relative traffic noise level increase (net change) resulting from

development of the proposed project. Actual traffic noise exposure levels at noise-sensitive receptors in the project vicinity would vary depending on a combination of factors such as variations in daily traffic volumes, relative distances between sources and receiver locations, shielding provided by existing and proposed structures, and meteorological conditions. Refer to Appendix H for modeling inputs and results.

Table 4.11-9. Modeled Existing (2022) No Project and Plus Project Traffic

Receiver		Traffic Noise Level, L _{dn} dBA				Project Impact?
No.	Description	Existing (2022)	Existing Plus Project	Increase Threshold	Net Change	
P1	LT1 – Western project site	63.8	63.8	+3 dB	<1	No
P2	ST1 – Adjacent to Hotel Nia Western Façade and Pool Area	71.2	71.2	+1.5 dB	<1	No
P3	ST2 – TIDE Academy, Sequoia Union Highschool	62.5	62.5	+3 dB	<1	No
P4	Hotel Nia Pool Area (within barrier)	62.4	62.4	+3 dB	<1	No
P5	Hotel Nia Northeastern Façade	55.5	55.5	+5 dB	<1	No
P6	Elan Apartments Western Façade	66.5	66.5	+1.5 dB	<1	No
P7	Elan Outdoor Activity Area	50.0	50.0	+5 dB	<1	No
P8	Menlo Portal Eastern Façade	59.9	59.9	+3 dB	<1	No
P9	Menlo Portal Eastern Outdoor Activity Area (within barrier)	55.2	55.2	+5 dB	<1	No

Source: Appendix H.

Notes: dBA = A-weighted decibels; L_{dn} = Day/Night average noise level

Bold – Noise level exceeding City threshold for transportation noise levels at residential receptors.

* Traffic noise levels are predicted at prediction receiver locations representing the distance to the outdoor activity areas and building facades of noise-sensitive land uses adjacent to major roadway segments in the project vicinity.

Existing (2022) traffic noise levels presented in 4.11-8 indicate that existing traffic noise levels in the project vicinity currently range from approximately 50 to 62 dBA L_{dn} at the outdoor activity areas of existing noise-sensitive receptors nearest the proposed project (P4 and P7), 62.5 dBA L_{dn} at the TIDE Academy (P3) and range from approximately 56 to 71 dBA L_{dn} at receivers representing nearby noise-sensitive building facades (P2, P5, and P6). Of the noise prediction receivers representing the noise-sensitive receptor locations, only the western façade of the Elan Apartments was calculated to exceed the applicable Menlo Park land use compatibility “normally acceptable” threshold for the respective category, residential – multifamily. This exceedance is the result of existing no project traffic and is not contributed to substantially by the proposed project traffic.

To further evaluate effects of the proposed project, the potential for project traffic to increase the ambient noise level in the project’s vicinity is also analyzed. According to the presented industry research and potential annoyance from transportation noise sources, an incremental increase in ambient noise levels would be considered significant if the project were to result in an increase of +5 dB for areas with existing ambient levels lower than 60 dBA L_{dn}, +3 dB for existing ambient levels between 60 and 65 dBA L_{dn}, and +1.5 for existing ambient level greater than 70 dBA L_{dn}, when compared to the no project scenario. Development of the proposed project under the Existing (2022) scenario is calculated to result in marginal increases in the project study area, with all traffic noise increases being less than 1 dBA. Traffic noise level increases associated with the proposed project would be less than the acceptable increase thresholds. Therefore, the proposed project is anticipated to result in increases of traffic noise levels that would result in a **less-than-significant** impact.

Mitigation Measures

No mitigation measures are required.

Parking Garage and Surface Parking

The proposed project includes a subterranean and surface level parking garage, internal to the apartment building, along with private garages and surface parking for the townhomes. The apartment garage will include 336 total parking spaces, with a single ingress and egress access on the northern façade of the building, accessed from Constitution Drive. The townhome portion of the project includes 217 private tuck-under spaces within garages and 36 surface parking spaces for guests.

Empirical sound level emission data for enclosed parking garages similar to the apartment garage indicates that traffic associated with the proposed surface and sub-surface parking areas noise would not be of sufficient level or occurrence to exceed community noise standards based on a time-averaged scale such as CNEL or L_{eq} . This is attributable to the sporadic and instantaneous nature of sound levels generated by a car door slamming, an engine starting up, cars pass-by or tire squeal near the parking garage ingress and egress point. These noise sources associated with parking activities are short-term or instantaneous rather than steady noise levels and include sample L_{max} value ranges at a distance of 50 feet as follows: door slamming (60–70 dBA); engine ignition (60–70 dBA); and car pass-bys (55–70 dBA) (Mestre Greve Associates 2011). While audible under the certain conditions near the entrance, their contribution to the outdoor ambient sound environment would be akin to similar infrequent noises produced by vehicles starting up or parking on nearby streets. Moreover, with the access to the garage located on the northern façade of the apartment building, parking garage sound levels would not affect nearby noise-sensitive receptors.

Parking activities associated with the private garages are orientated towards the proposed project's interior drives. Noise levels generated in association with parking activities at the private garages would be shielded from nearby noise-sensitive receptors.

Mitigation Measures

No mitigation measures are required.

Building Mechanical, Heating, Ventilation, and Air Conditioning

Mechanical equipment associated with the long-term operation of the proposed project includes heating, ventilation, and air-conditioning (HVAC) equipment, an emergency generator, various fans, pumps, and compressors that can potentially be significant noise sources. HVAC equipment associated with the proposed project will be mounted on building rooftops, shielded by mechanical screens and rooftop parapets or on dedicated decks for the outdoor units at the second and third floors of the affordable townhomes. Noise levels generated by HVAC equipment vary significantly depending on unit size, efficiency, location, type of rotating or reciprocating components, and orientation of openings. The exact sizes, efficiencies, models, etc. of the proposed HVAC systems are unknown at the time of this analysis. The proposed project is known to utilize individual outdoor air conditioning condenser units (ACCUs) for each residential unit, similar to the Trane TTX 2-ton units. The manufacturer's general data sheet for the Trane TTX ACCUs are shown to have an A-weighted sound power level (dBA L_w) of 72 dBA (~61 to 64 dBA at 1 meter).

Based on the plan set provided (Appendix B), the outdoor HVAC equipment for the apartment portion of the project would be centrally located on the rooftop of each of the building sections, distributed in banks of 20 outdoor condenser units, with a total of 340 units. Not accounting for the shielding provided by the rooftop screens/parapets or the duty cycle of the individual units, and assuming a standard point source attenuation rate of 6 dB per doubling of distance, the 340 units would result in a combined noise level of approximately 45 dBA L_{eq} at the property boundary of the nearest receptor, Hotel Nia (480 feet), and approximately 39 dBA L_{eq} at the TIDE Academy (1,025 feet).

HVAC outdoor condenser units for the townhomes would be located within second and third floor decks for the affordable townhomes, dedicated to the mechanical equipment, with the market-rate townhomes having rooftop mounted units. The largest number of individual units that the nearest receptor could be exposed to would be the units associated with the market-rate Buildings 21 and 22. Not accounting for the shielding provided by the rooftop screens/parapets or the duty cycle of the individual units, and assuming a standard point source attenuation rate of 6 dB per doubling of distance, the 9 units would result in a combined noise level of approximately 39 dBA L_{eq} at the property boundary of the nearest receptor, Hotel Nia (480 feet). The TIDE Academy could be exposed to a total of 12 units associated with the market-rate buildings 15, 17, and 20, which would result in a combined noise level of approximately 30 dBA L_{eq} .

Combined HVAC noise levels at Hotel Nia from both the apartment building and the townhomes would result in noise level of approximately 46 dBA L_{eq} . Combined HVAC noise levels at the TIDE Academy from both the apartment building and the townhomes would result in noise level of approximately 40 dBA L_{eq} . Shielding from the mechanical screens or parapets that would break line of sight to the units, consistent with the Menlo Park Municipal Code, would provide an additional noise level reduction of at least 5 dB.

Menlo Park Municipal Code Section 16.08.095 requires roof-mounted mechanical equipment not exceed a threshold of 50 dBA at a distance of 50 feet. Based on the rooftop mechanical equipment sound power level of 72 dBA L_w , the outdoor condenser units would be approximately 39.6 dBA L_{eq} at a distance of 50 feet. The proposed mounting location for the affordable townhomes would locate the units within a dedicated mechanical deck incorporating a mechanical screen, and the market-rate townhomes would locate the units on the rooftop, both of which would provide additional attenuation of the mechanical equipment noise levels.

Rooftop mechanical equipment for the apartment building would be at a height of at least 52 feet above ground level and setback a minimum of 18 feet from the edge of the roof. Performing a measurement of the rooftop mechanical units atop the apartment building at a diagonal (slant) distance of 50 feet would result in a noise level of 49.6 dBA L_{eq} for one grouping of 20 units, or approximately 53 dBA L_{eq} for 3 sets of 20 rooftop condensing units. However, due to the shielding that would be provided by the location of the units on the roof and the edge of the roof intervening in the path of the sound, the rooftop mechanical equipment would be attenuated more than 8 dB, not accounting for the additional shielding provided by the rooftop mechanical screen or parapet or the reduction provided by the duty cycle of individual units. Therefore, the rooftop mechanical is calculated to comply with the Menlo Park Municipal Code threshold of 50 dBA L_{eq} at 50 feet.

Additional building mechanical equipment necessary for the long-term operation of the proposed project, and more specifically the apartment building, would incorporate an emergency generator, electrical rooms, fan rooms, trash rooms and equipment rooms. All of these potentially noise generating sources associated with the apartment building would be enclosed within the building and not result in substantial noise levels in the surrounding area.

Based on the combined noise levels of the rooftop mechanical equipment at nearby noise-sensitive receptors, and the location and nature of the building mechanical equipment being enclosed within the structure, mechanical

noise levels are not anticipated to contribute to an increase in ambient noise levels in the project area. The rooftop mechanical equipment would also comply with the Municipal Code 50 dBA L_{eq} at 50 feet threshold. Therefore, noise generated from the building mechanical equipment would be a **less than significant** impact.

Mitigation Measures

No mitigation measures are required.

Impact 4.11-2 Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Construction activities on the project site may result in varying degrees of temporary groundborne vibration or noise, depending on the specific construction equipment used and operations involved. Representative groundborne vibration levels for various types of construction equipment, developed by FTA, are summarized in Table 4.11-10. As previously mentioned, pile driving, and blasting is not currently expected to be utilized in project construction. Where more substantial shoring and foundation is necessary, the project proponent has stated that displacement auger cast piles are anticipated.

The topic of construction vibration was analyzed in the ConnectMenlo EIR as Impact NOISE-2. The impact was determined to be potentially significant and would be reduced to a less-than-significant level with implementation of MMs NOISE-2a and NOISE-2b. Consistent with ConnectMenlo EIR MM NOISE-2a, this impact discussion presents the results of a project-specific vibration analysis. Further, this analysis demonstrates that vibration levels associated with project construction would remain below the vibration thresholds established in ConnectMenlo EIR MM NOISE-2a. Specifically, MM NOISE-2a requires that vibration levels must be limited to a maximum PPV of 0.2 in/sec and to the following thresholds for specific types of sensitive receptors: 0.126 in/sec at the nearest workshop, 0.063 in/sec at the nearest office, and 0.032 in/sec at the nearest residence during daytime hours and 0.016 in/sec at the nearest residence during nighttime hours. Additionally, ConnectMenlo EIR MM NOISE-2b requires the City to ensure through the project approval process that projects implement best management practices to minimize vibration. The analysis concluded that, overall, vibration impacts related to construction would be short term, temporary, and generally restricted to areas in the immediate vicinity of construction activity.

Table 4.11-10. Groundborne Vibration Thresholds

Location to be Applied	Vibration Threshold, in./sec.	
	PPV	RMS
Nearest Structure (Architectural Damage)	0.2	—
Workshop (Annoyance)	0.5	0.126
Office (Annoyance)	0.25	0.063
Residence – Daytime (Annoyance)	0.128	0.032
Residence – Nighttime (Annoyance)	0.064	0.016

Source: City of Menlo Park 2016b.

Table 4.11-11. Representative Vibration Levels for Construction Equipment

Equipment	in/sec PPV ¹				
	25 feet ²	15 feet	8 feet	13 feet	20 feet
Hoe Ram	0.089	0.191	0.492	0.237	0.124
Large Bulldozer	0.089	0.191	0.492	0.237	0.124
Caisson Drilling	0.089	0.191	0.492	0.237	0.124
Heavy-duty Trucks (Loaded)	0.076	0.164	0.420	0.203	0.106
Jackhammer	0.035	0.075	0.193	0.093	0.049
Small Bulldozer	0.003	0.006	0.017	0.008	0.004

Source: FHWA 2018.

Notes:

¹ Where PPV is the peak particle velocity.

² Vibration levels can be approximated at other locations and distances using the above 25-foot reference levels and the following equation: $PPV_{equip} = PPV_{ref} (25/D)^{1.5}$ (in/sec); where “PPV ref” is the given value in the above table, “D” is the distance for the equipment to the new receiver in feet.

As shown in 4.11-11, heavier pieces of typical construction equipment, such as a bulldozer, have been documented to generate peak particle velocities of approximately 0.089 in./sec. PPV or less at a reference distance of 25 feet (FTA 2018). The ConnectMenlo EIR MM NOISE-2a threshold distances were calculated based on these propagation characteristics and the FTA and Caltrans propagation formulas. As can be seen in Table 4.11-11, architectural damage would not be anticipated unless the machinery was operating at distances less than 15 feet from a nearby structure and would not reach the annoyance thresholds unless operating at distances less than 20 feet. Given the operational characteristics of the machinery, the setback distances and the transportation rights-of-way, the proposed project is not expected to exceed the City’s vibration thresholds. Therefore, construction vibration impacts associated with the proposed project are considered **less than significant**.

ConnectMenlo EIR MM NOISE-2b serves to reduce long-term vibration impacts at existing or potential future sensitive uses through the application of best management practices. The proposed project is not located in the vicinity of vibration generating sources; nor does the proposed project incorporate long-term operation sources of groundborne vibration. Therefore, ConnectMenlo MM NOISE-2b is not applicable to the proposed project and this impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

The analysis of cumulative noise impacts considers noise conditions within the Bayfront Area because noise attenuates as distance from the noise source increases. The development scenario for the analysis of potential cumulative impacts associated with construction noise considers specific current and pending development projects in the immediate vicinity of the project site because construction noise is a localized impact. The development scenario for the analysis of potential cumulative noise impacts associated with project operation considers buildout of the ConnectMenlo General Plan Update.

Impact 4.11-3 Would the project result in cumulatively considerable noise impacts?**Construction Noise**

The nearest projects to the 123 Independence project site that have the potential to be constructed concurrently with the proposed project are the Commonwealth Building 3 Project located at 162 and 164 Jefferson Drive, Menlo Flats located at 165 Jefferson Drive, Menlo Uptown located at 141 Jefferson Drive. In addition, construction at TIDE Academy, located at 150 Jefferson Drive, is currently under way and could still be under construction during construction of the proposed project.

As discussed in Impact 4.11-1, most construction activities for the proposed project and the cumulative projects would occur during the exempt daytime hours of 8:00 a.m. to 6:00 p.m. Monday through Friday, and thus would not be subject to the daytime noise limitations set forth in Municipal Code Section 8.06.040(a). However, some project construction activities could occur during weekday hours outside of the exempt daytime hours or on weekends.

Construction of individual projects that occurs during daytime hours could result in a 10 dB increase over the ambient noise level at nearby receptors before mitigation, and construction of multiple projects at one time could combine to expose a given receptor to greater noise levels than those that would be experienced from construction of one project alone. Similarly, construction of individual projects during non-exempt weekday hours and during weekends could exceed the allowable daytime (i.e., 7:00 a.m. to 10:00 p.m.) noise level of 60 dBA at nearby noise-sensitive land uses, the allowable nighttime (i.e., 10:00 p.m. to 7:00 a.m.) noise level of 50 dBA at nearby sensitive land uses, or the allowable threshold (10 dB increase over ambient). Thus, there is a **potentially significant** cumulative impact associated with construction noise. As discussed in Impact 4.11-1 and shown in Table 4.11-7, construction of the proposed project could result in a noise level increase up to approximately 19 dBA over ambient at Menlo Portal, located immediately south of the project site. Further, noise associated with project construction could combine with construction noise from other nearby projects to result in noise level increases of 10 dB over ambient at other nearby sensitive receptors during daytime exempt hours as well as during non-exempt hours and could result in noise levels that exceed the City's standards. Therefore, the project's contribution to the cumulative construction noise impact could be cumulatively considerable.

All projects would be required to implement ConnectMenlo EIR MM NOISE-1c to help ensure that construction activity complies with the Menlo Park Municipal Code and other City regulations pertaining to construction noise. ConnectMenlo EIR MM NOISE-1c is included in this EIR as MM 4.11a. As discussed in Impact 4.11-1, construction noise impacts for some projects (including the proposed project) may not be reduced to less-than-significant levels with implementation of this mitigation measure alone because there would be a potential for construction noise outside of the daytime exempt hours to exceed the City's thresholds and since the certification of the ConnectMenlo EIR, the City has adopted a new construction noise threshold of 10 dBA over ambient. Thus, the proposed project would also be required to implement MM 4.11b, which requires monitoring the effectiveness of noise attenuation measures and use of additional attenuation measures where necessary to ensure compliance with the City's thresholds. With implementation of both 4.11a and 4.11b, construction noise levels associated with the project would be in compliance with the allowable limits during both daytime and non-daytime hours. Therefore, implementation of MMs 4.11a and 4.11b as presented in Impact 4.11-1 would ensure that the proposed project would make a less than cumulatively considerable contribution to the potentially significant cumulative impact. No additional mitigation measures are required.

Operational Noise

Buildout of the land uses anticipated under the ConnectMenlo General Plan Update would increase traffic in the Bayfront Area, which could result in increased traffic noise and exposure of sensitive receptors to unacceptable noise levels. The ConnectMenlo EIR found that there would be no roadway segments that would experience a substantial permanent increase in ambient noise levels and that General Plan Policies N-1.6 and N-1.9 and General Plan Programs N-1.B and N-1.C would reduce noise from vehicles at the source and to otherwise shield uses from excessive noise. The ConnectMenlo EIR concluded that industrial uses and existing and future residential uses would not be exposed to noise levels that exceed the City's land use compatibility criteria and cumulative transportation noise impacts would be less than significant. Thus, the ConnectMenlo EIR did not identify a significant cumulative operational noise impact to which the project could contribute.

As discussed in Section 4.14, Transportation, the proposed project would generate 870 new vehicle trips per day. As shown in Table 4.11-9, the traffic generated by the project would have no measurable effect on roadway noise levels at any of the monitoring locations under existing plus project conditions. Traffic volumes on local roadways are expected to increase over time due to buildout of the ConnectMenlo General Plan Update and from regional development and population growth. The background (no project) traffic noise levels would increase over time, which would lessen the relative contribution of the proposed project to total traffic volumes and associated noise levels. Given that the project-generated traffic would have no measurable effect on roadway noise under existing plus project conditions and non-project traffic would continue to increase over time, the project-generated traffic would also have no measurable effect on cumulative transportation noise levels. Thus, the project would not create or contribute to any significant cumulative transportation noise impacts, consistent with the findings of the ConnectMenlo EIR.

Mitigation Measures

Construction Noise

As noted above, implementation of MMs 4.11a and 4.11b as presented in Impact 4.11-1 would ensure that the proposed project would make a less than cumulatively considerable contribution to the potentially significant cumulative impact. No additional mitigation measures are required.

Operational Noise

No mitigation measures are required.

4.11.5 References Cited

Caltrans (California Department of Transportation). 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. California Department of Transportation: Division of Environmental Analysis. September 2013.

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4.12 Population and Housing

This section describes the existing and projected population and housing conditions in Menlo Park and the changes to those conditions that would result from implementation of the 123 Independence Drive Residential Project (project; proposed project).

As discussed in Chapter 2, Introduction, and Chapter 4, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this environmental impact report (EIR), one in January and February 2021, and one in September and October 2021. The Sequoia Union High School District submitted a comment regarding the school district capacity to serve additional population. Impacts related to educational services and facilities are addressed in Section 4.13, Public Services and Recreation. No other comments raised concerns related to population, employment, and housing. Both NOPs and the comments received in response to them are provided in Appendix A of this EIR.

The primary sources reviewed to prepare this section include the current Menlo Park 2015–2023 Housing Element (City of Menlo Park 2014), the Preliminary California Department of Housing and Community Development (HCD) Review Draft 2023–2031 Housing Element (City of Menlo Park 2022), the ConnectMenlo General Plan Update EIR (City of Menlo Park 2016), the Housing Needs Assessment (HNA) for 123 Independence Drive Project (June 2022) included in this EIR as Appendix I1, and the Update of Housing Needs Impacts Analysis for 123 Independence Project memorandum (November 2022) included in this EIR as Appendix I2, both of which were prepared by BAE Urban Economics. Additional sources include data published by the Association of Bay Area Governments (ABAG), the Metropolitan Transportation Commission (MTC), California Department of Finance (DOF), and the U.S. Census Bureau.

4.12.1 Environmental Setting

Population

Within the context of CEQA, population typically refers to residents within a particular jurisdiction. The City of Menlo Park (City) is located in the southern portion of San Mateo County, south of the San Francisco Bay and is surrounded by the Cities of Atherton, Redwood City, Woodside, East Palo Alto, and Palo Alto. In 2020, San Mateo County, including its 20 cities, had a population of 771,061. In 2021, the County experienced a slight reduction in regional population, with a total population of 765,245 (DOF 2021a).

The ConnectMenlo Draft EIR indicates that the City had a population of 32,896 with an average of 2.6 persons per household in 2014 (City of Menlo Park 2016). The ConnectMenlo EIR states that the City experienced a population increase of 7 percent between 2000 and 2014, and that this growth was reflected in the City's increase in average household size rather than an increase in the total number of households. DOF data indicates that in 2020, the City of Menlo Park had a population of 35,120, while in 2021, the population slightly reduced to 34,825. The population further reduced in 2022, with a total of 33,034 (DOF 2022).

Housing

Housing within San Mateo County is generally dispersed amongst the 20 cities within the county. More than half of Menlo Park's housing units are single-family detached homes. However, almost all of the residential growth in the City and the region since 2010 has been in multifamily units in buildings of five or more units (Appendix I1). As of January 2022, the City of Menlo Park has 13,916 housing units, with approximately 2.5 persons per household, and an 8.2

percent vacancy rate (DOF 2022). According to ABAG and the MTC Plan Bay Area 2050, approximately 80,000 households were accounted for in South San Mateo County (which includes the City of Menlo Park) in 2015 (ABAG/MTC 2021a). In 2010, Menlo Park contained 13,085 housing units, with a 5.6 percent vacancy rate and an average household size of 2.53 people. By 2015, Menlo Park had added 95 housing units, for a total of 13,180, a vacancy rate of 6.5 percent, and an average household size of 2.65 people. By 2021, Menlo Park had added another 944 housing units for a total of 14,124, with a vacancy rate of 7.4 percent and an average household size of 2.60 people (DOF 2022).

As described in the 2015–2023 Housing Element, Menlo Park’s housing is so expensive, many people have to stretch to make their monthly mortgage or rent payment. Also, many people who work in Menlo Park cannot afford to live in the City due to housing and rent costs, so essential employees such as teachers, firefighters, and health care workers must travel long distances. The difference between the median selling price of homes and the amount purchasers (earning median household income) can afford to pay for them creates a significant affordability gap within the City.

Housing Element

As discussed further in Section 4.12.2, state law requires all local governments to adopt a General Plan to guide development and operation of land uses throughout their jurisdiction. State law also requires that the General Plan include a Housing Element to address the housing needs for the jurisdiction.

The Housing Element is required to demonstrate that there are sufficient potential housing sites to accommodate construction of new housing meeting the Regional Housing Needs Allocation (RHNA), which is a projection of the number of housing units at varying income levels needed to accommodate anticipated population growth. The City’s RHNA targets are developed by the ABAG based on an initial determination of HCD regarding the number of new housing units at various income levels that are projected to be needed in the region. ABAG then distributes this requirement among the region’s nine counties and 101 cities and towns, which must revise their general plans and zoning ordinances to ensure that land use and zoning designations as well as development standards would accommodate construction of the needed housing units.

At the time of drafting this EIR, the City of Menlo Park was in the process of updating their Housing Element. The City submitted the Preliminary HCD Review Draft 2023–2031 Housing Element (Draft 2023–2031 Housing Element) to the HCD on July 25, 2022 (City of Menlo Park 2022).

The Draft 2023–2031 Housing Element identifies that during the prior Housing Element cycle (2015–2023), the City far exceeded the RHNA housing target for the above moderate income level with construction of 1,182 housing units compared to the target of 150 units, and nearly achieved the target for the very low income level with construction of 217 units compared to the target of 233 units. Further, the City provided 70.5 percent of the low income level housing target (91 units constructed compared to a target of 129) and 15.4 percent of the moderate income level housing target (22 units constructed compared to a target of 143). The Draft 2023–2031 Housing Element identifies the RHNA targets shown in Table 4.12-1.

Table 4.12-1. Projected Housing Need

Income Level	Housing Unit Target
Very low income (AMI)	740 units
Low income (51 to 80 percent of the AMI)	426 units
Moderate income (81 to 120 percent of the AMI)	496 units

Table 4.12-1. Projected Housing Need

Income Level	Housing Unit Target
Above Moderate Income (greater than 120 percent of AMI)	1,284 units
Total	2,946 units

Source: City of Menlo Park 2022

Housing Development Potential

The Draft 2023–2031 Housing Element identifies 69 housing opportunity sites located on 83 parcels; it also identifies several residential and mixed-use development projects that are already under review (referred to as Pipeline Projects) which would also contribute to the City’s attainment of the RHNA target. Combined, the opportunity sites and pending projects could accommodate development of 30 percent more units than are identified under the RHNA (City of Menlo Park 2022). This 30 percent buffer is recommended by HCD.

The ConnectMenlo General Plan Update, prepared in 2016, proposed a number of changes to the land use element to allow for future development within the city. Specifically, ConnectMenlo identifies the Bayfront Area, which includes the project site, as the focus of future land use change and new housing development potential. Most of the Pipeline Projects identified in the Draft 2023–2031 Housing Element are located within the Bayfront, including the proposed project. As described in the ConnectMenlo EIR, the land use element updates provide a development potential of 4,500 new residential units in the Bayfront (City of Menlo Park 2016).

Employment

Menlo Park has seen significant job growth in recent years, far exceeding population growth, as the tech economy has boomed (Appendix I1). From 2010 to 2022, employment in the County increased by approximately 305,700 jobs (73 percent) (EDD 2022a). The State of California Employment Development Department, which compiles current and historical employment data for California counties and metropolitan areas, indicated that the largest employment sector in San Mateo County is the service industry, including private services, educational/health services, as well as professional and business services. Other employment sectors of note include the trade, transportation, and utility industry, as well as government employment. Approximately 44,100 people were employed in the construction industry within the San Francisco-Redwood City–South San Francisco Metropolitan District (MD) in 2022 (EDD 2022c). As of March 2022, the unemployment rate was 2.3 percent within San Mateo County and 2.4 percent within the San Francisco-Redwood City–South San Francisco MD (EDD 2022b, 2022c). The ConnectMenlo EIR reported approximately 31,920 jobs in the study area for that EIR in 2015, comprising roughly 9 percent of all jobs in San Mateo County and projected that new Bayfront development under ConnectMenlo could accommodate 5,500 new jobs (City of Menlo Park 2016).

Jobs-Housing Balance

Menlo Park has more jobs than employed residents; there are 3.2 jobs for every employed resident in the City. The Menlo Park region (i.e., San Francisco and San Mateo counties) is more balanced but still has more jobs than employed residents (1.14 jobs per working resident). As a result, Menlo Park has high net in-commuting, and the region also imports workers from surrounding counties in the region (Appendix I1).

Growth Projections

Plan Bay Area 2050 is a long-range plan created by ABAG and the MTC in collaboration with Bay Area residents, partner agencies and nonprofit organizations. Plan Bay Area 2050 is the nine-county Bay Area’s long-range plan for the key elements of housing, economic development, transportation and environmental resilience.

Plan Bay Area 2050 includes growth projections for both household and employment growth for each of the 9 participating counties. According to the Plan Bay Area 2050 Growth Pattern, a 32 percent increase in household growth, or approximately 106,000 new households, within South San Mateo County could occur by 2050. Table 4.12-2, Projected Household Growth, describes projected growth patterns, for South San Mateo, San Mateo County, and the Bay Area Region, as indicated in the Plan Bay Area 2050 Growth Pattern (ABAG/MTC 2021a).

The California Department of Finance, which also provides regional and local growth projections, projects a San Mateo County population of 813,098 in 2040, 814,643 in 2050, and 805,479 in 2060 (DOF 2021b).

Table 4.12-2. Projected Household Growth

Geographic Area	2015	2050	Growth	Growth (percent)	Share of Regional Growth (percent)
South San Mateo (includes Atherton, Menlo Park, Redwood City, Woodside, East Palo Alto, Portola Valley, San Carlos)	80,000	106,000	26,000	32	2
San Mateo County	265,000	394,000	129,000	48	9
Bay Area Region	2,677,000	4,043,000	1,367,000	51	100

Source: ABAG 2021.

According to Plan Bay Area 2050, jobs in the South San Mateo area are expected to increase by 13 percent between 2015 and 2040 from 31,920 to 36,150. Jobs in San Mateo County are expected to increase by 19 percent between 2015 and 2040, from 374,940 to 445,070 (ABAG/MTC 2021). Table 4.12-3, Projected Employment Growth, describes the projected employment in South San Mateo (including the City of Menlo Park), San Mateo County, and the Bay Area region through 2050.

Table 4.12-3. Projected Employment Growth

Geographic Area	2015	2050	Growth	Growth (percent)	Share of Regional Growth (percent)
South San Mateo (includes Atherton, Menlo Park, Redwood City, Woodside, East Palo Alto, Portola Valley, San Carlos)	152,000	196,000	44,000	29	3
San Mateo County	393,000	507,000	114,000	29	8
Bay Area Region	4,005,000	5,408,000	1,403,000	35	100

Source: ABAG 2021.

4.12.2 Regulatory Framework

Federal Regulations

No federal requirements related to population or housing are applicable to the proposed project.

State Regulations

State Housing Element Law

Under the state's Housing Element law (California Government Code, Section 65580 et seq.), regional councils of government are required to identify for each city and county its "fair share allocation" of the Regional Housing Needs Determination provided by the California Department of Housing and Community Development. The RHNA presents statistics on housing affordability in a region so that each city or county can plan appropriately to accommodate its fair-share of the region's affordable housing.

The Housing Element law requires each city/county's general plan housing element to include an inventory and analysis of sites within that jurisdiction that would be suitable for housing and would provide sufficient space to meet the jurisdiction's RHNA. If more sites are necessary to meet the RHNA, a housing element must include a program of actions to make sufficient housing sites available to accommodate the jurisdiction's RHNA, as required under California Government Code Section 65583. This is commonly accomplished through rezoning or modifying zoning regulations to increase the area where housing can be built. ABAG Executive Board adopted the Final RHNA Plan on December 16, 2021, and HCD approved ABAG's RHNA Plan on January 18, 2022.

State Density Bonus Law

The state's Density Bonus law is codified in Government Code Sections 65915 through 65918 and is designed to encourage and incentivize construction of lower-income housing and transit-oriented housing. The Density Bonus law requires local governments to provide density bonuses, allowing up to a 50 percent increase in the base density as defined in the municipality's zoning ordinance for mixed-income projects, and other incentives to developers of affordable housing and for developers proposing to donate land for affordable housing. A municipality is required to grant a Density Bonus at defined amounts when a project meets at least one of six conditions. Those conditions include minimum percentage of units that must be offered to specific below-average income levels and development of housing for specific types of residents (such as senior citizens, disabled veterans, university students, and transitional foster youth). When granting a Density Bonus, the municipality must also ensure that the identified affordable housing units remain affordable for at least 55 years when the units are rental units and for at least 45 years or be subject to an equity-sharing agreement when the units are offered for sale. In addition to a Density Bonus, a municipality must grant a housing developer between one and four incentives when the project meets specified criteria relating to the percentage of affordable units within the overall project and the specific affordability level (i.e., very-low income, low income, and moderate income).

Sustainable Communities Strategy and Senate Bill 375

Senate Bill (SB) 375, adopted in 2008, requires preparation of a Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan (RTP) for the Bay Area. Plan Bay Area 2050, the SCS for the region, was approved by MTC and ABAG in October 2021. As required by SB 375, Plan Bay Area 2050 defines a transportation and land use/housing strategy for the Bay Area to address transportation mobility and accessibility needs, land

development, and greenhouse gas emissions reduction requirements through 2050. This SCS was developed based on the following Guiding Principles: advancing equity, increasing resilience, implementing a shared vision, and defining and implementing strategies for the future. A key focus in Plan Bay Area 2050 is understanding interrelated elements of housing, the economy, transportation, and the environment and implementing strategies to improve conditions throughout the Bay Area (MTC and ABAG 2021). Plan Bay Area 2050 is discussed further in the Local Regulations discussion.

SB 375 requires that the RHNA be consistent with the SCS and establishes an 8-year cycle for the RHNA. The 2014–2022 RHNA was incorporated into Plan Bay Area 2050 and Plan Bay Area 2040. Plan Bay Area 2050 helps guide, but does not directly establish, new state-mandated RHNA numbers for any jurisdiction.

Housing Accountability Act, Permit Streamlining Act, and Housing Crisis Act of 2019

The Housing Crisis Act of 2019, adopted as SB 330, made numerous changes to both the Housing Accountability Act and Permit Streamlining Act. It established a process by which project sponsors can “lock in” applicable fees and development regulations by submitting a Preliminary Application. The Housing Accountability Act was amended to prohibit more than five hearings for projects that comply with the general plan and zoning code objective standards when deemed complete. The Housing Crisis Act also shortens the timeframe for approval of housing projects under the Permit Streamlining Act, requiring local agencies to approve a project within 90 days of certification of an EIR. However, a local agency can disapprove a project that would have a specific adverse effect on public health and safety if there are no feasible mitigation measures to reduce the impact. Finally, the Housing Crisis Act restricts local agencies’ ability to adopt housing moratoria and from changing a land use designation to remove housing as a permitted use or to reduce residential density unless corresponding zoning amendments are made elsewhere to compensate for the reduced housing units.

Regional and Local Regulations

Association of Bay Area Governments Projections

ABAG is the official comprehensive planning agency for the San Francisco Bay region, which includes the counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. ABAG primarily deals with regional land use, housing, environmental quality, and economic development. ABAG is responsible for taking the overall regional housing needs allocation provided by the State and allocating that housing need by income level across its jurisdiction. The relationship of the project’s potential residential population and proposed below market rate units to ABAG’s projections are discussed in Impact 4.12-1 in this section.

ABAG produces growth forecasts that are informed by the general plans, zoning regulations, and growth management programs of local jurisdictions and are relied upon by other regional agencies, including the MTC and the Bay Area Air Quality Management District, to make project funding and regulatory decisions. For example, the ABAG projections are the basis for the regional Ozone Attainment Plan and the RTP, each of which is discussed in Section 4.2, Air Quality, and Section 4.14, Transportation, of this Draft EIR. The growth forecasts are produced on 4-year cycles.

The ABAG projections are also developed to reflect the impact of “smart growth” policies and incentives that could be used to shift development patterns from historical trends toward a better jobs-housing balance, increased preservation of open space, and greater development and redevelopment in urban core and transit-accessible areas throughout the ABAG region.

Plan Bay Area, Strategy for a Sustainable Region

Chapter 2 of Plan Bay Area 2050 addresses housing. It notes that the Bay Area currently has 2.5 million homes and will need new housing stock to accommodate the anticipated regional population of 10 million people by 2050. The plan recognizes that carefully planning the form and location of new housing will be critical in addressing housing affordability, access to job opportunities, and reducing greenhouse gas emissions. It also notes that focusing on providing high quality affordable housing in locations that provide access to opportunity, such as well-resourced schools and well-maintained transit, will help achieve the stated Guiding Principles of advancing equity throughout the region and increasing the community's resilience to housing uncertainty.

Menlo Park General Plan

The City of Menlo Park General Plan includes goals, policies, and programs relevant to the environmental factors potentially affected by the proposed project. Applicable goals, policies, and programs are identified below under their respective General Plan Elements.

Housing Element

All California cities and counties are required to include a Housing Element in their general plans that establishes housing objectives, policies, and programs in response to community housing conditions and needs. The City updated and adopted its Housing Element on April 1, 2014, to respond to then current and near-term future housing needs in Menlo Park. The Housing Element also provides a framework for the community's longer-term approach to addressing its housing needs, with the intent of enhancing "community life, character, and vitality through the provision of adequate housing opportunities for people at all income levels" (City of Menlo Park 2022). The Housing Element contains goals, updated information, and strategic decisions (policies and implementing actions) that the City is committed to undertaking.

As described above, the State Housing Element Law requires a city's general plan to have an updated Housing Element that provides for a specified number of housing units, based on an allocation of regional housing needs. The allocation process is now set to occur every 8 years, as discussed above, and the next allocation will be for 2023–2031. ABAG is responsible for the allocation in the Bay Area.

The City began the process of updating the Housing Element in 2021 for the upcoming RHNA cycle. The draft Housing Element for the 2023–2031 planning period was submitted to the State Department of Housing and Community Development on July 25, 2022. While the City has used the "sub-regional" allocation process in the past, the County and all the cities in the County do not intend to use it for the 2023–2031 cycle due to changes in the process, which made the "sub-regional" allocation process infeasible. The draft 2023–2031 Housing Element provides updates on the goals, policies, and implementing programs contained in the current Housing Element and other City policies related to housing needs. It also incorporates proposed new goals, policies and programs, with an emphasis on furthering fair housing.

The following policies within the Housing Element of the City's General Plan are relevant to the proposed project:

Policy H1.7: Local Funding for Affordable Housing. Seek ways to reduce housing costs for lower-income workers and people with special needs by developing ongoing local funding resources and continuing to utilize other local, State, and federal assistance to the fullest extent possible. The City

will also maintain the Below Market Rate (BMR) housing program requirements for residential and nonresidential developments.

Policy H4.2: Housing to Address Local Housing Needs. Strive to provide opportunities for new housing development to meet the City's share of its RHNA. In doing so, it is the City's intent to provide an adequate supply and variety of housing opportunities to meet the needs of Menlo Park's workforce and special needs populations, striving to match housing types, affordability and location, with household income, and addressing the housing needs of extremely low-income persons, lower income families with children and lower income seniors.

Policy H4.3: Housing Design. Review proposed new housing in order to achieve excellence in development design through an efficient process and will encourage infill development on vacant and underutilized sites that is harmonious with the character of Menlo Park residential neighborhoods. New construction in existing neighborhoods shall be designed to emphasize the preservation and improvement of the stability and character of the individual neighborhood.

The City will also encourage innovative design that creates housing opportunities that are complementary to the location of the development. It is the City's intent to enhance neighborhood identity and sense of community by ensuring that all new housing will: 1) have a sensitive transition with the surrounding area; 2) avoid unreasonably affecting the privacy of neighboring properties; or 3) avoid impairing access to light and air of structures on neighboring properties.

Policy H4.8: Retention and Expansion of Multi-Family Sites at Medium and Higher Density. Strive to protect and expand the supply and availability of multi-family and mixed-use infill housing sites for housing. When possible, the City will avoid re-designating or rezoning multi-family residential land for other uses or to lower densities without re-designating equivalent land for multi-family development and will ensure that adequate sites remain at all times to meet the City's share of the region's housing needs.

Policy H4.10: Inclusionary Housing Approach. Require residential developments involving five or more units to provide units or an in-lieu fee equivalent for very-low, low and moderate-income housing. The units provided through this policy are intended for permanent occupancy and must be deed restricted, including but not limited to single-family housing, multi-family housing, condominiums, townhouses or land subdivisions. In addition, the City will require larger nonresidential developments, as job generators, to participate in addressing housing needs in the community through the City's commercial in-lieu fee requirements.

Policy H4.12: Fair Share Distribution of Housing throughout Menlo Park. Promote the distribution of new, higher density residential developments throughout the city, taking into consideration compatibility with surrounding existing residential uses, particularly near public transit and major transportation corridors in the city.

Policy H4.13: Preferences for Affordable Housing. Implement BMR housing preferences for people who live or work in Menlo Park to the extent consistent with Fair Housing laws.

Land Use Element.

The following policies within the Land Use Element of the City's General Plan are relevant to the proposed project:

Policy LU-2.5: *Below-Market Rate Housing*. Require residential developments of five or more units to comply with the provisions of the City's Below-Market Rate (BMR) Housing Program, including eligibility for increased density above the number of market rate dwellings otherwise permitted by the applicable zoning and other exceptions and incentives.

Policy LU-2.9: *Compatible Uses*. Promote residential uses in mixed-use arrangements and the clustering of compatible uses such as employment centers, shopping areas, open space and parks, within easy walking and bicycling distance of each other and transit stops.

Below Market Rate Housing Program

The City's Below-Market Rate (BMR) Housing Program (Menlo Park Municipal Code Chapters 15.36, 16.04, and 16.96) is intended to increase the supply of affordable housing in Menlo Park. As part of the program, qualifying residential and other developers are required to contribute BMR housing units and/or BMR housing in-lieu fees. These units may be available for rent at low-income levels (or an equivalent alternative) or purchase to very-low-, low-, or moderate-income households. The BMR Housing Program is administered under the BMR Housing Program Guidelines (BMR Guidelines). Residential developments of five or more units are subject to the requirements of the BMR Housing Program and must submit a BMR Housing Agreement and comply with the program before a building permit or land use authorization can be issued. For developments of 20 or more units, no fewer than 15 percent of the units shall be provided at below market rates to very-low, low-, and moderate-income households in compliance with the BMR Guidelines.

4.12.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to population and housing are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. Potential project-related impacts analyzed in this section account for population and housing that occur or have the potential to occur on the project site. According to Appendix G of the CEQA Guidelines, a significant impact related to population and housing would occur if the project would:

- A. 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).
- B. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.
- C. Result in a cumulative population, employment, and housing impact.

4.12.4 Impacts and Mitigation Measures

Methodology

This evaluation of population, employment, and housing impacts is based on information obtained from review of available population, employment, and housing projections from the City Menlo Park, San Mateo County, ABAG, the Employee Development Department, DOF, and other sources; the 123 Independence HNA (Appendix I1) and the HNA Update Memorandum (Appendix I2) prepared by BAE Urban Economics; and review of applicable elements and policies from the City of Menlo Park ConnectMenlo General Plan.

The HNA is required under the terms of a 2017 settlement agreement between the cities of Menlo Park and East Palo Alto. It supports the analysis in this EIR by providing context for evaluation of the project's potential environmental effects associated with population and housing; it also provides additional housing related information for consideration by decision-makers during the entitlement process. Specific to the issues that must be evaluated in the entitlement process that are not considered to be environmental effects under CEQA, the HNA considers whether the project could contribute to displacement of existing residents within East Palo Alto and the Belle Haven neighborhood of Menlo Park, which both have risk factors for displacement. Thus, that information can be found in Appendix I1 rather than in this section.

As indicated in the HNA (Appendix I1) and HNA Update Memorandum (Appendix I2), project implementation would include construction of 432 total residential units. Of the total units, 116 units would be residential townhomes and 316 would be apartments. The project would deed restrict 18 townhomes and 56 apartment units for below-market rate prices to be affordable to households at the low-income level (Appendix I2).

Project Impacts

Impact 4.12-1 Would the project induce substantial unplanned population growth in an area, either directly or indirectly?

Project implementation would result in an increase of 432 new residential units within the City. As described above, in 4.12.1, Environmental Setting, the project is located in the Bayfront Area within the City of Menlo Park, an area that has been contemplated in the ConnectMenlo General Plan Update for increased development of residential uses. Further, and as described in Chapter 3, Project Description, the project site is zoned as Residential Mixed-Use Bonus (R-MU-B), which is intended to provide high-density housing to complement nearby employment as well as plus associated retail/service and office uses.

ConnectMenlo contemplated a development potential of 4,500 new residential units, 11,570 residents, and 5,500 employees in the Bayfront Area. The project's contribution of 432 residential units would represent 9.6 percent of the new residential units planned for and anticipated by ConnectMenlo. Using recent housing data from DOF, which assumes 2.5 persons per household in the City, the project is estimated to result in approximately 1,080 residents, which would represent 9.3 percent of new residents contemplated by ConnectMenlo (DOF 2022, City of Menlo Park 2016). The population per household identified in the ConnectMenlo EIR, which was based on ABAG data, is 2.57 persons. At this rate, the project would accommodate approximately 1,110 residents, which would represent 9.6 percent of new residents contemplated by ConnectMenlo (City of Menlo Park 2016).

The ConnectMenlo EIR assumed that 1,500 of the new residential units in the Bayfront would be dormitory style corporate campus units, which typically are smaller than standard multi-family units, and 3,000 units would be

multi-family dwellings. As noted in Section 4.0 Environmental Analysis, the recently approved and pending projects in the Bayfront Area would accommodate more than 3,000 multi-family units; specifically, the proposed project would introduce 98 more multi-family units than were evaluated in the ConnectMenlo EIR. However, the ConnectMenlo EIR applied a constant household population rate (2.57 persons) to all residential units; thus the shift from corporate campus units to multi-family units would not affect the population projections for buildout of the General Plan. As such, project implementation would be consistent with anticipated and planned growth within the City.

Typically, a project would result in indirect growth inducement if it would establish substantial new permanent employment opportunities, or if it would involve a construction effort with long term employment opportunities and indirectly require additional housing. The construction labor force for the proposed project is anticipated to come from existing workforce in the Bay Area. According to the latest labor data available from the California Employee Development Department, 44,000 residents within the San Francisco-Redwood City-South San Francisco MD are employed in the construction industry, and as previously discussed, ConnectMenlo contemplated an increase of 5,500 employees within the Bayfront Area. Based on applying the most recent unemployment rate of 2.4 percent for San Francisco-Redwood City-South San Francisco MD to the construction sector, approximately 1,056 construction employees could be available in the region to work on the proposed project. During construction, it is assumed that construction labor force would fluctuate depending on the phase of work. Construction efforts would be relatively short term (occurring over a 5-year period) and are not expected to result in employees relocating to the area. Once operational, there would be a limited number of on-site workers associated with property management and maintenance. It is assumed that the workers employed during project operation would live within the local region and would not contribute to local housing demands within the City (Appendix I1). As such, an increase in housing demand resulting from the project is not expected and the project would not indirectly induce substantial unplanned population growth.

Because the project would be consistent with previously contemplated and planned growth in the Bayfront Area, and would not indirectly or directly result in substantial unplanned population growth during construction and/or operation, this impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.12-2 Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The project proposes to demolish existing office and industrial buildings within the project site and construction of 116 residential townhomes and 316 apartments as well as associated parking and on-site amenities (i.e., landscaping, pedestrian paths). As described in Table 3-2 and Table 3-3 in Chapter 3, Project Description, 56 of the proposed apartments and 18 of the proposed townhomes would be below market rate. Displacement typically occurs when housing or neighborhood conditions force existing residents to move, or existing households feel that their move is involuntary. The project includes a substantial addition of new housing and as such, would increase the available housing stock within the city. No housing currently exists within the project site, and therefore no housing would be permanently removed through implementation of the project, nor would there be any actions that would indirectly displace substantial numbers of existing people. Thus, there would be **no impact** associated with displacement of substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

Impact 4.12-3 Would the Project result in a cumulative population, employment, and housing impact?

The cumulative setting for population, housing, and employment consists of the regional area, including the San Francisco-Redwood City-South San Francisco MD as well as San Mateo County and the City of Menlo Park. The City of Menlo Park has approximately 20 residential projects (totaling 3,880 residential units) that are either currently being planned, were previously approved, or are under construction (Appendix I1).

As previously discussed, the proposed project would be consistent with development in the Bayfront Area as contemplated in ConnectMenlo. Additionally, buildout of the project would be consistent with housing and employment growth projections contemplated in Plan Bay Area 2050. As described in 4.12.1, Environmental Setting, Plan Bay Area 2050 anticipates a 32 percent increase in household growth, or approximately 106,000 new households, within South San Mateo County by 2050 and a 19 percent increase in employment (445,070 total jobs) by 2040. The project would account for 0.4 percent of anticipated future housing growth in the Bay Area.

As discussed in Impacts 4.12-1 and 4.12-2, above, the project site does not currently contain any residential uses and project implementation would result in an increase in the available housing stock within the city, consistent with contemplated growth identified in ConnectMenlo and Plan Bay Area 2050. Further, the project would include construction of below-market rate units on site, equal to 17 percent of the total housing units included in the project. The project would not displace housing or people necessitating the construction of replacement housing elsewhere. Accordingly, under the cumulative condition, implementation of the proposed project would also not displace housing or substantial numbers of people necessitating the construction of replacement housing elsewhere.

While the removal of existing businesses from the project site would result in a net job loss, the housing units replacing those businesses would create a demand for on-site workers associated with construction as well as a limited number of on-site workers associated with property management and maintenance during project operation. In addition, as discussed above, the city has more jobs than housing resulting in many employees needing to commute into the city. Reducing jobs and adding housing helps to better balance jobs and housing. As described in Impact 4.12-2, it is assumed that the workers employed during project construction and operation would live within the region and would not contribute to local housing demands within the city.

Because the project would be consistent with previously contemplated and anticipated population, household, and employment growth within the city and greater Bay Area, growth resulting from project implementation would not be cumulatively considerable. As such, the project would not, when considered with past, present, and foreseeable future projects, result in significant cumulative impacts related to population growth under the cumulative condition and this impact would be **less than significant and less than cumulatively considerable**.

Mitigation Measures

No mitigation measures are required.

4.12.5 References

- Association of Bay Area Governments/Metropolitan Transportation Commission (ABAG/MTC) 2021a. Plan Bay Area 2050: Growth Patterns. Accessed May 2, 2022. Available: https://www.planbayarea.org/sites/default/files/FinalBlueprintRelease_December2020_GrowthPattern_Jan2021Update.pdf.
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4.13 Public Services and Recreation

This section describes the existing public services conditions of the proposed 123 Independence Drive Residential Project (project; proposed project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts.

As discussed in Chapter 2, Introduction, and Section 4.0, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this EIR, one in January and February 2021, and one in September and October 2021. The Sequoia Union High School District (SUHSD) submitted written comments in response to both NOPs identifying concerns with project-specific and cumulative impacts associated with air quality, noise, transportation, and public services. Regarding public services, the SUHSD comment letter raises concerns regarding the potential for increases in student population and traffic to impact the District's need for new or physically altered school facilities, and if impacts would interfere with the school district's ability to accomplish its objectives. Both NOPs and the comments received in response to them are provided in Appendix A of this EIR.

The primary sources reviewed to prepare this section include the ConnectMenlo General Plan Update EIR (City of Menlo Park 2016) and various planning documents and reports for each of the public service providers addressed in this section.

4.13.1 Existing Conditions

The project site is located in the Bayfront Area of the City of Menlo Park (City). The existing fire stations, police stations, parks, schools, and libraries present in the project area are discussed herein.

Fire Protection

The Menlo Park Fire Protection District (MPFPD) provides fire protection services for the cities of Menlo Park, Atherton, East Palo Alto, and some unincorporated areas in San Mateo County, including the project site. In addition to fire prevention, the MPFPD is also responsible for providing emergency and disaster response, public education services, and community crisis management. The MPFPD currently serves approximately 90,000 people and covers 30 miles of San Mateo County. In 2020, MPFPD responded to approximately 8,500 emergencies (MPFPD 2020a). The MPFPD includes the MPFPD Headquarters, located at 1700 Middlefield Road in the City of Menlo Park, as well as 7 stations which have been strategically placed throughout the MPFPD's jurisdiction to provide the best response time. MPFPD's adopted performance goal is to have a first-response unit arrive on the scene of all Code 3 (i.e., using warning lights and sirens) emergencies within 7 minutes from the time of the call to the dispatch center, 90 percent of the time. For the full response, the MPFPD's goal is to have all dispatched units arrive on the scene within 11 minutes from the time of the call to the dispatch center, 90 percent of the time (MPFPD 2020b). MPFPD's average response times fall under the currently adopted 7-minute standard for first-response units and 11-minute standard for all units (MPFPD 2021a).

The closest station to the project site is Station 77 which is approximately 0.8 miles from the project site, located at 1467 Chilco Street. The ConnectMenlo EIR stated that this station is in excellent condition, but MPFPD anticipated a need to expand or relocate the station to accommodate future fire protection and emergency service demand (City of Menlo Park 2016). In MPFPD's fiscal year 2021/2022 budget, funding was allocated to construct a new mechanic shop and dorm at Station 77 (MPFPD 2021b). Station 77's primary response areas include the eastern portion of Menlo Park, the Belle Haven neighborhood, the Bayfront Area, and East Palo Alto. This station

houses two units - Engine 77, which has a captain and two firefighters, one of which is a qualified engineer, and Rescue 77, which has one captain and one engineer. Each unit includes one licensed paramedic providing Advanced Life Support (MPFPD 2020a).

The MPFPD is organized into the following five Fire District Divisions: Administrative Services, Human Resources, Fire Prevention, Operations, and Support Services. MPFPD staff includes 12 chief officers, 30 captains, and 66 engineers/firefighters, for a total of 108 fire safety personnel, and 22 administrative support staff (MPFPD 2020a). MPFPD has a ratio of approximately 1.2 firefighters per 1,000 residents in the service area. The following fire protection apparatus are housed within the 7 MPFPD stations (MPFPD 2021c):

- | | |
|-----------------------|-----------------------------|
| ▪ 7 Fire Engines | ▪ 3 Inflatable Rescue Boats |
| ▪ 1 Fire Truck | ▪ 2 Jet Skis |
| ▪ 1 Rescue Engine | ▪ 1 Water Rescue Truck |
| ▪ 1 Fire Chief Truck | ▪ 2 Reserve Engines |
| ▪ 1 Fire Patrol Truck | ▪ 1 Air Boat |

MPFPD receives approximately 91 percent of its general fund revenue from property taxes (MPFPD 2021b). Additionally, MPFPD adopted an Emergency Services and Fire Protection Impact Fee Program under which MPFPD can collect impact fees from developers to fund fire station improvements, additional apparatus and/or equipment, or other non-personnel requirements to ensure that MPFPD can maintain a high standard of service to properties within the district.

Police Protection

The Menlo Park Police Department (MPPD) provides police protection services to the City. The MPPD operates one station located at City Hall at 701 Laurel Street, approximately 2.0 miles southwest of the project site and a substation and neighborhood service center located in the Belle Haven neighborhood approximately 1.4 miles east of the project site. The MPPD station performs various law enforcement, code enforcement, traffic enforcement, investigative functions, and various administrative duties. The substation houses the MPPD's Code Enforcement Office and Community Safety Police Officer and provides officers a place to conduct interviews and meet with community members. MPPD has 43 sworn officers and 16.5 professional staff. The sworn officers include: 1 Police Chief, 1 patrol operations commander, 1 special operations commander, 7 sergeants, 3 detectives, 5 corporals, and 28 officers. The professional staff include code and parking enforcement, communication and records staff, and various administrative positions (City of Menlo Park 2019). MPPD also participates in a mutual-aid agreement with the local neighboring cities.

Schools

The Bayfront Area of the City is within the Ravenswood City School District (Ravenswood CSD) and the SUHSD.

Ravenswood CSD operates three elementary schools and one middle school. The elementary school nearest the project site is Belle Haven Elementary. This campus serves students from Transitional Kindergarten through 5th grade and is located approximately 1.5 miles from the project site, within the Belle Haven residential neighborhood. The current enrollment is 457 students; the highest recent enrollment was over 700 students in the 1999–2000 academic year (Public School Review 2022).

The two other elementary schools are Costaño School of the Arts, which also serves students from Transitional Kindergarten through 5th grade, and Los Robles-Ronald McNair Academy, which serves students from Kindergarten through 5th grade. These schools are located within the City of East Palo Alto, approximately 3 miles and 4.5 miles, respectively, from the project site.

Cesar Chavez Ravenswood Middle School serves students in grades 6 through 8 and is located approximately 2.5 miles from the project site within the City of East Palo Alto. In 2019 there were 474 students enrolled at this campus. Ravenswood CSD is currently constructing a bond-funded project to improve the Cesar Chavez Ravenswood campus. The project includes construction of a new two-story classroom building and a separate new administrative wing as well as modernizing three existing classroom buildings to add new heating and ventilation units and new windows and roofs. The construction is expected to be complete at the end of 2023 (Ravenswood CSD 2021).

SUHSD is comprised of five high schools: Carlmont High School, Menlo-Atherton High School, Sequoia High School, TIDE Academy, and Woodside High School (SUHSD 2021). Carlmont High School is located at 1400 Alameda de las Pulgas in Belmont and is approximately 6.25 miles northwest of the project site. Menlo-Atherton High School is located at 555 Middlefield Road in Atherton, located approximately 1.5 miles southwest of the project site. Sequoia High School is located at 1201 Brewster Avenue in Redwood City, approximately 3.25 miles west of the project site. TIDE Academy is located at 150 Jefferson Drive, approximately 0.2 miles east of the project site. Lastly, Woodside High School is located at 199 Churchill Avenue in Woodside, approximately 4 miles west from the project site. In the 2020-2021 school year SUHSD had a total enrollment of approximately 8,650 students (SUHSD 2021).

Parks/Recreation

The Menlo Park Community Services Department owns and operates parks and recreational facilities in the City. The City has adopted a goal of maintaining a ratio of 5 acres of developed parkland per 1,000 residents. Currently, the City provides 244.96 acres of parkland in 15 separate parks, with a ratio of 7.44 acres per 1,000 residents (City of Menlo Park 2016).

Bedwell Bayfront Park, located at 1600 Marsh Road, is approximately 160 acres and is the closest park to the project site. Bedwell Bayfront Park includes hiking trails, bicycle paths, trail marker signage, handicap accessibility, and outdoor restrooms (City of Menlo Park 2021a). Other regional parks include the Don Edwards San Francisco Bay National Wildlife Refuge, which is located adjacent to Bedwell Bayfront Park and offers passive recreation opportunities including wildlife viewing, and the 26-acre Flood Park, which is a San Mateo County facility located on Bay Road approximately 0.5 miles (2.3 miles driving distance) from the project site. The Belle Haven Child Development Center is located on Ivy Drive approximately 0.8 miles from the project site. Additionally, the Onetta Harris Community Center and Belle Haven Pool were located at Kelly Park on Terminal Avenue approximately 0.4 miles from the project site. These facilities have been demolished to accommodate development of a new multigenerational facility that will incorporate the Onetta Harris Community Center, Menlo Park Senior Center, Belle Haven Youth Center (after-school child care), Belle Haven Pool, and branch library.

Libraries

There are two libraries located within the City; Menlo Park Library located at 800 Alma Street and Belle Haven Community Library located at 413 Ivy Drive.

4.13.2 Regulatory Framework

Federal Regulations

There are no federal regulations related to public services or recreation that are relevant to the project.

State Regulations

Fire Protection

California Fire Code

Part 9 of the California Building Code (CBC) contains the California Fire Code (CFC). The CFC provides provisions and standards for emergency fire service features, fire protection systems, fire flow requirements, fire hydrant locations and distribution, and emergency planning and preparedness. Furthermore, the CFC is adopted at the discretion of each jurisdiction and can be modified to meet the needs of the community. However, fire safety requirements usually include the installation of sprinklers in high-rise and/or multi-family buildings, fire resistance standards for applicable equipment and material, and clearance of debris and vegetation within a determined distance from occupied structures located in wildlife hazard areas.

California Building Code

The California Code of Regulations, Title 24, Part 2 (the California Building Code), set minimum standards for building design, including fire safety requirements. The California Building Code is updated every three years. The current code is the 2019 California Building Code; however, the 2022 California Building Code was adopted in December 2021 and will be effective January 1, 2023. Typical fire safety requirements of the CBC include: the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

Insurance Services Organization

The Insurance Services Organization (ISO) is an advisory organization that collects information on municipal fire-protection efforts in communities throughout the United States. The ISO analyzes relevant data using their Fire Suppression Rating Schedule and then assigns a Public Protection Classification from 1 to 10. Class 1 generally represents superior property fire protection, and Class 10 indicates that the area's fire-suppression program does not meet ISO's minimum criteria. The ISO rating is used by the MPFPD to evaluate their public fire-protection services. Currently, the MPFPD has an ISO rating of Class 2 (City of Menlo Park 2016).

Schools

California Education Code – Section 17620 and Senate Bill 50

California Senate Bill 50 (SB 50), the School Facilities Act of 1998, and the bond procedures under Proposition 1A of 1998 amended Education Code Section 17620 regulate school facilities financing and the mitigation of land use through the implementation of fee caps, the removal of development application denial authority from lead agencies, and setting the California Environmental Quality Act standard for full and complete mitigation for school facilities. Prior to enactment of the legislation, a local agency had the authority to deny or require full mitigation for projects that required an amendment to a General Plan and/or a zone change.

As amended by SB 50, Education Code Section 17620 authorizes school districts to levy a fee against new development within the district to fund the construction, reconstruction, or modernization of school facilities. The district must demonstrate that the need for school construction or reconstruction results from development and that the fee does not exceed the cost of construction or reconstruction necessary to meet this need. Further, a local agency is prohibited from either denying approval of a land use project because of inadequate school facilities, or imposing school impact mitigation measures other than the designated fees provided for in the Government Code. Specifically, California Government Code Section 65995(3)(h), states that the payment of statutory fees is “deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization...on the provision of adequate school facilities.” Effective January 2006, if a statewide bond measure fails, SB 50 would again permit a City or County to deny a development approval that requires a legislative act on the basis of the inadequacy of school facilities.

Recreation

Quimby Act

In 1975, the Quimby Act (California Government Code Section 66477, as amended in 1982) granted cities and counties authority to pass ordinances requiring developers to set aside land, donate conservation easements, or pay fees for park improvements through in-lieu fees. The goal of the Quimby Act was to require developers to help mitigate the impacts of their developments. Special districts must work with cities and/or counties to receive parkland dedication and/or in-lieu fees. The Quimby Act sets a standard park space to population ratio of up to 3 acres of park space per 1,000 persons. Cities with a ratio of higher than three acres per 1,000 persons can set a standard of up to 5 acres per 1,000 persons for new development. Where in-lieu fees are imposed, state law requires the City to clearly show a reasonable relationship between the public need for a recreation facility or park land, and the type of development project upon which the fee is imposed. The fees must be paid and land conveyed directly to the local public agencies that provide park and recreation services to the affected community. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities.

Regional and Local Regulations

Menlo Park General Plan

The City of Menlo Park General Plan provides goals, policies, and programs relevant to environmental resources potentially affected by the project. Goals, policies, and programs that are applicable to the project are discussed further in this section.

Goal CIRC-1: Provide and maintain a safe, efficient, attractive, user-friendly circulation system that promotes a healthy, safe, and active community and quality of life throughout Menlo Park.

Policy CIRC-1.6: Emergency Response Routes. Identify and prioritize emergency response routes in the citywide circulation system.

Goal CIRC-2: Increase accessibility for and use of streets by pedestrians, bicyclists, and transit riders.

Policy CIRC-2.14: Impacts of New Development. Require new development to mitigate its impacts on the safety (e.g., collision rates) and efficiency (e.g., vehicle miles traveled (VMT) per capita) of the

circulation system. New development should minimize cut-through and high-speed vehicle traffic on residential streets; minimize the number of vehicle trips; provide appropriate bicycle, pedestrian, and transit connections, amenities and improvements in proportion with the scale of proposed projects; and facilitate appropriate or adequate response times and access for emergency vehicles.

Goal S-1: Assure a Safe Community. Minimize risk to life and damage to the environment and property from natural and human-caused hazards, and assure community emergency preparedness and a high level of public safety services and facilities.

Policy S-1.5: New Habitable Structures. Require that all new habitable structures to incorporate adequate hazard mitigation measures to reduce identified risks from natural and human-caused hazards.

Policy S-1.11: Visibility and Access to Address Safety Concerns. Require that residential development be designed to permit maximum visibility and access to law enforcement and fire control vehicles consistent with privacy and other design considerations.

Policy S-1.29: Fire Equipment and Personnel Access. Require adequate access and clearance, to the maximum extent practical, for fire equipment, fire suppression personnel, and evacuation for high occupancy structures in coordination with the Menlo Park Fire Protection District.

Policy S-1.30: Coordination with the Menlo Park Fire District. Encourage City-Fire District coordination in the planning process and require all development applications to be reviewed and approved by the Menlo Park Fire Protection District prior to project approval.

Policy S-1.31: Fire Resistant Design. Require new homes to incorporate fire resistant design and strategies such as the use of fire resistant materials and landscaping, and creating defensible space (e.g., areas free of highly flammable vegetation).

Policy S-1.38: Emergency Vehicle Access. Require that all private roads be designed to allow access for emergency vehicles as a prerequisite to the granting of permits and approvals for construction.

Goal H-4: New Housing. Use land efficiently to meet community housing needs at a variety of income levels, implement sustainable development practices and blend well-designed new housing into the community.

Policy H-4.1: Housing Opportunity Areas. Identify housing opportunity areas and sites where a special effort will be made to provide affordable housing consistent with other General Plan policies. Given the diminishing availability of developable land, Housing Opportunity Areas should have the following characteristics:

- For sites with significant health and safety concerns, development may be tied to nearby physical improvements, and minimum density requirements may be reduced.
- Site development should consider school capacity and the relationship to the types of residential units proposed (i.e., housing seniors, small units, smaller workforce housing, etc. in school capacity impact areas).

Goal LU-6: Preserve open-space lands for recreation; protect natural resources and air and water quality; and protect and enhance scenic qualities.

Policy LU-6.1: Parks and Recreation System. Develop and maintain a parks and recreation system that provides areas, play fields, and facilities conveniently located and properly designed to serve the recreation needs of all Menlo Park residents.

Policy LU-6.2: Open Space in New Development. Require new nonresidential, mixed use, and multiple dwelling development of a certain minimum scale to provide ample open space in the form of plazas, greens, community gardens, and parks whose frequent use is encouraged through thoughtful placement and design.

Policy LU-6.4 Park and Recreational Land Dedication. Require new residential development to dedicate land, or pay fees in lieu thereof, for park and recreation purposes.

Goal OSC-2: Provide Parks and Recreation Facilities. Develop and maintain a parks and recreation system to provide areas and facilities conveniently located, sustainable, properly designed and well maintained to serve the recreation needs and promote healthy living of all residents, workers and visitors to Menlo Park.

Policy OSC-2.1: Open Space for Recreation Use. Provide open space lands for a variety of recreation opportunities, make improvements, construct facilities and maintain programs that incorporate sustainable practices that promote healthy living and quality of life.

Policy OSC-2.2: Planning for Residential Recreational Needs. Work with residential developers to ensure that parks and recreational facilities planned to serve new development will be available concurrently with need.

Policy OSC-2.3: Recreation Requirements for New Development. Require dedication of improved land, or payment of fee in lieu of, for park and recreation land for all residential uses.

Policy OSC-2.4: Parkland Standards. Strive to maintain the standard of 5 acres of parkland per 1,000 residents.

Policy OSC-2.5: Schools for Recreational Use. Coordinate with the local school districts to continue to operate school sites for local recreation purposes.

Policy OSC-2.6: Pedestrian and Bicycle Paths. Develop pedestrian and bicycle paths consistent with the recommendations of local and regional trail and bicycle route projects, including the Bay Trail

Menlo Park Municipal Code

Chapter 15.16, Design and Improvement Standards

This chapter outlines the requirements for the dedication of land or payment of fees for park and recreational services and land for public right of access. Under Section 15.16.020, the City can require the dedication of land or the payment of fees, or a combination of both, for park and recreational purposes as a condition to the approval of a tentative subdivision or parcel map for residential development on one or more parcels of the subdivision. The amount of land dedicated or fees paid is calculated based upon residential density per the formula listed under Section 15.16.020(3), which is based on 5 acres per 1,000 persons.

Menlo Park Fire Protection District Fire Prevention Code

The MPFPD has adopted a District Fire Prevention Code to better serve the City in regard to fire safety. Adoption of the Fire Prevention Code allows the MPFPD to regulate permit processes, handling of hazardous material, emergency access, and fire protection systems such as fire extinguishers, fire alarms, and automatic sprinkler systems. The MPFPD Fire Prevention Code includes adoption of the 2019 California Fire Code, with some local amendments as presented in Ordinance 45-2019, and additional local specifications adopted under Ordinance 47-2019. The MPFPD Fire Prevention Code includes requirements for burning, fire apparatus access roads, traffic-calming devices, photovoltaic system installations, automatic fire sprinkler systems, fire alarm systems and components, and building access in the event of an emergency. The local specifications address specific climatic, geological, and topographical conditions in the MPFPD service area.

4.13.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to public services and recreation are based on Appendix G of the CEQA Guidelines. Potential project-related impacts analyzed in this section account for public services and recreation that occur or have the potential to occur on the project site. According to Appendix G of the CEQA Guidelines, a significant impact related to public services and recreation would occur if the project would:

- A. 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:
 - Fire Protection,
 - Police Protection,
 - Schools,
 - Parks/Recreation,
 - Other public facilities.
- B. 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.
- C. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.
- D. Result in a cumulatively considerable contribution to cumulative impacts associated with provision of public services, including any physical expansion of existing public service facilities.

4.13.4 Impacts and Mitigation Measures

Methodology

This evaluation of public services and recreation impacts is based on information obtained from review of available information from the City, including fire and police service agencies, Ravenswood City School District (CSD), and the Sequoia Union High School District (SUHSD).

Project Impacts

Impact 4.13-1 Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new facilities, 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: Fire Protection, Police Protection, Schools, Parks/Recreation, or other public facilities.

Fire Protection

As noted in Section 4.13.1, the current MPFPD service ratio is 1.20 fire protection staff members per 1,000 residents in the service area, which is above the MPFPD's goal of 1 fire-protection staff member per 1,000 residents. Implementation of the proposed project would result in an increase in population by approximately 1,110 residents, assuming the household population established in the ConnectMenlo EIR of 2.57 persons. (As of 2021, the California Department of Finance reports that the City has an average household size of 2.5 persons; the higher household size of 2.57 persons is used throughout this EIR to ensure a conservative impact analysis.) If there were no increase in MPFPD staffing, the ratio of fire protection staff members to residents within the service area would decrease from 1.20 to 1.19 per 1,000 when the proposed project is at full occupancy. This would continue to exceed the MPFPD's goal of 1 fire protection staff member per 1,000 residents in the service area. Therefore, the project would not result in the need for new or physically altered fire service facilities in order to maintain acceptable service ratios. In addition, no additional equipment would be needed to serve the proposed buildings at the project site because similarly sized buildings at this location and in the project vicinity are already served by the MPFPD. However, it is acknowledged that if there is no staffing increase, the demands for fire protection and emergency medical response services that could be generated by project residents could affect MPFPD's responses to emergencies by slightly reducing the staffing ratio. Based on the existing service area population of 90,000 people generating 8,500 calls for service annually, the additional 1,110 people within the project site could generate approximately 105 additional calls for service annually. To maintain the current staffing ratio, approximately one new fire-safety employee would need to be hired. Under MPFPD's Emergency Services and Fire Protection Impact Fee Program, an impact fee for fire protection services may be imposed on the project. Payment of this fee would ensure that the project would fund its fair share of the cost of needed capital facilities to serve the growing population within MPFPD's boundaries.

The ConnectMenlo EIR found that MPFPD has identified a budget to fund various improvements: capital improvements to each of the seven existing fire stations; hiring more personnel and increasing the daily staffing ratio, which was 0.86 firefighters per 1,000 residents in 2016; and remodeling or rebuilding Fire Station 77 – the nearest station to the project site – to keep up with future demand (City of Menlo Park 2016). In MPFPD's fiscal year 2021/2022 budget, funding was allocated to construct a new mechanic shop and dorm at Station 77 (MPFPD 2021b).

Additionally, the proposed project would be required to comply with all applicable MPFPD codes and regulations as well as standards related to fire hydrants (e.g., fire-flow requirements, spacing requirements), access points, and other fire code requirements. The fire hydrant placement and emergency vehicle access identified in the project site plans (Appendix B) meet Menlo Park Municipal Code requirements and typical MPFPD standards. In addition, prior to issuance of building permits, MPFPD would review the proposed site plans to ensure that adequate fire and emergency response infrastructure will be installed as part of project implementation.

The proposed project would not generate new residents in excess of the projected new population identified in the ConnectMenlo EIR. Specifically, the ConnectMenlo EIR projected that residential development anticipated under the ConnectMenlo General Plan Update could accommodate a population of 11,570 new residents within the Bayfront Area, which reflects an average household size of 2.57 persons (City of Menlo Park 2016). The ConnectMenlo EIR assumed that there would be 3,000 new multi-family residential units in the Bayfront Area and 1,500 new corporate campus units. As discussed in Section 4.0, Environmental Analysis, when added to other pending and approved projects in the Bayfront Area, the proposed project would result in a total of 3,098 multi-family units in the Bayfront Area. However, in the ConnectMenlo EIR analysis, the same average household size was applied to all of the 4,500 new units, thus the demand for fire protection services would not change relative to the demand evaluated in the ConnectMenlo EIR as a result of construction of the additional 98 multi-family units.

The population accommodated by the proposed project would not result in the ratio of MPFPD firefighting personnel to residents falling below MPFPD's staffing ratio goal and the project would not lead to a need for remodeled or expanded MPFPD facilities beyond the improvements to Station 77 that are already planned and funded. Consistent with the ConnectMenlo EIR, ongoing compliance with State and local laws, compliance with the MPFPD permitting process, and payment of applicable development fees would ensure that impacts of new development associated with the need for fire protection services would be less than significant. As discussed in the Non-CEQA Analysis portion of Section 4.14, Transportation, the project would not result in substantial increases in vehicle congestion and delay. Thus, the project would not cause the MPFPD response times to fall below the adopted performance goal. Therefore, fire protection impacts as a result of the project would be **less than significant**, consistent with the findings of the ConnectMenlo EIR.

Police Protection

The proposed project could affect the MPPD as a result of the increase in population within the project site. The project would result in an increase in population of approximately 1,110 residents an average household size of 2.57 persons, consistent with the assumptions of the ConnectMenlo EIR (City of Menlo Park 2016). As noted above, although the ConnectMenlo EIR assumed that 1,500 of the new residential units would be corporate campus units, the same average household size was applied to all of the 4,500 new units, thus the demand for police protection services would not change due to construction of 98 more multi-family units than were assumed in the ConnectMenlo EIR analysis.

The increase in population within the City due to the proposed project would result in a nominal decrease in the ratio of officers to residents. As stated in Section 4.13.1, MPPD currently has 43 sworn officers. As discussed in Section 4.12, Population and Housing, the estimated Citywide population in 2022 is 33,034 people, which is a slight decrease from the 2021 population of 34,825. The current staffing ratio is 1.30 officers per 1,000 residents. This would decrease to 1.26 officers per 1,000 residents at full occupation of the project. Police surveillance in the project area would continue, including routine patrols and responses to calls for assistance. The project would not require the MPPD to expand its current service boundary. Therefore, based on the existing service levels and the levels anticipated under the proposed project, it is not expected that new police facilities would be required. As such, police protection impacts as a result of the proposed project would be **less than significant**, consistent with the findings of the ConnectMenlo EIR.

Schools

The proposed project is located within the Ravenswood CSD and the SUHSD. The project would include construction of 432 dwelling units, which would result in an increase in population of approximately 1,110 residents. The Ravenswood

CSD student generation rate for multi-family units is 0.56 students per dwelling unit, thus the proposed project could generate approximately 242 new students within this district. SUHSD also has a student generation rate for multi-family units of 0.56 students per dwelling unit, thus, the proposed project could generate approximately 242 new high school students. However, it is noted that in response to the Notice of Preparation for this EIR, SUHSD submitted a comment letter that stated the original project design, which included 383 dwelling units, would generate 77 new high school students. This reflects a student generation rate of 0.2 students per dwelling unit. At this rate, the current proposal to construct 432 dwelling units would generate 86 high school students.

The ConnectMenlo EIR assumed that buildout of the General Plan would include construction of 3,672 new multi-family units within the Ravenswood CSD boundaries and 5,428 new multi-family units within the SUHSD boundaries. As discussed in Section 4.0, Environmental Analysis, at the time that the environmental analysis for the proposed project began, the City had or was processing applications for development of 2,816 multi-family units within the Bayfront Area. The proposed project, in combination with those previously submitted applications, would result in 3,248 multi-family units. Thus, at buildout of the pending projects including the proposed project there would be fewer multi-family units within each school district than was evaluated in the ConnectMenlo EIR.

Residential development, including the project, is subject to Senate Bill (SB) 50 school impact fees (established by the Leroy F. Greene School Facilities Act of 1998 and codified in Section 65996 of the State Government Code), which states that payment of school impact fees established by SB 50 is deemed to constitute full and complete mitigation for school impacts from development. The development impact fee is the source of school capital improvement funding provided by new development. The Ravenswood CSD is eligible to levy Level 1 development impact fees on new residential and development, and, by agreement with the SUHSD, Ravenswood CSD is entitled to receive 60 percent of \$3.36 per square foot of residential development, which is \$2.02 per square foot while SUHSD receives \$1.34 per square foot.

The ConnectMenlo EIR determined that any development associated with ConnectMenlo would be subject to payment of development impact fees, which under Senate Bill 50 (SB 50) are deemed to be full and complete mitigation. Therefore, because the proposed project would be subject to the mandatory payment of developer impact fees pursuant to SB 50, the proposed project would have a **less-than-significant** impact related to the need for remodeled or expanded school facilities. Further because the proposed project would not result in more dwelling units than were anticipated for each school district and therefore would not increase student generation for either district compared to the ConnectMenlo EIR analysis, the project is consistent with the findings of the ConnectMenlo EIR.

In response to the Notice of Preparation for this EIR, SUHSD identified concerns regarding student safety related to pedestrian and bicycle travel to the TIDE Academy and Menlo-Atherton High School, potential interference with bus transportation due to increased traffic volumes, potential health effects to students and staff due to increased air pollution, and potential interference with school operations due to increases in ambient noise levels in the vicinity. These issues are evaluated in Section 4.2, Air Quality, Section 4.11, Noise, and Section 4.14, Transportation, as summarized in the following paragraphs.

Impact 4.2-3 in Section 4.2 reports on the findings of two Health Risk Assessments (HRAs) – one focused on construction emissions and one focused on vehicle emissions. Both evaluations found that the project would not significantly exacerbate health risks in the project area. The HRAs were based on an exposure duration (residency time) of 30 years starting in the third trimester of pregnancy. This reflects a conservative analysis when applied to high school students who are typically present at a given campus for only four years and are of an age where the increased susceptibility of exposures in early life have reduced. This also reflects a conservative analysis for high school staff because they are also beyond the age where early-life stage exposures are no longer relevant.

Section 4.11 includes specific consideration of TIDE Academy as a sensitive receptor. Existing ambient noise monitoring was conducted at the northern corner of this campus, and the potential for project construction activities and project-generated traffic to increase noise levels at this campus was modeled. Table 4.11-8 identifies that the campus would not experience any increase in noise levels due to project construction, and Table 4.11-9 identifies that the campus would not experience any increase in noise levels associated with vehicle traffic on adjacent and nearby roadways. Finally, the analysis of heating, ventilation, and air conditioning (HVAC) noise levels included in Impact 4.11-1 found that HVAC equipment could generate noise levels at TIDE Academy ranging from 30 to 40 A-weighted decibels. Given the existing noise levels at TIDE Academy of 62.5 decibels, the noise from HVAC equipment would not be audible and would not increase the ambient noise levels at the campus.

As discussed in Impact 4.14-3, construction and operation of the proposed project would not create vehicular queues or unsafe conditions at TIDE Academy or along any of the current safe routes to school locations, and the campus's driveways and drop-off areas would not be impacted by project-generated traffic. As shown in Table 4.14-2, with implementation of the project's Transportation Demand Management plan and factoring in the elimination of vehicle trips associated with the existing buildings at the project site, the proposed project would generate a net increase of only 38 AM peak hour trips. This includes elimination of 43 existing trips arriving at the site and creation of 81 new trips leaving the site. As shown in Tables 4.14-9 and 4.14-10, the project would contribute to increases in delay at the intersections of Chrysler Drive with Jefferson Drive and with Independence Drive – each of which are currently unsignalized. These are the two intersections that would receive a large proportion of the project-generated traffic trips and that also serve as access to TIDE Academy. As shown in Table 4.14-11 both of these intersections are planned to be signalized and the proposed project would contribute to the costs of signalization through payment of the required Transportation Impact Fee. Signalization would improve the level of service at each intersection to acceptable levels and thus the project would neither cause nor contribute to vehicle delay that interferes with bussing and private vehicle access to TIDE Academy.

Parks/Recreation

The proposed project would result in an increase of approximately 1,110 residents within the project area. The proposed project would include one open space lot (Lot 1), consisting of 0.59 acres, which would provide passive recreation opportunities and a community gathering space for residents. The nearest parks to the project site include Bedwell Bayfront Park (155 acres at 1600 March Road) located approximately 0.4 miles to the north and Belle Haven School Field (1360 Almanor Avenue) located approximately 1.04 miles to the east. Additionally Flood Park is approximately 1.8 miles driving distance from the site and includes 26 acres of active and passive recreation facilities. The City has a joint use agreement with Belle Haven school to allow public use of the school's basketball and baseball facilities outside of normal school use.

The ConnectMenlo EIR found that the City currently has approximately 245 acres of parkland, which provides a ratio of 7 acres of parkland for every 1000 residents, that buildout of the General Plan Update would generate 11,570 new residents, and that there is adequate capacity in the study area to maintain the City's adopted goal of providing 5 acres of parkland per 1,000 residents. The proposed project would not generate more residents than were anticipated under the ConnectMenlo EIR. Although the ConnectMenlo EIR assumed that 1,500 of the new residential units in the Bayfront Area would be corporate campus units, the same average household size was applied to all of the 4,500 new Bayfront units, thus the demand for parks and recreation would not change due to construction of more multi-family units.

Therefore, given the availability of public parks, the increase in population as a result of development of the project is not anticipated to increase the use of parks and recreational resources such that substantial physical deterioration would occur; impacts would be **less than significant**, consistent with the findings of the ConnectMenlo EIR.

Mitigation Measures

No mitigation measures are required.

Impact 4.13-2 Would the project increase the use of existing neighborhood or regional parks, or other recreational facilities requiring the construction of new parks?

The proposed project would result in an increase of approximately 1,110 residents within the project area which would result in an increase in use of existing parks. As noted above, the project site is within approximately 0.4 miles of the 155-acre Bedwell Bayfront Park, approximately one mile from Belle Haven School, and approximately 1.8 miles from the 26-acre Flood Park. As discussed in Impact 4.11-1, the proposed project would include an open space lot consisting of 0.59 acres that would provide passive recreational opportunities and a community gathering space for residents and could lessen the potential increase in use of other passive recreation facilities in the project vicinity. Further, the proposed project would not generate a new residential population that exceeds the population projections in the ConnectMenlo EIR. Thus, consistent with the findings of the ConnectMenlo EIR, the proposed project would not result in a substantial increase in use of existing parks, the city's parkland ratio would meet the City's standard of having 5 acres of parkland for every 1,000 residents, and construction of new parks would not be required. Therefore, impacts related to the increase in use of existing parks and recreational facilities would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.13-3 Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

As noted above, the proposed project would include a publicly accessible park near the center of the project site. The park has been integrated into the project design and would not require any offsite improvements or unusual construction activity. Thus, the environmental effects that could result from development and operation of the park have been evaluated throughout this EIR and no additional adverse physical environmental effects would occur. As discussed in Impact 4.13-2, the project would not result in a substantial increase in use of existing parks and thus would not require construction or expansion of recreational facilities other than the onsite park. This impact would remain **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

This analysis of potential cumulative impacts to public services and recreation considers the effects of buildout under the City's General Plan. This includes ongoing development throughout the City of Menlo Park, particularly within the Bayfront Area, as anticipated under the ConnectMenlo General Plan Update and as summarized in

Section 4.0 Environmental Analysis. This geographic area is appropriate for consideration of cumulative impacts to public services and recreation because, as discussed in the ConnectMenlo EIR, future development would likely result in an increase in calls for emergency services, as well as an increase in demand for public facilities within the project vicinity.

Impact 4.13-4 Would the project contribute to a cumulative increase in demand for fire services, which could result in the need to construct new fire facilities?

The ConnectMenlo EIR contained a discussion of cumulative impacts to fire protection under Impact PS-2. The analysis found that a significant cumulative impact would occur if growth from the anticipated development under the General Plan were to exceed the ability of the MPFPD to serve residents and businesses within its service boundaries. The analysis determined that as a result of the anticipated growth in the MPFPD service area, the expansion of Station 77 is required to adequately serve the Bayfront Area. As discussed in Impact 4.13-1, the proposed project would not generate a new residential population that exceeds the population projections within the ConnectMenlo EIR. The project site is located in the Bayfront Area of the City and would be served by Station 77; thus, implementation of the proposed project would contribute to the cumulative increase in demand for fire services from Station 77. However, the proposed project would be required to pay developer impact fees which would provide funding to MPFPD to provide fire protection services to its service area, including funding for the expansion of Station 77. In conclusion, with the payment of the required impact fees, the proposed project would have a **less than significant** impact associated with cumulative increase in demand for fire services, consistent with the findings of the ConnectMenlo EIR.

Mitigation Measures

No mitigation measures are required.

Impact 4.13-5 Would the project contribute to a cumulative increase in demand for police services, which could result in the need to construct new police facilities?

The proposed project would include the construction of 432 dwelling units and would result in an increase of approximately 1,110 residents within the Bayfront Area. As discussed in the ConnectMenlo EIR, which evaluated buildout of the General Plan, growth anticipated under the General Plan is not expected to result in a substantial increase in demand for police services. As discussed in Impact 4.13-1, the proposed project would not generate a new residential population that exceeds the population projections within the ConnectMenlo EIR. As such, development of the proposed project would not require the construction of new police facilities. The proposed project would have **no impact** associated with the cumulative increase in demand for police services, consistent with the findings of the ConnectMenlo EIR.

Mitigation Measures

No mitigation measures are required.

Impact 4.13-6 Would the project contribute to a cumulative increase in demand for schools, which could result in the need to construct of new school facilities?

The proposed project would include the construction of 432 dwelling units and would result in an increase of approximately 1,110 residents within the Bayfront Area. As discussed in the ConnectMenlo EIR, which evaluated

buildout of the General Plan, growth anticipated under the General Plan is not expected to result in a substantial increase in demand for schools. As discussed in Impact 4.13-1, the proposed project would not generate a new residential population that exceeds the population projections within the ConnectMenlo EIR and specifically the number of multi-family dwelling units and associated numbers of new students for both the Ravenswood CSD and SUHSD would remain below the assumptions identified in the ConnectMenlo EIR. Further the project applicant would be required to pay school impact fees to provide for improvements and expansions at existing campuses. Development of the proposed project would not require construction of new schools. The proposed project would have **no impact** associated with the cumulative increase in demand for schools, consistent with the findings of the ConnectMenlo EIR.

Mitigation Measures

No mitigation measures are required.

Impact 4.13-7 Would the project contribute to a cumulative increase in demand for parks or other recreational/public facilities, which could result in the need to construct new parks or facilities?

The proposed project would include the construction of 432 dwelling units and would result in an increase of approximately 1,110 residents within the Bayfront Area. As discussed in the ConnectMenlo EIR, which evaluated buildout of the General Plan, growth anticipated under the General Plan is not expected to result in a substantial increase in demand for parks and recreation facilities. As discussed in Impact 4.13-1, the proposed project would not generate a new residential population that exceeds the population projections within the ConnectMenlo EIR, and residents of the project site would be located within two miles of over 170 acres of existing parks, that provide both active and passive recreation. Further, the project would include construction of an onsite park to meet some of the project resident's recreation needs. As such, development of the proposed project would not require the construction of new parks and recreation facilities. The proposed project would have **no impact** associated with the cumulative increase in demand for parks, consistent with the findings of the ConnectMenlo EIR.

Mitigation Measures

No mitigation measures are required.

4.13.5 References Cited

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4.14 Transportation

This section evaluates potential transportation and circulation impacts that could result from implementation of the 123 Independence Drive Residential project (project; proposed project). Specifically, this section describes existing and future transportation and circulation characteristics within the study area, describes analysis methodologies and regulatory framework, identifies potential transportation impacts of the proposed project, and identifies the recommended mitigation measures for identified significant impacts.

As discussed in Chapter 2, Introduction, and Chapter 4, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this environmental impact report (EIR), one in January and February 2021, and one in September and October 2021. Public comments received in response to the NOPs pertaining to transportation and circulation include a letter from Caltrans specifying that the section should include a vehicle miles traveled (VMT) screening analysis, discussion relating to funding sources and mitigations along state facilities, and the assessment of travel demand. Another comment letter was received from the Sequoia Union High School District specifying that the section should assess impacts on travel routes near TIDE Academy school and expected traffic patterns as it relates to students' safety and site circulation of the proposed project. Both NOPs and the comments received in response to them are provided in Appendix A of this EIR.

For purposes of disclosing potential transportation impacts, projects in the City of Menlo Park (City) use the City's current Transportation Impact Analysis (TIA) Guidelines (2020) to ensure compliance with both state and local requirements. Up until July 1, 2020, the City's TIA Guidelines used roadway congestion or level of service (LOS) as the primary study metric for planning and environmental review purposes. However, Senate Bill (SB) 743 required the Governor's Office of Planning and Research (OPR) to establish a new metric for identifying and mitigating transportation impacts under CEQA in an effort to meet the state's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through more active transportation. CEQA Section 21099(b)(2) states that upon certification of the revised guidelines for determining transportation impacts pursuant to CEQA Section 21099(b)(1), automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment under CEQA. OPR identified VMT as the required CEQA transportation metric for determining potentially significant environmental impacts.

In December 2018, the California Natural Resources Agency certified and adopted the CEQA Guidelines update package, including the section implementing SB 743 (CEQA Guidelines Section 15064.3). OPR developed a Technical Advisory on Evaluating Transportation Impacts in CEQA (2018), which contains OPR's technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. As of July 1, 2020, VMT (not LOS) is the only legally acceptable threshold for transportation-related environmental impacts pursuant to CEQA. A local VMT threshold was adopted by City Council on June 23, 2020, which incorporated local VMT thresholds into the updated TIA Guidelines. The City Council, however, retained the requirement that the TIA also analyze LOS for (non-CEQA) planning purposes.

Therefore, the TIA includes both an assessment of VMT impacts using local VMT thresholds included in the updated TIA Guidelines for purposes of determining potentially significant environmental impacts pursuant to CEQA, as well as a summary of the LOS analysis for assessment of local congestion for planning purposes. However, in accordance with SB 743 for purposes of determining potentially significant environmental impacts, this EIR will focus on VMT as the threshold of significance instead of LOS. Because the City Council approved TIA Guidelines

also require an analysis of LOS for local planning purposes, that information is summarized in the Non-CEQA Analysis at the end of this section and Appendix J1, Transportation Impact Analysis, of this EIR.

In addition to the documents incorporated by reference, as identified in Section 2.7 of Chapter 2, Introduction of this EIR, the following analysis is based, in part, on the following sources:

- Transportation Impact Analysis (TIA) prepared by Dudek in September 2022 (Appendix J1)
- Transportation Demand Management Plan prepared by Hexagon Transportation Consultants, Inc., October 19, 2021 (Appendix J2)

4.14.1 Environmental Setting

This section describes the existing transportation network in the vicinity of the project site, including the roadway, transit, pedestrian, and bicycle systems.

Existing Street System

Characteristics of the existing street system within the study area are described below.

US 101 is a north-south, 10-lane, divided highway located south of the project site. The highway serves as a regional transportation corridor on the peninsula for the project, with access provided via the Marsh Road interchange. US 101 is designated as a Freeway/Expressway by the City of Menlo Park General Plan. The posted speed limit is 65 mph within the study area.

Marsh Road is a north-south, generally four-lane divided roadway with a raised median and left-turn pockets. The roadway is located west of the project site and connects the project to major corridors, including the Bayfront Expressway and US 101. Marsh Road is designated as a Thoroughfare from Bayfront Expressway to Scott Drive and Mixed-Use Collector from Scott Drive to Bay Road by the City of Menlo Park General Plan. The posted speed limit is 35 mph. Bicycle and pedestrian facilities and bus stops for the City of Menlo Park M3-Marsh Road Shuttle (M3 shuttle) are provided along the majority of the roadway within the study area.

Bayfront Expressway (State Route 84 or SR-84) is an east-west, six-lane, divided roadway with a raised median and left-turn pockets throughout the study area. The expressway connects the project site to major corridors and communities, including Interstate 880 (I-880) via the Dumbarton Bridge and communities in the East Bay. Bayfront Expressway is designated as a Freeway/Expressway by the City of Menlo Park General Plan. The posted speed limit is 50 mph within the vicinity of the project site. Sidewalk, curb, and gutters are not provided along the majority of Bayfront Expressway within the study area; however, pedestrian crosswalks and bicycle lanes are provided at major intersections connecting bicycle and pedestrian facilities along adjacent streets to the Class I Bike Path that runs parallel to westbound traffic on the expressway.

Independence Drive is generally an east-west, undivided, two-lane roadway with a two-way left-turn lane (TWLTL) located along the project site's southern boundary and is designated as a Mixed Use Collector by the City of Menlo Park General Plan. Independence Drive serves as the primary roadway to and from the project site with bicycle and pedestrian facilities present throughout the roadway, except that there is no sidewalk, curb, or gutter along the northern edge of the roadway. Bike facilities along Independence drive are considered Class III Bike Routes. The posted speed limit is 25 mph.

Chrysler Drive is a north-south trending, undivided, two-lane roadway located immediately east of the project site and connects the project to major corridors, such as Bayfront Expressway. Chrysler Drive is considered a Mixed Use Collector by the City of Menlo Park General Plan. Bicycle and pedestrian facilities are present throughout the roadway, except that there is no sidewalk, curb, or gutter along the western edge of the roadway between Jefferson Drive and Constitution Drive. A bus stop for the M3 shuttle is present at the Chrysler Drive/Constitution Drive intersection, as well as the Chrysler Drive/Independence Drive intersection. The posted speed limit is 25 mph.

Constitution Drive is an east-west, undivided, two-lane roadway located immediately north of the project site that connects the project site to major corridors, such as Marsh Road. Constitution Drive is designated as a Mixed Use Collector by the City of Menlo Park General Plan. Bicycle and pedestrian facilities are located throughout the roadway. Bicycle facilities located along Constitution Drive are designated as Class II Bike Lanes per the City of Menlo Park's Draft Transportation Master Plan (TMP) (City of Menlo Park 2020b). Bus stops for the M3 shuttle are present along the westbound portion of the road. The posted speed limit is 30 mph.

Jefferson Drive is a generally east-west, undivided, two-lane roadway located east of the project site. Jefferson Drive is designated as a Mixed Use Collector by the City of Menlo Park General Plan. Bicycle and pedestrian facilities and a bus stop for the M3 shuttle are located along the roadway. No posted speed limit is present.

Chilco Street is a north-south, generally undivided, two-lane roadway located approximately 0.5 miles east of the project site. From Bayfront Expressway to Hamilton Avenue, Chilco street is considered a Mixed Use Collector, and considered a Neighborhood Collector from Hamilton Avenue to Newbridge Street by the City of Menlo Park General Plan. A vegetative divider between lanes is present near the Bayfront Expressway intersection. Bicycle facilities are present along the road's non-residential portions, while parking is generally permitted along the road's residential portions south of Hamilton Avenue. Pedestrian facilities and bus stops for the City of Menlo Park M1-Crosstown Shuttle (M1 shuttle) are located throughout the roadway. The posted speed limit is 40 mph within the study area.

Scott Drive is an east-west, two-lane, undivided roadway located to the south of the project site. Scott Drive is designated as a Local Access Road by the City of Menlo Park General Plan. Eastbound portions of the roadway generally permit parking and have pedestrian facilities. Bus stops for the M3 shuttle are present along the Scott Drive/Marsh Road intersection. No posted speed limit is present.

Florence Street-Bohannon Drive is a predominantly east-west, undivided, two-lane roadway with a TWLTL located south of the project site. Florence Street-Bohannon Drive is designated as a Local Access road by the City of Menlo Park General Plan. The Marsh Road intersection separates Florence Street to the west and Bohannon Drive to the east. Bicycle, pedestrian, and parking facilities are present on Florence street. Bicycle facilities along Florence Street are designated as Class II Bike Lanes per the TMP. Bus stops for SamTrans Route 207 bus and M3 shuttle are located along Florence Street and Bohannon Drive, respectively. The posted speed limit is 25 mph within the study area.

Bay Road is an east-west, two-lane, undivided roadway located approximately 0.5 miles south of the project site, connecting Marsh Road with Willow Road to the east. Bay Road is designated as a Neighborhood Collector by the City of Menlo Park General Plan. Bicycle facilities are present on both sides of the roadway, and pedestrian facilities are present along the road's westbound portion. Bicycle facilities along Bay Road are designated as Class II Bike Lanes per the TMP. Bus stops for Route 83 of the San Mateo County Transit District's SamTrans bus service are located throughout the roadway. The posted speed limit is 30 mph within the study area.

Middlefield Road is an east-west undivided roadway with left-turn pockets, located approximately 1.3 miles south of the project site. Middlefield Road is designated as an Avenue-Mixed Use by the Menlo Park General Plan. Bicycle, pedestrian facilities, and bus stops for SamTrans Route 296 and 397 buses are located along the roadway. Bicycle facilities along Middlefield Road are designated as Class II Bike Lanes per the TMP. The posted speed limit is 30 mph within the study area.

Willow Road is a north-south, four to six-lane divided roadway with left-turn lane pockets. The roadway is located approximately 1.5 miles east of the project site and serves as a connection between major corridors, including US 101 and Bayfront Expressway. Willow Road is designated as a Boulevard from Bayfront Expressway to Bay Road, an Avenue-Mixed Use from Bay Road to Middlefield Road, and a Neighborhood Collector from Middlefield Road to Alma Road, per the City of Menlo Park General Plan. Bicycle and pedestrian facilities and bus stops for SamTrans Route 296 and 397 buses, Dunbarton Express bus, and M1 shuttle are provided along the roadway. Bicycle facilities located along Willow Road are designated as Class II Bike Lanes per the TMP. Parking is generally not permitted along the roadway, except for some portions in residential areas. The posted speed limit ranges from 25 to 40 mph within the study area.

University Avenue is a north-south two to four-lane divided roadway with left-turn pockets located approximately 1.9 miles east of the project site. University Avenue is designated as a Boulevard according to the City of Menlo Park General Plan. Similar to Willow Road, University Avenue connects major corridors, including US 101 and Bayfront Expressway. Bicycle and pedestrian facilities and bus stops for SamTrans Route 280, 281, 296, and 397 buses, Dunbarton Express bus, and M1 shuttle are provided along the roadway. Bicycle facilities along University Avenue are classified as Tier II Bike Paths per the TMP. While parking is generally not permitted, some stretches of the road allow street parking. The posted speed limit is 25 mph within the study area.

Existing Transit Facilities

Figure 4.14-1, Existing Transit Facilities, shows the existing transit facilities within the study area. The project site is served by passenger rail and bus services. The Caltrain commuter rail system serves the Menlo Park Station, located at 1120 Merrill Street, approximately 2 miles south of the project site. The study area is also served by the Menlo Park Shuttle Service and the SamTrans bus service, which collectively provide local and regional public transit within the project area.

Caltrain

Caltrain is a commuter railroad operating between San Francisco and San Jose, with limited service to Gilroy. As of 2022, Caltrain's fleet consists of 29 locomotives, 134 passenger cars, and 52 bike cars that service 31 stations over a 51-mile corridor. Caltrain is owned and operated by the Peninsula Corridor Joint Powers Board, which is made up of representatives from the City and County of San Francisco, the San Mateo County Transit District, and the Santa Clara Valley Transportation Authority (Caltrain 2022).

As noted above, the proposed project would be served by Caltrain's Menlo Park Station, which is located approximately 2.0 miles to the south of the project. Weekday headways for northbound and southbound trains at this station average around 45 to 60 minutes.

Menlo Park Shuttle Service

The City of Menlo Park offers a free shuttle service for local community destinations and commuters working in business parks. The commuter shuttles serve Marsh Road and Willow Road business parks from the Caltrain station during commute hours by the M3 and M1 shuttles, respectively. However, the project site would mainly be served by the M3 shuttle. The M3 Shuttle serves the Menlo Park Caltrain Station, primarily operating along Marsh Road and roadways within the adjacent business parks, Middlefield Road, and Oak Grove Avenue. The nearest M3 shuttle stop is located at the intersection of Chrysler Drive and Independence Drive, immediately southeast of the project site. The M3 shuttle provides morning and afternoon commuter service with 60-minute peak service headways to synchronize with Caltrain's peak period schedule (City of Menlo Park 2022).

San Mateo County Transit District (SamTrans)

SamTrans bus services are part of the regional public transit and transportation effort conducted by the County of San Mateo to provide bus service throughout San Mateo County and into parts of San Francisco and Palo Alto. In total, SamTrans operates 76 bus routes throughout its service area (SamTrans 2022). Route 270 is the closest bus route to the project site, with stops along Haven Avenue and East Bayshore Road. Route 270 serves the Redwood City Transit Center, primarily operating along East Bayshore Road, Jefferson Drive, Broadway Street, Bay Road, and Marsh Road. The 3719 Haven Avenue bus stop would serve as the nearest stop to project site, located approximately 0.25 miles northwest. Route 270 provides 60-minute headways during weekday peak service (SamTrans 2022).

Existing Pedestrian Facilities

Pedestrian Facilities

The City of Menlo Park is continually looking for ways to improve the safety and availability of pedestrian facilities for commuters and residents within the City. The City's TMP indicates that, while the City's sidewalk network is largely complete, there are still a number of challenges that can make walking difficult for many residents. These issues include difficulty crossing multi-lane, high-traffic volume streets, lack of buffers between sidewalks from traffic, and obstruction of sidewalks by municipal and utility infrastructure (e.g., utility poles) (City of Menlo Park 2020b).

Land uses around the project site are predominantly comprised of offices, which serve as areas with active transportation users. Sidewalks are present along the eastbound portions of Independence Drive. Within Chrysler Drive, sidewalks are present along the southbound portion of the roadway near the road's intersection with Independence Drive and along all of the northbound portion of the road. Sidewalks are also present along the westbound portion of Constitution Drive and along a small section of the eastbound section of the roadway. These roadways are outfitted with storm drain outlets that either flow into the municipal storm drain system or directly into vegetated swales. Designated crosswalks are also present along most of the intersections near the project site.

Existing Bicycle Facilities

Figure 4.14-2, Existing and Proposed Bicycle Facilities, shows the existing and proposed bicycle facilities within the study area. The City's TMP also includes specific class designations for bicycle facilities within the City. The following designations are used to classify bicycle facilities with the City:

- **Class I Shared Use Path** allows for two-way, off-street bicycle use and also may be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. These facilities are frequently found in

parks, along rivers, beaches, and in greenbelt or utility corridors where there are few conflicts with motorized vehicles. Path facilities can also include amenities such as lighting, signage, and fencing.

- **Class II On-Street Bicycle Lanes** is designated exclusively for bicycle travel. On-street bicycle lanes are separated from vehicle lanes by striping and can include pavement stencils and other treatments. On-street bicycle lanes are most appropriate on collector streets with single-lane of traffic in each direction where moderate traffic volumes and speeds are too high for shared-roadway use.
- **Class III: Shared Roadways** allows for bicyclists and motor vehicles to use the same roadway space. These facilities are typically used on roads with low speeds and traffic volumes; however, they can be used on higher volume roads with wide outside lanes or shoulders. A motor vehicle driver will usually have to cross over into the adjacent lane to pass a bicyclist unless a wide outside lane or shoulder is provided.
- **Class IV: Separated Bikeways** is an exclusive bike facility that combines the user experience of a separated path with the on-street infrastructure of an on-street bike lane. A separated bikeway is physically separated from motor traffic by a vertical element and distinct from the sidewalk. In situations where on-street parking is allowed, separated bikeways are located between the parking and the sidewalk.

The closest designated bicycle facility is a Class III Bike Route along Independence Drive, located immediately south of the project site. In addition, an existing Class I Bike Path is provided along Bayfront Expressway and Class II Bike Lanes are present on Constitution Drive, Jefferson Drive, and Chrysler Drive. As indicated in the TMP, proposed bicycle facilities in the vicinity of the project site include an extension of the Class II Bike Lane along Haven Avenue Drive and a Class II Bike Lane along Marsh Road, from Bayfront Expressway to Bay Road.

4.14.2 Regulatory Framework

Federal Regulations

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) of 1990 provides comprehensive rights and protections to individuals with disabilities. The goal of the ADA is to assure equality of opportunity, full participation, independent living, and economic self-sufficiency for people with disabilities. To implement this goal, the United States Access Board, an independent federal agency created in 1973 to ensure accessibility for people with disabilities, has created accessibility guidelines for public rights-of-way. While these guidelines have not been formally adopted, they have been widely followed by jurisdictions and agencies nationwide in the last decade. The guidelines, last revised in July 2011, address various issues, including roadway design practices, slope and terrain issues, pedestrian access to streets, sidewalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way. The guidelines apply to all proposed roadways in the project area. The City's ADA Coordinator works out of City Hall to manage the City's efforts in complying with applicable accessibility regulations.

State Regulations

Assembly Bill 32

With Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, the State of California committed itself to reducing GHG emissions to 1990 levels by 2020. The California Air Resources Board (CARB) is coordinating the response to comply with AB 32. In 2007, CARB adopted a list of early action programs that could be put in place by January 1, 2010. In 2008, CARB defined its 1990 baseline level of emissions, and by 2011 it completed its major

rule making for reducing GHG emissions. Rules on emissions, as well as market-based mechanisms like the proposed cap and trade program, took effect in 2012. On December 11, 2008, CARB adopted its Proposed Scoping Plan for AB 32. This scoping plan included the approval of SB 375 as the means for achieving regional transportation related GHG targets. SB 375 provides guidance on how curbing emissions from cars and light trucks can help the state comply with AB 32.

Senate Bill 32

In 2016, the Legislature enacted SB 32 as a follow-up to AB 32. Health and Safety Code section 38566, added by SB 32, provides that “[i]n adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by [Division 25.5 of the Health and Safety Code], [CARB] shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030.” In other words, SB 32 requires California, by 2030, to reduce its statewide GHG emissions to 40 percent below those that occurred in 1990.

Senate Bill 375

SB 375 requires metropolitan planning organizations (MPOs) to prepare a sustainable communities strategy (SCS) as part of their regional transportation plans (RTPs). MPOs must consider the information in the general plans of the municipalities in their jurisdiction when undertaking transportation planning and funding. The SCS demonstrates how transportation planning for the region will support attainment of the region’s GHG reduction targets for cars and light-duty vehicles. Specifically, the SCS must identify a transportation network that is integrated with the forecasted development pattern of the region and will reduce GHG emissions from automobiles and light trucks in accordance with targets set by the CARB. In 2017, the State Legislature passed SB 150, which requires CARB to prepare a report beginning in 2018 and every 4 years thereafter analyzing the progress made by each MPO in meeting the regional GHG emission reduction targets. The Metropolitan Transportation Commission (MTC) serves as the MPO for the Bay Area, including San Mateo County and Menlo Park. SB 375 also provides streamlining (i.e., limited CEQA review) for certain transit priority projects that are consistent with the SCS.

Senate Bill 743

On September 27, 2013, Governor Brown signed SB 743, which became effective on January 1, 2014. The purpose of SB 743 is to streamline the review under the CEQA process for several categories of development projects including the development of infill projects in transit priority areas and to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions. SB 743 adds Chapter 2.7: Modernization of Transportation Analysis for Transit Oriented Infill Projects to the CEQA Statute (Public Resources Code Section 21099). Section 21099(d)(1) provides that aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment. In addition, SB 743 mandates that alternative metric(s) for determining impacts relative to transportation shall be developed to replace the use of LOS in CEQA documents.

In the past, environmental review of transportation impacts focused on the delay that vehicles experience at intersections and on roadway segments, which is often measured using LOS. Mitigation for impacts on vehicular delay often involves increasing capacity such as widening a roadway or the size of an intersection, which in turn encourages more vehicular travel and greater pollutant emissions. Additionally, improvements to increase vehicular capacity can often discourage alternative forms of transportation such as biking and walking. SB 743 directed the

OPR to develop an alternative metric(s) for analyzing transportation impacts in CEQA document and required that the alternative promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution, development of multimodal transportation systems, and providing clean, efficient access to destinations. Under SB 743, it was anticipated that the focus of transportation analysis would shift from vehicle delay to VMT within transit-priority areas (i.e., areas well served by transit).

Pursuant to SB 743, OPR released the draft revised CEQA Guidelines in November 2017, recommending the use of VMT for analyzing transportation impacts for all projects. Additionally, OPR released Updates to Technical Advisory on Evaluating Transportation Impacts in CEQA, to provide guidance on VMT analysis. In this Technical Advisory, OPR provides its recommendations to assist lead agencies in screening out projects from VMT analysis and selecting a significance threshold that may be appropriate for their particular jurisdictions. While OPR's Technical Advisory is not binding on public agencies, CEQA allows lead agencies to "consider thresholds of significance ... recommended by other public agencies, provided the decision to adopt those thresholds is supported by substantial evidence" (CEQA Guidelines Section 15064.7[c]).

In December 2018, the CEQA Guidelines were updated to add new Section 15064.3, Determining the Significance of Transportation Impacts, which describes specific considerations for evaluating a project's transportation impacts using the VMT methodology.

CEQA Guidelines Section 15064.3(b) is divided into four subdivisions as follows:

1. **Land Use Projects.** VMT exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease VMT in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
2. **Transportation Projects.** Transportation projects that reduce, or have no impact on, VMT should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.
3. **Qualitative Analysis.** If existing models or methods are not available to estimate the VMT for the particular project being considered, a lead agency may analyze the project's VMT qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.
4. **Methodology.** A lead agency has discretion to choose the most appropriate methodology to evaluate a project's VMT, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project.

OPR's regulatory text indicated that a public agency may immediately commence implementation of the new transportation impact guidelines, and that the guidelines must be implemented statewide by July 1, 2020. However, the OPR Technical Advisory allows local agencies to retain their congestion-based LOS standards in general plans and for project planning purposes.

California Department of Transportation

Caltrans is responsible for planning, designing, constructing, operating, and maintaining the state highway system. Federal highway standards are implemented in the state by Caltrans. Any improvements or modifications to the state highway system within the study area would need to be approved by Caltrans.

On May 20, 2020, Caltrans adopted its VMT-Focused Transportation Impact Study Guide (TISG). The TISG provides guidance on how Caltrans will review land use projects, with a focus on VMT analysis and supporting state land use goals, state planning priorities, and GHG emission reduction goals. The TISG also identifies land use projects' possible transportation impacts to the state highway system and potential non-capacity increasing mitigation measures.

The TISG emphasizes that VMT analysis is Caltrans' primary review focus, and references OPR's 2018 Technical Advisory as a basis for the guidance in the TISG. Notably, the TISG recommends the use of the recommended thresholds in the Technical Advisory for land use projects. The TISG also references the Technical Advisory for screening thresholds that would identify projects and areas presumed to have a less-than-significant transportation impact. Caltrans supports streamlining for projects that meet these screening thresholds because they help achieve VMT reduction and mode shift goals.

On July 2, 2020, Caltrans released the Interim Land Development and Intergovernmental Review Safety Review Practitioners Guidance. The purpose of the interim guidance is to provide instructions for conducting safety impact analysis for proposed land use projects and plans in compliance with CEQA. The guidance is focused on potential safety impacts affecting the state highway system and sets expectations for Caltrans staff and lead agencies about what information and factors to consider in safety impact analysis. Caltrans recommends lead agencies use a similar approach, specifically Local Roadway Safety Plans and Systemic Safety Analysis Reports, as a model for safety analysis of the local transportation network.

Regional and Local Regulations

Metropolitan Transportation Commission

MTC was created by the California Legislature in 1970 to plan and provide a cohesive vision for the Bay Area's transportation system. The Commission's scope over the years has expanded to address other regional issues, including housing and development. MTC provides planning, funding, coordination and technical assistance to cities, counties, transit agencies and other partners to bring the region together—to make life better for residents and make the Bay Area's transportation system more resilient to future challenges. MTC directly distributes more than \$1 billion per year to local public transit agencies and other recipients and prioritizes requests from local agencies for millions more in state and federal funds. In addition to coordinating with local agencies, MTC distributes state and federal funding through the Regional Transportation Improvement Program.

Plan Bay Area

Plan Bay Area 2050 is a state-mandated, integrated long-range transportation and land use plan that is required by SB 375. All metropolitan regions in California must complete a Sustainable Communities Strategy as part of a Regional Transportation Plan. This strategy considers transportation measures in light of land use and housing to meet greenhouse gas reduction targets set by the California Air Resources Board. Plan Bay Area 2050 is a long-range plan charting the course for the future of the nine-county San Francisco Bay Area. Plan Bay Area 2050 focuses on four key elements—housing, the economy, transportation and the environment—and identifies goals, policies, and actions to make the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges. The latest plan was developed in 2021. The agencies estimate approximately 72 percent of housing and 48 percent of job growth will occur in the priority development areas between 2015 and 2050. The project site is not located within a priority development area, which are areas designated for growth by local governments.

City of Menlo Park General Plan

Transportation-related policies are included in the Circulation Element of the Menlo Park General Plan (City of Menlo Park 2016a). This section was added to the General Plan to provide framework for transportation planning within the city and was most recently updated in 2016 when the City updated its Land Use and Circulation Elements (commonly referred to as ConnectMenlo). The framework is based on existing practices and future considerations in land use, population, and regional transportation. The General Plan Circulation Element establishes a vision for the city with goals related to sustainability, reliability, and safety for all modes of transportation. The transportation goals for Menlo Park that relate to the proposed project include:

Goal CIRC-1: Provide and maintain a safe, efficient, attractive, user-friendly circulation system that promotes a healthy, safe, and active community and quality of life throughout Menlo Park.

Policy CIRC-1.7: Bicycle Safety. Support and improve bicyclist safety through roadway maintenance and design efforts.

Policy CIRC-1.8: Pedestrian Safety. Maintain and create a connected network of safe sidewalks and walkways within the public right of way ensuring that appropriate facilities, traffic control, and street lighting are provided for pedestrian safety and convenience, including for sensitive populations.

Goal CIRC-2: Increase accessibility for and use of streets by pedestrians, bicyclists, and transit riders.

Policy CIRC-2.1: Accommodating All Modes. Plan, design and construct transportation projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists, people with mobility challenges, and persons of all ages and abilities.

Policy CIRC-2.2: Livable Streets. Ensure that transportation projects preserve and improve the aesthetics of the city.

Policy CIRC-2.3: Street Classification. Utilize measurements of safety and efficiency for all travel modes to guide the classification and design of the circulation system, with an emphasis on providing “complete streets” sensitive to neighborhood context.

Policy CIRC-2.4: Equity. Identify low-income and transit-dependent districts that require pedestrian and bicycle access to, from, and within their neighborhoods.

Policy CIRC-2.7: Walking and Biking. Provide for the safe, efficient, and equitable use of streets by pedestrians and bicyclists through appropriate roadway design and maintenance, effective traffic law enforcement, and implementation of the City's Comprehensive Bicycle Development Plan and the El Camino Real/Downtown Specific Plan.

Policy CIRC-2.8: Pedestrian Access at Intersections. Support full pedestrian access across all legs of signalized intersections.

Policy CIRC-2.9: Bikeway System Expansion. Expand the citywide bikeway system through appropriate roadway design, maintenance, effective traffic law enforcement, and implementation of the City's Comprehensive Bicycle Development Plan, and the El Camino Real/Downtown Specific Plan.

Policy CIRC-2.10: Green Infrastructure. Maximize the potential to implement green infrastructure by: a) Reducing or removing administrative, physical, and funding barriers; b) Setting implementation priorities based on stormwater management needs, as well as the effectiveness of improvements and the ability to identify funding; and c) Taking advantage of opportunities such as grant funding, routine repaving or similar maintenance projects, funding associated with Priority Development Areas, public private partnerships, and other funding opportunities.

Policy CIRC-2.11: Design of New Development. Require new development to incorporate design that prioritizes safe pedestrian and bicycle travel and accommodates senior citizens, people with mobility challenges, and children.

Policy CIRC-2.14: Impacts of New Development. Require new development to mitigate its impacts on the safety (e.g., collision rates) and efficiency (e.g., VMT per capita) of the circulation system. New development should minimize cut-through and high-speed vehicle traffic on residential streets; minimize the number of vehicle trips; provide appropriate bicycle, pedestrian, and transit connections, amenities and improvements in proportion with the scale of proposed projects; and facilitate appropriate or adequate response times and access for emergency vehicles.

Goal CIRC-3: Increase mobility options to reduce traffic congestion, greenhouse gas emissions, and commute travel time.

Policy CIRC-3.1: Vehicle Miles Traveled. Support development and transportation improvements that help reduce per capita vehicle miles traveled.

Policy CIRC-3.2: Greenhouse Gas Emissions. Support development, transportation improvements, and emerging vehicle technology that help reduce per capita greenhouse gas emissions.

Policy CIRC-3.4: Level of Service. Strive to maintain level of service (LOS) D at all City-controlled signalized intersections during peak hours, except at the intersection of Ravenswood Avenue and Middlefield Road and at intersections along Willow Road from Middlefield Road to US 101. The City shall work with Caltrans to ensure that average stopped delay on local approaches to State-controlled signalized intersections does not exceed LOS E.

Goal CIRC-4: Improve Menlo Park's overall health, wellness, and quality of life through transportation enhancements.

Policy CIRC-4.1: Global Greenhouse Gas Emissions. Encourage the safer and more widespread use of nearly zero-emission modes, such as walking and biking, and lower emission modes like transit, to reduce greenhouse gas emissions.

Policy CIRC-4.2: Local Air Pollution. Promote non-motorized transportation to reduce exposure to local air pollution, thereby reducing risks of respiratory diseases, other chronic illnesses, and premature death.

Policy CIRC-4.3: Active Transportation. Promote active lifestyles and active transportation, focusing on the role of walking and bicycling, to improve public health and lower obesity.

Policy CIRC-4.4: Safety. Improve traffic safety by reducing speeds and making drivers more aware of other roadway users.

Goal CIRC-6: Provide a range of transportation choices for the Menlo Park community.

Policy CIRC-6.1: Transportation Demand Management. Coordinate Menlo Park's transportation demand management efforts with other agencies providing similar services within San Mateo and Santa Clara Counties.

Policy CIRC-6.4: Employers and Schools. Encourage employers and schools to promote walking, bicycling, carpooling, shuttles, and transit use.

Menlo Park Municipal Code

The proposed project is located in the Residential Mixed Use (R-MU) zoning district. The Zoning Ordinance requires development and implementation of a Transportation Demand Management (TDM) plan:

Chapter 16.45.090 Transportation Demand Management. As stated in Chapter 16.45.090 of the City's Zoning Ordinance, all new construction, regardless of size, and building additions of 10,000 or more square feet of gross floor area, or a change of use of 10,000 or more square feet of gross floor area shall develop a TDM plan to reduce associated vehicle trips to at least 20 percent below standard generation rates for uses on the individual project site. Each individual applicant is required to prepare its own TDM plan and provide an analysis to the satisfaction of the City's Transportation Manager of the impact of that TDM program.

The TDM Program Guidelines (July 2015) provide options for project applicants to mitigate the traffic impacts of new developments. The guidelines include an extensive list of TDM measures accompanied with the number of trips credited to each measure and the rationale for each measure. The list of recommended measures and the associated trip credit is maintained by City/County Association of Governments of San Mateo County (C/CAG) as part of the San Mateo County Congestion Management Program and are as follows:

Eligible TDM measures may include but are not limited to:

- Participation in a local Transportation Management Association that provides documented, ongoing support for alternative commute programs;
- Appropriately located transit shelter(s);
- Preferred parking for carpools or vanpools;
- Designated parking for car-share vehicles;

- Requiring drivers to pay directly for using parking facilities;
- Public and/or private bike share program;
- Provision or subsidy of carpool, vanpool, shuttle, or bus service, including transit passes for site occupants;
- Required alternative work schedules and/or telecommuting for non-residential uses;
- Passenger loading zones for carpools and vanpools at main building entrance;
- Safe, well-lit, accessible, and direct route to the nearest transit or shuttle stop or dedicated, fully accessible bicycle and pedestrian trail;
- Car share membership for employees or residents;
- Emergency Ride Home programs;
- Green Trip Certification.
- Measures receiving TDM credit shall be:
 - Documented in a TDM plan developed specifically for each project and noted on project site plans, if and as appropriate;
 - Guaranteed to achieve the intended reduction over the life of the development, as evidenced by annual reporting provided to the satisfaction of City's Transportation Manager;
 - Required to be replaced by appropriate substitute measures if unable to achieve intended trip reduction in any reporting year;
 - Administered by a representative whose updated contact information is provided to the City's Transportation Manager.

City of Menlo Park Complete Streets Policy

The Complete Streets Policy was adopted by the City in 2013. The policy confirms the City's commitment to provide safe and convenient travel along and across streets for all users. It also requires Complete Streets infrastructure to be considered for incorporation into all significant planning, funding, design, approval, and implementation processes for new, maintenance, and retrofit construction.

City of Menlo Park Neighborhood Traffic Management Plan

The Neighborhood Traffic Management Plan (City of Menlo Park 2004) was developed to mitigate the adverse effects of increased vehicle speeds and vehicle volumes on neighborhood streets. The primary goal of this plan is to correct unsafe conditions at prioritized locations with higher incidences and higher speeds. The plan recommends two levels of measures, Level I "Express" and Level II. Level I "Express" measures include education and enforcement initiatives. Level II measures are traffic management features that can be implemented to divert traffic and to restrict access to certain properties. The traffic management measures are recommended by City staff at the request of the community.

City of Menlo Park Transportation Master Plan

The City adopted the finalized TMP (City of Menlo Park 2020b) in November 2020 to serve as an update of the City's Bicycle and Sidewalk Plans and advance goals and policies set forth in the General Plan Circulation Element. The TMP provides the ability to identify appropriate projects to enhance the transportation network, conduct community engagement to ensure such projects meet the communities' goals and values, and prioritize projects

based on need for implementation. The following recommended TMP projects proposed within the vicinity of the project site and are identified below for informational purposes only in Table 4.14-1.

Table 4.14-1. City of Menlo Park Recommended TMP Projects

TMP Project No.	Location	Project	Project Details	Cost
1.	Haven Avenue from Marsh Road to Haven Court	Bayfront Expressway Multimodal Corridor Project	Construct Class I Multi-Use Path from Marsh Road to Atherton Channel. Establish Class II Bicycle Lanes from Haven Court to Atherton Channel. Install Bicycle and Pedestrian crossing upgrades.	\$2,866,000
2.	Bayfront Expressway & Marsh Road	Bayfront Expressway Multimodal Corridor Project	Recommended Improvements: Modify southbound Haven Avenue approach to reduce delay. Install Bicycle and Pedestrian crossing upgrades. Funded Improvements: Widen eastbound Marsh Road and add additional right turn lanes. Install Class I Multi-Use Path along eastbound Marsh Road	\$206,000
8.	Bayfront Expressway & Willow Road	Bayfront Expressway Multimodal Corridor Project	Install bike signals, high-visibility crosswalks and cross-bike markings. Reconstruct eastbound Willow Road right-turn channelizing island to improve pedestrian access. Remove southbound Bayfront Expressway channelizing island to provide space for shoulder-running bus lane and implement a right-turn overlap phase. Modify traffic signal to accommodate channelized right turn modifications. Install Transit Signal Priority (TSP) for queue jumps by shoulder-running buses.	\$1,757,000
14.	Marsh Road from Bay Road to Scott Drive	Marsh Road Bicycle Network Improvement	Bay Road to Florence Street: Establish Class II Buffered Bicycle Lanes in both directions (requires removal of parking on the north side of street). Florence Street to Scott Drive: Establish Class II Buffered Bicycle Lanes in both directions. Remove or modify existing median at Scott Drive.	\$1,491,000
178.	Marsh Road between Independence Drive to Scott Drive	Marsh Road Corridor Mobility Project	Establish Class II Bike Lanes. Implement Caltrans District 4 Bike Plan Project Number SM-101-X14 that calls for the construction of an additional bicycle and pedestrian bridge over US 101 north of Marsh Road.	\$30,341,000

Table 4.14-1. City of Menlo Park Recommended TMP Projects

TMP Project No.	Location	Project	Project Details	Cost
189.	University Drive between Oak Grove Avenue and Santa Cruz Avenue	Downtown Mobility Improvements	Establish Class II Bicycle Lanes on University Drive (requires removal of parking on at least one side of University Drive).	\$103,000

City of Menlo Park Transportation Impact Fee

The City of Menlo Park has a Transportation Impact Fee (TIF) codified in Municipal Code Chapter 13.26 to help fund transportation improvements as new development occurs in the City. New development and redevelopment projects are subject to the TIF to contribute to the cost of new transportation infrastructure associated with the development. The types of developments that are subject to the TIF are:

- All new development in all land use categories identified in the City's zoning ordinance
- Any construction adding additional floor area to a lot with an existing building
- New single-family and multifamily dwelling units
- Changes of use from one land use category to a different land use category that requires Planning Commission approval.

The TIF provides a mechanism to modernize the City's fee program to collect funds towards construction of the improvements expected to be identified and prioritized in the Transportation Master Plan (as noted above).

4.14.3 Thresholds of Significance

The significance criteria used to evaluate the project's impacts to transportation are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to transportation would occur if the project would:

1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, 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.
5. Result in cumulatively considerable transportation impacts.

4.14.4 Impacts and Mitigation Measures

Project Traffic

Trip generation estimates for the proposed project are based on daily and AM and PM peak hour trip generation rates obtained from the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 11th Edition (ITE 2021). In order to accurately represent the proposed project's trip generation, trips generated from the existing land uses that the project would replace were calculated and subtracted resulting in the net project trip generation. Consistent with the City of Menlo Park City Ordinance 1026, a 20 percent reduction was applied to account for the proposed TDM plan that the project would be required to provide. The TDM would be expected to achieve the required minimum of 20 percent reduction of daily and peak hour vehicle trips. Table 4.14-2 displays the proposed project trip generation estimates.

Table 4.14-2. Project Trip Generation

Land Use	ITE Code	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates ¹									
Research and Development Center	760	per TSF	11.08	0.84	0.19	1.03	0.16	0.82	0.98
Manufacturing	140	per TSF	4.75	0.52	0.16	0.68	0.23	0.51	0.74
Multifamily Housing (Mid-Rise) - buildings 4 to 10 stories in height	221	per DU	4.54	0.09	0.28	0.37	0.24	0.15	0.39
Multifamily Housing (Low-Rise) - buildings 3 stories or less in height	220	per DU	6.74	0.10	0.30	0.40	0.32	0.19	0.51
Trip Generation of Existing Uses									
119 Independence Drive - Tree Care	760	12.996 TSF	144	10	2	12	2	11	13
123-25 Independence Drive - Defense Contractor	760	12.335 TSF	137	10	2	12	2	10	12
127 Independence Drive - Medical Device R&D	760	13.822 TSF	153	12	3	15	3	11	14
130 Constitution Drive - Defense Contractor	760	25.528 TSF	283	22	5	27	4	21	25
1205 Chrysler Drive - Energy Company	140	39.302 TSF	187	20	7	27	9	20	29
Existing Uses Subtotal			904	74	19	93	20	73	93
Trip Generation of Proposed Project									
Residential - Multifamily (Apartments) - 4 stories in height	221	316 DU	1,435	27	90	117	76	48	124

Table 4.14-2. Project Trip Generation

Land Use	ITE Code	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Residential - Multifamily (Townhomes) - 3 stories in height	220	116 DU	782	12	35	47	37	22	59
<i>Proposed Project Subtotal</i>			2,217	39	125	164	112	70	182
<i>TDM Plan: 20 percent Reduction²</i>			-443	-8	-25	-33	-22	-14	-36
<i>Proposed Project Total</i>			1,774	31	100	131	90	56	146
Total Net Project Trip Generation (Proposed - Existing)			870	-43	81	38	70	-17	53

Source: ITE 2021

Notes: TSF = thousand square feet; DU = dwelling unit

¹ Trip rates from Trip Generation, 11th Edition, Institute of Transportation Engineers, 2021.

² Consistent with the City of Menlo Park City Ordinance 1026, a 20 percent reduction was applied to account for the proposed TDM plan that the project would be required to provide. The TDM would be expected to achieve the required minimum of 20 percent reduction of daily and peak hour vehicle trips.

As shown in Table 4.14-2, the proposed project after the application of the 20 percent reduction as required by the TDM plan would generate 1,774 daily trips, 131 AM peak hour trips (31 inbound and 100 outbound), and 146 PM peak hour trips (90 inbound and 56 outbound). After subtracting for the existing land uses, the proposed project's net trip generation would be 870 daily trips, 38 AM peak hour trips (-43 inbound and 81 outbound), and 53 PM peak hour trips (70 inbound and -17 outbound). It is important to note that the negative trips are a result of the existing land uses consisting of employment generating uses that generate a greater proportion of inbound traffic in the AM peak hour and a greater proportion of outbound traffic in the PM peak hour as compared to the residential uses that the proposed project would construct.

Project trip distribution percentages are based on logical travel paths to and from the project site, as well as consideration of existing major routes of travel. The project's trip distribution percentages were approved by the City's Public Works Department prior to the completion of the transportation analysis and the TIA.

Project Impacts

Impact 4.14-1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Table 4.14-3 summarizes the proposed project's consistency with applicable programs, plans, policies, or ordinances addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Table 4.14-3. Applicable Programs, Plans, Ordinances, or Policies Addressing the Circulation System

Program/Plan/Plan/Ordinance/Policy	Project Evaluation
Plan Bay Area 2050	The proposed project would be consistent with the goals and policies contained in Plan Bay Area 2050, and would provide residential units near existing offices, commercial, and industrial uses, reducing the demand for automobile travel. The proposed

Table 4.14-3. Applicable Programs, Plans, Ordinances, or Policies Addressing the Circulation System

Program/Plan/Plan/Ordinance/Policy	Project Evaluation
	project is located in an area with adequate bicycle and transit facilities that would further facilitate a lower reliance on single-occupancy automobile use. All transit, bicycle, and pedestrian descriptions were described above and in Chapter 3.
C/CAG Congestion Management Program	The proposed project would generate fewer than 100 vehicle trips during the weekday PM peak hour and therefore, under C/CAG's Transportation Demand Management policy further analysis is not required.
City of Menlo Park Circulation Element Policies	<p>The City's Circulation Element policies are described above in Section 4.14.2. The proposed project would provide safe and convenient access to existing bicycle and pedestrian facilities, as well as provide adequate pedestrian facilities on-site and along the project's frontage. Site access would be provided to be able to all users, including persons with disabilities, persons with mobility challenges, ages, and all mode shares. A pedestrian paseo provided within the project site would further enhance the local community and provide green infrastructure. Equitable use of roads and pedestrian space for all users would be provided by the pedestrian and bicycle facilities within and near the project site.</p> <p>All site circulation, emergency access, and overall roadway safety metrics are evaluated within this analysis and have found to produce less than significant impacts. The project's TDM plan would provide additional measures to reduce automobile trips within the surrounding roadway network, reduce vehicle emissions and greenhouse gases. All intersections that exceed the LOS standards are described below, for informational purposes only.</p>
City of Menlo Park Municipal Code Section 16.45.090	As mandated by ordinance, the proposed project would implement a TDM plan (Appendix J2) to reduce vehicle trips to at least 20 percent below standard trip generation rates. The details of the TDM plan are provided below.
City of Menlo Park Complete Streets Policy	The proposed project would be consistent with the City's commitment to provide safe and convenient travel for all road users.
City of Menlo Park Neighborhood Traffic Management Plan	The proposed project would provide residential uses and include several driveways to spread out the distribution of traffic within the site and within the neighborhood.
City of Menlo Park Transportation Master Plan	The proposed project does not include any conflicts with projects and recommendations identified in the TMP. At locations where the proposed project would cause an intersection to operate in non-compliance with General Plan Policy CIRC-3.4 and the TIA Guidelines, modifications are identified that are consistent with a majority of the recommendations identified in the TMP.
City of Menlo Park Transportation Impact Fee	The proposed project is subject to all transportation impact fees and would contribute to the cost of new transportation infrastructure associated with the development of the proposed project

The proposed project would also comply with all existing regulations, including general plan and zoning regulations. The City's Public Works Department would review the project and project site plan for conformance with all standards and guidelines. The project would be constructed according to all City specifications and requirements.

Therefore, as described in Table 4.14-3, the proposed project would be consistent with all relevant programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.14-2: Would the project exceed an applicable VMT threshold of significance?

Implementation of the proposed project would not exceed an applicable VMT threshold of significance with implementation of TDM program as discussed for the residential use. Impact would be **less than significant**.

The City uses the following threshold of significance and methodology to address the substantial additional VMT significance criterion for residential projects.

VMT Significance Threshold

According to City VMT guidelines, the evaluation of residential land use is based on a daily VMT per capita metric. Using MTC travel demand model that has been customized for City's transportation analysis and as described in detail under VMT Analysis, this metric is calculated only for home-based trips, per OPR's technical advisory. Based on the latest citywide travel demand model, regional average residential VMT is 13.1 per capita. Therefore, the City's residential VMT impact threshold, at 15 percent below regional average, would be 11.2 daily VMT per capita.

VMT Analysis

To determine the appropriate VMT analysis tool (e.g., C/CAG VMT sketch model or City's travel demand model). Based on discussion with the City, the citywide travel demand forecast model was used. The model is a mathematical representation of travel within the nine Bay Area counties, as well as Santa Cruz, San Benito, Monterey and San Joaquin counties. The base model structure was developed by MTC and further refined by C/CAG and Santa Clara Valley Transportation Authority for use within San Mateo County and Santa Clara County. The City further refined this model for application with Menlo Park to add more detail to the zone structure and transportation network. The model has a base year of year 2019.

There are four main components of the model: 1) trip generation, 2) trip distribution, 3) mode choice, and 4) trip assignment. The model uses socioeconomic inputs (i.e., population, income, employment) aggregated into geographic areas, called transportation analysis zones (TAZ) to estimate travel within the model area. There are 80 TAZs within the model to represent the City of Menlo Park. The model was used to estimate the proposed project's effect on VMT in accordance with the City's VMT guidelines.

The most readily available long-range forecast year is 2040, which assumes buildout of the City of Menlo Park General Plan and any pending General Plan Amendments, buildout of the pending developments in the City of East Palo Alto (as of December 2020), and regional growth projected by the Association of Bay Area Governments

(ABAG), modified by VTA/C/CAG for model land use inputs. Therefore, the project's VMT analysis was conducted under year-2040 conditions. The project's VMT summary is provided in Table 4.14-4.

Table 4.14-4. Vehicle Miles Traveled Summary

Land use / VMT Metric	Regional Average	VMT Threshold (15 percent below Regional Average)	Project Transportation Analysis Zone (TAZ 3070)	VMT Impact	VMT Reduction needed
Residential /per capita	13.1	11.2	13.29	Yes	16 percent

Notes: All data referenced is from the latest Menlo Park citywide travel demand forecasting model provided by Hexagon. It should be noted that the City's Transportation Guidelines do not include the latest VMT thresholds for residential and office uses.

Because the project is a residential use, the efficiency metric of VMT per capita was used. A project-specific model run was conducted and the project's home based VMT was extracted from the TAZ. The project's VMT was estimated to be 13.29 VMT per capita. The regional average VMT per capita is 13.1 and the threshold is 11.2 VMT per capita for the City. Therefore, the project VMT exceeds the VMT significance threshold by 16 percent. The estimated project VMT does not account for the project's proposed TDM plan. Without any TDM measures, the project's residential use may cause substantial additional VMT.

The TDM plan would need to achieve a minimum 16.0 percent reduction in VMT to reduce the proposed project's impacts to less-than-significant levels, which is within the 20 percent reduction in vehicle trips required by Section 16.45.090 of the Menlo Park Municipal Code. The TDM measures to be implemented by the project include services, incentives, actions, and planning and design features related to the attributes of the site design and site amenities. Such design features encourage walking, biking, and use of transit. Some of the recommended TDM measures are programs that would be created and implemented by the Property Manager or the Transportation Coordinator. The project's recommended TDM measures are provided in Table 4.14-5.

Table 4.14-5. Recommended TDM Measures

TDM Measure	Applies to Apartment Residents, Townhome Residents or Both	Implementation Responsibility
Program Administration		
Designating a Transportation Coordinator	Both	Property Manager
Online Kiosk/TDM Information Board ¹	Both	Transportation Coordinator
Transportation Information Packets	Both	Transportation Coordinator
Trip Planning Assistance	Both	Transportation Coordinator
Program Monitoring and Reporting		
Annual Resident Surveys	Both	Transportation Coordinator
Target Drive-alone Mode Share Monitoring	Both	Transportation Coordinator
Carpool and Vanpool Programs		
511 Ridematching Service	Both	Available to Public
Incentives for New Carpools/Vanpools	Both	Available to Public

Table 4.14-5. Recommended TDM Measures

TDM Measure	Applies to Apartment Residents, Townhome Residents or Both	Implementation Responsibility
Bicycle Facilities		
Bicycle Parking	Both	Building developer
Bicycle Repair Station	Both	Building developer
Ebike and Cargo Bicycle	Apartment Residents	Building developer
Resources (bikeway maps & other info)	Both	Building developer
Pedestrian Facilities		
Pedestrian Scale Lighting	Both	Building developer
New Sidewalks	Both	Building developer
Other On-Site Amenities		
Fitness Room and Club Room	Apartment Residents	Building developer
High-bandwidth Internet Connection	Apartment Residents	Building developer
Pet Spa	Apartment Residents	Building developer
Pool and SPA	Apartment Residents	Building developer
Transit Elements		
Transit Subsidy	Both ²	Building developer
Unbundled Parking	Apartment Residents	Building developer

Notes: 1. The building developer will have initial responsibility for creating an online kiosk and appointing the Transportation Coordinator. After the building is occupied, the Transportation Coordinator will have ongoing responsibility for the online kiosk and various program elements. 2. For ownership units (Townhomes), a free one-year transit pass will be given to each new owner upon original purchase from the developer.

Proposed TDM measures and estimated VMT reductions applicable to the project's residential use are described below and summarized in Table 4.14-6.

Table 4.14-6. TDM Measures and Estimated VMT Reduction

TDM Measure (CAPCOA ID)	Applied VMT Reduction Rate for Residential Use
Bike Parking (SDT-7)	0.63 percent
Pedestrian Network Improvement (SDT-1)	1 percent
Unbundled Parking (PDT-2) ^a	6 percent
Commute Trip Reduction Marketing (TRT-7)	2 percent
Increase Density (LUT-1)	5 percent
Transit Subsidies (TRT-4)	6 percent
Total	20.63 percent^b

Notes: a. Unbundled Parking will be applied to the proposed apartment residential units only. Source: California Air Pollution Control Officers Association (CAPCOA) report, August 2010. b. A reduction in trips is considered equivalent to a reduction in VMT.

These measures have been calculated by using the Bay Area Air Quality Management District (BAAQMD) TDM Tool that assists with calculating VMT reductions due to TDM measures based on the CAPCOA research. Based on the

TDM Tool, with the implementation of the proposed TDM measures, the project would achieve a reduction of more than 20 percent of the VMT generated by the proposed residential development as shown in Table 4.14-6 above.

The project would be required to implement a TDM Plan achieving a 20 percent reduction from gross ITE trip generation rates (for the project, this reduction equals 443 daily trips. As noted in the CAPCOA Handbook when estimating VMT or GHG reductions in the Transportation sub-sector, the adjustment factor from vehicle trips to VMT is 1. This assumes that all vehicle trips will average out to typical trip length (“assumes all trip lengths are equal”). Thus, it can be assumed that a percentage reduction in vehicle trips will equal the same percentage reduction in VMT.) Additionally, daily trips generated by projects is a metric that can be measured and periodically reviewed using the TDM plan. The Transportation Coordinator shall prepare, Implement, monitor and report a Residential TDM Plan for the project to the satisfaction of the City’s Transportation Manager and per the Menlo Park Municipal Code requirements. The TDM Plan reporting shall include annual commute surveys, annual driveway counts and annual reporting to demonstrate that 20 percent peak hour trip reduction requirement has been achieved. If the reduction has not been achieved in the reporting period, the report shall provide additional measures that will be implemented in the coming year in order to achieve the City’s requirement.

The required residential TDM Plan will include annual monitoring and reporting requirements on the effectiveness of the TDM program. The project applicant submitted a draft residential TDM Plan (Appendix J2), which contains specific measures that would meet this trip reduction requirement. The draft TDM Plan is subject to City review and approval. If the annual monitoring finds that the TDM reduction is not met, the TDM coordinator will be required to work with City staff to detail next steps to achieve the TDM reduction. Based on the City’s transportation engineer, if needed, there are additional measures that could be added to the TDM that would ensure the required reduction is met. Additional measures include scaling up certain measures as their popularity increases such as electric vehicle charging stations, bike and e-scooter parking and storage, and participation in further local and regional transit programs.

With the implementation of the required residential TDM Plan, the project’s VMT impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.14-3: Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

As described previously, the proposed project would provide for vehicular circulation system within each of the four proposed building lots, as shown on Figure 3-6, Proposed Circulation, and would provide access from Independence Drive, Chrysler Drive, Jefferson Drive, and Constitution Drive. Lot B would be accessed from Independence Drive and streets within this lot would not be connected with the adjacent Lot C other than by an emergency vehicle access route crossing the paseo. Lot C would have one 26-foot-wide access driveway off Independence Drive and Lot D would have one 26-foot-wide, access driveway off Chrysler Drive. Streets within Lot C and Lot D would be interconnected and remain accessible from one each other. Lot A would have a single driveway off Constitution Drive providing access into the parking garage. Internal streets that would provide emergency vehicle access would be 26 feet wide while other internal streets and driveways would be 20 feet wide.

All driveways and accessways to the project site would be designed according to the City’s standards and guidelines for construction and coordinated with the City’s Public Works Department for work done at existing intersections,

such as Chrysler Drive and Jefferson Drive. Vehicular queuing is expected to be minimally affected by the proposed project, and all queues are expected to be within all available storage lengths and would cause nominal changes in existing or future conditions. Specifically, the proposed project would not create vehicular queues or unsafe conditions at the nearby TIDE Academy school located along Jefferson Drive. The TIDE Academy school driveways and drop-off areas would not be impacted by the construction of the proposed project. All current safe routes to school locations would be unaffected and remain safe and available for students. During construction of the proposed project, there would be adequate traffic management signage and minimal construction traffic would utilize Jefferson Drive. Construction truck traffic would remain on the most efficient path of travel to all regional and locally signed truck routes. The proposed project is a residential use that is compatible with the mixed-use nature of the area and would not introduce vehicles, such as farm tractors, heavy machinery and equipment, or oversized haul trucks, which could be incompatible with the other residential, institutional, and commercial uses in the area.

The north project driveway along Constitution Drive would provide a gated entrance to the parking garage, and the driveway would have approximately 100 feet of length from the edge of the roadway to the secure gated area. A gate stacking analysis was conducted to evaluate the amount of vehicular storage provided to what would be required with this type of parking entrance configuration. According to the project trip distribution and trip assignment, approximately 76 inbound vehicles would arrive inbound to the parking garage in the PM peak hour.

Table 4.14-7 displays the gate service rates using the Crommelin method of estimation (Robert Crommelin and Associates 1972).

Table 4.14-7. Gate Service Rates

Gate Entrance ¹	Average Headway (seconds/vehicle)	Design Capacity (vehicles/hour)	Maximum Capacity (vehicles/hour)
Coded Care Operated Gate	8.9	340	425

Source: Appendix J1

Notes:

¹ The type of gate control is from Entrance-Exit Design and Control for Major Parking Facilities (Robert Crommelin and Associates 1972)

Traffic intensity is calculated based on the volume of inbound project vehicles and the rates presented in Table 4.14-7. Table 4.14-8 presents the traffic intensity at the gate (also known as the volume to service ratio). The inbound peak PM peak hour totaling 76 vehicles was divided by the design capacity service rate of 340 vehicles/hour to compute a traffic intensity of 0.224.

Table 4.14-8. Traffic Intensity

Gate Entrance	Traffic Intensity
North Project Driveway/Constitution Drive	76/340 = 0.224

Source: Appendix J1

Based on the gate stacking analysis using the Crommelin methodology above, a stacking reservoir of one vehicle behind the gate is required. Using the standard size of a passenger car as 22-feet in length, the approximately 100 feet of storage length that is provided from the gate entrance to the public roadway (Constitution Drive) is adequate. The proposed project gate would also be evaluated by the City's Public Works Department as part of the standard design review process and would be constructed according to all City specifications.

Therefore, as described above, the proposed project would not substantially increase hazards due to a geometric design feature or introduce incompatible uses. Therefore, project impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.14-4: Would the project result in inadequate emergency access?

As described above, and as shown previously in Figure 3-6, Proposed Circulation, the proposed project would provide four vehicular driveways, as well as a paseo connecting the northern and southern portions of the site. The southwest driveway and the southeast driveway located along Independence Drive would provide access to the southern and western portion of the site, while the project driveway located at the intersection of Chrysler Drive/Jefferson Drive would provide access to the eastern portion of the project site. The parking garage entrance driveway along Constitution Drive would also provide emergency vehicle access.

Additionally, emergency vehicle access would be provided via the northern leg of Lot 1, west of the apartment building, which would have a total width of 26 feet and would serve as an emergency vehicle access entrance and exit. A second 26-foot-wide emergency vehicle easement would extend east from the park to Chrysler Drive along the northern edge of Lot D. This emergency vehicle easement would also serve as a pedestrian pathway. The fire district will review the proposed residential site plan, including fire hydrant placement and emergency vehicle access, prior to issuance of building permits. Along Chrysler Drive, Constitution Drive, and Independence Drive, there is adequate width for emergency vehicles to access adjacent properties and for other vehicles to safely pull over and yield to emergency vehicles. The proposed project would not result in inadequate emergency access to adjacent parcels or properties within the study area. The vehicular circulation network would not change and overall emergency response to adjacent properties would remain adequate. Therefore, the proposed project would not result in inadequate emergency access, and impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

Impact 4.14-5: Would the project result in cumulatively considerable transportation impacts?

Conflicts with a Program, Plan, Ordinance, or Policy Addressing the Circulation System

All future development would be required to comply with applicable state, regional, and local regulations and policies, including the General Plan and zoning regulations. Future developments would be required to minimize impacts to the transportation and circulation of the City's roadway network. The ConnectMenlo General Plan Update included adoption of several transportation policies to limit potential cumulative transportation impacts caused by projects within the City. The proposed project and all other pending and future projects within the City are required to comply with these policies, which address the topics of ensuring a safe transportation system, complete streets, sustainable transportation, health and wellness (through transportation enhancements), transit opportunities, transportation demand management, and parking.

The ConnectMenlo EIR evaluated consistency with plans, ordinances, and policies relating to vehicle transportation in Impact TRANS-1 and considered consistency with the San Mateo County Congestion Management Program in Impact TRANS-2. As required by the CEQA Guidelines at the time that the ConnectMenlo EIR was prepared, the analysis in Impacts TRANS-1 and TRANS-2 focused on potential changes in intersection and roadway segment levels of service. As discussed previously, recent changes in the CEQA Guidelines preclude consideration of level of service as an environmental effect. Refer to Section 4.14.5, Non-CEQA Analysis, for information regarding level of service. As noted in Table 4.14-3, the proposed project would generate fewer than 100 vehicle trips during the weekday PM peak hour and therefore, under C/CAG's Transportation Demand Management policy, further analysis is not required.

Implementation of the land use and transportation changes described in ConnectMenlo would create a built environment that supports a live/work/play environment with increased density and diversity of uses and a street network that supports safe and sustainable travel. The updates to the City's Circulation Element adopted under ConnectMenlo include a new emphasis on complete streets, multi-modal transportation, community circulation benefits from private development, transportation system safety and efficiency, and community transit services. This is expected to reduce VMT per capita within the Bayfront Area where the project site is located. In addition, all other future development would be required to comply with existing regulations, including General Plan policies and zoning regulations that have been adopted to minimize impacts related to transportation and circulation.

The City would implement the General Plan programs that require the City to annually update the Capital Improvement Program to reflect City and community priorities for physical projects related to transportation for all travel modes and bi-annually update data regarding travel patterns for all modes to measure circulation system efficiency (e.g., VMT per capita, traffic volumes) and safety (e.g., collision rates) standards, amongst others as listed above. Furthermore, implementation of zoning regulations would support adequate facilities and access to transportation and future development would be consistent with the City's Transportation Master Plan.

The proposed project is consistent with the land use and zoning designations assigned to the project site under ConnectMenlo. As discussed in Section 4.0, Environmental Analysis, the proposed project in combination with other approved and pending projects in the Bayfront area would result in 98 more multifamily dwelling units than were assumed in the ConnectMenlo EIR. However, the project's TDM plan would apply to all of the units within the project site and would provide the necessary reductions in VMT to ensure that the full project, including these additional 98 units, does not make a cumulatively considerable contribution to any cumulative impacts related to conflicts with programs, plans, ordinances, and policies addressing the circulation system. The City's General Plan programs, policies, and goals would be implemented to the 2040 Cumulative Year and would be monitored for additional updates as needed. Therefore, the proposed project, and all pending and future projects in the cumulative development scenario would not conflict with any program, plan, ordinance, or policy address the circulation system, and impacts would be **less than significant**.

Pedestrian and Bicycle Facilities

The ConnectMenlo EIR evaluated consistency with plans, ordinances, and policies related to alternative modes of travel in Impact TRANS-6. The ConnectMenlo EIR found that implementation of the ConnectMenlo General Plan Update would not provide adequate pedestrian or bicycle facilities to connect to the area wide circulation system.

Mitigation Measure TRANS-6a required updating the City's TIF program to secure funding mechanism for future pedestrian and bicycle improvements to mitigate impacts from future projects based on the current standards at the time the Final EIR was certified but would not reduce the impact to less-than-significant levels. At the time that

the ConnectMenlo EIR was certified, the TIF nexus study had not yet been prepared, the City could not guarantee improvements, and no additional mitigation measures were feasible and available. For these reasons, impacts to bicycle and pedestrian facilities were considered significant and unavoidable. Recently, the City's TIF program was updated and approved by the City Council. The City's Transportation Master Plan has been updated and the City Council approved the updated plan on November 17, 2020 (City of Menlo Park 2020b). Therefore, payments collected as part of the City's TIF program would mitigate impacts to cumulative pedestrian and bicycle facilities. There is no cumulative impact to pedestrian and bicycle facilities to which the project could contribute, and this impact would remain **less than significant**.

Transit Facilities

The ConnectMenlo EIR (City of Menlo Park 2016b) found that implementation of the ConnectMenlo General Plan Update would generate a substantial increase in transit riders that could not be adequately serviced by existing public transit services, and implementation of ConnectMenlo would generate demand for transit services at sites more than one-quarter mile from existing public transit routes.

Mitigation Measure TRANS-6b required updates to the City's existing Shuttle Fee program to guarantee funding for operations of City-sponsored shuttle service that is necessary to mitigate impacts from future projects based on the then current City standards. However, because the nexus study had not yet been prepared, the City could not guarantee improvements, and no additional mitigation measures were feasible and available, impacts to transit were considered significant and unavoidable.

The ConnectMenlo EIR also found that implementation of ConnectMenlo would result in increased peak hour traffic delay at intersections on Bayfront Expressway, University Avenue, and Willow Road that could decrease the performance of transit service and increase the cost of transit operations. As discussed in Section 4.14.5, the proposed project would contribute to increased delays at the Willow Road/Bayfront Expressway intersection but would not contribute to increased delays on University Avenue. The City's TIF Program was updated and now includes a project to assist in the construction of a Bayfront Expressway Multimodal Corridor Project, which would alleviate the increased delays at the Willow Road/Bayfront Expressway such that transit service would not be significantly adversely affected. Thus, the project would not make a cumulatively considerable contribution to transit service, and this impact would remain **less than significant**.

Vehicle Miles Traveled

Consistent with OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA, a project's cumulative impacts are based on an assessment of whether the "incremental effects of an individual 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." A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. An efficiency-based threshold applies only to the proposed project without regard to the VMT generated by the previously existing land use.

The project would be consistent with the development assumptions included in ConnectMenlo. Implementation of the land use and transportation changes described in ConnectMenlo would create a built environment that supports a live/work/play environment with increased density and diversity of uses and a street network that supports safe and sustainable travel, and is expected to reduce VMT per capita by providing housing within the study area where the project site is located and is surrounded by various offices. Consistent with the findings of the ConnectMenlo

EIR, the project, in combination with cumulative projects and as assessed for year 2040 which includes buildout of the City of Menlo Park General Plan, would have a less-than-significant cumulative impact with mitigation with respect to VMT. There would be no significant cumulative VMT impact to which the project could contribute, and the project would not combine with past, present, and foreseeable future projects to create such impact; therefore, this impact would remain **less than significant**.

Substantial Increase of Hazards Due to a Geometric Design Feature or Incompatible Uses

As discussed in the ConnectMenlo EIR, development projects within the City would be required to evaluate hazardous conditions and the follow all relevant zoning requirements to ensure that incompatible uses are limited and that roadway improvements would be designed according to City standards and subject to existing regulations that are aimed at reducing hazardous conditions with respect to circulation. Site plan review and the City's Public Work's Department would evaluate all development projects and ensure that projects are constructed according to the City's construction standards and specifications. The ConnectMenlo EIR found that buildout of the General Plan would result in less-than-significant impacts with respect to hazards due to design features or incompatible uses. Thus, there would be no significant cumulative impact to which the project could contribute, and the project would not combine with past, present, and foreseeable future projects to create such impact; therefore, impacts associated with transportation system hazards would remain **less than significant**.

Emergency Access

The ConnectMenlo EIR found that the ConnectMenlo General Plan Update included policies that would ensure efficient circulation and adequate access are provided in the city, which would help facilitate emergency response. All future development projects would be required to comply with all City regulations and site plan review as part of the City's project approval process. The Fire Department would review certain projects and together with the policies and goals as outlined in the City's General Plan, would ensure that minimal impacts result to emergency access and there would be no significant cumulative impact to which the project could contribute. The project is consistent with ConnectMenlo. Therefore, cumulative impacts associated with emergency access would remain **less than significant**.

Mitigation Measures

No mitigation measures are required.

4.14.5 Non-CEQA Analysis

Intersection Level of Service Analysis

An intersection LOS analysis is provided in this section for informational purposes only. The TIA contains the analysis methodology and standards, as located in Appendix J1.

Although the City of Menlo Park adopted VMT thresholds into their TIA Guidelines, the City continues to require LOS analysis for conformance with their General Plan. LOS is commonly used as a qualitative description of intersection operations and roadway segments and is based on the design capacity of the intersection configuration and roadway facility, compared to the volume of traffic using the facility. Compliance criteria identified in the ConnectMenlo General Plan Update Circulation Element (City of Menlo Park 2016) and the City of Menlo Park Traffic Impact Analysis Guidelines (City of Menlo Park 2020a) were used to evaluate the project's potential impacts on intersection LOS. Thresholds vary depending on street classification and location of the intersection in relation state

(Caltrans) approaches and jurisdictions. Potential improvements that could bring the proposed project into conformance with Circulation Policy 3.4 (strive to maintain LOS D at all City controlled intersections, except at the intersection of Ravenswood Avenue and Middlefield Road and at intersections along Willow Road from Middlefield Road to US 101) are also identified. Implementation of any such measures would require review and approval by City decision makers and implementation through project conditions of approval.

Near Term (2025) Plus Project Conditions

This section presents the results of a cumulative condition analysis that was conducted for a short-term horizon year (2025) assuming the proposed project is constructed and fully occupied. This section follows the City's TIA Guidelines for intersection LOS analysis. Further discussion regarding methodology, LOS definitions, policy standards, and thresholds are provided in Appendix J1. The PTV Vistro software was used to determine intersection LOS, consistent with HCM 6 methodology for both signalized and unsignalized intersections, and detailed LOS calculation worksheets are included in Appendix J1.

Table 4.14-9 identifies the LOS for each intersection included in the study area under the near term no project and plus project conditions and whether the project could cause the City's LOS standards to be exceeded. With the addition of project traffic, the following intersections would exceed the thresholds identified in the City's TIA guidelines and increase the average critical movement delay by 0.8 seconds or more during AM and/or PM peak hours. As such, the following intersections would be non-compliant with the City's TIA Guidelines under Near Term (2025) plus project conditions.

- #1 (Marsh Road/Bayfront Expressway) – LOS E in AM and PM peak hours (signalized)
- #9 (Chrysler Drive/Constitution Drive) – LOS F in AM peak hour; LOS E in PM peak hour (signalized)
- #10 (Chrysler Drive/Jefferson Drive – East Driveway) – LOS F in AM peak hour (unsignalized)
- #11 (Chrysler Drive/Independence Drive) - LOS F in AM peak hour; LOS E in PM peak hour (unsignalized)
- #14 (Willow Road/Bayfront Expressway) – LOS F in AM and PM peak hours (signalized)

The Manual on Uniform Traffic Control Devices (MUTCD) peak hour signal warrant was performed at the unsignalized intersections (#10 and #11) and is provided in Appendix J1. The warrant is not met in either peak hour primarily due to lower traffic volumes along Chrysler Drive.

A summary of recommended improvement measures is provided in Table 4.14-11 to improve intersection operations to pre-project conditions or better for consistency with the City's TIA Guidelines.

Table 4.14-9. Near Term (2025) Plus Project Peak Hour Intersection Level of Service

No.	Intersection	Jurisdiction	LOS Method	Critical Approach	Near Term (2025)				Near Term (2025) plus Project				Change in Avg. Delay		Inconsistent w/City Standards?¹		Inconsistent w/TIA Guidelines?²		Near Term (2025) plus Project w/Improvements			
					AM Peak		PM Peak		AM Peak		PM Peak								AM Peak		PM Peak	
					Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	AM	PM	AM	PM	AM	PM	Avg. Delay	LOS	Avg. Delay	LOS
1	Marsh Road/Bayfront Expressway	Menlo Park/State	HCM Signal		58.8	E	60.6	E	59.2	E	61.8	E	0.4	1.2	Yes	Yes	Yes	Yes	50.8	D	63.5	E
				NB	82.9	F	81.3	F	83.0	F	83.7	F	0.1	2.4	Yes	Yes			17.9	B	35.2	D
				EB	99.3	F	86.5	F	99.2	F	87.0	F	-0.1	0.6	Yes	Yes			68.5	E	77.3	E
2	Marsh Road/US 101 NB Off-Ramp	Menlo Park/State	HCM Signal		30.8	C	17.8	B	31.4	C	18.7	B	0.6	0.9	No	No	No	No				
3	Marsh Road/US 101 SB Off-Ramp	Menlo Park/State	HCM Signal		19.8	B	17.7	B	20.0	C	18.1	B	0.2	0.4	No	No	No	No				
4	Marsh Road/Scott Drive	Menlo Park	HCM Signal		19.3	B	32.7	C	19.4	B	32.8	C	0.1	0.1	No	No	No	No				
5	Marsh Road/Bay Road	Menlo Park	HCM Signal		23.9	C	18.7	B	23.9	C	18.7	B	0.0	0.0	No	No	No	No				
6	Marsh Road/Middlefield Road	Atherton	HCM Signal		37.6	D	38.1	D	38.0	D	38.3	D	0.4	0.2	No	No	No	No				
7	Marsh Road/Florence Street-Bohannon Drive	Menlo Park	HCM Signal		40.4	D	55.1	E	40.5	D	55.1	E	0.1	0.0	No	Yes	No	No				
8	Chrysler Drive/Bayfront Expressway	Menlo Park/State	HCM Signal		12.7	B	20.3	C	13.8	B	22.5	C	1.1	2.2	No	No	No	No				
9	Chrysler Drive/Constitution Drive	Menlo Park	HCM Signal		230.9	F	73.7	E	239.4	F	104.2	F	8.5	30.5	Yes	Yes	Yes	Yes	140.1	F	45.5	D
				SB	340.5	F	208.4	F	400.1	F	314.7	F	59.7	106.3	Yes	Yes			338.1	F	100.6	F
				EB	241.6	F	30.4	C	232.3	F	33.3	C	-9.2	2.9	Yes	No			47.6	D	30.5	C
10	Chrysler Drive/Jefferson Drive-East Driveway	Menlo Park	HCM TWSC		56.6	F	20.8	C	67.3	F	28.9	D	10.7	8.1	Yes	No	Yes	Yes	20.1	C	22.1	C
11	Chrysler Drive/Independence Drive	Menlo Park	HCM TWSC		291.3	F	45.5	E	336.3	F	50.9	F	45.0	5.4	Yes	Yes	Yes	Yes	31.7	C	21.7	C
12	Chilco Street/Bayfront Expressway	Menlo Park/State	HCM Signal		33.8	C	57.6	E	33.9	C	58.7	E	0.1	1.1	No	Yes	No	No				
				NB	N/A	N/A	165.1	F	N/A	N/A	165.1	F	N/A	0.0	No	Yes	No	No				
13	Chilco Street/Constitution Drive	Menlo Park	HCM Signal		33.8	C	171.1	F	33.9	C	163.0	F	0.1	-8.1	No	Yes						
				EB	N/A	N/A	295.0	F	N/A	N/A	294.1	F	N/A	-1.0	No	Yes	No	No				

Table 4.14-9. Near Term (2025) Plus Project Peak Hour Intersection Level of Service

No.	Intersection	Jurisdiction	LOS Method	Critical Approach	Near Term (2025)				Near Term (2025) plus Project				Change in Avg. Delay		Inconsistent w/City Standards? ¹		Inconsistent w/TIA Guidelines? ²		Near Term (2025) plus Project w/Improvements			
					AM Peak		PM Peak		AM Peak		PM Peak								AM Peak		PM Peak	
					Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	AM	PM	AM	PM	AM	PM	Avg. Delay	LOS	Avg. Delay	LOS
14	Willow Road/Bayfront Expressway	Menlo Park/State	HCM Signal		137.1	F	113.0	F	136.9	F	114.3	F	-0.2	1.3	Yes	Yes	No	Yes	N/A	N/A	— ³	— ³
				NB	291.2	F	241.9	F	285.1	F	240.7	F	-6.1	-1.2	Yes	Yes			N/A	N/A	— ³	— ³
				SB	68.2	E	130.3	F	68.6	E	139.4	F	0.4	9.1	Yes	Yes			N/A	N/A	— ³	— ³
15	University Avenue/Bayfront Expressway	Menlo Park/State	HCM Signal		14.1	B	105.4	F	14.2	B	105.8	F	0.1	0.4	No	Yes	No	No				
				NB	N/A	N/A	161.3	F	N/A	N/A	161.1	F	N/A	-0.2	No	Yes	No	No				
D1	Southwest Driveway/Independence Drive	Menlo Park	HCM TWSC		N/A				12.7	B	13.1		N/A		B	No	No	No				
D2	Southeast Driveway/Independence Drive	Menlo Park	HCM TWSC		N/A				12.1	B	12.4		N/A		B	No	No	No				
D3	North Driveway/Constitution Drive	Menlo Park	HCM TWSC		N/A				17.7	C	12.0		N/A		B	No	No	No				

Notes: Bold – Exceeds LOS threshold
TWSC = two-way stop control; LOS reported for the movement with highest delay; NB = northbound; EB = eastbound; SB - southbound
N/A = not applicable – critical approach information is not relevant. Critical approach information is relevant where the proposed project would increase delay over the City’s LOS thresholds.

¹ Inconsistency with City standards is provided for informational purposes only to determine whether intersection LOS meets General Plan standards.

² The City’s TIA guidelines indicate that intersections with deficient LOS may result in "...a project [being] considered potentially noncompliant with local policies." The City has discretion to allow LOS to be exceeded in order to achieve other Circulation Element goals and policies.

³ TIF improvements include adaptive traffic signal coordination along the Bayfront Expressway corridor which is likely to improve LOS operations; however, LOS is unable to be quantified at this time. Additionally, physical intersection improvements are considered infeasible due to right-of way (ROW) constraints.

Cumulative (2040) Plus Project Conditions

This section presents the results of a cumulative condition analysis that was conducted for a long-term horizon year (2040) assuming both buildout of the General Plan and full operation of the proposed project. This section follows the City's TIA Guidelines for intersection LOS analysis. Further discussion regarding methodology, LOS definitions, policy standards, and thresholds are provided in Appendix J1. The PTV Vistro software was used to determine intersection LOS, consistent with HCM 6 methodology for both signalized and unsignalized intersections, and detailed LOS calculation worksheets are included in Appendix J1.

Table 4.14-10 identifies the LOS for each intersection included in the study area under the cumulative no project and plus project conditions and whether the project could cause the City's LOS standards to be exceeded. With the addition of project traffic, the following intersections would exceed the thresholds identified in the City's TIA guidelines and increase the average critical movement delay by 0.8 seconds or more during AM and/or PM peak hours. As such, the following intersections would be non-compliant with the City's TIA Guidelines under cumulative (2040) plus project conditions.

- #1 (Marsh Road/Bayfront Expressway) – LOS E in AM peak hour; LOS F in PM peak hour (signalized)
- #9 (Chrysler Drive/Constitution Drive) – LOS F in AM and PM peak hours (signalized)
- #10 (Chrysler Drive/Jefferson Drive – East Driveway) – LOS F in AM peak hour; LOS E in PM peak hour (unsignalized)
- #11 (Chrysler Drive/Independence Drive) - LOS F in AM peak hour (unsignalized)
- #13 (Chilco Street/Constitution Drive) – LOS F in AM and PM peak hours (signalized)
- #14 (Willow Road/Bayfront Expressway) – LOS F in AM and PM peak hours (signalized)

The MUTCD peak hour signal warrant was performed at the unsignalized intersections (#10 and #11) and is provided in Appendix J1. The warrant is not met in either peak hour primarily due to lower traffic volumes along Chrysler Drive.

A summary of recommended improvement measures is provided in Table 4.14-11 to improve intersection operations to pre-project conditions or better for consistency with the City's TIA Guidelines. However, it should be noted that per OPR's Technical Advisory Guidelines (OPR 2018), roadway improvements that are confined to the intersection and do not extend through to the next roadway segment (i.e., roadway remaining at 4-lane capacity, even with widening of lanes at intersection level), would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis.

It is noted that the ConnectMenlo EIR concluded that additional motor vehicle trips generated on the local roadway network as a result of the project would cause an increase in delay to peak hour vehicle traffic, resulting in significant impacts at some study intersections and roadway segments. The ConnectMenlo EIR was prepared before the 2018 CEQA Guidelines update, which included the section implementing SB 743 (CEQA Guidelines Section 15064.3) and before the City updated its Traffic Impact Analysis Guidelines. Thus, the ConnectMenlo EIR relied on LOS as a metric for defining significant environmental effects.

ConnectMenlo EIR Mitigation Measure TRANS-1a would require the widening of impacted roadway segments at appropriate locations throughout the city to add travel lanes and capacity to accommodate the increase in net daily trips. Implementation of Mitigation Measure TRANS-1a would reduce the impacts but not to a less than significant level. The ConnectMenlo EIR found that fully mitigating the impact to less than significant levels would be infeasible

because it would require eliminating most of the year 2040 traffic growth on impacted segments, including background traffic growth and regional traffic growth outside the boundary of the City. Therefore, impacts to roadway segments were considered significant and unavoidable. However, these impacts are no longer considered environmental effects under CEQA.

ConnectMenlo EIR Mitigation Measure TRANS-1b requires updates to the City's TIF program to secure a funding mechanism for future roadway and infrastructure improvements to mitigate impacts from future projects (based on the current standards at the time the Final EIR was certified) but would not reduce the impact to less than significant levels. The City could not guarantee improvements at the impacted intersections because the nexus study (for development impact fees under AB 1600) had not been prepared, some improvements could cause secondary environmental impacts that would need to be addressed prior to construction, and some impacted intersections are within the jurisdiction of the City of East Palo Alto and Caltrans. Therefore, impacts to intersections were considered significant and unavoidable. Recently, the City's TIF program was updated and approved by the City Council. The City's Transportation Master Plan has been updated and was adopted by the City Council on November 17, 2020. The identified roadway improvements would not fully mitigate the intersection impacts identified in the ConnectMenlo EIR; however, these impacts are no longer considered environmental effects under CEQA.

Table 4.14-10. Cumulative (2040) Peak Hour Intersection Level of Service

No.	Intersection	Jurisdiction	LOS Method	Critical Approach	Cumulative (2040)				Cumulative (2040) plus Project				Change in Avg. Delay		Inconsistent w/City Standards?¹		Inconsistent w/TIA Guidelines?²		Cumulative (2040) plus Project w/Improvements							
					AM Peak		PM Peak		AM Peak		PM Peak								AM Peak		PM Peak					
					Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	AM	PM	AM	PM	AM	PM	Avg. Delay	LOS	Avg. Delay	LOS				
1	Marsh Road/Bayfront Expressway	Menlo Park/State	HCM Signal		61.9	E	96.3	F	62.5	E	99.1	F	0.6	2.8	Yes	Yes	No	Yes	54.5	D	97.7	F				
				NB	74.9	E	101.6	F	75.0	E	101.6	F	0.2	0.0	Yes	Yes			37.8	D	100.8	F				
				EB	111.4	F	132.1	F	112.0	F	134.9	F	0.6	2.8	Yes	Yes			78.0	E	126.5	F				
2	Marsh Road/US 101 NB Off-Ramp	Menlo Park/State	HCM Signal		61.6	E	21.3	C	62.2	E	22.8	C	0.6	1.5	Yes	No	No	No								
3	Marsh Road/US 101 SB Off-Ramp	Menlo Park/State	HCM Signal		21.8	C	18.0	B	22.4	C	18.3	B	0.6	0.3	No	No	No	No								
4	Marsh Road/Scott Drive	Menlo Park	HCM Signal		31.7	C	36.9	D	31.8	C	37.0	D	0.1	0.1	No	No	No	No								
5	Marsh Road/Bay Road	Menlo Park	HCM Signal		64.9	E	54.9	D	64.8	E	54.9	D	-0.1	0.0	Yes	No	No	No								
				EB	182.5	F	N/A	N/A	182.5	F	N/A	N/A	0.0	N/A	Yes	No	No	No								
6	Marsh Road/Middlefield Road	Atherton	HCM Signal		48.3	D	45.4	D	49.1	D	45.7	D	0.8	0.3	No	No	No	No								
7	Marsh Road/Florence Street-Bohannon Drive	Menlo Park	HCM Signal		60.3	E	90.9	F	60.4	E	90.8	F	0.1	-0.1	Yes	Yes	No	No								
					NB	84.9	F	195.9	F	84.9	F	195.0	F	0.0	-0.9	Yes	Yes	No					No			
8	Chrysler Drive/Bayfront Expressway	Menlo Park/State	HCM Signal		11.7	B	29.8	C	12.8	B	36.3	D	1.1	6.5	No	No	No	No								
9	Chrysler Drive/Constitution Drive	Menlo Park	HCM Signal		328.6	F	151.4	F	342.1	F	193.5	F	13.5	42.1	Yes	Yes	Yes	Yes					252.7	F	106.5	F
					SB	635.8	F	489.9	F	713.5	F	640.0	F	77.7	150.1	Yes							Yes	633.0	F	321.4
				EB	266.6	F	40.4	D	253.4	F	43.0	D	-13.2	2.6	Yes	No			97.2	F	41.1	D				
10	Chrysler Drive/Jefferson Drive-East Driveway	Menlo Park	HCM TWSC		76.5	F	22.2	C	117.8	F	36.0	E	41.3	13.8	Yes	Yes	Yes	Yes	19.9	B	26.0	C				
11	Chrysler Drive/Independence Drive	Menlo Park	HCM TWSC		47.9	E	17.8	C	60.5	F	18.5	C	12.6	0.7	Yes	No	Yes	Yes	15.5	B	18.7	B				
12	Chilco Street/Bayfront Expressway	Menlo Park/State	HCM Signal		71.9	E	113.7	F	71.9	E	114.6	F	0.0	0.9	Yes	Yes	No	No								
				NB	138.1	F	337.5	F	138.1	F	337.5	F	0.0	0.0	Yes	Yes										
13	Chilco Street/Constitution Drive	Menlo Park	HCM Signal		87.1	F	201.4	F	87.6	F	202.8	F	0.5	1.4	Yes	Yes	No	Yes	N/A	N/A	116.4	F				

Table 4.14-10. Cumulative (2040) Peak Hour Intersection Level of Service

No.	Intersection	Jurisdiction	LOS Method	Critical Approach	Cumulative (2040)				Cumulative (2040) plus Project				Change in Avg. Delay		Inconsistent w/City Standards?¹		Inconsistent w/TIA Guidelines?²		Cumulative (2040) plus Project w/Improvements			
					AM Peak		PM Peak		AM Peak		PM Peak								AM Peak		PM Peak	
					Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	AM	PM	AM	PM	AM	PM	Avg. Delay	LOS	Avg. Delay	LOS
				NB	106.4	F	264.7	F	106.6	F	272.0	F	0.2	7.3	Yes	Yes			N/A	N/A	191.8	F
14	Willow Road/Bayfront Expressway	Menlo Park/State	HCM Signal		187.2	F	159.3	F	186.6	F	163.1	F	-0.6	3.8	Yes	Yes	No	Yes	N/A	N/A	- ³	- ³
				NB	379.9	F	255.0	F	373.7	F	253.8	F	-6.3	-1.2	Yes	Yes			N/A	N/A	- ³	- ³
				SB	60.6	E	387.4	F	60.8	E	421.4	F	0.2	34.0	Yes	Yes			N/A	N/A	- ³	- ³
15	University Avenue/Bayfront Expressway	Menlo Park/State	HCM Signal		13.2	B	141.2	F	13.2	B	141.7	F	0.0	0.5	No	Yes	No	No				
				NB	N/A	N/A	162.3	F	N/A	N/A	162.2	F	N/A	N/A	No	Yes						
D1	Southwest Driveway/Independence Drive	Menlo Park	HCM TWSC		N/A				11.2	B	11.3	B	N/A		No	No	No	No				
D2	Southeast Driveway/Independence Drive	Menlo Park	HCM TWSC		N/A				10.8	B	11.0	B	N/A		No	No	No	No				
D3	North Driveway/Constitution Drive	Menlo Park	HCM TWSC		N/A				17.6	C	12.1	B	N/A		No	No	No	No				

Notes: Bold – Exceeds LOS threshold
TWSC = two-way stop control; LOS reported for the movement with highest delay; NB = northbound; EB = eastbound; SB - southbound
N/A = not applicable – critical approach information is not relevant. Critical approach information is relevant where the proposed project would increase delay over the City’s LOS thresholds.

¹ Inconsistency with City standards is provided for informational purposes only to determine whether intersection LOS meets General Plan standards.

² The City’s TIA guidelines indicate that intersections with deficient LOS may result in "...a project [being] considered potentially noncompliant with local policies." The City has discretion to allow LOS to be exceeded in order to achieve other Circulation Element goals and policies.

³ TIF improvements include adaptive traffic signal coordination along the Bayfront Expressway corridor which is likely to improve LOS operations; however, LOS is unable to be quantified at this time. Additionally, physical intersection improvements are considered infeasible due to right-of way (ROW) constraints.

Table 4.14-11. Summary of Recommended Improvement Measures

No.	Intersection	Jurisdiction	Near Term (2025) Plus Project	Cumulative (2040) Plus Project	Improvement in TIF Fee Program? ^a	Project Responsibility
1	Marsh Road/Bayfront Expressway	Menlo Park/State	Modify signal phasing for eastbound right-turning movements to overlap phasing.	Same	No	Design/Installation
			^c			
9	Chrysler Drive/Constitution Drive	Menlo Park	Widen and reconfigure eastbound approach to one eastbound left-turn lane, one eastbound through lane, and one eastbound right-turn lane. ^c	Same	No	Design/Installation
10	Chrysler Drive/Jefferson Drive-East Driveway	Menlo Park	Install a traffic signal ^d	Same	Yes - Menlo Gateway Mitigation	Design/Installation
11	Chrysler Drive/Independence Drive	Menlo Park	Install a traffic signal ^d	Same	Yes - Chrysler Drive Intersection Improvements	Design/Installation
13	Chilco Street/Constitution Drive	Menlo Park	N/A	Widen and reconfigure eastbound approach to one eastbound left-turn lane, one eastbound through lane, and one eastbound right-turn lane ^c	No	Fair Share (0.54%)
				Widen and reconfigure westbound approach to one westbound left-turn lane, one westbound through lane, and one westbound right-turn lane ^c	No	Fair Share (0.54%)
				Modify signal phasing for east and westbound left-turning movements to protected-permitted phasing	No	Fair Share (0.54%)

Table 4.14-11. Summary of Recommended Improvement Measures

No.	Intersection	Jurisdiction	Near Term (2025) Plus Project	Cumulative (2040) Plus Project	Improvement in TIF Fee Program? ^a	Project Responsibility
14	Willow Road/ Bayfront Expressway	Menlo Park/ State	Widen the eastbound approach with an additional through lane. Widen the northbound approach with an additional left-turn lane. These physical improvements would not be feasible. ^{ee}	Same ^e	Yes - Bayfront Expressway Multimodal Corridor Project	Design/Installation

Notes:

- ^a Improvements included in City of Menlo Park Transportation Impact Fee (TIF) program and noted in the City of Menlo Park TIF Nexus Study (January 3, 2020).
- ^b Identifies either the project's responsibility to construct an improvement or contribute fair share towards the implementation of improvements outside of payment to the TIF program. Project responsibility and improvements will be determined in the project's conditions of approval.
- ^c May require right-of-way (ROW) acquisition and/or relocation of utilities and/or mature trees. This approach is also along private ROW.
- ^d MUTCD peak hour signal warrants are not met under either the 2025 or 2040 conditions with the addition of project traffic; however, signalization is recommended due to the volume of vehicles approaching on minor streets and potential for queuing along stop-controlled approaches. Additionally, signalization is included as part of the noted TIF projects at these intersections in the City of Menlo Park TIF Nexus Study.
- ^e TIF improvements include adaptive traffic signal coordination along the Bayfront Expressway corridor which is likely to improve LOS operations; however, LOS is unable to be quantified at this time. Additionally, physical intersection improvements are considered infeasible due to ROW constraints for both the eastbound approach and the northbound approach.

Parking Assessment

The project would include a total of 552 parking spaces; 510 spaces for residents and 42 spaces for guests. Lot A would be developed with 316 apartments and would offer 336 parking spaces (330 residential spaces and 6 guest spaces) in a parking structure with a single level below grade and a single level at grade. Eight of the residential spaces and one guest space would be ADA accessible. At the time of construction, 15 percent of the parking stalls in the apartment garage would be equipped with an electric vehicle (EV) charging station and one parking stall per residential unit would be “EV Ready,” meaning that conduits would be installed to facilitate adding a charging station in the future.

Each townhome unit would have either a one- or two-car garage. Lot B would be developed with 26 townhomes and would include 73 total parking spaces, 8 of which would be tandem spaces and therefore are not counted toward the number of parking spaces required under the Municipal Code. There would be 44 non-tandem residential parking spaces and 21 guest spaces. The guest spaces would be provided as surface parking along the western site boundary and south of buildings 1 and 2. Lot C would be developed with 18 townhomes and would offer 24 parking spaces (18 residential spaces and 6 guest spaces provided as surface parking within and adjacent to buildings 6 and 7). Lot D would be developed with 72 townhomes and would offer a total of 153 parking spaces (118 residential non-tandem spaces, 26 residential tandem spaces, and 9 guest spaces). Guest spaces would be provided as surface parking in the northeast corner of this lot and north of building 14 as well as the southeast corner of this lot across from building 20 (Appendix B). According to Municipal Code Section 16.45.080, the minimum spaces per unit is one space, and the maximum spaces per unit is 1.5 spaces. The project would provide a total of 552 parking spaces for 432 dwelling units, totaling approximately 1.3 spaces per unit. Therefore, the project would meet the City’s parking requirements.

4.14.6 References Cited

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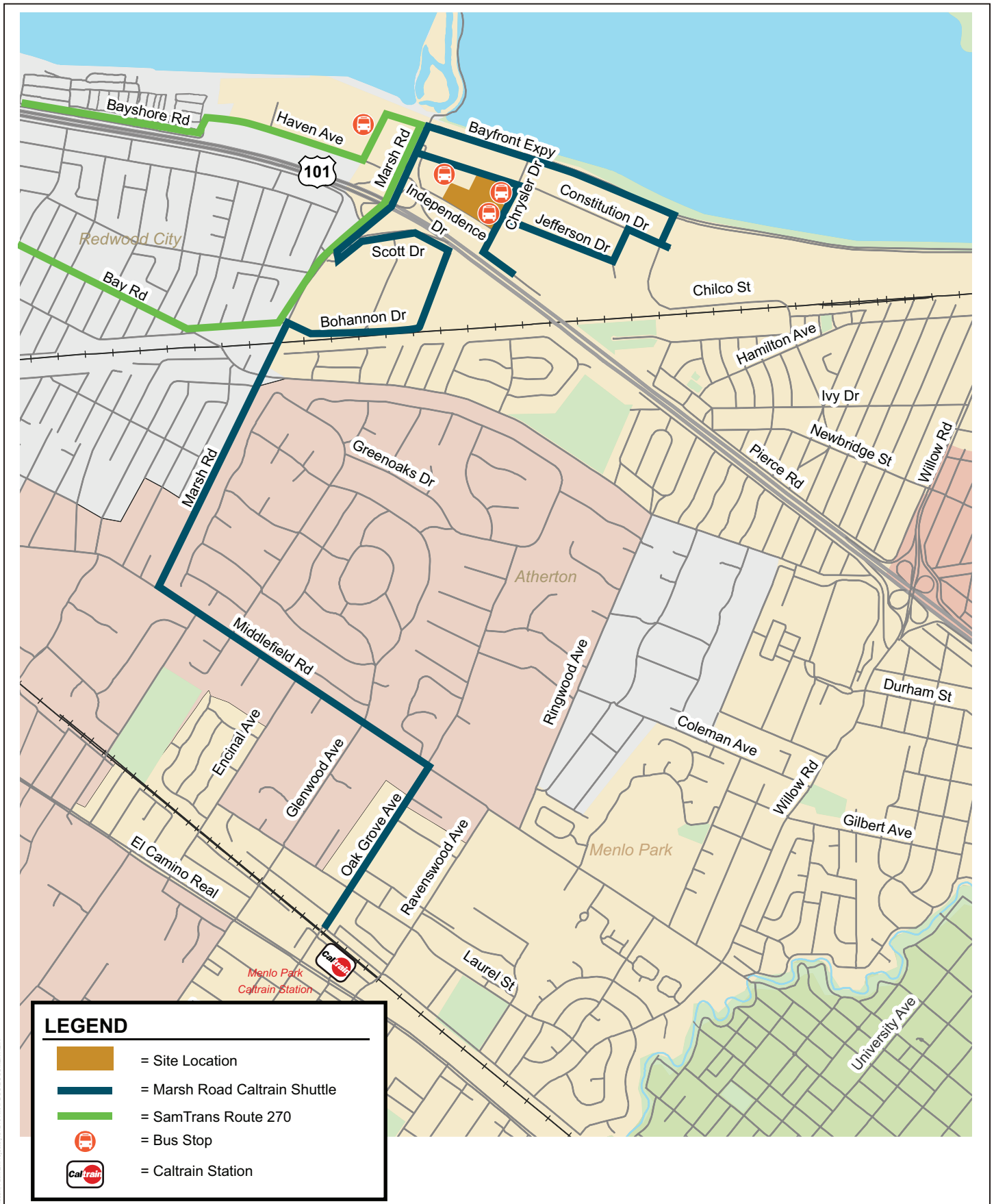
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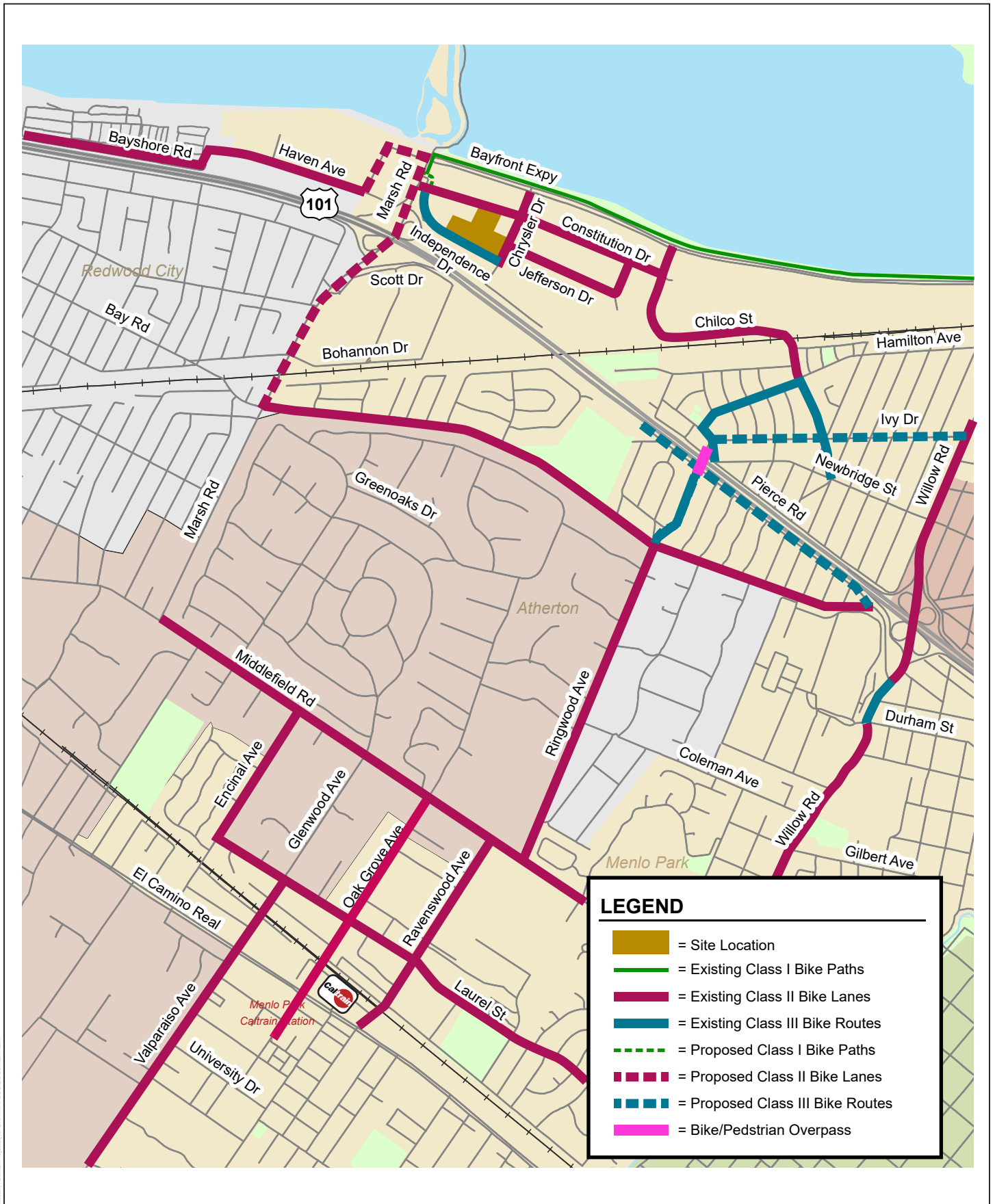
SOURCE: Hexagon 2022

FIGURE 4.14-1

Existing Transit Facilities

123 Independence Drive Residential Project

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SOURCE: Hexagon 2022

FIGURE 4.14-2

Existing and Proposed Bicycle Facilities

123 Independence Drive Residential Project

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4.15 Tribal Cultural Resources

This section describes the tribal cultural resources setting for the proposed 123 Independence Drive Residential Project (project; proposed project) site and region, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures to be implemented during project construction to avoid or minimize potential effects to tribal cultural resources.

As discussed in Chapter 2, Introduction, and Chapter 4, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this environmental impact report (EIR), one in January and February 2021, and one in September and October 2021. One verbal comment was received at the January 2021 scoping session raising concern that cultural and tribal resources may not have been evaluated prior to construction of the existing buildings within the project site. The Native American Heritage Commission (NAHC) submitted written responses to both NOPs describing state regulations regarding Native American consultation requirements and evaluation of cultural and tribal resources. Both NOPs and the comments received in response to them are provided in Appendix A of this EIR.

The primary sources reviewed to prepare this section include the City of Menlo Park (City) General Plan (City of Menlo Park 2016a), the ConnectMenlo General Plan Update EIR (City of Menlo Park 2016b), and the Phase I Archaeological Assessment prepared for the project by Albion in March 2020 (Appendix E1).

4.15.1 Environmental Setting

The project site, and its surrounding area, has been developed since the 1960s. The project site currently features office and industrial uses and includes one building that has retained its original scale since the 1960s (Appendix E2). Implementation of the project would require the demolition of existing buildings as well as grading the entire project site and importing fill soil to raise the site elevation sufficient to ensure that ground-level residential units are 2 feet above the Federal Emergency Management Agency floodplain, per the requirements of Menlo Park Municipal Code (Section 16.45.130[4]).

A detailed discussion of the archaeological setting and cultural context for the project area is provided in Section 4.4, Cultural Resources. The following discussion provides additional information regarding the tribal cultural resource context of the region.

CEQA defines a tribal cultural resource as a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe that is either included in or determined eligible for inclusion in the California Register of Historic Resources (CRHR) or a qualifying local historical register or determined by the lead agency to be significant pursuant to the criteria for listing in the CRHR, based on substantial evidence (Public Resources Code Section 20174[a]). A cultural landscape that meets this definition is a tribal cultural resource to the extent that the landscape is geographically defined in terms of size and scope (Section 20174[b]). A historical resource or archaeological resource that meets this definition may also be a tribal cultural resource (Section 20174[c]). As discussed in Section 4.4, Cultural Resources, no archaeological or historic resources have been identified within the project site, but there is a potential for archaeological resources to be encountered during excavation and grading activities that would occur as part of project construction.

The following tribes are traditionally and culturally affiliated with the project region:

- Amah Mutsun Tribal Band;

- Costanoan Rumsen Carmel Tribe;
- Indian Canyon Mutsun Band of Costanoan;
- Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
- Ohlone Indian Tribe
- Wuksache Indian Tribe/Eshom Valley Band; and
- Tamien Nation

The Bayfront Area of Menlo Park has been identified as archaeologically sensitive. The ConnectMenlo EIR notes that “artifacts from the lives of these early residents of what is now Menlo Park are still being discovered today. As recently as 2012, Native American remains were found at a construction site along Willow Road, in Menlo Park. Additionally, Native American remains were found at the Prologis commercial development site in the Bayfront Area” (City of Menlo Park 2016b). In addition, archival record searches indicate that there is a previously recorded multi-component (historic and pre-European contact) archaeological resource, referred to as the Hiller Mound, located within the Willow Village project site approximately 1.5 miles east of the proposed project. The Willow Village Final EIR identifies that Basin Research Associates (Basin) prepared a Cultural Resources Assessment Report for that project, which included archival records reviews, literature review, and an enhanced archaeological identification program involving subsurface probing. Basin reported that the Hiller Mound has been extensively studied. The central portion of the resource site, referred to as the Core, represents the most archaeologically intact component of the resource. The Perimeter component is characterized by the presence of alluvial midden which reflects archaeological material has been displaced from the Core through erosion, slope wash, and leveling of the Core that occurred during prior development activities at the site. Basin also noted that Native American remains were encountered at the Willow Village site during construction activities that occurred in 2017 (City of Menlo Park 2022).

Three of the Native American tribes that are traditionally and culturally affiliated with the project region requested consultation with the City in regards to the Willow Village project. Through that consultation process, the Tamien Nation identified that they recognize various mounds across the Bay Area region, including the Hiller Mound, as comprising an ethnographic landscape, which is a type of cultural landscape that can range from contemporary settlements to religious sacred sites or geological landforms that exhibit importance to the culture (City of Menlo Park 2022).

Native American Resources

In compliance with the Native American Historic Resource Protection Act, which was adopted under Assembly Bill (AB) 52 in 2015, notification letters and the NOPs for this EIR were sent to all tribal representatives including in the NAHC-provided list of recommended tribal contacts for the project area. The notification letters included a brief project description and invitation to provide information and/or request consultation with the City regarding the potential for the project to affect tribal cultural resources. The City has not received any responses to the notification letters.

Project Site

The project site is approximately 7 feet above mean sea level and relatively flat. Flood Slough is approximately 884 feet northwest of the site; Ravenswood Slough is 0.5 miles east of the site. Soils in the project area are characterized as Urban land Orthents, reclaimed complex, 0–2 percent slopes, which occurs in areas that were once part of the San Francisco Bay and adjacent tidal flats (Appendix E1). Urban land soils generally consist of deep, poorly drained fill. However, the underlying landform includes Holocene alluvial soils, which indicates there is potential for buried archaeological deposits beneath the fill soils (Appendix E1).

Records Search

Albion's investigation included a background records search at the Northwest Information Center of the California Historical Resources Information System at Sonoma State University. The records search results identified that one archaeological study was previously conducted within the project site that did not identify any archaeological resources, and 13 studies have been conducted within a 0.25-mile radius of the site, resulting in recordation of one prehistoric period resource and four historic period resources (Appendix E1).

4.15.2 Regulatory Framework

Federal Regulations

Federal regulations that address protection of Native American and historic resources are described in Section 4.4.

State Regulations

Native American Historic Resource Protection Act

The Native American Historic Resource Protection Act (AB 52), which went into effect July 1, 2015, establishes that Tribal Cultural Resources must be considered under the California Environmental Quality Act (CEQA) and defines a lead agency's requirements for notification and consultation with California Native American tribes.

Public Resource Code (PRC) Section 21074 states:

a) "Tribal cultural resources" are either of the following:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

c) A historical resource described in PRC Section 21084.1, a unique archaeological resource as defined in subdivision (g) of PRC Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of PRC Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

Under AB 52, lead agencies must notify all California Native American tribes that are traditionally and culturally affiliated with the project area and that have requested formal notification. The notification requirement extends to tribes that are not federally recognized, and notification must occur at the onset of a project, which is typically

considered to be when an NOP is released. After notification, tribes may request to engage in consultation with the Lead Agency. If it is determined that a substantial adverse change to a tribal cultural resource would result from a project, the tribal consultation can include development of mitigation measures and/or project alternatives that could reduce or avoid those impacts.

All tribes identified on the NAHC official SB 18 California Tribal Consultation List were notified of this project under both SB 18 and AB 52 in January 2020. No tribes requested consultation. The revised NOP was also sent to these tribes in September 2021. The City has not received any tribal responses to the AB 52 notifications or the NOPs.

California Environmental Quality Act

As discussed above, the Native American Historic Resource Protection Act amended CEQA to require public agencies to consider the effects of their actions on tribal cultural resources. CEQA also requires that public agencies avoid damaging effects to any tribal cultural resource, when feasible. If the lead agency determines that a project may cause a substantial adverse change in a tribal cultural resource, and measures are not otherwise identified in the consultation process, state law provides mitigation measures that may be considered to avoid or minimize the significant adverse impacts. These include:

- Avoidance and preservation in place, including incorporation of the resource into open spaces, parks, or green spaces;
- Treating the resource with appropriate dignity, including protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource;
- Establishing conservation easements or other interests in real property with culturally appropriate management criteria for purposes of preserving or utilizing the resource in place; or
- Otherwise protecting the resource.

Additional State Regulations

Additional state regulations that address protection of Native American and historic resources are described in Section 4.4.

Regional and Local Regulations

Regional and local regulations that address protection of Native American and historic resources are described in Section 4.4.

4.15.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to tribal cultural resources are based on Appendix G and Section 15130 of the CEQA Guidelines. A significant impact related to tribal cultural resources would occur if the project would:

- A. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: (i); listed or eligible for listing in the

California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code Section 5020.1(k); or (ii) 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

- B. Make a cumulatively considerable contribution to a significant cumulative impact related to tribal cultural resources.

4.15.4 Impacts and Mitigation Measures

Methodology

A Phase I Archaeological Assessment was prepared for the project (Appendix E1). As stated in Section 4.15.1, Environmental Setting, this investigation included a background records search at the Northwest Information Center of the California Historical Resources Information System at Sonoma State University. The records search included a review of the information center's mapped prehistoric, historical, and built-environment resources, Department of Parks and Recreation Site Records, technical reports, historical maps, and local inventories. Additional consulted sources included the NRHP, CRHR, and listed Office of Historic Preservation Archaeological Determinations of Eligibility, California Points of Historical Interest, and California Historical Landmarks. The records search results identified that one archaeological study was previously conducted within the project site that did not identify any archaeological resources, and 13 studies have been conducted within a 0.25-mile radius of the site, resulting in recordation of one pre-historic period resource and four historic period resources (Appendix E1).

In January 2020, Albion completed a pedestrian survey of the project site and Native American outreach under the Native American Historic Resource Protection Act. The City also provided notification to NAHC-listed traditionally culturally affiliated Native American tribes pursuant to AB 52 in January 2020, at the time of public circulation of the NOP for this EIR, and sent a second notification along with the revised NOP to the same Native American tribes in September 2021. The notification letters included a brief project description and invitation to provide information and/or request consultation with the City regarding the potential for the project to affect tribal cultural resources. The City has not received any responses to the notification letters or any Native American tribal responses to the NOPs.

Albion's visual inspection of the project site revealed no evidence of intact precolonial or historic-era archaeological deposits. However, there is minimal soil visibility at the site due to the existing buildings and paving. Albion's background research conducted for the site suggests that, due to past dynamic geological processes, the area holds a moderate to high potential to contain buried archaeological deposits.

Project Impacts

Impact 4.15-1 Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- (i) listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code Section 5020.1(k); or,

- (ii) 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

As previously described in Section 4.15.2, Regulatory Framework, a tribal cultural resource is defined under Native American Historic Resource Protection Act (AB 52) as a site, feature, place, cultural landscape that is geographically defined in terms of size and scope, sacred place, or object with cultural value to a California Native American tribe that are either included or eligible for inclusion in the CRHR or included in a local register of historical resources, or if the City of Menlo Park, acting as the lead agency, supported by substantial evidence, chooses at its discretion to treat the resource as a tribal cultural resource.

Preparation of the Phase I Archaeological Investigation (Appendix E1) included a Sacred Lands File records search for the project site. This search failed to indicate the presence of Native American cultural resources within the project area or within one-half mile of the project area. Albion also conducted Native American tribal outreach and no responses to these outreach efforts were received.

As discussed above, in compliance with AB 52, the City provided formal notification of the proposed project to all tribes listed on the NAHC official SB 18 California Tribal Consultation List that have requested notification of projects subject to CEQA review. The City provided notification to these tribes in January 2020 and stated that tribes had 30 days to request consultation, in accordance with the timelines established in AB 52. A second notification along with the revised NOP was also sent to these tribes in September 2021. The City has not received any tribal responses to the AB 52 notifications or the NOPs. Thus, no tribes have requested participation in the consultation process, and no tribes have identified any tribal cultural resources in the project site or vicinity. As discussed in Impact 4.4-3, the project site is not known to contain any human remains, but compliance with Health and Safety Code Section 7050.5 in the event that any are encountered would ensure that such discoveries are appropriately evaluated and treated.

As discussed above, there are no known cultural resources within the project site and no known tribal cultural resources within the site or project vicinity. However, there is a potential for unknown tribal cultural resources to be encountered during construction, similar to the potential for unknown cultural resources to be encountered during construction as discussed in Impact 4.4-2. Thus, this impact is **potentially significant** because the project could cause a substantial adverse change in the significance of such a resource.

Mitigation Measures

Implementation of Mitigation Measure (MM) 4.15a would ensure that any potential tribal cultural resources encountered during project construction would be protected from further impacts until they have been evaluated by a qualified professional and a determination is made as to the treatment measures that can be implemented to avoid adverse effects to such resources prior to continuance of construction activities in the vicinity of the resource. This would reduce the project's impacts to tribal cultural resources to a **less-than-significant** level.

MM 4.15a **Unanticipated Discovery of Tribal Cultural Resources.** In the event that resources with potential to meet the definition of a "Tribal Cultural Resource" (archaeological sites, features, or artifacts of Native American origin or association) are exposed during construction activities, the City shall be immediately notified and all construction work occurring within 50 feet of the find shall immediately stop until the find is assessed by a qualified archaeologist. A report documenting the resource

assessment shall be submitted to the City. The City shall review this information to assess if the resource has potential to meet the definition of a Tribal Cultural Resource and, if appropriate, contact and/or provide a designated individual the authority to notify traditionally and culturally affiliated Native American tribes. The tribes shall be provided a reasonable time to provide comment and recommend treatment of the find. The City shall review these recommendations and, if they are confirmed to be reasonable and appropriate, they shall be implemented by the contractor. All management strategies shall occur in compliance with cultural resources mitigation and pertinent regulatory conditions. Treatment for tribal cultural resources would be consistent with PRC Section 21084.3(b), which recommends (1) avoidance and preservation of the resources in place, including planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria; (2) treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including the following: (a) protecting the cultural character and integrity of the resource, (b) protecting the traditional use of the resource, and (c) protecting the confidentiality of the resource; (3) permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places; or (4) protecting the resource.

Cumulative Impacts

The geographic scope or cumulative context for evaluation of potential cumulative impacts on tribal cultural resources is San Mateo County and adjacent areas of Santa Clara County because these areas are included in the traditional territory of the Native American tribes that are traditionally and culturally affiliated with the project region. Tribal cultural resources are unique and non-renewable; thus, all adverse effects or negative impacts erode a dwindling resource base. Effects to tribal cultural resources within the City could combine with effects to other tribal cultural resources in the region to further erode the cultural context of the area. Thus, this cumulative impact analysis for cultural resources relies on projected plans for development in the City of Menlo Park, the 19 other incorporated cities within San Mateo County, and the City of East Palo Alto, consistent with CEQA Guidelines Section 15130(b)(1)(B).

Impact 4.15-2 Would the project make a cumulatively considerable contribution to a significant cumulative impact related to tribal cultural resources?

Although there are no known cultural or tribal cultural resources within or adjacent to the project site, the project region is considered archaeologically sensitive, as discussed further below. Thus, there is a potential for tribal cultural resources to be encountered during construction and for the project to cause a substantial adverse change in the significance of such a resource.

Archaeological evidence suggests that San Mateo County has been inhabited dating to more than 5,500 years before present time. Background research has identified a number of historical archaeological sites, prehistoric archaeological sites, and historic buildings and structures throughout the County while recent consultations between Native American tribes and local governments have identified several tribal cultural resources in the region. Urban development throughout San Mateo County and adjacent areas of Santa Clara County has likely impacted a number of known and unknown historic and prehistoric sites, including tribal cultural resources. It is reasonable to assume that present and future development would continue to have an impact on known and unknown tribal cultural resources throughout the region. The potential for adverse effects to tribal cultural

resources can be lessened through the notification and consultation process defined in CEQA as well as implementation of appropriate and effective mitigation development in consultation with Native American tribes and in compliance with applicable federal, state, and local laws that protect these resources in most instances. However, the cumulative loss of tribal cultural resources from present and future development within San Mateo County and adjacent areas of Santa Clara County is considered a potentially significant cumulative impact.

Further, as discussed in Section 4.15.1, the Bayfront Area of the City of Menlo Park has been identified as archaeologically sensitive, and there are known cultural resources, human remains, and tribal cultural resources in this portion of the City as well as throughout the region overall.

The analysis in the ConnectMenlo EIR found that the future development anticipated under the General Plan has the potential to cumulatively impact cultural resources (and by extension tribal cultural resources) but that such impacts would be reduced to less-than-significant levels with implementation of mitigation measures CULT-2a (which addresses unanticipated discovery of subsurface cultural resources during construction), CULT-2b (which addresses Native American consultation), and CULT-4 (which addresses unanticipated discovery of human remains during construction) and compliance with applicable federal, state, and local regulations, including applicable City General Plan goals and policies. These regulations were found to protect tribal cultural resources by providing for early detection of potential conflicts between development and resource protection and preventing or minimizing material impairment of the ability of archaeological deposits to convey their significance through excavation or preservation. Thus, the analysis in the ConnectMenlo EIR concluded that ongoing development within the City would not create or contribute to a cumulative impact on cultural resources (Menlo Park 2016b).

While the proposed project would increase the total development density and intensity compared to the amount of development evaluated in the ConnectMenlo EIR, the project would not expand the footprint of development relative to the General Plans of San Mateo County and each of the incorporated cities included in the geographic scope of this analysis, and relative to the Santa Clara County General Plan. Further, the project, like the development analyzed in the ConnectMenlo EIR, would undertake mitigation designed to minimize or eliminate impacts to tribal cultural resources. Thus, the analysis and conclusions of the ConnectMenlo EIR regarding cumulative impacts to cultural resources remain applicable to the proposed project, which would not create or make a cumulatively considerable contribution to any significant cumulative impact on tribal cultural resources from prior and existing development. As discussed above and evaluated in Appendices E1 and E2, the project site does not contain any known cultural, tribal cultural, historic, or archaeological resources or human remains, although archaeological resources and human remains could be present below-ground. The project would be required to comply with the City's General Plan implementation measures related to the preservation of cultural and tribal cultural resources as described in Mitigation Measures 4.4a and 4.4b and Health and Safety Code Section 7050.5 related to unearthing human remains. Project-specific mitigation for cultural resources would apply as MM 4.4a and MM 4.4b, which require additional subsurface investigation and prescribe management strategies to be implemented in the event unanticipated cultural resources or human remains are encountered. In addition, MM 4.15a stipulated above would be implemented in the event that these unanticipated finds have potential to meet the definition of a tribal cultural resource, including notification of traditionally and culturally affiliated Native American tribes and engaging with designated tribal representatives to develop an appropriate and respectful management approach. Directly including traditionally culturally affiliated tribes will help ensure that the project would not result in any significant direct adverse effects tribal cultural resources, and therefore the project would not make a cumulatively considerable contribution to a significant cumulative impact related to cultural or tribal cultural resources. Therefore, in combination with past, present, and reasonably foreseeable projects, the project would result in a **less-than-significant** cumulative impact with respect to cultural resources.

Mitigation Measures

Implementation of MMs 4.4a, 4.4b, and 4.15a and compliance with Health and Safety Code Section 7050.5 would reduce the project's impacts to tribal cultural resources to a less-than-significant level and would ensure that the project would not make a cumulatively considerable contribution to any significant cumulative impact to tribal cultural resources. No additional mitigation measures are required.

4.15.5 References Cited

City of Menlo Park. 2016a. *General Plan*. Adopted November 19, 2016. https://www.menlopark.org/DocumentCenter/View/15013/Land-Use-and-Circulation-Element_adopted-112916_final_figures?bidId=.

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City of Menlo Park. 2022. *Willow Village Master Plan Project Final EIR*. Prepared by ICF for the City of Menlo Park. October 2022. <https://beta.menlopark.org/files/sharedassets/public/community-development/documents/projects/under-review/willow-village/final-eir/willow-village-master-plan-final-eir.pdf>

County of San Mateo Parks Department. n.d. "Flood Park History." Accessed January 13, 2022. <https://parks.smcgov.org/flood-park-history>.

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4.16 Utilities and Service Systems

This section of the environmental impact report (EIR) describes the existing utilities and service systems for the proposed 123 Independence Drive Residential Project (project; proposed project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures where necessary to avoid or reduce potential significant impacts. The analysis in this section addresses water supply, wastewater treatment, solid waste, electrical infrastructure, and telecommunications infrastructure. Energy consumption is addressed in Section 4.5, Energy, and stormwater infrastructure is addressed in Section 4.9, Hydrology and Water Quality.

As discussed in Chapter 2, Introduction, and Chapter 4, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this EIR; one in January and February 2021, and one in September and October 2021. No comments regarding utilities and service systems were received in response to the NOPs or during scoping sessions held for this EIR. Both NOPs and the comments received in response to them are provided in Appendix A of this EIR.

The primary sources reviewed to prepare this section include the ConnectMenlo General Plan Update (City of Menlo Park 2016a), the ConnectMenlo General Plan Update Draft EIR (City of Menlo Park 2016b), the City of Menlo Park Municipal Code (City of Menlo Park 2021), the 2020 Urban Water Management Plan for Menlo Park Municipal Water (MPMW 2021), the 123 Independence Water Budget (Appendix K1), the project's Mixed Use Town Home Parcel Zero Waste Management Plan (Appendix K2), and the project's Mixed Use Apartments Zero Waste Management Plan (Appendix K3).

4.16.1 Environmental Setting

Water

Water Service—Menlo Park Municipal Water

There are four water utility companies that serve various portions of the City of Menlo Park. The water provider in the Bayfront Area is Menlo Park Municipal Water (MPMW), which is governed by the City Council and run by the City's Public Works Department. MPMW's primary responsibilities are water distribution and maintenance. MPMW does not undertake water treatment because it purchases all of its potable water from the San Francisco Public Utilities Commission (SFPUC) as a member of Bay Area Water Supply and Conservation Agency (BAWSCA); water purchased from the SFPUC does not require further treatment (MPMW 2021).

MPMW serves approximately 50 percent of the City's population. In 2020, this equated to about 18,276 residents in an approximately 9-square-mile area. The service territory is divided into the following three pressure zones, which are hydraulically disconnected from each other:

- The Lower Zone is generally located north and east of El Camino Real and includes part of the Belle Haven neighborhood, Bay Road, and Willows neighborhood. This area includes residential, commercial, and industrial land uses.
- The High Pressure Zone is located in the northern portion of the City between US 101 and the Bayfront Expressway. This zone serves multi-family residential, a mobile home park, commercial, and light industrial land uses.
- The Upper Zone is located in the southwest portion of the City near Interstate 280. It primarily serves the residential Sharon Heights neighborhood and business parks along Sand Hill Road (MPMW 2021).

The MPMW distribution system consists of 59 miles of water mains, approximately 4,296 metered connections, two reservoirs, and one pump station. MPMW also maintains fire hydrants, backflow prevention devices, flushing points, and service connections to the SFPUC, which controls access to water via the Hetch Hetchy pipeline right-of-way through the City (MPMW 2021). MPMW is a member of BAWSCA, which represents MPMW and the 25 other water districts, cities, and utilities in the region that purchase wholesale water from SFPUC. BAWSCA negotiates and coordinates with the SFPUC in the development of regional water demand and conservation projections and programs and long-term strategies and programs for improving water supply reliability, including SFPUC's efforts to develop alternative water supplies.

Water Sources

The major water supply source for the proposed project is the San Francisco Regional Water System, which consists of more than 280 miles of pipelines, 60 miles of tunnels, 11 reservoirs, 5 pump stations, and 2 water treatment plants. It includes the Hetch Hetchy System and the Bay Area water system facilities. The Hetch Hetchy System is generally composed of the reservoirs, hydroelectric generation and transmission facilities, and water transmission facilities from the Hetch Hetchy Valley in the Sierra Nevada west to the Alameda East Portal of the Coast Range Tunnel in Sunol Valley. Hetch Hetchy System water is disinfected at the Tesla Treatment Facility. Because water supply for the Regional Water System comes from the Sacramento-San Joaquin Delta, the total amount of available water for the region is influenced by the Sacramento-San Joaquin Delta Reform Act of 2009 and the Delta Plan prepared in 2013 by the Delta Stewardship Council, which was created under the Delta Reform Act.

SFPUC's Bay Area water system is comprised of two parts—the Alameda System and the Peninsula System—generally consisting of the facilities west of the Alameda East Portal of the Coast Range Tunnel, including the 63,000-acre Alameda and Peninsula watersheds, storage reservoirs, two water treatment plants, and the distribution system that delivers water to both retail and wholesale customers.

The Alameda System includes two reservoirs, San Antonio Reservoir and Calaveras Reservoir, which collect water from the San Antonio Creek, Upper Alameda Creek, and Arroyo Hondo watersheds in Alameda County. San Antonio Reservoir also receives water from the Hetch Hetchy System. The Sunol Valley Water Treatment Plant (SVWTP) filters and disinfects water supplied from San Antonio Reservoir and Calaveras Reservoir.

The Hetch Hetchy System and the Alameda System are connected to the Peninsula system via the Bay Division Pipelines, which cross the South Bay. The Peninsula System includes the Crystal Springs Reservoir, San Andreas Reservoir, and Pilarcitos Reservoir. Water from the Crystal Springs and San Andreas reservoirs are treated at the Harry Tracy Water Treatment Plant (HTWTP) while the water from the Pilarcitos Reservoir is provided directly to wholesale customers and delivered to Crystal Springs and San Andreas Reservoirs.

Water Treatment

Water from the Hetch Hetchy Reservoir meets or exceeds all federal and state criteria for watershed protection. All water derived from sources other than Hetch Hetchy Reservoir is treated at one of two treatment plants: SVWTP or the HTWTP. The SVWTP primarily treats water from the Alameda System reservoirs and has both a peak capacity and sustainable capacity of 160 million gallons per day (mgd). The HTWTP treats water from the Peninsula System reservoirs and has a peak capacity of 180 mgd and a sustainable capacity of 140 mgd. Major upgrades to the SVWTP were completed in 2013 and to the HTWTP in 2015 (MPMW 2021).

Groundwater

As discussed in Section 4.9, Hydrology and Water Quality, the project region overlies the southern end of the San Mateo Plain Groundwater Subbasin of the Santa Clara Valley Groundwater Basin. MPMW does not utilize groundwater as a potable water source outside of emergency conditions. MPMW anticipates bringing one groundwater well online in early 2023 and is planning to construct an additional one or two wells to provide up to 3,000 gallons per minute of potable and fire supply in these zones (MPMW 2021).

Water Supply and Demand

MPMW purchases all of its water supplies from the SFPUC. Currently, MPMW has a contractual supply of 4.456 mgd, which is approximately 1,630 million gallons per year. This is expected to be sufficient to meet projected water demand through 2040 in normal water years (MPMW 2021).

In its 2020 Urban Water Management Plan (UWMP) Update, MPMW notes that its service area is largely built-out, thus residential population growth is expected to occur primarily through redevelopment projects, particularly within the Bayfront Area, consistent with the City's General Plan. MPMW also supplies water to commercial, industrial, and institutional customers and anticipates increases in the number of jobs in the service area. Table 4.16-1, Existing and Projected Residential Population and Employment reflects the population and employment estimates for the MPMW service territory through 2040, as identified in the UWMP. The changes in employment reflect anticipated growth in the commercial sector and declines in the industrial sector.

Table 4.16-1. Existing and Projected Residential Population and Employment

Year	Population	Employment
2020	18,276	23,574
2025	23,383	29,511
2030	25,166	32,356
2035	27,675	34,834
2040	30,184	37,311

Source: MPMW 2021.

The 2020 UWMP population and employment projections reflect the redevelopment that could occur under the ConnectMenlo General Plan Update, particularly the increased development potential within the Bayfront Area, which is expected to include:

- 2.3 million non-residential square feet, including offices, life-sciences buildings, and other commercial uses;
- 400 hotel rooms;
- 4,500 multi-family residential units;
- Two transit centers; and
- Up to 61 acres of landscaped open space.

The ConnectMenlo EIR evaluated potential development of a total of 5,500 residential units within the City, reflecting the capacity for development of 4,500 units within the Bayfront Area and 1,000 units in other areas of the City. However, MPMW does not provide water supply to all areas of the City. Thus, as reflected in Appendix D of

the UWMP, buildout of the General Plan is expected to accommodate up to 4,500 new residential units and a population of 11,570 new residents within the MPMW service area (MPMW 2021).

The ConnectMenlo EIR also identified that the buildout potential for future development was expected to occur over a 24-year buildout horizon (from approximately 2016 to 2040) (City of Menlo Park 2016b); however, the UWMP recognized that based on development applications that were already being reviewed by the City at the time the UWMP was being prepared, buildout of the anticipated maximum number of residential units was likely to occur more rapidly than had been projected in the ConnectMenlo EIR. Specifically, the UWMP notes that 40 percent of the total population growth expected through the year 2040 was assumed to occur between the years 2020 and 2025.

MPMW used the anticipated level of redevelopment in the Bayfront Area, buildout projections for the entire MPMW service area, and reasonably expected improvements in water conservation measures to determine projected future water demands, as shown in Table 4.16-2, Projected Water Demand and Supply. Conservation measures include both passive conservation, which accounts for reductions in water use from redevelopment projects that replace older water fixtures with more efficient fixtures and replace existing landscaping with low-water use landscaping, as well as active conservation measures, which account for water savings resulting from MPMW's implementation of water conservation programs, education programs, and the offering of financial incentives (such as rebates for homeowner replacement of older water fixtures).

Table 4.16-2. Projected Water Demand and Supply (million gallons per year)

Year	Normal Year Supply	Single Dry Year Supply	Multiple Dry Year Supply at 5th Dry Year	Projected Water Demand
2025	1,678	877	760	1,296
2030	1,750	978	854	1,345
2035	1,750	1,018	824	1,410
2040	1,750	1,062	832	1,483

Source: MPMW 2021.

Wastewater

The West Bay Sanitary District (WBSD) provides wastewater collection and conveyance services to Menlo Park, Atherton, Portola Valley, and areas of East Palo Alto, Woodside, and unincorporated San Mateo and Santa Clara counties. WBSD collected wastewater is conveyed Silicon Valley Clean Water (SVCW), a Joint Powers Authority, pumping and transmission lines and then to the SVCW Regional Wastewater Treatment Plant (WWTP) in Redwood Shores. SVCW then discharges treated water to the San Francisco Bay.

Wastewater Collection

The WBSD service area encompasses approximately 8,325 acres and includes approximately 19,000 service connections to serve a population of 52,900. WBSD operates and maintains approximately 200 miles of gravity sewer mains in size from 6 to 54 inches in diameter and operates 12 pump stations ranging in capacity from 110 to 2,500 gallons per minute. The system serves residential, commercial, and industrial users, and contains 150 miles of private lateral sewers. WBSD conveys raw wastewater to SVCW for treatment through the Menlo Park Pump Station and force main.

The WBSD's Base Wastewater Flow ("dry weather flow"), as measured during the 2009/10 flow monitoring program, is 4.6 mgd. This Base Wastewater Flow translates to approximately 87 gallons per person per day.

Wastewater Conveyance

The SVCW pumping and transmission facilities include four pump stations, a wet weather booster station co-located with the San Carlos Pump Station, a lift station at the WWTP, and an approximately 9-mile-long, reinforced concrete force main. The Menlo Park Pump Station is the southernmost facility within the SVCW conveyance system.

SVCW determined that the four pump stations and the force main were in poor to very poor condition and developed an improvement program, known as the RESCU Program, consisting of "rehabilitation and/or repurposing of existing pump stations, improvements to the existing WWTP, and replacement of the existing force main pipeline with a gravity pipeline" (SVCW 2017). The RESCU Program was evaluated under the Wastewater Conveyance System and Treatment Plant Reliability Improvement Project EIR (SVCW 2017).

SVCW is currently implementing the RESCU Program, which is necessary to continue to provide wastewater conveyance and treatment service to the existing population and non-residential customers within the service area as well as to serve planned customers already accounted for in the General Plans of the cities within the service area. The specific components of the RESCU Program currently being implemented include the Gravity Pipeline, Front of Plant, Pump Stations, and Belmont Force Main projects.

The gravity pipeline would replace the force main, which is necessary because the force main is over 45 years old and in very poor condition. The conversion to gravity flow would also reduce energy consumption for wastewater conveyance,

Wastewater Treatment

The SVCW WWTP treats raw wastewater from Menlo Park and other communities and discharges to the deep water channel of the San Francisco Bay. Operation of the SVCW WWTP is governed by the waste discharge requirements found in Regional Water Board Order No. R2-2018-00XX (NPDES No. CA0038369). The WWTP is designed to remove more than 97 percent of all solids, organic material, and pathogens from the wastewater through physical and biological processes. During the dry season, SVCW further treats some of the WWTP flow with coagulation and additional disinfection for use as recycled water for landscape irrigation in the SVCW service area.

The SVCW's WWTP has an existing dry weather capacity of 29 mgd and wet weather capacity of 71 mgd. As reported by the RWQCB from July 2008 through June 2011, the average monthly flow was 15.9 mgd, and the maximum daily flow was 48.8 mgd. Between October 2012 and August 2017, flows decreased somewhat, with average flows of 13.5 mgd and a maximum instantaneous flow of 50 mgd. Under its Stage 2 Expansion Program, the SVCW will increase WWTP capacity to 80 mgd wet weather capacity as needed. The improvements under the SVCW's Capital Improvement Project are intended to improve the conveyance system, treatment processes and capacity to accommodate regional development.

The RESCU Program includes a component called the Front of Plant project. Under this component, SVCW will construct a Headworks Facility that includes a preliminary treatment system to allow large inorganic material (such as plastics, wood, and metal) to be screened out of the wastewater stream, and a new grit removal system to remove grit, sand, and rocks before wastewater enters the primary treatment process. Without these improvements, the existing partial screening and grit removal processes allow too much grit and unscreened material to enter the WWTP, which causes excessive wear on equipment and high maintenance and repair costs (SVCW 2017).

The RESCU Program also includes construction of flow diversion facilities to increase storage volume, including a Flow Diversion Structure (FDS) that would be used in conjunction with the gravity pipeline to store incoming wastewater for a short period to allow for a more consistent flowrate into the WWTP processes. The gravity pipeline will be used as the primary method of storage while the FDS, which would consist of a three million gallon, above-grade concrete tank, would be used for additional storage when needed.

Equalization in the new conveyance system would be provided by the new Gravity Pipeline and FDS for both daily and wet weather flows. The Gravity Pipeline and the FDS would provide the storage capacity required to provide SVCW the option to limit wastewater flow through the WWTP to 60 mgd during the wet weather season and a constant daily flow during the dry weather season to enhance the operation of the treatment processes. This would be achieved in wet weather with a combination of storage in the Gravity Pipeline and installation of overflow piping from the FDS to one of SVCW's existing drying beds that would provide an additional 4.4 million gallons of storage.

The peak wet weather storage would be designed for a single, 10-year, 24-hour storm event with incoming flow rates to the WWTP at 108 mgd (which includes five mgd of peak flow from the Redwood Shores Force Main), and would have sufficient storage volume to reduce the process flow to the maximum wet weather treatment plant process flow rate of up to 80 mgd. A total storage volume of 15.4 million gallons would be needed to limit process flows to up to 80 mgd. While current peak flow capacity of the WWTP is higher than 60 mgd, this facility would improve the ability to store wastewater short-term and increase the reliability of the processes during storm events.

Solid Waste

Recology Incorporated provides solid waste collection and conveyance service for the City of Menlo Park. Collected recyclables, organics, and garbage are conveyed to the Shoreway Environmental Center in San Carlos for processing and shipment. The Shoreway Environmental Center is owned by RethinkWaste (former South Bayside Waste Management Authority), which is a Joint Powers Authority that is comprised of 12 public agencies, including the City, surrounding cities, the County of San Mateo, and WBSD, and operated by South Bay Recycling under a 10-year contract with RethinkWaste as of January 1, 2011 (City of Menlo Park 2016b).

The Shoreway Environmental Center consists of a transfer station, a materials recovery facility, a public recycling center, an environmental education center, Recology offices, and South Bay Recycling offices in separate buildings on 16 acres of land. Shoreway serves as a regional solid waste and recycling facility for the receipt, handling and transfer of refuse, recyclables and organic materials collected from the RethinkWaste service area (southern and central San Mateo County). The primary goal of RethinkWaste is to provide cost effective waste reduction, recycling, and solid waste programs to member agencies through franchised services and other recyclers to meet and sustain a minimum of 50-percent diversion of waste from landfill as mandated by California State Law, AB 939.

CalRecycle reports that in 2019 a total of 34,913 tons of solid waste from the City was disposed of at 19 different landfills, with the majority of this waste being disposed of at the Ox Mountain Landfill (also called Corinda Los Trancos Landfill). The Ox Mountain Landfill is a sanitary landfill located in Half Moon Bay, California. It has a permitted throughput capacity of 3,598 tons per day. Its remaining permitted capacity is 22,180,000 cubic yards. The Ox Mountain Landfill has an estimated "cease operation date" of January 1, 2034 (CalRecycle 2021a). The three landfills receiving the second, third and fourth largest amount of solid waste from Menlo Park in 2019 were:

- **Monterey Peninsula Landfill** received 6,414 tons of Menlo Park solid waste in 2019 (CalRecycle 2019). Located in Marina, California, this landfill has a permitted throughput capacity of 3,500 tons per day, a

remaining permitted capacity of 48,560,000 cubic yards, and an estimated “cease operation date” of February 28, 2107 (CalRecycle 2021b).

- **Altamont Landfill** received 1,399 tons of Menlo Park solid waste in 2019 (CalRecycle 2019). Located in Livermore, California, this landfill has a permitted throughput capacity of 11,150 tons per day, a remaining permitted capacity of 65,400,000 cubic yards, and an estimated “cease operation date” of January 1, 2070 (CalRecycle 2021c).
- **John Smith Road Landfill** received 1,298 tons of Menlo Park solid waste in 2019 (CalRecycle 2019). Located in Hollister, California, this land fill has a permitted throughput capacity of 1,000 tons per day, remaining permitted capacity of 1,921,000 cubic yards, and estimated “cease operation date” of August 1, 2025 (CalRecycle 2021d).

Energy Infrastructure

The project site is currently developed and served with electrical and natural gas supply from Pacific Gas & Electric (PG&E). There are existing overhead PG&E electrical transmission lines that run through the middle of the project site, starting at Chrysler Drive and running northwest. As discussed in Section 4.5, Energy, residences and businesses within the City of Menlo Park (including those on the project site) receive electricity from either PG&E or the Peninsula Clean Energy Authority (PCE). PCE is a Community Choice Aggregator that was created as a Joint Powers Agency in 2016 to serve all areas of San Mateo County. PCE is the default energy provider throughout San Mateo County, including each of the 20 incorporated cities within the County, but residents may opt-out of obtaining energy from PCE and instead obtain it from PG&E.

PCE obtains all of its electric power from renewable resources (e.g., water, wind, and solar) and carbon-free sources (e.g., hydroelectric and geothermal). Energy supplied through PCE is transmitted to customers through transmission lines and other infrastructure owned and maintained by PG&E. PG&E owns 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines over a 70,000-square-mile service area that includes Northern California and Central California (PG&E 2016).

In 2020, a total of 4,168 million kWh of electricity was consumed in San Mateo County, with 2,516 million kWh being used by non-residential customers and 1,652 million kWh being used by residential customers (CEC 2021a). PCE serves 765,000 customers in San Mateo County by providing more than 3,500 gigawatt hours annually of electricity while PG&E provides electric services to 5.4 million customers. According to PG&E, its customers consumed 78,519 million kWh of electricity in 2020 (Table 4.5-1) (CEC 2021b).

Telecommunications Infrastructure

The project site is currently developed and served with telecommunications services. There are existing overhead telecommunication lines co-located with the PG&E electrical transmission lines through the project site.

4.16.2 Regulatory Framework

Federal Regulations

Federal Safe Drinking Water Act

The Safe Drinking Water Act is the main federal law that regulates the quality of potable water for the public. The Safe Drinking Water Act authorizes the U.S. Environmental Protection Agency (EPA) to establish national health-based standards for drinking water quality. These standards may apply to naturally occurring and human-caused constituents in drinking water. The national standards are established using scientific methods to evaluate health risks and

consider available technology and costs to achieve the standards. The National Primary Drinking Water Regulations establish maximum contaminant levels or mandated methods for water treatment to remove contaminants, and requirements for regular water quality testing to make sure standards are achieved. In addition to setting these standards, the EPA provides guidance, assistance, and public information about drinking water, collects drinking water data, and oversees state drinking water programs. States can apply to the EPA for authority to implement the Safe Drinking Water Act within their jurisdictions by showing that they will adopt standards at least as stringent as the national standards and adequately enforce these standards. California has been granted this authority, and the California Department of Public Health establishes and enforces statewide drinking water standards.

Clean Water Act

The Federal Water Pollution Act of 1972, more commonly known as the Clean Water Act, regulates the discharge of pollutants into watersheds throughout the nation. It is the primary federal law governing water pollution. Under the Clean Water Act, the US EPA implements pollution control programs and sets wastewater standards. The objective of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the Clean Water Act to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable connections and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage treatment plant.

Operation of the SVCW WWTP and its wastewater collection system is regulated by Waste Discharge Requirements (WDRs; NPDES No. CA0038369) found in RWQCB Order No. R2-2012-0062 effective October 1, 2012, and expiring September 30, 2017. The discharger's wastewater collection system consists of four pump stations which receive wastewater from the "satellite" wastewater collection systems of four municipal jurisdictions (West Bay Sanitary District, City of Belmont, City of San Carlos and City of Redwood City). The effluent from the WWTP is also subject to two other NPDES permits: 1) the WDRs for mercury and polychlorinated biphenyls (PCBs) from municipal and industrial wastewater discharges to San Francisco Bay (NPDES No. CA0038849); and 2) waste discharge requirements for nutrients from municipal wastewater discharges to San Francisco Bay (NPDES No. CA0038873). The three NPDES permits enable SVCW to discharge treated wastewater into San Francisco Bay

State Regulations

California Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, which was passed in California in 1969 and amended in 2013, the State Water Resources Control Board (SWRCB) has authority over state water rights and water quality policy.

This Act divided the state into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB) to oversee water quality on a day-to-day basis at the local and regional level. RWQCBs engage in a number of water quality functions in their respective regions. RWQCBs regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. Menlo Park is overseen by the San Francisco Bay RWQCB.

California Senate Bills 610 and 221

Senate Bill (SB) 610 and SB 221 amended state law to ensure better coordination between local water supply and land use decisions and ensure adequate water supply for new development. Both statutes require that detailed information regarding water availability be provided to city and county decision-makers prior to approval of large development projects. SB 610 requires water supply assessments (WSAs) for certain types of projects, as defined by Water Code Section 10912, which are subject to the California Environmental Quality Act (CEQA). Projects required to prepare a WSA are the following:

- Residential development of more than 500 dwelling units
- Shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor area
- Hotel or motel, or both, having more than 500 rooms
- Industrial, manufacturing, or processing plant, or industrial park planned to employ more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area
- Mixed-use project that includes one or more of the projects specified above
- Projects that would demand an amount of water equivalent to, or greater than, the amount of water required for 500 dwelling units.

SB 221 establishes consultation and analysis requirements related to water supply planning for residential subdivisions including more than 500 dwelling units.

California Urban Water Management Planning Act

Through the Urban Water Management Planning Act of 1983, the California Water Code requires all urban water suppliers within California to prepare and adopt an UWMP and update it every 5 years. This requirement applies to all suppliers providing water to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. The Act is intended to support conservation and efficient use of urban water supplies. The Act requires that total project water use be compared to water supply sources over the next 20 years in 5-year increments, that planning occur for single and multiple dry water years, and that plans include a water recycling analysis that incorporates a description of the wastewater collection and treatment system within the agency's service area along with current and potential recycled water uses. In September 2014, the Act was amended by SB 1420 to require urban water suppliers to provide descriptions of their water demand management measures and similar information. Additionally, in 2018 the Act was amended by SB 606 and Assembly Bill (AB) 1668 requiring UWMPs to include a Water Shortage Contingency Plan (WSCP). The WSCP addresses water supply risks facing a water system, including unforeseeable factors that could contribute to water supply constraints, and identifies feasible response actions. The WSCP must address six water shortage levels (corresponding to 10 percent, 20 percent, 30 percent, 40 percent, and 50 percent water shortages) and identify locally appropriate response actions for each shortage level.

The Water Conservation Act of 2009

The Water Conservation Act of 2009, SB X7-7, requires all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita water by 20 percent by 2020, with an interim goal of a 10 percent reduction in per capita water use by 2015. Effective in 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for state water grants or loans. The SB X7-7 requires that urban water retail suppliers determine baseline water use and set reduction targets according to specified standards. It also requires agricultural water suppliers to prepare plans and implement efficient water management practices.

State Updated Model Landscape Ordinance

The updated Model Landscape Ordinance requires cities and counties to adopt landscape water conservation ordinances by February 1, 2016 or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Ordinance. The City of Menlo Park adopted Ordinance No. 968, Water Efficient Landscaping Regulations, in 2016, and revised Municipal Code Chapter 12.44, which is described below.

CAL Green Building Code

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24, known as "CALGreen") was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations [CCR]) to apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure, unless otherwise indicated in the code, throughout the State of California. CALGreen established planning and design standards for sustainable site development, including water conservation measures and requirements that new buildings reduce water consumption by 20 percent. The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011. The building efficiency standards are enforced through the local building permit process. The purpose of CALGreen is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design
- Energy efficiency
- Water efficiency and conservation
- Material conservation and resource efficiency
- Environmental quality

The California Building Code, including CALGreen, is updated every 3 years. The California Energy Commission adopted the 2022 Title 24 Energy Code in August 2021 and the California Building Standards Commission approved incorporating the updated code into the California Building Standards Code in December 2021. The 2022 Energy Code will go into effect on January 1, 2023.

The California Plumbing Code (Part 5, Title 24, CCR)

The California Plumbing Code (Part 5, Title 24, CCR) was adopted as part of the California Building Standards Code. The general purpose of the universal code is to prevent disorder in the industry as a result of widely divergent

plumbing practices and the use of many different, often conflicting, plumbing codes by local jurisdictions. Among many topics covered in the code are water fixtures, potable and non-potable water systems, and recycled water systems. Water supply and distribution shall comply with all applicable provisions of the current edition of the California Plumbing Code.

Executive Order 29-B-15

Executive Order B-29-15, signed by Governor Brown on April 1, 2015, imposed mandatory water restrictions in California. The Order requires the SWRCB to impose restrictions to achieve a statewide 25 percent reduction in potable urban water usage through February 28, 2016 as compared to the amount used in 2013. In addition to requiring cities and towns to save water, the Order is intended to increase enforcement to prevent wasteful water use, streamline the state's drought response and invest in new technologies that will make California more drought resilient.

Executive Order B-36-15

On November 13, 2015, Governor Brown issued Executive Order B-36-15 (EO B-36-15) that calls for an extension of restrictions to urban potable water usage until October 31, 2016, should drought conditions persist through January 2016. EO B-36-15 is the fifth in a series of Executive Orders by Governor Brown on actions necessary to address California's severe drought conditions. On February 2, 2016, the SWRCB adopted an extended and revised emergency regulation. The regulation extends restrictions on urban water use through October 2016 while providing urban water suppliers more flexibility in meeting their conservation requirements. It also directs staff to report back on additional flexibility once more complete water supply information is known in April 2016. The February 2016 Emergency Regulation allows suppliers flexibility in meeting their conservation requirements through adjustments and credits that allow a supplier to modify its conservation standard up to eight percentage points, based on consideration of: (1) climatic differences experienced throughout the state; (2) water- efficient growth experienced by urban areas; and (3) significant investments that have been made by some suppliers toward creating new, local, drought-resilient sources of potable water supply. Conservation standards were able to be adjusted by submitting required information for verification through the new on-line reporting tool at the state's Drinking Water Information Clearinghouse Portal. The tool was available beginning the week of February 8, 2016 through March 15, 2016. On May 9, 2016, the Governor issued an Executive Order (B-37-16) that directs the SWRCB to adjust and extend its emergency water conservation regulations through the end of January 2017 in recognition of the differing water supply conditions for many communities.

Executive Order N-7-22

On April 12, May 10, July 8, and October 19, 2021, Governor Newsom proclaimed states of emergency due to extreme drought conditions across California. On March 28, 2022, Governor Newsom issued EO N-7-22 in an attempt to achieve water conservation goals, including those described in previous proclamations except as modified by the EO. EO N-7-22 encourages the SWRCB to consider adopting emergency regulations that would require urban water suppliers to submit preliminary annual water supply and demand assessments and to implement water shortage response actions. The EO also suspended any requirements adopted by a public agency that prohibits the hauling of water out of the water's basin of origin or the public agency's jurisdiction for the purposes of human consumption, cooking, or sanitation in communities threatened with the loss of affordable safe drinking water. The EO also called for the SWRCB to expand inspections to determine whether illegal diversions or wasteful uses of water are occurring and to bring enforcement actions against those engaging in wasteful or illegal activities, among other orders to promote the efficient use of water.

State Water Resources Control Board

On May 2, 2006, the SWRCB adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than 1 mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows (SSOs) by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sanitary Sewer Master Plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system.

The SWRCB has delegated authority to nine Regional Water Quality Control Boards (RWQCBs) to enforce these requirements within their region. The San Francisco Bay RWQCB issues and enforces NPDES permits applicable to the WBSD wastewater collection system in Menlo Park and the SVCW WWTP in Redwood City.

Sanitary District Act of 1923

The Sanitary District Act of 1923 (Health and Safety Code Section 6400 et seq.) authorizes the formation of sanitation districts and enforces the Districts to construct, operate, and maintain facilities for the collection, treatment, and disposal of wastewater. The Act was amended in 1949 to allow the districts to also provide solid waste management and disposal services, including refuse transfer and resource recovery.

California Integrated Waste Management Act

California's Integrated Waste Management Act of 1989, AB 939, subsequently amended by SB 1016, set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000 through source reduction, recycling, and composting. To help achieve this, the Act required that each city and county prepare and submit a Source Reduction and Recycling Element. AB 939 also established the goal for all California counties to provide at least 15 years of on-going landfill capacity.

In 2007, SB 1016 amended AB 939 to establish a per capita disposal measurement system. The per capita disposal measurement system is based on two factors: a jurisdiction's reported total disposal of solid waste divided by a jurisdiction's population. The California Integrated Waste Management Board was replaced by the California Department of Resources Recycling and Recovery (CalRecycle) in 2010. CalRecycle sets a target per capita disposal rate for each jurisdiction. Each jurisdiction must submit an annual report to CalRecycle with an update of its progress in implementing diversion programs and its current per capita disposal rate. In 2013, the statewide residential per capita disposal rate was 4.4 pounds per resident per day, and the statewide employee per capita disposal rate was 10.2 pounds per employee per day.

In 2011, AB 341 was passed that sets a state policy goal of not less than 75 percent of solid waste that is generated to be source reduced, recycled, or composted by the year 2020. CalRecycle was required to submit a report to the legislature by January 1, 2014 outlining the strategy that will be used to achieve this policy goal.

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act requires areas in development projects to be set aside for collecting and loading recyclable materials. This Act required CalRecycle to develop a model ordinance for adoption by any local agency relating to adequate areas for collection and loading of recyclable materials as part

of development projects. Local agencies are required to adopt the model, or an ordinance of their own, providing for adequate areas in development projects for the collection and loading of recyclable materials.

Mandatory Commercial Organics Recycling

In October of 2014 Governor Brown signed AB 182676 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. Greenhouse gas (GHG) emissions result from the decomposition of organic wastes in landfills. Mandatory recycling of organic waste is aimed at helping achieve California's aggressive recycling and GHG emission goals. The implementation schedule is as follows:

- **January 1, 2016:** Local jurisdictions shall have an organic waste recycling program in place. Jurisdictions shall conduct outreach and education to inform businesses how to recycle organic waste in the jurisdiction, as well as monitoring to identify those not recycling and to notify them of the law and how to comply.
- **April 1, 2016:** Businesses that generate eight cubic yards of organic waste per week shall arrange for organic waste recycling services.
- **January 1, 2017:** Businesses that generate four cubic yards of organic waste per week shall arrange for organic waste recycling services.
- **August 1, 2017 and Ongoing:** Jurisdictions shall provide information about their organic waste recycling program implementation in the annual report submitted to CalRecycle. (See above for description of information to be provided.)
- **Fall 2018:** After receipt of the 2016 annual reports submitted on August 1, 2017, CalRecycle shall conduct its formal review of those jurisdictions that are on a two-year review cycle.
- **January 1, 2019:** Businesses that generate four cubic yards or more of commercial solid waste per week shall arrange for organic waste recycling services.
- **Fall 2020:** After receipt of the 2019 annual reports submitted on August 1, 2020, CalRecycle shall conduct its formal review of all jurisdictions.
- **Summer/Fall 2021:** If CalRecycle determines that the statewide disposal of organic waste in 2020 has not been reduced by 50 percent of the level of disposal during 2014, the organic recycling requirements on businesses will expand to cover businesses that generate two cubic yards or more of commercial solid waste per week. Additionally, certain exemptions, previously discussed, may no longer be available if this target is not met.

Global Warming Solutions Act of 2006

The California Global Warming Solutions Act of 2006 (also known as AB 32) Scoping Plan, which was adopted by the California Air Resources Board, included a Mandatory Commercial Recycling Measure. The Mandatory Commercial Recycling Measure focuses on diverting commercial waste as a means to reduce greenhouse gas (GHG) emissions, with the goal of reducing GHG emissions by five million metric tons of carbon dioxide equivalents (MTCO₂e), consistent with the 2020 targets set by AB 32. To achieve the Measure's objective, the commercial sector will need to recycle an additional 2 to 3 million tons of materials annually by the year 2020.

CalRecycle adopted this Measure at its January 17, 2012 monthly public meeting. The regulation was approved by the Office of Administrative Law on May 7, 2012 and became effective immediately. On June 27, 2012, the Governor signed SB 1018, which included an amendment requiring both businesses that generate 4 cubic yards or more of commercial solid waste per week and multi-family residences with five or more units to arrange for recycling services. This requirement became effective on July 1, 2012.

Statewide General Permit

The SWRCB elected to adopt a statewide general permit (Water Quality Order No. 2003-0005-DWQ) for Small Municipal Separate Storm Sewer System (MS4s) operators to efficiently regulate stormwater discharges under a single permit. Permittees must develop and implement a Stormwater Management Plan (SWMP) with the goal of reducing the discharge of pollutants to the maximum extent practicable.

NPDES Municipal Regional Stormwater Permit

The proposed project study area is covered under the regulations of the new Municipal Regional Stormwater NPDES Permit (MRP) issued by the RWQCB, which became effective on July 1, 2022. This NPDES Permit falls under Order R2-2022-0018, adopted on May 11, 2022. This 2022 order revised the prior MRP, which was adopted under Order R2-2015-0049 on November 19, 2015. However, the project is proposed under SB 330, the Housing Crisis Act of 2019, which states that a municipality can require a housing development project under the Housing Crisis Act of 2019 to comply with only those ordinances, policies, and standards adopted and in effect when the project's Preliminary Application was submitted, subject to certain exceptions. The Preliminary Application for the proposed project was submitted on February 26, 2020. Thus, under the provisions of the Housing Crisis Act of 2019, the project is subject to the MRP as it existed on February 26, 2020.

Under the MRP, municipalities have to require both private and public projects to implement post-construction stormwater controls as part of their obligations under Provision C.3 of the MRP. Above and beyond post-construction stormwater management practices, the permit also requires municipalities to adopt trash and street sweeping programs to regulate discharges into storm drain systems or directly into waters of the United States.

California Public Utilities Commission

In September 2008, the California Public Utilities Commission adopted the Long Term Energy Efficiency Strategic Plan, which provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-term, mid-term, and long-term strategies to assist in achieving these goals. This Plan sets forth the following four goals, known as Big Bold Energy Efficiency Strategies, to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy by 2020;
- All new commercial construction in California will be zero net energy by 2030;
- Heating, Ventilation and Air Conditioning (HVAC) will be transformed to ensure that its energy performance is optimal for California's climate; and
- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

With respect to the commercial sector, the Long Term Energy Efficiency Strategic Plan notes that commercial buildings, which include schools, hospitals, and public buildings, consume more electricity than any other end-use

sector in California. The commercial sector's five billion-plus square feet of space accounts for 38 percent of the state's power use and over 25 percent of natural gas consumption. Lighting, cooling, refrigeration, and ventilation account for 75 percent of all commercial electric use, while space heating, water heating, and cooking account for over 90 percent of gas use. In 2006, schools and colleges were in the top five facility types for electricity and gas consumption, accounting for approximately 10 percent of state's electricity and gas use.

The California Public Utilities Commission and the California Energy Commission have adopted the following goals to achieve zero net energy (ZNE) levels by 2030 in the commercial sector:

- **Goal 1:** New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- **Goal 2:** 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- **Goal 3:** Transform the commercial lighting market through technological advancement and innovative utility initiatives.

Regional and Local Regulations

2020 Urban Water Management Plan, Menlo Park Municipal Water

This UWMP is a foundational document and source of information about MPMW's historical and projected water demands, water supplies, supply reliability and potential vulnerabilities, water shortage contingency planning, and demand management programs. Among other things, it is used as:

- A long-range planning document for water supply and system planning; and
- A source for data on population, housing, water demands, water supplies, and capital improvement projects used in:
 - Regional water resource management plans prepared by wholesale water suppliers and other regional planning authorities (as applicable),
 - General Plans prepared by cities and counties, and
 - Statewide and broad regional water resource plans prepared by the California Department of Water Resources, the SWRCB, or other state agencies.

MPMW's last UWMP was completed in 2016, referred to herein as the "2015 UWMP" (City of Menlo Park, 2016a). This Plan is an update to the 2015 UWMP and carries forward information that remains current and is relevant to this Plan, and it provides additional information as required by amendments to the UWMP Act (CWC Section 10610-10657). Although this Plan is an update to the 2015 UWMP, it was developed to be a self-contained, stand-alone document and does not require readers to reference information contained in previous updates.

2020 Water Shortage Contingency Plan, Menlo Park Municipal Water

MPMW's WSCP is developed to serve as a flexible framework of planned response measures to mitigate future water supply shortages. The WSCP is included as a chapter in the 2020 UWMP and supersedes the WSCP that was presented in the 2015 UWMP. The WSCP includes six stages of response to a water shortage caused by drought or by supply interruptions caused by infrastructure failure, regulatory mandate, or catastrophic human-caused or natural events. The primary objective of the WSCP is to ensure that MPMW has in place the necessary resources and management responses needed to protect health and human safety, minimize economic disruption, and

preserve environmental and community assets during water supply shortages and interruptions. The WSCP also includes procedures to conduct an annual assessment of water supply and demand in order to determine whether water shortage conditions are likely to exist in the forthcoming year, and to proactively begin the process of implementing WSCP stages of action, as appropriate. For example, the Menlo Park City Council adopted drought stage 2 on May 24, 2022 and the WSCP stage 2 regulations became effective on June 10, 2022. The information presented in the respective WSCP sections and the associated text and tables are collectively intended to fulfill the requirements of that sub-section of the UWMP Act. MPMW has authority within Section 7.35 of the City's Municipal Code to require water rationing and conservation and to enforce penalties.

West Bay Sanitary District Code of General Regulations

The WBSD's Code of General Regulations establishes standards, conditions, and provisions for fees relating to the use of sanitary wastewater facilities of the WBSD. Article VII requires Class 1 sewer permits for residential connections, Class 2 sewer permits for non-residential connections, and Class 3 sewer permits for construction of sewer mains, pumping stations, and other wastewater facilities. In order to receive a permit, a developer must submit an application, pay all fees and charges, and satisfy requirements, such as extending the collection facilities to the vicinity of the development site. For a Class 3 permit, the WBSD Manager examines the submitted application's conformance with engineering practices and the standard specifications and policies of the WBSD and then submits it to the WBSD Board of Directors for approval. Subsequent to the WBSD's acceptance of a Class 3 permit, but prior to connection of and discharge into the WBSD's wastewater facilities, a Class 1 or Class 2 permit, as applicable, must be obtained by the developer. All costs and expenses associated with the installation and connection of the building sewer shall be at the owner's expense. All work shall be performed under the inspection of, and in accordance with, the standard specifications of WBSD.

San Mateo Countywide Integrated Waste Management Plan

The California Integrated Waste Management Act of 1989 (AB 939) requires each County to prepare and adopt a Countywide Integrated Waste Management Plan. San Mateo County government and all the cities in the county have prepared and adopted elements that comprise the Countywide Integrated Waste Management Plan. The elements of the Countywide Integrated Waste Management Plan are the Source Reduction and Recycling Element, the Household Hazardous Waste Element, and the Non-Disposal Facility Element.

City of Menlo Park Climate Action Plan

The City's 2009 Climate Action Plan (CAP) was developed to reduce GHG emissions by implementing various strategies and programs at the local level. The 2009 CAP identified the City's existing GHG inventory and estimates emissions for the year 2020 under different scenarios. Based on this, the 2009 CAP proposed emission reduction targets to help meet AB 32's regional goals. Specifically, the City Council adopted a GHG reduction target of 27 percent below 2005 levels by 2020, and data from 2017 showed that an 18.6 percent reduction had been attained by that time. This included 13,321 tons of emissions reductions associated with solid waste resulting from installation of efficient gas capture devices at Ox Mountain landfill (City of Menlo Park 2019).

The 2009 CAP recommended short- and mid- term strategies for the community and municipal operations to meet the targets. The 2009 CAP strategies related to solid waste included 1) adopting a new mandatory commercial recycling ordinance to reduce waste to landfill and 2) adopting a Zero Waste Policy, which requires a 75-percent diversion rate by 2020 and a 90 percent diversion rate by 2030. In a 2015 strategic update to the 2009 CAP, the City identified that 1 percent of Menlo Park GHG emissions at that time were attributable to solid

waste. Strategies to be implemented between 2015 and 2020 included considering changes to the City's solid waste, recycling, and organics collection franchise that encourage zero waste and decrease waste to landfill.

The City adopted a 2030 CAP in 2020, which was amended in 2021. The 2030 CAP established a climate goal of zero carbon by 2030 and identified that this goal could be achieved through a “90 percent reduction in carbon dioxide equivalent emissions (CO₂e) from 2005 levels, and elimination of the remaining 10 percent of CO₂e through direct carbon removal measures” (City of Menlo Park 2021). The 2030 CAP identified that the City had generated 21,745 metric tons of CO₂e emissions related to solid waste in 2005, which was reduced to 8,424 metric tons of CO₂e emissions by 2017, and set a target of reducing these emissions to 2,903 metric tons CO₂e by 2030. Achievement of this goal is expected to be supported by the City's adoption in 2017 of the Community Zero Waste Plan, as anticipated under the strategic updates to the 2009 CAP.

City of Menlo Park Community Zero Waste Plan

Under the periodic strategic updates to the 2009 CAP, the City identified a goal of adopting a Zero Waste Plan to support further reductions in GHG emissions associated with solid waste. Accordingly, the City adopted the Zero Waste Plan in 2017 to reduce generation of solid waste and divert waste from landfill disposal. Specifically, the plan established a goal of reducing the amount of landfilled material generated per person per day from 5.0 pounds in 2015 to 3.1 pounds by 2035. This is projected to reduce the total annual volume of landfilled material generated by the city's residents from approximately 30,200 tons in 2015 to 18,600 tons in 2035 (City of Menlo Park 2017).

The strategies identified in the Community Zero Waste Plan identify a range of short-term, mid-term, and long-term actions to be taken by the City, the South Bayside Waste Management Authority, and/or the solid waste franchised collection service providers (which, in the City of Menlo Park, is Recology). This includes strategies such as conducting community education and outreach; expanding curbside recycling and pick-up programs; mandating that waste generators participate in recycling and composting programs; providing universal recycling and composting collection services to all commercial and multi-family customers who have trash collection; and partnering with community organizations and businesses to increase options for reuse, repair, recycling, or composting. Individual development projects can demonstrate consistency with the Community Zero Waste Plan by complying with the Menlo Park Municipal Code requirements to recycle and salvage construction and demolition debris, as discussed below, and by ensuring that appropriate and adequate provisions are made to accommodate recycling and composting in addition to solid waste collection.

City of Menlo Park 2013 Green Building Standards Codes

The City has adopted local amendments to 2013 CALGreen, which has been enforced since January 1, 2014. Chapter 12.18 of the Menlo Park Municipal Code adopts and amends CALGreen by reference, establishing sustainable building requirements that are applicable to all newly constructed buildings or structures. Section 12.18.010 of the Menlo Park Municipal Code requires that newly constructed buildings achieve at least a 15 percent reduction in energy usage when compared to the state's mandatory energy efficiency standards.

San Francisco Bay Basin Water Quality Control Plan

The San Francisco Bay RWQCB oversees a Water Quality Control Plan for the San Francisco Bay Basin (the Basin Plan) that designates “beneficial” uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan, which includes wetlands in and near Menlo Park. The Basin Plan centers on watershed management, a strategy for protecting

water quality by examining all inputs into drainages and downstream water bodies. Accordingly, compliance with the Basin Plan involves adherence to stormwater control requirements for land use activities in Menlo Park.

Grading and Drainage Guidelines

The Grading and Drainage Guidelines (G&D Guidelines) establish design requirements for new construction and redevelopment projects. These G&D Guidelines describe the stormwater control and treatment measures that reduce the amount of stormwater runoff and prevent sediment and pollutants from entering into the City's storm drain system. In particular, G&D Guidelines require that post-development runoff rate not exceed pre-project levels, and the retention/detention systems be designed to treat storm water run-off in the event of a 10-year storm with a time of concentration of 10 minutes.

In addition, the G&D Guidelines outline requirements for G&D Plans, which the City of Menlo Park Engineering Division requires for any new construction or redevelopment that increases impervious areas by more than 500 square feet. The G&D Guidelines indicate that a G&D Plan must include existing and proposed calculations showing site grading and drainage features. The grading and drainage design for the project shall control stormwater runoff and pollutants using San Mateo County's C.3 Stormwater Technical Guidance criteria. The City also requires G&D Plans to include erosion and sedimentation control details and include an Impervious Area Worksheet evaluating existing and proposed impervious areas (City of Menlo Park 2014).

Menlo Park General Plan

The City of Menlo Park General Plan includes goals, policies, and programs relevant to the environmental factors potentially affected by the proposed project. The proposed Land Use Element, Open Space/Conservation, Noise and Safety Elements, contains general goals, policies, and programs that would require local planning and development decisions to consider impacts to the environment related to water supply and demand, wastewater treatment and capacity, solid waste collection, and energy.

Water

Goal OSC-1: Maintain, protect and enhance open space and natural resources.

Policy OSC-1.11: Sustainable Landscape Practices. Encourage the enhancement of boulevards, plazas and other urban open spaces in high-density and mixed-use residential developments, commercial and industrial areas with landscaping practices that minimize water usage.

Goal OSC-2: Provide Parks and Recreation Facilities.

Policy OSC-2.7: Conservation of Resources at City Facilities. Reduce consumption of water, energy, landfilled waste, and fossil fuels in the construction, operations and maintenance of City owned and/or operated facilities.

Goal OSC-4: Promote sustainability and climate action planning.

Policy OSC-4.2: Sustainable Building. Promote and/or establish environmentally sustainable building practices or standards in new development that would conserve water and energy, prevent stormwater pollution, reduce landfilled waste, and reduce fossil fuel consumption from transportation and energy activities.

Goal OSC-5: Ensure healthy air quality and water quality.

Policy OSC-5.3: Water Conservation. Encourage water-conserving practices in businesses, homes and institutions.

Program OSC-5.A: Expand Water Conservation Programs. Expand the Menlo Park Municipal Water District's conservation programs through education, social marketing methods, establishing standards, and providing incentives.

Goal LU-4: Promote the development and retention of business uses that provide goods or services needed by the community that generate benefits to the City, and avoid or minimize potential environmental and traffic impacts.

Policy LU-4.5: Business Uses and Environmental Impacts. Allow modifications to business operations and structures that promote revenue generating uses for which potential environmental impacts can be mitigated.

Goal LU-7: Promote the implementation and maintenance of sustainable development, facilities and services to meet the needs of Menlo Park's residents, businesses, workers, and visitors.

Policy LU-7.1 Sustainability. Promote sustainable site planning, development, landscaping, and operational practices that conserve resources and minimize waste.

Policy LU-7.4 Water Protection. Work with regional and local jurisdictions and agencies responsible for ground water extraction to develop a comprehensive underground water protection program in accordance with the San Francisco Creek Watershed Policy, which includes preservation of existing sources and monitoring of all wells in the basin to evaluate the long term effects of water extraction.

Policy LU-7.5: Reclaimed Water Use. Implement use of adequately treated "reclaimed" water (recycled/nonpotable water sources such as, graywater, blackwater, rainwater, stormwater, foundation drainage, etc.) through dual plumbing systems for outdoor and indoor uses, as feasible.

Wastewater

Goal LU-4: Promote the development and retention of business uses that provide goods or services needed by the community that generate benefits to the City, and avoid or minimize potential environmental and traffic impacts.

Policy LU-4.5: Business Uses and Environmental Impacts. Allow modifications to business operations and structures that promote revenue generating uses for which potential environmental impacts can be mitigated.

GOAL LU-7: Promote the implementation and maintenance of sustainable development, facilities and services to meet the needs of Menlo Park's residents, businesses, workers, and visitors.

Policy LU-7.6: Sewage Treatment Facilities. Support expansion and improvement of sewage treatment facilities to meet Menlo Park's needs, as well as regional water quality standards, to the extent that such expansion and improvement are in conformance with other City policies.

Program LU-7.A: Green Building Operation and Maintenance. Employ green building and operation and maintenance best practices, including increased energy efficiency, use of renewable energy and reclaimed water, and install drought-tolerant landscaping for all projects.

Goal OSC-5: Ensure Healthy Air Quality and Water Quality.

Policy OSC-5.3: Water Conservation. Encourage water-conserving practices in businesses, homes and institutions.

Program OSC-5.A: Expand Water Conservation Programs. Expand the Menlo Park Municipal Water District's conservation programs through education, social marketing methods, establishing standards, and providing incentives.

Solid Waste

Goal OSC-4: Promote sustainability and climate action planning.

Policy OSC-4.2: Sustainable Building. Promote and/or establish environmentally sustainable building practices or standards in new development that would conserve water and energy, prevent stormwater pollution, reduce landfilled waste, and reduce fossil fuel consumption from transportation and energy activities.

Policy OSC-4.6: Waste Reduction Target. Strive to meet the California State Integrated Waste Management Board per person target of waste generation per person per day through their source reduction, reuse, and recycling programs.

Policy OSC-4.7: Waste Management Collaboration. Continue to support and participate in efforts such as the South Bayside Waste Management Authority, which provides waste reduction, recycling, and solid waste programs and solutions.

Policy OSC-4.8: Waste Diversion. Develop and implement a zero waste policy, or implement standards, incentives, or other programs that would lead the community towards a zero waste goal.

Goal LU-4: Promote the development and retention of business uses that provide goods or services needed by the community that generate benefits to the City, and avoid or minimize potential environmental and traffic impacts.

Policy LU-4.5: Business Uses and Environmental Impacts. Allow modifications to business operations and structures that promote revenue generating uses for which potential environmental impacts can be mitigated.

GOAL LU-7: Promote the implementation and maintenance of sustainable development, facilities and services to meet the needs of Menlo Park's residents, businesses, workers, and visitors.

Policy LU-7.1: Sustainability. Promote sustainable site planning, development, landscaping, and operational practices that conserve resources and minimize waste

Menlo Park Municipal Code

The City of Menlo Park Municipal Code, organized by title, chapter, and section, contains all ordinances for Menlo Park. Title 7, Health and Sanitation, and Title 12, Buildings and Construction, include regulations relevant to solid waste resources in Menlo Park as discussed below.

Chapter 7.04, Garbage and Rubbish Disposal

Chapter 7.04 describes the responsibilities and requirements for owners, occupants and service providers regarding solid waste collection, storage, recycling and disposal.

Chapter 7.06, Refuse and Garbage Collection Service Areas

Chapter 7.06 establishes service areas and describes the process of determining and allocating charges for service.

Chapter 7.10, Reusable Bag Ordinance

Chapter 7.10 specifies that Chapter 4.114, "Reusable Bags," of Title 4, "Sanitation and Health," of the San Mateo County Ordinance Code, and any amendment thereto approved by the Menlo Park city council, is adopted in its entirety by reference and made effective in the city.

Chapter 7.35, Water Conservation

Chapter 7.35 of the City's Municipal Code contains regulations and restrictions on water use in order to conserve water resources and eliminate wasteful water uses. Municipal Code Section 7.35.020 allows the City Council to adopt by resolution a water conservation plan to mandate any water conservation measures in the event of adoption of emergency water conservation regulations by the SWRCB.

Chapter 12.44, Water Efficient Landscaping

Chapter 12.44 of the City's Municipal Code establishes water-efficient landscaping standards to conserve water use on irrigation. The provisions of this chapter apply to landscaping projects that include irrigated landscape areas exceeding 500 square feet for all landscape areas and 1,000 square feet for rehabilitated landscapes associated with projects requiring City review and approval.

Chapter 12.48, Recycling and Salvaging of Construction and Demolition Debris

Chapter 12.48 establishes landfill diversion requirements of Construction and Demolition debris. Residential projects of 1,000 square feet or greater and commercial projects of 5,000 square feet or greater are required to divert 60 percent of total generated waste tonnage through recycling, reuse, salvage, and other diversion programs. As part of a building or demolition permit application, project applicants must submit estimated tonnage of Construction and Demolition debris and plans for diverting materials to the building division.

4.16.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts with regard to utilities and service systems are based on Appendix G and Section 15130 of the CEQA Guidelines. A significant impact related to utilities and service systems would occur if the project would:

- A. 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.

- B. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.
- C. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- D. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
- E. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.
- F. Make a cumulatively considerable contribution to a significant cumulative impact related to provision of water, wastewater treatment, stormwater drainage, energy, telecommunication, or solid waste utilities and services.

4.16.4 Impacts and Mitigation Measures

Methodology

This section evaluates project impacts on the existing utilities and service systems that would serve the project site. The City of Menlo Park General Plan (City of Menlo Park 2016a) and ConnectMenlo General Plan Update EIR (City of Menlo Park 2016b), proposed 123 Independence Residential Project Plans (Appendix B), 123 Independence Water Budget Summary (Appendix K1), 123 Independence Stormwater Management Plan (Appendix G2), the Menlo Park Municipal Water 2020 Urban Water Management Plan (MPMW 2021), the project's Mixed Use Town Home Parcel Zero Waste Management Plan (Appendix K2), and the project's Apartments Zero Waste Management Plan (Appendix K3) were all referenced to evaluate the project's potential effects on existing utilities and service systems.

Project Impacts

Impact 4.16-1 Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The project site is located in an urban area with existing utilities and infrastructure. The proposed project would be required to install the following utility connections in compliance with City and provider specifications to serve the residential development:

- Connect to existing 8-inch water lines located in Constitution Drive adjacent to the northern boundary of the project site and located in Independence Drive adjacent to the southern boundary of the project site;
- Provide a fire hydrant at the northeast corner of the proposed office building which would connect to the existing 12-inch water line in Chrysler Drive;
- Connect to existing 8-inch sanitary sewer lines located in Constitution Drive and Independence Drive, and an existing 10-inch sanitary sewer line in Chrysler Drive;
- Implement biotreatment measures and connect to existing stormwater drainage;
- Relocate existing overhead electricity lines within the project limits underground; and
- Relocate existing overhead telecommunications lines within the project limits underground.

Water Supply Infrastructure

The project site is already served by MPMW and no off-site expansion of water supply infrastructure would be needed to provide water supply to the proposed residential units. As noted above and shown on Sheet C3.0 of the project plans (Appendix B), the project would connect to existing 8-inch water lines located in Constitution Drive adjacent to the northern boundary of the project site and located in Independence Drive adjacent to the southern boundary of the project site.

Water Treatment

As discussed in Section 4.16.1, the City does not own or operate a water treatment plant (WTP). The water received by MPMW is treated by SFPUC at one of three WTPs: the Tesla Treatment Facility, which was constructed in 2011 and has the capacity to treat 315 mgd, the SVWTP, which has both a peak capacity and sustainable capacity of 160 mgd, and the HTWTP, which has a peak capacity of 180 mgd and a sustainable capacity of 140 mgd. The 123 Independence Water Budget Summary (Appendix K1) identifies that the project would require 16.94 million gallons of water annually (approximately 46,422 gallons per day or 0.05 mgd). This demand is consistent with the demand evaluated in the ConnectMenlo EIR, which evaluated development of 4,500 new dwelling units within the Bayfront Area. Although the ConnectMenlo EIR assumed that 3,000 of those units would be multi-family dwellings and 1,500 of those units would be dormitory style corporate campus units, the Water Supply Evaluation prepared to support that EIR applied a constant water demand factor to all housing units, assuming a household size of 2.57 people (City of Menlo Park 2015). While the proposed project in combination with other pending and approved projects would result in more than 3,000 multi-family units being constructed in the Bayfront Area, the total number of housing units would be less than 4,500 and therefore the total water demand would be within the amount estimated in the ConnectMenlo EIR and the Water Supply Evaluation.

Further, the proposed project is expected to use less water per unit than was assumed in the Water Supply Evaluation. The Water Supply Evaluation estimated indoor water use for each residential unit to be 127 gpd, or 49.4 gallons per capita per day, while the 123 Independence Water Budget Summary estimates that indoor water use for the dwelling units within the project would be 102.5 gpd, or 39.9 gallons per capita per day. Similarly, the Water Supply Evaluation estimated outdoor water use for each residential unit to be 10 million gallons per year, or 2.3 gallons per capita per day, while the 123 Independence Water Budget Summary estimates that indoor water use for the dwelling units within the project would be 1.9 gallons per capita per day (City of Menlo Park 2015 and Appendix K1).

In Impact UTIL-2, the ConnectMenlo EIR concluded that “adoption and implementation of the proposed project would not prompt a need to expand treatment facilities or regional water system conveyance and storage facilities in order to meet its demand.” As demonstrated above, the water demand of the proposed project is consistent with the assumptions used in the ConnectMenlo EIR and Water Supply Evaluation, which treated all 4,500 dwelling units anticipated under ConnectMenlo as typical multi-family units. Thus, the ConnectMenlo EIR analysis of demand for water treatment, conveyance, and storage is applicable to the proposed project. Although it is not known which of the three WTPs would treat water for the project site, this increase in demand of approximately 0.05 mgd is anticipated to be within the existing capacity of each of the respective WTPs and would not be considered a substantial increase for the SFPUC system, which has a total treatment capacity of approximately 615 mgd. The SFPUC periodically makes improvements to its WTPs to improve system reliability and accommodate projected regional growth. For example, the SFPUC completed capacity expansion and other improvements to the Tesla Treatment Facility in 2013, the SVWTP in 2013, and the HTWTP in 2015 (SFPUC 2022). The project would not require expansion of the three WTPs that serve the City and this impact would remain **less than significant**.

Wastewater Conveyance and Treatment

Wastewater collection and conveyance service is already provided to the existing land uses at the project site by WBSD and no off-site expansion of wastewater conveyance infrastructure would be needed to serve the proposed residential units. As noted above and shown on Sheet C3.0 of the project plans (Appendix B), the project would connect to existing 8-inch sanitary sewer lines located in Constitution Drive and Independence Drive and an existing 10-inch sanitary sewer line in Chrysler Drive.

Wastewater collected in WBSD infrastructure is conveyed to the SVCW's WWTP. As identified in Section 4.16.1, the WWTP has an existing dry weather capacity of 29 mgd and wet weather capacity of 71 mgd and is planned to be expanded to achieve a wet weather capacity of 80 mgd. The MPMW UWMP identifies that in 2020, WBSD collected approximately 873 million gallons of wastewater, which is approximately 2.4 mgd, from within the MPMW service area (MPMW 2021).

With a total indoor water use budget of 16.16 million gallons per year (0.044 mgd) (Appendix K1), and a typical wastewater generation rate equal to 90 percent of the indoor water use, the project would be expected to generate 0.039 mgd of wastewater. This increase in wastewater generation would not be considered a substantial increase for the SVCW's WWTP relative to the treatment capacity of approximately 71 mgd. Thus, the Project would not require expansion of the WWTP and this impact would remain **less than significant**.

Further, because the proposed project would redevelop the site, replacing the existing office and light industrial uses with residential uses, a portion of wastewater generated by the proposed project would be offset by the current wastewater generation at the site associated with the existing uses. However, estimates of the current wastewater generation for the existing uses is not available and thus the net increase in wastewater generation has not been determined.

Stormwater Management

Stormwater drainage and management services are provided by the City. As shown in Sheets C4.0 and C4.1 of the project site plans (Appendix B) and documented in the Stormwater Report (Appendix G2), runoff from the site would be directed into treatment measures consisting of both Biotreatment Ponds and Flow-Through Planters. The water will be directed through both storm drain pipes, and surface flow as shown in the site grading and drainage plan into the proposed biotreatment areas. The proposed project would connect to existing storm drain networks at the associated project frontages in Independence Drive (18-inch storm drain diameter line), Constitution Drive (18-inch storm drain diameter line), and Chrysler Drive (48-inch/54-inch storm drain diameter lines). The implementation of biotreatment measures and connection into the City's existing stormwater network would not require additional expansion, construction, or relocation of stormwater facilities as a result of the proposed project. Therefore, the Project would result in a **less-than-significant** impact associated with stormwater management.

Electrical Supply

Electricity at the Project site is currently provided by PG&E but after project construction the property owners could opt to receive electrical service from either PG&E or Peninsula Clean Energy, as discussed further in Section 4.5. The proposed project would include undergrounding the existing overhead electricity lines within the project site. The lines would remain within a public easement and continue to serve the properties beyond the project site to the northwest. The joint pole lines beyond the project site limits would remain in their current condition. The relocated powerlines would supply electricity to the project and would not require additional expansion or construction of a new facility. Therefore, the proposed project would result in a **less than significant** impact related to electrical supply.

Natural Gas

Section 4.5 identifies the amount of energy that would be consumed during project construction and operation and evaluates the potential environmental effects associated with energy consumption. As discussed in more detail in Section 4.5, all of the project's energy demand would be met with electrical energy; no natural gas would be used. Thus the project would have **no impact** associated with natural gas infrastructure or supplies.

Telecommunications

Telecommunications services are provided in Menlo Park by a variety of private telecommunications companies. The proposed project would connect into existing telecommunication infrastructure within and adjacent to the site and would not require additional expansion, construction, or relocation of telecommunications. Therefore, the proposed project would result in a **less-than-significant** impact associated with telecommunication services.

Mitigation Measures

No mitigation measures are required.

Impact 4.16-2 Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

The major water supply source for the MPMWD is the San Francisco Regional Water System (RWS), operated by the SFPUC, under the 2009 "Water Supply Agreement between the City and County of San Francisco and Wholesale Customers in Alameda County, and Santa Clara County." The source of water in the RWS is predominately from the Tuolumne River watershed in the Sierra Nevada Mountains, delivered through the Hetch Hetchy aqueducts, but also includes treated water produced by the SFPUC from its local watersheds and facilities in Alameda and San Mateo Counties. In June 2009, the City of Menlo Park (and California Water Service Company [i.e., Cal Water]) entered into an agreement with the SFPUC that implemented a new system for allocating water during water shortages, such as drought years. This allocation system accounts for usage by both wholesale and retail customers in the SFPUC service area and specific reductions in use would be determined by water availability and projected demand at the time a water shortage is declared (City of Menlo Park 2016b).

The 123 Independence Water Budget Summary (Appendix K1) identifies that the project would require 16.94 million gallons of water annually (approximately 46,422 gallons per day). This includes 16.16 million gallons for indoor water use and 0.78 million gallons for outdoor water use. With construction of 432 dwelling units and an average household size of 2.57 persons, the project could accommodate approximately 1,110 residents. Thus, the project would consume approximately 41.8 gallons per capita per day. This is less than the 51.7 gallons per capita per day that was assumed in the ConnectMenlo EIR for all dwelling units, and substantially less than the MPMW 2020 water use target of 204 gallons per capita per day and the actual 2020 per capita daily water use of 160 gallons per capita per day (MPMW 2021). Because the proposed project would redevelop the site, replacing the existing office and light industrial uses with residential uses, a portion of project-generated water consumption would be offset by the current water consumption at the site associated with the existing uses. However, a water budget for the existing uses is not available and thus the net increase in water consumption has not been determined.

As discussed in Section 4.16-1, water for the proposed project would be supplied by MPMW, which receives 100 percent of its potable water from the SFPUC. The MPMW's demand projections anticipate modest residential growth because the service area is largely built-out and residential population growth is expected to occur primarily through

redevelopment projects, consistent with the City’s General Plan, including the ConnectMenlo General Plan Update. The ConnectMenlo General Plan Update EIR assumed a maximum of 5,500 new residential units would be developed within the City, with 4,500 of those units being located within the MPMW service area. This residential development projection was relied upon in the MPMW 2020 UWMP. As noted in Appendix D to the UWMP, the projected residential development could accommodate a population of 11,570 new residents, which reflects an average household size of 2.57 persons (MPMW 2021). Although the ConnectMenlo EIR assumed that 1,500 of the new residential units would be corporate campus units, the same average household size was applied to all of the 4,500 new units, thus the same water demand amount was allocated to each residential unit, as reflected in the Water Supply Evaluation prepared for the ConnectMenlo EIR (City of Menlo Park 2015) and the UWMP. Therefore, the water supply demand that would be generated by the proposed project would not cause the total water supply demand on MPMW from buildout of the General Plan to exceed the anticipated water supply demand evaluated in the UWMP. Since adoption of the ConnectMenlo General Plan Update, the City has received development applications for a total of 3,248 dwelling units within the Bayfront Area, including the proposed 123 Independence Project. In addition, Section 4.16.1 also discusses that the rate of at which buildout of future development accommodated by the General Plan Update is occurring more rapidly than had been projected in the ConnectMenlo EIR, and that the 2020 UWMP accounted for this by assuming that 40 percent of the total population growth expected through the year 2040 would occur between the years 2020 and 2025. Specifically, the UWMP states “The projections have been updated by the City’s Planning Division to account for frontloading of development between 2020 and 2025, as indicated by their review of the approved and pending projects. The total population within the MPMW service area is projected to be 30,184 by 2040. More than 40 percent of the increase is expected to take place within the next five years (2020 to 2025)” (MPMW 2021). Thus, the proposed project would not increase the residential population of the MPMW service area beyond that anticipated in the UWMP under both near-term and long-term conditions.

As reflected in Table 4.16-2, the MPMW UWMP demonstrates that there is sufficient water supply to serve the projected population in normal years but insufficient water supply to meet the full range of base water demand for the single dry year and multiple dry year scenarios. Table 4.16-3 provides additional details of dry year water supply shortages, showing that water shortages in the MPMW service area would range from 419 to 652 million gallons per year. As noted in Section 4.16.1, buildout of the dwelling units accommodated under the ConnectMenlo General Plan Update is occurring faster than was anticipated at the time that the General Plan Update was adopted, but the faster buildout has been incorporated in the 2020 UWMP. Thus, the proposed Project would contribute to these forecasted shortages but would not exacerbate the short-term or long-term shortages beyond what is forecast in the UWMP. As discussed further below, the UWMP includes a Water Shortage Contingency Plan that includes a range of measures to reduce base water demand in single dry and multiple dry years.

Table 4.16-3. Consecutive Dry Year Demand and Supply (million gallons per year)

		2025	2030	2035	2040
Total Base Demand		1,296	1,345	1,410	1,483
Total Supply/Shortage		—	—	—	—
First Dry Year	Supply	877	978	1,018	1,062
	Shortage	-419 (32 percent)	-367 (27 percent)	-392 (28 percent)	-422 (28 percent)
Second Dry Year	Supply	760	854	887	927
	Shortage	-536 (41 percent)	-491 (37 percent)	-523 (37 percent)	-557 (38 percent)
Third Dry Year	Supply	760	854	887	927
	Shortage	-536 (41 percent)	-491 (37 percent)	-523 (37 percent)	-557 (38 percent)

Table 4.16-3. Consecutive Dry Year Demand and Supply (million gallons per year)

		2025	2030	2035	2040
Fourth Dry Year	Supply	760	854	887	832
	Shortage	-536 (41 percent)	-491 (37 percent)	-523 (37 percent)	-652 (44 percent)
Fifth Dry Year	Supply	760	854	824	832
	Shortage	-536 (41 percent)	-491 (37 percent)	-585 (41 percent)	-652 (44 percent)

Source: MPMW 2021.

Section 7 of the UWMP presents analysis of water supply reliability, including considerations of drought conditions, changes in water supply due to climate change, and uncertainties in water supply due to implementation of other water and environmental resource management efforts, such as the Bay-Delta Plan Amendment. The UWMP states that MPMW relied upon the water supply reliability projections provided by the SFPUC for this analysis.

A critical factor in this analysis is the future implementation of an amendment to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment (the Bay-Delta Amendment), which was adopted to increase salmon populations in three San Joaquin River tributaries. However, as discussed further in the UWMP, several lawsuits have been filed challenging adoption of the Bay-Delta Amendment, and the amendment is not self-implementing, meaning that water supply and river flow allocations would need to be developed through other regulatory and/or adjudicatory proceedings. Thus, the actual and full effects of the Bay-Delta Amendment is uncertain.

For regional planning, BAWSCA has developed water supply projections that reflect full implementation of the Bay-Delta Plan Amendment under the assumptions that a Voluntary Agreement between the SFPUC and the State Water Resources Control Board is not reached and that SFPUC's Alternative Water Supply Program is not implemented. Thus, the UWMP states that the water supply projections for single dry and multiple dry years reflect a worst-case scenario. Further, the UWMP notes that "without the Bay-Delta Plan Amendment SFPUC would be able to supply 100 percent of projected [Regional Water System] demands in all year types through 2045, except for the 4th and 5th consecutive dry year in 2045, during which 90 percent of projected" demands would be met. However, this is considered to be a "highly optimistic water supply reliability outcome" (MPMW 2021).

In addition, the UWMP recognizes that a variety of regional water planning efforts are currently underway that could affect water supply reliability (such as a potential Tuolumne River Voluntary Agreement and changes in BAWSCA's and SFPUC's drought allocation methodology and plan). The UWMP states that modeling for scenarios that include the Tuolumne River Voluntary Agreement and SFPUC's Alternative Water Supply Program showed significantly improved water supply availability for the Regional Water System, however these elements are not incorporated in the water supply and demand projections in the UWMP. Additionally, the UWMP notes that "MPMW is working independently and with the other BAWSCA agencies to identify regional mitigation measures to improve reliability for regional and local water supplies and meet its customers' water needs. If conditions for large drought cutbacks to the [Regional Water System] persist, MPMW will need to implement additional demand management practices to invoke strict restrictions on potable water use and accelerate efforts to develop alternative supplies of water" (MPMW 2021).

To address the insufficient water supply for the single dry year and multiple dry year scenarios, the UWMP includes a Water Shortage Contingency Plan, which defines the policies and procedures to be implemented during dry years under specific water shortage level scenarios. The Water Shortage Contingency Plan includes six levels of actions that address shortage conditions associated with single and multiple dry years, including mandatory water use restrictions and supply augmentation actions tailored to each shortage condition level.

In conclusion, based on the water demand and supply projections in the UWMP, MPMW has sufficient water in normal water years to meet projected demand through 2040. However, MPMW could experience water shortages at single dry years and in all years of a multiple dry year cycle. Water shortages would range from 27 percent to 44 percent. With implementation of MPMW's Water Shortage Contingency Plan, the shortages in multiple dry years would be managed through demand reductions sufficient to reduce the shortage amount by between 10 percent and 55 percent and supply augmentations and other policy actions that would reduce the shortage amount by between 5 percent to 45 percent (MPMW 2021). Thus the project would not require expansion of water supply sources and this impact would be **less than significant**.

In addition, MPMW is pursuing implementation of an Emergency Water Storage/Supply Project, which is designed to provide the City with an emergency backup water supply for use in the event of damage to SFPUC infrastructure and a reduced water supply. That project includes construction of two or three emergency groundwater wells that would provide a total capacity to provide up to 3,000 gallons per minute. The first well is completed. MPMW is currently working with the SWRCB to permit another well and amend MPMW's drinking water permit (MPMW 2022).

Mitigation Measures

No mitigation measures are required.

Impact 4.16-3 Would the project result in a determinization by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

As discussed in Impact 4.16-1, the proposed project would be expected to generate 0.039 mgd of wastewater. This increase in wastewater generation would not be considered a substantial increase for the SVCW's WWTP relative to the treatment capacity of approximately 71 mgd. Thus, SVCW has adequate capacity to meet the project's demand for wastewater treatment and this impact would remain **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.16-4 Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

The majority of solid waste generated within the City is transported to the Corinda Los Trancos Landfill, also known as Ox Mountain Landfill. As discussed in Impact UTIL-8 of the ConnectMenlo EIR, in 2014 approximately 74 percent of solid waste (21,658 tons) from the City was disposed of in this landfill and three other smaller landfills received approximately 5,966 tons combined. The ConnectMenlo EIR estimated the amount of additional solid waste generated by development under the buildout of the General Plan based on the City's actual per capita daily solid waste generation rate from 2014, which was 4.9 pounds per day. The solid waste generation assumptions in the ConnectMenlo EIR apply the same generation rate to all dwelling units. With the total new population of 11,570 residents, the ConnectMenlo EIR estimated that at buildout of the General Plan the City's residents and employees would generate approximately 58.3 tons per day, which represents less than 1.5 percent of the daily capacity of Corinda Los Trancos Landfill. The ConnectMenlo EIR also determined that the landfill is anticipated to reach its

permitted capacity prior to 2040. However, the other three landfills that serve Menlo Park are not estimated to reach their capacity until 2048, 2077, and 2107 (City of Menlo Park 2016).

As described in Section 4.16.2, the California Waste Management Act sets requirements for cities and counties throughout the state to divert 75 percent of all solid waste from landfills through waste reduction, recycling, and compost. Further, the California Green Building Standards Code (“CALGreen”) is intended to enhance the design and construction of buildings through the use of building concepts that reduce negative environmental impacts and encourage sustainable construction practices, including material conservation and resource efficiency. Additionally, the City has adopted a Zero Waste Plan that calls for reducing solid waste generation per capita from 5.0 pounds in 2015 to 3.1 pounds by 2035. The City’s Community Zero Waste Plan notes that “successfully engaging the multi-family sector to participate in diversion programs is a challenge in Menlo Park” and that “high turnover in multi-family residences can contribute to an ongoing need for outreach, education, and periodic re-education” (City of Menlo Park 2017). The proposed project would construct 432 new multi-family dwelling units, which could incrementally increase the need for ongoing outreach and education. However, the project design incorporates building standards and elements that would encourage diversion of materials from the landfill by providing recycling and compost collection facilities that would be easily accessible for all project residents.

Consistent with City requirements, the project applicant has submitted two project-specific zero-waste management plans, one for the townhomes and one for the apartment building (Appendices K2 and K3, respectively). The zero waste management plan outlines the applicant’s plan to reduce, recycle, and compost waste from demolition, construction, and operational phases of the project to ensure compliance with the City’s waste reduction target of diverting 90 percent of non-hazardous waste from landfill and incineration by 2035. Both of the project’s zero waste management plans show that the proposed project is estimated to generate 5.0 pounds of solid waste per person per day upon initial operation and reduce solid waste generation incrementally, measured in 3-year increments, until a generation rate of 0.5 pounds per person per day is achieved in 2035. The project would initially generate solid waste at generally the same rate per person as was assumed in the ConnectMenlo EIR and at lower rates in future years. Thus, the conclusions of the ConnectMenlo EIR regarding landfill capacity are applicable to the proposed project and the landfills that serve the City would have sufficient capacity to accommodate the proposed 123 Independence project.

The project’s zero waste plan indicates that the project would comply with the City’s requirements and goals of 90 percent diversion by 2035 by having: (1) trash chutes and concierge services for waste, compost, and recycling; (2) compost collection in each trash chute vestibule; (3) signage in each trash chute vestibule so residents are informed of what can be diverted from the waste stream; (4) project design that allows for access to all three streams of waste; and (5) regular building management meetings with the City’s recycling coordinator.

Waste from construction and demolition would be disposed of in accordance with Chapter 12.48 of Menlo Park Municipal Code which establishes landfill diversion requirements for construction and demolition debris. This chapter requires residential projects of 1,000 square feet or greater (which includes this project) to divert 60 percent of total generated waste tonnage through recycling, reuse, salvage, and/or other diversion programs. The project applicants are required to submit the estimated tonnage of construction and demolition debris and plans for diverting 60 percent of these materials as part of the project’s building and demolition permit application and approval process. The proposed project would be required to comply with the state’s statutes and City’s regulations, including General Plan policies and Zoning regulations listed above in Section 4.16.2 intended to minimize impacts related to solid waste disposal. As described above, operationally, the project is expected to comply with the City’s requirements for waste reduction through the implementation of zero waste management plans. The project plans (Appendix B) indicate where trash chutes and collection bins would be placed in the apartment building, and City

staff would verify appropriate content and placement of signage prior to issuance of a certificate of occupancy. For these reasons, the proposed project would result in a **less-than-significant** impact with respect to compliance state or local standards related to solid waste reduction goals.

Mitigation Measures

No mitigation measures are required.

Impact 4.16-5 Would the Project comply with federal, state and local management and reduction statutes and regulations related to solid waste?

As discussed in Impact 4.16-4, the City has complied with state requirements to reduce the volume of solid waste through recycling and reduction of solid waste and has established solid waste diversion requirements in its Municipal Code that the project would comply with. The project would comply with all federal, state, and local solid waste statutes and/or regulation related to solid waste; thus, the project would have **no impact** associated with solid waste management and reduction statutes and regulations.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

This analysis of potential cumulative impacts associated with utilities and service systems considers the effects of ongoing development throughout the service areas of the applicable utility and service system providers. This geographic area is appropriate for consideration of cumulative impacts to utilities and service systems because each utility and service provider must maintain adequate levels of service for all populations within their service area, and thus the effects of the proposed project must be considered in context with other reasonably foreseeable projects that could contribute to increased demands for service. As discussed in Section 4.0, Environmental Analysis, this cumulative impact analysis evaluates the proposed project's contribution to environmental effects expected to occur under buildout of the City's General Plan, as discussed in the ConnectMenlo EIR. This includes consideration of the potential incremental increases in cumulative impacts due to the number of reasonably foreseeable multi-family residential units within the Bayfront Area based on the specific projects that have been constructed, approved, and proposed since adoption of the ConnectMenlo General Plan Update, as summarized in Section 4.0. Including the proposed project, there are 98 more multi-family units planned or proposed within the Bayfront Area relative to the development projections evaluated in the ConnectMenlo EIR, which can increase demands on utilities and service systems.

Impact 4.16-6 Would the project make a cumulatively considerable contribution to a significant cumulative impact related to provision of water, wastewater treatment, stormwater drainage, energy, telecommunication, or solid waste utilities and services?

Water Supply Infrastructure

The ConnectMenlo EIR found that ongoing development in the project area is not expected to require new or upgraded water supply infrastructure outside of individual project sites. Thus, there is no significant cumulative impact associated with water supply infrastructure to which the project could contribute. As noted in Impact 4.16-1, the proposed project is already served by MPMW, and no off-site expansion of water supply infrastructure would be

needed to support the project. Thus, the project would be consistent with the findings of the ConnectMenlo EIR and would not create or contribute to a significant cumulative impact related to water supply infrastructure.

Water Supply

The ConnectMenlo EIR found that MPMW, through the SFPUC, has sufficient water supplies to meet projected demands in 2040 from buildout of the City's General Plan in normal water years. The ConnectMenlo EIR also found that local and regional efforts to reduce water demand and increase water supplies in single-dry and multiple-dry years are sufficient to ensure that dry-year water demands can also be met. These regional plans include the MPMW Water Shortage Contingency Plan and BAWSCA's long-term water supply strategy. Since preparation of the ConnectMenlo EIR, the City adopted the MPMW 2020 UWMP, which confirms that MPMW expects to meet the water supply shortfalls during single-dry and multiple-dry years through implementation of water conservation measures identified in the Water Shortage Contingency Plan.

The proposed project would introduce 98 more multi-family dwelling units to the region than were evaluated under the proposed project buildout projections in the ConnectMenlo EIR. However, as discussed in Impact 4.16-2, The water demands projected for the area in the ConnectMenlo EIR and the MPMW 2020 UWMP applied the same average household size of 2.57 persons to all of the 4,500 new units, thus the same water demand amount was allocated to each residential unit, and the proposed project is within the growth that was anticipated in the analysis of the UWMP. Further, as discussed in Section 4.16.1 and noted in Impact 4.16-2, the 2020 UWMP accounted for the rapid pace of redevelopment within the Bayfront Area by assuming that 40 percent of the total population growth expected through the year 2040 would occur between the years 2020 and 2025. Thus, the proposed project would not increase the residential population of the MPMW service area beyond that anticipated in the UWMP under both near-term and long-term conditions. Therefore, the conclusions of the ConnectMenlo EIR remain applicable to the proposed project and other Bayfront Area projects included in the cumulative development scenario.

The proposed project, along with all other projects in the cumulative development scenario would contribute to the forecasted water shortages under the UWMP but would not exacerbate the short-term or long-term shortages beyond what is forecast in the UWMP. However, each project would also be subject to water efficiency requirements (including through low-water use fixtures and low-water use landscaping) and water conservation measures during dry years. The proposed project would also meet stringent water conservation measures as demonstrated by the project water budget (Appendix K1), which estimates that project residents would consume approximately 41.8 gallons per capita per day. This is less than the 51.7 gallons per capita per day that was assumed in the ConnectMenlo EIR for all dwelling units and substantially below the existing average water demand per capita in the MPMW service area of 160 gallons per day (MPMW 2021).

Thus, consistent with the analysis in the ConnectMenlo EIR and including consideration of the specific projects that have been constructed, approved, or proposed within the Bayfront Area, including the proposed project, there is no significant cumulative impact associated with water supply to which the project could contribute.

Wastewater Conveyance and Treatment

The ConnectMenlo EIR found that the cumulative demand for wastewater treatment would not exceed the existing or planned capacity of the SVCW's wastewater treatment system and thus there would not be a need to construct new or expanded wastewater treatment facilities. As discussed in Impact 4.16-1, the SVCW WWTP has an average dry-weather design flow of 29 mgd and a peak wet-weather design flow of 71 mgd and is planned to be expanded to achieve a wet weather capacity of 80 mgd. As discussed in Section 4.16-1, SVCW is currently implementing

several improvement projects to improve dry-weather and wet-weather capacity for wastewater treatment system to ensure there is sufficient capacity to serve the project region under the cumulative development scenario in both dry-weather and wet-weather conditions. The analysis in the ConnectMenlo EIR concluded that there is no significant cumulative impact related to wastewater conveyance and treatment to which the project could contribute because wastewater treatment demand under the cumulative development scenario would not substantially reduce the existing or planned capacity of the SVCW's wastewater treatment system and would not require construction of new wastewater treatment facilities.

The proposed project would contribute to the regional demand by generating approximately 0.039 mgd of wastewater. Although the proposed project would introduce 98 more multi-family dwelling units to the region than were assumed under the proposed project buildout projections in the ConnectMenlo EIR, the analysis in that EIR applied the same wastewater treatment demand rate to each residential unit, regardless of type. Specifically, the cumulative demand for wastewater treatment evaluated in the ConnectMenlo EIR was calculated as a percentage of the total water demand, which as discussed above applied the same water demand rate to each unit. Thus, the proposed project would not increase the residential population of the SVCW service area and would not increase the total wastewater treatment demand beyond that evaluated in the ConnectMenlo EIR. Therefore, the conclusions of the ConnectMenlo EIR remain applicable to the proposed project and other Bayfront Area projects included in the cumulative development scenario.

Stormwater Management

The stormwater analysis in the ConnectMenlo EIR noted that most of the development potential reflected in the cumulative scenario consists of redevelopment of parcels in the Bayfront Area that have already been developed and are covered with impervious surfaces. Because there would not be substantial increases in the amount of impervious surfaces, post-development runoff rates would not be significantly different than pre-development rates. In addition, development projects would be required to implement low-impact development techniques and construct improvements to detain/retain stormwater runoff such that discharges do not exceed existing flow rates. As shown in Sheets C4.0 and C4.1 of the project site plans (Appendix B) and documented in the Stormwater Report (Appendix G2), runoff from the site will be directed into treatment measures consisting of both Biotreatment Ponds and Flow-Through Planters. Thus, the project would be consistent with the analysis in the ConnectMenlo EIR, which found that all development projects in the cumulative scenario would be required to implement stormwater control measures, retention, infiltration, low-impact design measures, and review by the City's Public Works Department to integrate measures to reduce potential flooding impacts. With incorporation of these measures in each project, the analysis in the ConnectMenlo EIR concluded that there would be no significant cumulative impact associated with stormwater management to which the project could contribute.

While the proposed project would result in more multi-family dwelling units than were assumed to be present within the Bayfront Area, it does not increase the footprint of development in the area and thus would not result in a potential increase in stormwater runoff flow rates or volumes. Thus, the conclusions of the ConnectMenlo EIR regarding stormwater management under the cumulative scenario remain applicable to the proposed project.

Electrical Supply

The ConnectMenlo General Plan Update planning area is a small component of PG&E's 70,000-square-mile service territory. The ConnectMenlo EIR analysis found that the scale and nature of redevelopment accommodated by the General Plan Update would not generate substantial increases in energy demands within the PG&E service territory and would not require new energy supply facilities. As discussed in Section 4.16.1, PCE is the default energy provider

throughout San Mateo County, serving 765,000 customers. PCE obtains all of its electric power from renewable resources (e.g., water, wind, and solar) and carbon-free sources (e.g., hydroelectric and geothermal). Energy supplied through PCE is transmitted to customers through transmission lines and other infrastructure owned and maintained by PG&E. No improvements to existing energy supply facilities, transmission lines, and other infrastructure would be needed to serve the proposed project and other development anticipated under ConnectMenlo.

The proposed project, along with all other projects in the cumulative scenario, would be required to be consistent with the Municipal Code and state regulations requiring energy efficiency in all building components. As discussed further in Section 4.5, the energy demand associated with the proposed project and other projects in the cumulative scenario would be consistent with the energy supply and demand analysis in the ConnectMenlo EIR, which concluded that there is no significant cumulative impact to which the project could contribute.

Natural Gas

As discussed in more detail in Section 4.5, all of the project's energy demand would be met with electrical energy; no natural gas would be used. Thus, the project would have no contribution to cumulative impacts associated with use of natural gas or development of natural gas facilities.

Solid Waste

The ConnectMenlo EIR found that cumulative impacts from buildout of the General Plan and other development in the region could be significant because of a potential lack of landfill capacity for disposal of solid waste. To address this impact, the ConnectMenlo EIR identified MM UTIL-10, which requires the City continue waste reduction programs to lower the per capita disposal rate, monitor landfill capacity, and seek new landfill sites to replace the Ox Mountain landfill. The ConnectMenlo EIR concluded that with implementation of this mitigation measure, cumulative solid waste impacts would be less than significant because development in the City would be required to comply with the City's solid waste reduction regulations and growth would occur incrementally over a period of 24 years. Thus, ConnectMenlo EIR did not identify a significant cumulative impact to which the project could contribute.

As discussed in Impact 4.16-4, the project's townhouse and apartment zero-waste management plans (Appendix K2 and K3, respectively) estimates that the proposed project would generate 5.0 pounds of solid waste per person per day upon initial operation, consistent with the per capita generation rate assumed in the ConnectMenlo EIR and would gradually reduce solid waste generation to a rate of 0.5 pounds per person per day by 2035. With implementation of the project's zero waste management plans, the proposed project would comply with the City's adopted targets for solid waste reduction.

As discussed in section 4.16.1 and Impact 4.16-2, development in the Bayfront Area is occurring more rapidly than was assumed in the ConnectMenlo EIR. Based on the population projections provided by the City, the UWMP assumed that 40 percent of the projected new population would be realized by 2025. This would increase consumption of landfill capacity in the short term; however implementation of the City's Zero Waste Plan and the project-specific zero waste management plans that the City requires for all new development would ensure that daily solid waste generation decreases over time, which would prolong the lifespan of the landfills serving the City. The proposed project would not cause the City to exceed the General Plan and ConnectMenlo EIR population projections and would comply with the City's solid waste reduction measures. Therefore, the project would not cause a significant cumulative impact that was not evaluated in the ConnectMenlo EIR and this impact would remain **less than significant**.

Mitigation Measures

No mitigation measures are required.

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5 Effects Found Not to be Significant

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines requires that an environmental impact report (EIR) briefly describe potential environmental effects that were determined not to be significant and, therefore, were not discussed in detail in the EIR. This section provides a summary of the environmental resource areas for which the 123 Independence Drive Residential Project (project) is expected to have no impact or a less than significant impact without implementation of mitigation measures. The reasons for these less-than-significant impact or no impact determinations are discussed herein.

5.1 Aesthetics

The project site is within a portion of the City known as the Bayfront Area. The area is zoned as Residential Mixed-Use Bonus (R-MU-B) and is not part of a scenic vista. Existing development on site and in the vicinity limits the opportunity for views of scenic vistas from street-level public viewing areas. Therefore, the proposed project will not interfere with views of any designated scenic vistas. Additionally, there are no eligible or officially designated state scenic highways in the immediate project area.

Construction activities would gradually change the aesthetics of the site through tree removal, grading, installation of new surfaces and landscaping, and construction of new structures, fencing and lighting. Construction related impacts would be limited to the duration of construction and would not conflict with any regulations governing scenic quality outlined in the Menlo Park General Plan or the Menlo Park Municipal Code. Building design and development plans would comply with all requirements under Municipal Code Section 16.45 for Residential Mixed Use (R-MU) zoned districts as well as the policies outlined in General Plan Goals LU-1, LU-6, and OSC-1. This includes requiring connectivity through street and paseo requirements, building mass and scale (including upper story step backs), public and private open space, screening of utilities, trash, and storage areas, and control of light spillover would ensure a consistent and high-quality design throughout the Bayfront Area and compliance of all regulations.

The proposed project would be required to comply with the City's architectural control process, ensuring that the proposed project would comply with existing design standards, including standards related to light and glare. This process would ensure that the proposed design, construction materials, and lighting would be consistent with area practices and that the proposed lighting would be directed downward so as not to spill over on adjacent properties. Therefore, the proposed project's impacts related to scenic vistas, scenic resources, and light and glare would cumulatively have a **less than significant Impact** on aesthetic resources at the project site and **less than cumulatively considerable impact** on visual conditions in the project area.

5.2 Agricultural and Forestry Resources

According to the California Department of Conservation, the project site is categorized as urban and built-up land, and does not consist of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland). There is no Farmland within at least 5 miles of the project site (DOC 2020). Adjacent land uses include a variety of offices, commercial business parks, and public facilities. The project site currently supports office and light industrial uses and has not been used for agricultural uses since the 1960s. Construction of the project with new residential and office uses would not result in the conversion of Farmland to non-agricultural uses.

The project site is zoned Residential Mixed-Use Bonus (R-MU-B) and is not zoned for agricultural use (City of Menlo Park 2016). The project site is not located on lands enrolled in a Williamson Act contract (DOC 2016), and surrounding land entirely consists of urban built-up land. Therefore, the project would have no impact associated with existing agricultural zoning or a Williamson Act contract. Additionally, the proposed project would not 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]) because the project site is an urban developed parcel.

There are no forest or woodland resources located on or near the project site, and thus the project would not result in the conversion of forestland to non-forest use. The City does not contain land zoned for timberland production nor does the Menlo Park Zoning Map identify any areas zoned for Timberland Production (City of Menlo Park 2016). Therefore, the project would have **no impact** associated with forestland conversion, forestland, or timberland.

5.3 Energy

Implementation of the project would increase the demand for electricity at the project site and gasoline and diesel consumption in the project area during construction and operation relative to existing uses. Because the existing uses at the project site use natural gas and the new buildings that would be constructed at the project site would be all-electric, the project would reduce the demand for natural gas. Construction-related energy usage will be temporary and substantially less than that required for project operation. Project operation would require electricity for multiple purposes including, but not limited to, building heating and cooling, lighting, appliances, and electronics. The project would implement energy-saving designs in compliance with state regulations, policies in the General Plan and the Green Building Ordinance of the City's Municipal Code, which includes the City's Reach Code. These design features would include all electric buildings, on-site solar photovoltaic arrays, electric vehicle charging stations, bicycle and pedestrian facilities, recycled water for irrigation, and use of native/adapted species in landscaping to reduce irrigation needs.

The proposed project would be subject to and would comply with, at a minimum, the California Building Energy Efficiency Standards (24 CCR, Part 6) and the California Green Building Standards Code (CALGreen) Title 24 Part 11 Tier 2 voluntary efficiency measures. The project would have at least 75 percent of its construction and demolition waste diverted from landfills. In addition, the project is subject to the City's reach code ordinance which requires new residential projects be built "all-electric." See Chapter 3, Project Description, Section 3.4 for a full list of green building components incorporated into the project design to minimize energy consumption. The proposed project is consistent with state goals (as reflected in bills such as Senate Bills 375 and 743) to respond to housing demand by building housing near job centers, which results in more efficient use of energy. The project is in a robust job center and would help balance the jobs with housing. Providing needed housing close to jobs rather than in other locations, such as the Central Valley, reduces fuel use. Energy consumption associated with the proposed project would not be considered inefficient, wasteful, or unnecessary thus impacts would remain **less than significant**.

Although project development would result in the use of renewable and non-renewable resources during construction and operation, which could limit future availability of non-renewable energy sources, the use of such resources would be on a relatively small scale, consistent with growth expectations for the service areas, and would be reduced by energy-saving practices. Construction activities related to the project would consume petroleum-based fuels, however, consumption of such resources would be temporary and would cease upon the completion of construction. In addition, cumulative projects in the city would be required to meet or exceed the Title 24 building standards, including complying with the City's Reach Code, further reducing the inefficient use of energy. Therefore,

the project's contribution would not be cumulatively considerable and cumulative impacts related to the use of energy would be **less than significant** and **less than cumulatively considerable**.

5.4 Greenhouse Gas Emissions

The proposed project was analyzed against the Bay Area Air Quality Management District's Thresholds description approach to determining whether a project's greenhouse gas (GHG) contribution would be cumulatively considerable and was determined to be within the applicable emission limits. Estimated annual project-generated GHG emissions, as shown in Table 4.7-5, would be approximately 1,420 metric tons of CO₂ equivalent (MT CO₂e) per year as a result of project operations only. After summing the amortized project construction emissions, total GHGs generated by the project would be approximately 1,629 MT CO₂e per year. Emissions from the existing land uses are estimated to be approximately 1,005 MT CO₂e per year. As such, implementation of the project would result in net annual operational GHG emissions of 624 MT CO₂e per year. Additionally, the project would comply with recent revisions to the Menlo Park Municipal Code Chapter 12.16, which would require electricity as the only fuel source for newly constructed residential buildings. It would also comply with the current Building Energy Efficiency Standards (Title 24) at the time of construction, which include robust requirements for energy efficiency; the buildings would be more energy efficient than the existing buildings.

The proposed project is consistent with the Metropolitan Transportation Commission's and Association of Bay Area Government's Plan Bay Area 2050 goal of reducing GHG emissions associated with transportation. Operation of the project would provide housing for an estimate of 1,110 residents (assuming 2.57 persons per household), allowing them access to nearby transit services and pedestrian and bicycle facilities. The project would result in the development of uses and growth that are consistent with the City's General Plan and zoning designations and consistent with Plan Bay Area 2050 growth projections.

Overall, the project would be consistent with the Menlo Park 2030 Climate Action Plan, the state GHG Scoping Plan, Plan Bay Area 2050, Senate Bill 32, and Executive Order S-3-05 by being consistent with vehicle miles traveled (VMT) reduction strategies and policies, increasing the use of alternative fueled vehicles, and implementing energy efficiency strategies. The project would not conflict with any plans adopted with the purpose of reducing GHG emissions; therefore, the project's impacts with respect to GHG emissions would be **less than significant** and **less than cumulatively considerable**.

5.5 Hydrology and Water Quality

The proposed project would be required to comply with Chapter 7.42 of the City's Municipal Code as well as General Plan Policies OSC-5.1, S-1.26, and S-1.27, and the City's Storm Water Management Program. This would include incorporating on-site stormwater treatment measures into the site design and preparing a stormwater pollution prevention plan prior to the start of construction. These measures would identify and limit pollutants in the form of hazardous materials or sediment that would be produced during construction. Construction related pollutants would be limited to the duration of construction. Once the project is operational, it is not expected to release a substantial number of pollutants due to the residential nature of the project.

The project site is within an area considered at risk of future sea-level rise. The project would import fill material sufficient to ensure that the final floor elevation of all proposed ground-level residential units would be at least 2 feet above the 5-foot FEMA floodplain, per the requirements of Menlo Park Municipal Code Section 16.45.130(4), Municipal Code Chapter 12.42 Flood Damage Prevention, and General Plan Policy S-1.28. Additionally, project

designs would integrate a new drainage system to manage stormwater within the project site and the project would not alter drainage patterns outside of the site. Currently, there are no stormwater treatment measures at the project site. The project would comply with all applicable water quality regulations by incorporating on-site stormwater treatment measures into the design and the project would reduce the extent of impervious surfaces at the project site. Thus, the proposed project would improve water quality and reduce runoff compared to the existing conditions and cumulatively have a **less than significant** impact on hydrological and water quality at the project site and **less than cumulatively considerable impact** on hydrology and water quality in the project area.

5.6 Land Use and Planning

The proposed project would not construct any barriers or new roads that could physically divide the existing and planned residential and mixed-use land uses in the project vicinity; and it would not impede pedestrian, bicycle, or vehicle movement in the Bayfront Area. The proposed project would support non-motorized travel by including a publicly accessible paseo and park that would contribute to the interconnectedness of the mixed-use community envisioned for the Bayfront Area. Furthermore, the residential uses proposed under the proposed project would be consistent with the land use and zoning designations for the project site and would be compatible with the other planned residential and mixed-use development in the vicinity. The proposed project is consistent with the Menlo Park General Plan and would comply with all policies outlined in the City of Menlo Park Municipal Code, as shown in Table 4.10-1, General Plan Use and Housing Consistency. Thus, the project would have a **less than significant** project-specific impact and **less than cumulatively considerable impact** related to land use and planning.

5.7 Mineral Resources

As outlined in the ConnectMenlo EIR, industrial-scale solar salt production from sea water has occurred in the vicinity of Menlo Park since the 1800s (City of Menlo Park 2016). The nearest salt ponds are located directly adjacent to the west of the City in Redwood City. Ongoing salt production operations would not be affected by the proposed project given that it is outside of the project area. According to the Update of Mineral Land Classification: Aggregate Materials in the South San Francisco Bay Production-Consumption Region from the Division of Mines and Geology, which provides information on the availability of aggregate deposits in the region, the project site is located in an area where little likelihood exists for the presence of significant mineral resources (DOC 1996). As such, implementation of the project would not 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. Therefore, the project would have **no impact** associated with the loss of availability of a known mineral resource.

5.8 Population, Employment, and Housing

The proposed project would develop 432 new residential units in the Bayfront Area of the City of Menlo Park. The project's contribution of 432 residential units would accommodate approximately 1,110 residents, representing 9.6 percent of the new residential units planned for and anticipated under the ConnectMenlo General Plan Update. This increase in housing for the Bayfront Area complies with the General Plan Goals and the ConnectMenlo EIR. The project would dedicate 17 percent of the residential units to be Below-Market Rate units. Construction of the project would add jobs to the local construction/labor sector for the duration of the development. Once operational, there would be a limited number of on-site workers associated with property management and maintenance. It is assumed that the workers employed during project operation would live within the local region and would not contribute to local housing demands within the City (Appendix I1). As such, an increase in housing demand resulting

from the project is not expected and the project would not indirectly induce substantial unplanned population growth. Therefore, the project would be consistent with previously contemplated and planned growth in the Bayfront Area and would not indirectly or directly result in substantial unplanned population growth during construction and/or operation. The project's impacts related to population and housing would be **less than significant** and **less than cumulatively considerable**.

5.9 Public Services

The proposed project would adhere to state and City requirements, as well as the Menlo Park Fire Protection District (MPFPD) permitting process, to ensure that the project design provides for sufficient emergency access and equipment (e.g., hydrants). The project would result in an increase in population within the project site, decreasing the nominal ratio of MPFPD firefighters to residents and Menlo Park Police Department (MPPD) officers to residents. However, it would not require the MPFPD or MPPD to expand their current service boundaries and would not require construction of new fire protection or police facilities. The project site is located within the Ravenswood City School District and the Sequoia Union High School District and would generate approximately 242 new students within each district. This increase in students may require expansion of school facilities, which would be addressed through payment of the adopted school impact fees. While the proposed project would result in an increase in approximately 1,110 residents, the site design would include one open space lot (Lot 1), consisting of 0.59 acres, which would provide passive recreation opportunities and a community gathering space for residents. Therefore, the increase in population due to the development of the project is not anticipated to increase the use of parks and recreational resources such that substantial physical deterioration would occur. Impacts to surrounding schools, police and fire facilities, and parks would be **less than significant** and **less than cumulatively considerable**.

5.10 Utilities and Service Systems

The proposed project's Water Budget Summary (Appendix K1) identifies that the project would require 16.94 million gallons of water annually. This demand is consistent with and within the estimated demand evaluated in the ConnectMenlo EIR and the associated Water Supply Evaluation. Additionally, implementation of the proposed project would not prompt a need to expand treatment facilities or regional water system conveyance and storage facilities to meet its demand.

Based on the water demand and supply projections in the Urban Water Management Plan, Menlo Park Municipal Water (MPMW) has sufficient water in normal water years to meet projected demand through 2040, including increased demand created by the proposed project. However, MPMW could experience water shortages at single dry years and in all years of a multiple dry year cycle. To address this, MPMW would implement the Water Shortage Contingency Plan as presented in the Urban Water Management Plan. Any shortages in multiple dry years would be managed through demand reductions, supply augmentations, and other policy actions that would reduce water usage.

With a total indoor water use budget of 16.16 million gallons per year (0.044 million gallons per day [mgd]) (Appendix K1), and a typical wastewater generation rate equal to 90 percent of the indoor water use, the project would be expected to generate 0.039 mgd of wastewater. This increase in wastewater generation would not be considered a substantial increase for the Silicon Valley Clean Water's Wastewater Treatment Plan relative to the treatment capacity of approximately 71 mgd.

The project would connect to existing storm drain networks along the project site frontages. Implementation of biotreatment measures and connection into the City's existing stormwater network would not require additional expansion, construction, or relocation of stormwater facilities as a result of the proposed project.

Electricity is currently used by the existing buildings within the project site. As discussed previously, the project would incorporate several measures to minimize electricity use. The project would include undergrounding the existing overhead electrical lines within the project site and would not require expansion of electrical supplies or infrastructure.

The proposed project would connect into existing telecommunication infrastructure within and adjacent to the site and would not require additional expansion, construction, or relocation of telecommunications.

The project would implement project-specific zero-waste management plans (one for the townhomes and one for the apartment building, Appendices K2 and K3, respectively). The zero waste management plans outline specific measures incorporated in the project to reduce, recycle, and compost waste from demolition, construction, and operational phases of the project to ensure compliance with the City's waste reduction targets. The solid waste generated by the project would not require expansion of existing solid waste disposal facilities.

Thus, the project would not require expansion or new development of any utilities and service systems and the project-specific and cumulative impacts would be **less than significant**.

5.11 Wildfire

The ConnectMenlo EIR determined that the Bayfront Area, which includes the project site, does not contain areas of moderate, high, or very high Fire Hazard Severity for the Local Responsibility area, nor does it contain any areas of moderate, high, or very high Fire Hazard Severity for the State Responsibility Area (SRA) (City of Menlo Park 2016). Areas in the western portion of Menlo Park contain high Fire Hazard Severity Zones (FHSZ). These ratings do not extend to the project site

As such, the project site is not in or near land classified as a Very High FHSZ, and impacts associated with wildfire in or near SRAs or lands classified as Very High FHSZs are not anticipated. Notwithstanding, as discussed in Section 5.8, Hazards and Hazardous Materials, the project would not significantly affect emergency response or evacuation activities, and the project would not conflict with or impair implementation of the City's emergency operations plans. Therefore, impacts associated with adopted emergency response plans or evacuation plans would be less than significant.

The project site is located in a highly urbanized area and is not surrounded by woodlands or vegetation that would provide fuel load for wildfires. The project site is not located within or near SRAs or lands classified as Very High FHSZs. The project site is located in an area that is generally flat, lacking any steep slopes, and characterized as predominantly urban and industrial; these factors are not typically associated with the uncontrolled spread of wildfire. Therefore, impacts associated with the spread of wildfire would be **less than significant** and **less than cumulatively considerable**.

5.12 References Cited

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City of Menlo Park. 2016. *ConnectMenlo*: General Plan Land Use and Circulation Elements and M-2 Area Zoning Update EIR. Draft. SCH No. 2015062054. Prepared by PlaceWorks for the City of Menlo Park. June 1, 2016. <https://beta.menlopark.org/Government/Departments/Community-Development/Planning-Division/Comprehensive-planning/ConnectMenlo/Environmental-Impact-Report>.

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6 Other CEQA Considerations

As required by the California Environmental Quality Act (CEQA), this chapter discusses the following types of impacts that could result from implementation of the proposed project: growth-inducing impacts, significant irreversible changes, effects found not to be significant, and significant and unavoidable effects.

6.1 Growth-Inducing Impacts

Section 15126.2(e) of the CEQA Guidelines states that an environmental impact report (EIR) should discuss “...the ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.” Growth can be induced in a number of ways, including through the elimination of obstacles to growth; through the stimulation of economic activity within the region, including the generation of significant employment opportunities; or through precedent-setting action. CEQA requires a discussion of the physical impacts on the environment that would result if a project induces population, employment, or housing growth in the areas surrounding a project, including an analysis of the infrastructure and planning changes that would be necessary to accommodate induced growth. According to the CEQA Guidelines, it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

This EIR discusses the manner in which the proposed project could affect growth in the city and the larger Bay Area. The growth-inducement discussion is provided for informational purposes so that the public and local decision-makers appreciate the potential long-term growth implications of the proposed project. Although CEQA requires a disclosure of growth-inducement effects, an EIR is not required to anticipate and mitigate the effects of a particular project related to growth in other areas. Growth inducement has the potential to result in an adverse impact if the growth is not consistent with or accommodated by the land use and growth management plans and policies for the affected area. Because the general plan of a community defines the location, type, and intensity of growth, it is the primary means of regulating development and growth in that community.

6.1.1 Direct Impacts

In discussing growth inducement, it is useful to distinguish between direct and indirect growth. Direct growth occurs on a project site as a result of new facilities (buildings) being constructed or an increase in developed space. As discussed in Chapter 3, Project Description, the project site includes 8.15 acres and is currently developed with five existing single-story office and light industrial buildings totaling 103,983 square feet of building space. The site also supports 47,859 square feet of landscaping and 307,326 square feet of impervious surfaces, including parking lots, streets, and walkways. Direct growth associated with the proposed project would include 411,931 gross square feet residential building space consisting of an apartment building with 316 dwelling units in approximately 224,863 gross square feet and 116 townhomes with a total of 187,068 gross square feet of residential space. Parking for the apartment building would be provided in a 151,626 square foot parking structure accommodating 552 parking spaces and private garages would be provided for the townhomes in a total of 50,893 square feet. In total, there would be 679,485 square feet of building space within the project site (including space not within the dwelling units, such as for lobby spaces, common areas, leasing office, and decks/balconies/patios, as well as the parking structure and individual townhome unit garages). The project would also include approximately 25,580 square feet of landscape zones, approximately 23,577 square feet of landscaped areas along street frontages, approximately 15,518 square feet of common green spaces between townhomes, an approximately 23,360 square-foot common landscape area in the apartment building courtyard, and 26,154 square feet of publicly accessible open space

within a paseo and park. The project would include approximately 61,454 square feet of vehicle circulation and parking facilities and approximately 87,579 square feet of paths and patios. There would be a total of approximately 300,587 square feet of impervious surfaces on site, representing a 6,739-square-foot decrease compared to existing impervious surfaces (Appendix B, Sheet C5.1, and Appendix G2).

The project is located in the Bayfront Area of the City of Menlo Park, an area that has been planned in the ConnectMenlo General Plan Update for increased development of residential uses. As identified in Chapter 3, Project Description, the project site is zoned as Residential Mixed-Use Bonus (R-MU-B), which is intended to provide high-density housing to complement nearby employment as well as associated retail/service and office uses. As discussed in Impact 4.12-1, the project would result in an increase of 432 new residential units within the City. Under the residential population rate identified in the ConnectMenlo EIR of 2.57 persons per household, these units could support a residential population of 1,110 people. The ConnectMenlo EIR evaluated a development potential of 4,500 new residential units, 11,570 residents, and 5,500 employees in the Bayfront Area.

The proposed project would directly influence population in the Bayfront Area through the construction of the proposed 432 dwelling units. As discussed in more detail in Impact 4.12-1, with a potential for 1,110 residents, the project would account for 9.6 percent of the new residents within the Bayfront Area identified in the ConnectMenlo EIR. As discussed in Chapter 4.12, Population and Housing, 17 percent of the residential units (74 units) would be Below Market Rate (BMR), providing affordable housing to low-income households. This growth is consistent with the goals outlined in the ConnectMenlo General Plan Update to meet the City's growing housing needs. The project is consistent with the land use and zoning designations applied to the property under ConnectMenlo and would not result in unplanned growth.

6.1.2 Indirect Impacts

Indirect growth occurs beyond a particular project site but is stimulated by a project's direct growth. Indirect growth is tied to increased direct and indirect investment and spending associated with the new direct growth. For example, during project construction, construction workers would spend money in the local area, and the expenditure of that money could result in additional job creation. Similarly, a project that constructs new residential and/or employment uses would bring additional residents and workers to the project area, and money spent by those residents and workers in the local area could result in additional job creation. The indirect jobs generated by a project (referred to as the "multiplier effect") tend to occur relatively close to places of employment but may occur at more distant locales as well. Construction of the proposed project would be relatively short-term with building occurring in phases over a five-year period. It would not create long-term employment opportunities that could result in an increased demand for local housing. As discussed in Impact 4.12-2, 44,000 residents within the San Francisco-Redwood City-South San Francisco region are employed in the construction industry. Applying the most recent unemployment rate of 2.4 percent for San Francisco-Redwood City-South San Francisco area to the construction sector, approximately 1,056 construction employees could be available in the region to work on the proposed project. Therefore, the construction labor force is anticipated to come from the existing workforce in the Bay Area and employment opportunities associated with project construction would not lead to relocation of workers or contribute to the housing demand in the Bayfront Area (Appendix I1). As such, an increase in housing demand resulting from the project is not expected and the project would not indirectly induce substantial unplanned population growth. Finally, as discussed in Impact 4.12-3, demolition of the existing businesses currently at the project site would result in a net job loss, however, the housing units replacing those businesses would create a demand for on-site workers associated with construction as well as a limited number of on-site workers associated with property management and maintenance during project operation. In addition, the city has more jobs than housing resulting in many

employees needing to commute into the city. The proposed project would help balance available jobs to available housing within the Bayfront Area.

6.2 Significant Irreversible Changes

Section 15126.2(d) of the CEQA Guidelines requires an EIR to evaluate the significant irreversible environmental changes that could be caused by a proposed project should it be implemented. Irreversible environmental changes involve large commitments of nonrenewable resources or irreversible damage, such as damage that can result from environmental accidents. CEQA Guidelines Section 15126.2(d) discusses three categories of significant irreversible changes that should be considered. Each is addressed below.

6.2.1 Change in Land Use that Commits Future Generations to Similar Uses

The project site is within the Bayfront Area of the City and generally surrounded by commercial, light industrial, and office uses. The approximate 8.15-acre project site spans five existing adjacent parcels northwest of the intersection at Independence Drive and Chrysler Drive, with a portion of the site bounded on the north by Constitution Drive. The site currently supports five existing single-story office and light industrial buildings totaling 103,983 square feet of building space. The proposed project would demolish the existing structures and construct 316 residential apartment and 116 residential townhouses.

Construction of the proposed project would occur on land that is designated for Mixed-Use Residential uses. The proposed project would be consistent with existing zoning for the site; however, in the future, the site could be rezoned or redeveloped for a different use also allowed in the existing mixed-use zoning, in which case, at the end of the useful life of the proposed project, the use could change. Therefore, the proposed project would not commit future generations to a significant change in land use. This is in contrast to a large industrial use, where reuse for non-industrial uses likely would require extensive remediation, making such reuse difficult, or large infrastructure projects that are rarely moved or dismantled once constructed.

6.2.2 Irreversible Damage from Environmental Accidents

No significant environmental damage, such as damage from an accidental spill of a hazardous material, is anticipated to occur with development of the proposed project. As described in Chapter 4.8, Hazards and Hazardous Materials, a Phase I Environmental Site Assessment (ESA) was prepared for the project site.

It is anticipated that the proposed project would use hazardous materials that are typical in residential buildings (e.g., cleaning products, building maintenance products, fertilizers and pesticides for landscaping). It is possible that such materials could be released into the environment. As discussed in Section 4.8, Hazards and Hazardous Materials, The San Mateo County Environmental Health Department regulates household hazardous waste and the City and County provide residents with multiple options to properly dispose of such waste. Compliance with federal, state, and local regulations would ensure that all hazardous materials would be used, stored, and disposed of properly, which would minimize potential impacts related to a hazardous materials release during project operation. No irreversible changes, such as those that might result from construction of a large-scale mining project, a hydroelectric dam project, or major institutional project, would result from development of the proposed project.

6.2.3 Large Commitment of Nonrenewable Resources

The proposed project would provide approximately 411,931 square feet of residential space spread between 316 apartment and 116 townhouses, 202,523 square feet of parking structure and garage space, and 26,154 square feet of publicly accessible open space. Project development would require the use of materials such as lumber, steel, copper, plastics, and aggregate materials, as well as fossil fuels, during construction. The source metals used, unless they come from recycled materials, would represent an irreversible use of resources. Fossil fuels used during construction would represent an irreversible use of oil.

As discussed in Section 4.5, Energy, the proposed project would consume an estimated 571,767.39 gallons of diesel fuel and 41,928.52 gallons of gasoline during the construction period. Construction of the proposed project would not involve the consumption of natural gas. The project would, however, include the consumption of construction-related materials. These resources would include certain types of lumber and other forest products, aggregate materials used in concrete and asphalt (e.g., sand, gravel, and stone), metals (e.g., steel and copper), petrochemical construction materials (e.g., plastics), and glass. Construction, design, and planning of the project would comply with CALGreen codes and policies outlined in the City of Menlo Park Municipal Code. Additionally, the project would be built in accordance with the current Building Energy Efficiency Standards (Title 24) at the time of construction, which include robust requirements for energy efficiency and the new buildings would be more energy efficient than the existing buildings. Further, the amount of energy used by each project resident would be less than residents in older homes or less dense developments, such as traditional single-family subdivisions.

During operation, the proposed project's energy demand is estimated to be as follows:

- Electricity: The proposed project would consume approximately 4,451,000 kWh of electricity per year, which would represent an increase in electricity demand by 3,551,513 kWh per year compared to the existing energy usage of 899,487 kWh per year at the project site. All of this electricity would come from renewable sources such as wind and solar, as required by the City's Municipal Code.
- Natural Gas: The proposed project would be built "all electric" and would not utilize natural gas other than emergency generators. Based on modeling estimates, existing buildings within the project site currently consume 1,803,488 kBtu per year (Appendix C). This consumption would be eliminated upon project implementation.
- Other Fuel: The proposed project would consume 138,020 gallons of petroleum per year from vehicle trips traveling to and from the project site. Based on modeling estimate, the existing buildings within the project site currently consume 74,311 gallons of petroleum per year (Appendix C). Therefore, implementation of the project would lead to an increase in petroleum consumption of 63,709 gallons of petroleum per year.

To the extent that electricity for the proposed project comes from carbon-free and renewable sources (e.g., hydropower, sun, wind, geothermal), the proposed project would not represent an irreversible use of resources. As discussed in Section 4.5, Peninsula Clean Energy (PCE) is the default energy provider throughout San Mateo County and PCE obtains all of its electric power from renewable resources (e.g., water, wind, and solar) and carbon-free sources (e.g., hydroelectric and geothermal). To the extent that electricity for the proposed project comes from non-renewable sources (e.g., natural gas, coal, nuclear), the proposed project would represent an irreversible use of those resources. The project's green building features would include compliance with Menlo Park Municipal Code Section 16.45.130 through installation of solar-power generation equipment and ensuring that 100 percent of the project's energy demand is met with renewable energy sources, attaining Leadership in Energy and Environmental Design Gold standard, enrolling in EPA Energy Star Building Portfolio Manager, attaining

indoor and outdoor water use efficiency standards, and implementing project-specific zero waste management plans. Additional green building measures incorporated in the proposed project include consistency with Municipal Code Chapter 12.16 to provide all electric buildings, providing electric vehicle charging stations and parking spaces that include infrastructure to accommodate future installation of electric vehicle charging stations and providing bicycle and pedestrian facilities. Construction and operation of the proposed project would be prohibited from using natural gas, except in the case of emergencies when generators are necessary.

6.3 Significant and Unavoidable Impacts

Section 21100(b)(2)(A) of CEQA requires a Draft EIR to identify any significant environmental effects that cannot be avoided. With implementation of the mitigation measures recommended in this EIR all impacts of the proposed project would be reduced to a less-than-significant level. The proposed project would not result in any significant and unavoidable impacts.

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7 Alternatives

7.1 Introduction

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, environmental impact reports (EIRs) are required to “describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives” (14 CCR 15126.6[a]). This alternatives analysis is prepared in support of CEQA’s goals to foster informed decision making and public participation (14 CCR 15126.6[a]). An EIR is not required to evaluate the environmental impacts of alternatives at the same level of detail as the proposed project, but it must include enough information to allow meaningful evaluation, analysis, and comparison with the proposed project.

The alternatives analysis is required even if the alternatives “would impede to some degree the attainment of the project objectives or would be more costly” (14 CCR 15126.6[b]). An EIR must evaluate “only those alternatives necessary to permit a reasoned choice” (14 CCR 15126.6[f]) and does not need to consider “every conceivable alternative” to a project (14 CCR 15126.6[a]). The alternatives evaluated should be “potentially feasible” (14 CCR 15126.6[a]), but inclusion of an alternative in an EIR does not constitute definitive evidence that the alternative is in fact “feasible.” The final decision regarding the feasibility of alternatives lies with the decision makers for a given project who must make the necessary findings addressing the feasibility of alternatives for avoiding or substantially reducing a project’s significant environmental effects (California Public Resources Code, Section 21081; see also 14 CCR 15091).

This chapter describes the project alternatives selected for analysis, evaluates the environmental impacts associated with them, and compares the impacts with those of the 123 Independence Drive Residential Project (proposed project). This chapter also identifies those alternatives considered by the City of Menlo Park (City) but not carried forward for detailed analysis and the basis for the City’s decision to omit those alternatives from the detailed analysis.

In conformity with CEQA, the purpose of this analysis is to focus on alternatives that are potentially feasible, and that would avoid or substantially lessen any of the significant effects of the project. The analysis in the Environmental Analysis, Sections 4.1 through 4.15, finds that the proposed project would not result in any significant and unavoidable impacts. Thus, this analysis discusses whether the project alternatives could reduce any of the project’s impacts that require mitigation to bring the impact to a less than significant level.

7.2 Project Objectives

As described in Chapter 3, Project Description, the overarching intention of the proposed project is to deliver a mix of housing types that would enhance the environment of the Bayfront Area and balance the existing office uses as set forth in the City’s General Plan. More specifically, the objectives for the proposed project are to do the following:

- Provide a mix of housing types.
- Help the City and region achieve a better jobs/housing ratio by replacing office space with housing.

- Provide a pedestrian connection between Constitution Drive and Independence Drive to improve pedestrian circulation in the area.
- Alleviate traffic by providing housing close to a jobs center and public transit such as buses and shuttles.
- Develop the site at a sufficient density and intensity to provide the City with community benefits, including affordable housing.
- Provide enough market-rate residential units to have an economically viable and feasible project.
- Provide for-rent and for-sale affordable housing, where the for-sale affordable housing is organized to permit the use of tax-exempt bond financing.
- Support the City's sustainability goals by complying with the Building Energy Efficiency Standards in the California Building Code (Title 24, Parts 6 and 11) and local energy efficiency requirements and contributing to reduced mobile emissions by siting residential uses in a job-rich area.
- Provide residential and recreational uses in the Bayfront area consistent with the City's General Plan policies that promote residential development in the area.

7.3 Summary of Project Alternatives

7.3.1 Development of Project Alternatives

In developing the project alternatives evaluated in this EIR, the EIR preparers worked with city staff to explore various modifications to the project that could reduce environmental effects while responding to the project objectives and reflecting any suggestions for project alternatives that were provided in the public comments received in response to the Notice of Preparation. The analysis throughout this EIR does not identify any significant and unavoidable impacts that would result from the proposed project. Thus, the effort to develop project alternatives focused on reducing the project's impacts that would be reduced to a less than significant level through implementation of mitigation measures.

7.3.2 Alternatives Considered but Rejected

In addition to the alternatives selected for additional analysis, the following alternatives were initially considered but rejected from further consideration. The CEQA Guidelines provide reasons to eliminate potential alternatives from detailed consideration in an EIR can include (1) failure to meet most of the basic project objectives, (2) infeasibility, and (3) inability to avoid significant environmental impacts. Factors that may be considered to determine if an alternative is feasible include site suitability, economic viability, and general plan consistency. The following alternatives were preliminarily considered but rejected from further evaluation for the reasons described below.

1. **Off-site Alternative:** Under this potential alternative, the proposed project would be developed on another site within the city. If the project were located outside of the Bayfront Area, the Off-site Alternative would not meet the goals of the ConnectMenlo General Plan Update of redeveloping much of the Bayfront Area to support new mixed-uses and increase available housing within the City of Menlo Park. If the project were located on another site within the Bayfront Area, the Off-site Alternative would provide the same contribution to achievement of the ConnectMenlo goals for redevelopment of the Bayfront Area, but would not be expected to reduce or avoid any of the project's potentially significant effects because this alternative would result in similar amount of air pollution and noise within the same general area as the proposed project, would be developed in an area considered sensitive for cultural resources and with

similar geologic (including groundwater) and paleontological conditions as the project site, and would likely require demolition of existing structures which could contain hazardous materials. Additionally, if the proposed project were to be developed at an alternative site, the existing site office and industrial buildings onsite would remain in place which would further not contribute to the ConnectMenlo goals for redevelopment of the Bayfront Area. Therefore, this alternative was not further considered or evaluated in this EIR.

2. **All Commercial Option Alternative:** Under this alternative, the project site would be constructed entirely with commercial land uses. This alternative was rejected from further consideration because this alternative would not achieve the basic project objectives related to developing a residential project, would not be consistent with the ConnectMenlo goals to increase residential uses within the Bayfront Area, would result in greater environmental effects than the proposed project because it would not contribute to a better jobs/housing balance and increases in affordable housing that could help reduce vehicle miles traveled (VMT), would result in greater air pollutant emissions, greenhouse gas emissions, and noise associated with VMT, and would not reduce impacts associated with biological resources, cultural resources, and hazards and hazardous materials.
3. **Reduced Parking Alternative:** This alternative would consist of redeveloping the project site with the same amount of apartments and townhomes as under the proposed project but with 137 fewer parking spaces. This alternative was initially considered to evaluate whether it could achieve a greater reduction in VMT than is realized under the proposed project. The VMT reduction for reduced parking is calculated using the following California Air Pollution Control Officers Association (CAPCOA) equation to compare the proposed parking ratio against the ITE parking demand rate:

$$\% \text{ VMT Reduction} = \left| \frac{\text{Actual Parking Provision} - \text{ITE Parking Generation Rate}}{\text{ITE Parking Generation Rate}} \right| \times 0.5$$

The ITE Parking Generation rate for multi-family housing (mid-rise) uses is 1.31 spaces per dwelling unit, while the rate for multi-family housing (low-rise) is 1.21 spaces per dwelling unit. The proposed project includes a total of 552 parking spaces (including guest spaces and tandem spaces), which is 1.28 spaces per dwelling unit. This is in-between the ITE estimated demand for these uses, however the average of the ITE rates is 1.26 spaces per dwelling unit, which is slightly less than the proposed parking ratio.

CAPCOA identifies that at maximum a 12 percent VMT reduction can be realized by limiting vehicle parking on site. To achieve this, the parking rate would have to be lowered to a rate of 0.96 spaces per dwelling unit, and therefore the number of residential parking spaces would need to be reduced by 137 spaces to provide a total of 415 spaces. However, CAPCOA also notes that reducing onsite parking is more effective in areas where high quality alternative modes of travel are available. The project site is not within walking distance of a rail station and has somewhat limited bus service in terms of being able to rapidly access locations outside of the Bayfront Area.

Further, as discussed in Section 4.14, the proposed project would include implementation of a Transportation Demand Management (TDM) plan that would reduce per capita VMT for project site residents to 20.63 percent below the current average per capita VMT in the project site's transportation analysis zone. When multiple TDM measures are layered together, the effectiveness of each additional measure tends to decrease. The proposed TDM plan includes a requirement that parking for the apartment building be 'unbundled,' meaning that apartment leases would not automatically include a designated parking space. Residents who desire to lease a parking space would select to have the parking space added to their lease. Unbundling of parking encourages residents to forego a

second car or to have no car at all. Thus, a reduction in parking would not lead to substantial additional reductions in VMT compared to the proposed TDM plan. This alternative was rejected from further consideration because it would not reduce any of the project's significant impacts. As discussed in Section 4.14, implementation of the proposed Transportation Demand Management (TDM) Plan would reduce per capita VMT for project site residents to 20.63 percent below the current average per capita VMT in the project site's transportation analysis zone. Thus, the project complies with the City's threshold of reducing VMT 20 percent below the current average and the project would not result in a significant impact related to VMT. As discussed above, a parking reduction is unlikely to achieve greater reductions in VMT because the TDM plan includes unbundled parking for the apartment buildings and because there is limited access to high quality alternative modes of travel in the project area. Additionally, as discussed in Section 4.7, Greenhouse Gas Emissions, the proposed project would have a less than significant impact associated with greenhouse gas emissions. Thus, the Reduced Parking Alternative would not reduce the greenhouse gas or transportation impacts associated with the proposed project.

It is also important to consider that the City's zoning ordinance requires that new residential development provide a minimum of one parking space per dwelling unit. As stated above, the reduced parking alternative would require a maximum parking ratio of 0.96 parking spaces per dwelling unit to potentially achieve any additional reductions in VMT. A project alternative that includes a parking reduction such that the zoning ordinance requirements are not met would require the City to approve a variance from the City's development standards, which the City has no authority to require. Thus, this alternative would not be feasible within the regulatory framework under which the project is proposed.

7.4 Project Alternatives Selected for Analysis

This section provides an evaluation of the environmental effects of each alternative relative to the environmental effects of the proposed project. These conclusions are listed in the alternatives summary matrix provided at the end of this discussion.

A brief overview of each alternative selected for analysis is provided below while subsequent sections provide additional description of the alternative and present analysis comparing the impacts of each alternative to those of the proposed project.

1. **Alternative 1: No Project/No Development Alternative.** This alternative assumes no development would occur, and the site would remain in its current condition. The existing commercial buildings would remain untouched and multi-use residential buildings would not be constructed.
2. **Alternative 2: Mixed-Use Alternative.** The Mixed-Use Alternative (Alternative 2) would be similar to the originally proposed project design, but would modify the original project design to introduce a retail land use component within the project site and increase the number of dwelling units. This alternative would include demolishing existing site buildings and constructing 316 rental apartments within one 5-story building, 67 3-story townhomes, approximately 81,500 square feet of office space and 8,500 square feet of retail, a neighborhood park, common areas, and associated parking.
3. **Alternative 3: Base-level Development Alternative.** The Base-level Development Alternative would involve reduced development compared to the proposed project. This alternative would include demolition of existing site buildings, and construction of both residential apartments and townhomes, with reduced number of residential units. With less developed building space, this alternative would also allow for increased open space compared to the proposed project.

7.4.1 No Project/No Development Alternative (Alternative 1)

CEQA requires that an EIR consider a No Project/No Development (No Project) alternative, which could be one in which no development occurs within the project site or could be one in which development consistent with the General Plan and zoning designations occurs. Given that the project site is already developed, the No Project alternative assumes the site would remain in its current condition and that no demolition or redevelopment would occur.

Aesthetics

The proposed project would not result in any significant impacts related to scenic views, visual character and compatibility with surrounding land uses, or light and glare and no mitigation measures would be required. Construction activities related to the proposed project would adhere to the regulations outlined in the City's design standards and Municipal Code, which are described in Table 4.1-1 of Section 4.1, Aesthetics.

Under the No Project Alternative, there would be no change in the land uses of the project site and no changes to existing visual conditions and visual character of the site. Thus, the No Project/No Development Alternative would avoid all changes to visual resources and the visual character of the project site relative to the existing conditions. Both the proposed project and the No Project Alternative would result in no significant adverse aesthetic effects. Thus, this alternative would have *similar* impacts as the proposed project.

However, it is noted the proposed project would replace buildings that were constructed in the 1960s with more modern architecture that meets the City's current design standards. The visual character of the project site under the proposed project would be more compatible with the surrounding properties that have already been or are in the process of being redeveloped compared to the existing conditions.

Air Quality

The proposed project would implement Mitigation Measures (MMs) 4.2a and 4.2b to reduce potentially significant impacts related to construction emissions (toxic air contaminants and particulate matter) to a less than significant level. The proposed project would result in less-than-significant impacts related to conflicts with applicable air quality plans, increases in criteria air pollutants, other emissions (including odors), and cumulative air quality impacts.

Under the No Project Alternative, no construction would occur, there would be no increase or decrease in air pollutant emissions, and there would be no change in the potential for people in the project vicinity to be exposed to toxic air contaminants. Thus, the No Project Alternative would result in no impacts to air quality and no mitigation measures would be needed. Impacts would be *less than* the proposed project.

Biological Resources

The proposed project could result in potentially significant impacts to biological resources associated with potential disturbance of bat habitat and roosting and potential disturbance to nesting birds. Implementation of MMs 4.3a and 4.3b would reduce potentially significant impacts to less-than-significant levels by requiring pre-construction surveys for bats and nesting birds as well as measures to ensure that disturbance of bat roosts is avoided. The project would require removal of all 29 Heritage Trees within the project site. These would be replaced at a 1:1 ratio as required by the City's Heritage Tree Ordinance in effect at the time that the project's Preliminary Application was submitted. Thus the project would have a less than significant impact related to consistency with local ordinances for the protection of biological resources.

No construction would occur under the No Project Alternative and therefore no adverse effects to biological resources would occur. There would be no potential for nesting birds or bat habitat to be disturbed and no heritage trees would be removed. Therefore, the No Project Alternative would result in *fewer* biological resources impacts compared to the proposed project.

Cultural Resources

The proposed project site is in the Bayfront Area which has been identified as archaeologically sensitive. While there are no archaeological resources, historic resources, or human remains known to be present within or adjacent to the project site, it is possible that resources could be discovered below the ground surface during project construction. If that were to occur, a significant impact to cultural resources could occur and the project could contribute to the cumulative loss of cultural resources in the project region. Through implementation of MMs 4.4a and 4.4b any resources that may be uncovered during construction would be required to be evaluated for significance and any recommended treatment measures would be required to be implemented, and therefore the impact to cultural resources would be reduced to a less-than significant level.

Under the No Project Alternative, there would be no change in the project site, no ground-disturbance associated with project construction would occur, and the current structures would remain untouched. This alternative would result in no impacts to cultural resources and would not create a potential for discovery of subsurface resources. Impacts to cultural resources would be *less* than under the proposed project.

Energy

The proposed project would increase consumption of electricity as well as petroleum-based fuels during construction and operation but would comply with all state and local energy laws, resulting in less than significant impacts to energy consumption during construction and operation. The proposed project would not contribute to wasteful or inefficient use of energy, significant additional demand on energy resources or services, or conflict with current energy-related plans, therefore no mitigation is necessary.

Under the No Project Alternative, there would be no change in the project site's existing uses and associated energy consumption. Development under the proposed project would be subject to current building code standards, which require much greater energy efficiency than the existing buildings on site. Thus, while the No Project Alternative would not alter existing conditions, the proposed site redevelopment would result in improved energy efficiency and reduced wasteful energy consumption compared to the No Project Alternative. Because this alternative would not realize energy savings resulting from new building development, the No Project Alternative would result in *greater* impacts associated with energy usage than the proposed project.

Geology, Soils, Seismicity, and Paleontological Resources

The proposed project would not exacerbate the potential for seismic ground shaking or seismic-related ground failure to occur at the project site or in the vicinity and thus would result in no impacts associated with seismic activity. The project could result in potentially significant impacts associated with subsidence on nearby properties to occur during dewatering activities to support excavation, construction of below-grade parking, and installation of the foundation for the apartment building. The project could also result in potentially significant impacts associated with geological and soil stability associated with placement of fill material at the site. MMs 4.6a and 4.6b would lessen these potential impacts to less-than-significant levels by ensuring that design of the dewatering system avoids offsite subsidence, and that fill placement occurs sufficiently prior to construction to allow for settlement.

Although no paleontological resources are known to be present at the project site, such resources could be encountered during excavation activities. MM 4.6c which is the same as MM CULT-3 in the ConnectMenlo EIR, would lessen this potential impact to a less-than-significant level by ensuring that any potential paleontological resources encountered during construction are appropriately evaluated and recovered when necessary to avoid significant impacts. Would

The No Project Alternative would involve no construction activities at the project site which would avoid all potential impacts to geology, soil, or paleontological resources that are present. Impacts related to subsidence on offsite properties, soil settlement, and paleontological resources would be *less* under the No Project Alternative because no construction/earth-moving activities within the project site would take place, which would avoid the potential for adverse geologic and soil impacts or discovery of paleontological resources to occur. Overall, impacts under the No Project Alternative are considered to be *less* compared to the proposed project.

However, it is noted that existing buildings within the project site were constructed between 1961 and 1968 are not compliant with the current California Building Code (CBC), which includes construction requirements and standards for earthquake/seismic safety. The proposed project would develop new site structures in compliance with the current CBC, which would reduce the potential for geologic hazards to adversely affect occupants of site buildings.

Greenhouse Gas Emissions

The proposed project would result in less than significant impacts related to greenhouse gas (GHG) emissions during project construction and operation. As discussed in Section 4.7, Greenhouse Gas Emissions, the project incorporates green building and sustainability measures to minimize GHG emissions consistent with applicable regulatory requirements.

Under the No Project Alternative, no construction would occur, and the No Project Alternative would neither increase nor decrease emissions of GHGs. The existing buildings, which are not as energy efficient as the project, would remain and would continue to use natural gas. In addition, no housing would be added to a jobs-rich area and no TDM plan would be implemented; thus the reductions in VMT associated with the proposed project would not be realized under the No Project Alternative. The No Project Alternative would result in *greater* GHG-related impacts compared to the proposed project.

Hazards and Hazardous Materials

The proposed project would result in potentially significant impacts related to release of hazardous materials and conditions as well as handling of hazardous materials within proximity of existing schools. Implementation of MMs 4.8a, 4.8b, 4.8c, as described in Section 4.8, Hazardous and Hazardous Materials, as well as MM 4.2a, would reduce impacts to a less-than-significant level.

The No Project Alternative would not demolish any site buildings or construct new buildings. As such, the No Project Alternative does not have the potential to change the existing use, handling, and/or transport of hazardous materials nor would it have the potential to release any hazardous materials within the project site. Impacts under the No Project Alternative would therefore be *less* than the proposed project.

Hydrology and Water Quality

The proposed project would redevelop the project site but would have a less than significant effect on surface and groundwater quality. Compliance with federal, state, and San Mateo County regulations for pollutant control and use of Best Management Practices (BMPs) to protect water quality, the project would not result in a significant degradation of water quality during project construction or long-term operation. The proposed project would reduce the amount of impervious surface at the project site compared to existing conditions and result in less than significant impacts to groundwater supply, stormwater infrastructure, and potential increases in sediment and erosion on local waterways during construction.

Under the No Project Alternative there would be no impacts to hydrology, drainage, or water quality related to an increase in stormwater, loss of groundwater, or inadequate stormwater infrastructure because there would be no ground-disturbance or increase in pollutants at the project site. However, the proposed project would reduce the amount of impervious surfaces at the project site and implement low impact development (LID) features, which would allow for more on-site water quality treatment and groundwater recharge. Therefore, the proposed project would result in a beneficial impact to hydrology and water quality that could not be achieved under the No Project Alternative. As a result, hydrology and water quality impacts may be *greater* under the No Project Alternative because no improvements to hydrology and water quality would be achieved.

Land Use and Planning

As described in Section 4.10, Land Use and Planning, the proposed project would result in less than significant impacts related to division of an established community and conflicts with existing land use plans, policies, or regulations. Under the No Project Alternative, the project site would remain in its current condition with five single-story office/light industrial buildings. Under the ConnectMenlo General Plan Update, the project site is designated for Mixed-Use Residential land use. While administration and professional offices are allowed under the Mixed-Use Residential land use designation, light industrial uses are not permitted. As such, the No Project alternative would not be consistent with the current land use designation at the project site. Impacts under this alternative would therefore be *greater* than the proposed project, which proposes to develop the site with both for-sale and for-rent residential units.

Noise

As described in Section 4.11, Noise, a potentially significant noise impact could occur during project construction, particularly when construction activities occur outside of daytime hours. MM 4.11a identifies management practices to ensure that the construction noise is minimized, and MM 4.11b requires preparation of a construction noise control plan that includes specific noise-reducing construction practices to ensure that all of the City's construction noise performance standards are met. Section 4.11 also demonstrates that construction would not result in excessive groundborne noise or vibration, and that project operation would not generate a substantial temporary or permanent increase in ambient noise levels. Under the No Project Alternative, the project site would remain in its current condition and there would be no changes in the ambient noise environment. Impacts under this alternative would therefore be *less* than the proposed project.

Population, Employment, and Housing

As described in Section 4.12, Population and Housing, the proposed project would result in less than significant impacts related to unplanned population growth and displacement of people and housing. Under the No Project

Alternative, no new residences would be developed at the project site and existing office/light industrial uses would remain in place. This alternative would not result in any impacts associated with unplanned growth and displacement of people/housing, thus the No Project Alternative would result in *similar* impacts to the proposed project. However, it is noted that the No Project Alternative would not further the ConnectMenlo goals for redevelopment of the Bayfront Area with mixed-uses, including planned growth and residences within the project area.

Public Services and Recreation

As discussed in Section 4.13, Public Services and Recreation, the proposed project would result in less than significant impacts related to the provision of new or physically altered police, fire, school, parks, or other public facilities as well as recreational resources. Under the No Project Alternative, no new uses would be introduced at the project site and the current uses would continue to operate under existing conditions, which are already served by public services and recreational resources within the City. Compared to the proposed project, which would increase public service demands through the introduction of new residences in the project area, the No Project Alternative would result in *less* impacts.

Transportation

Project impacts related to transportation would be less than significant. As described in Section 4.14, Transportation, the project would include a TDM plan that would reduce project-generated VMT per resident by 20.63 percent compared to the current average VMT for the project site transportation analysis zone. Thus, the project would comply with the City's VMT threshold of reducing VMT by at least 15 percent per capita compared to the current average.

Under the No Project Alternative, the project site would remain in its existing condition and there would be no change in the average per capita VMT in this transportation analysis zone. The proposed project would generate 870 new daily trips compared to the existing uses at the project site, thus while the total VMT would increase as a result of the project, the threshold of significance for this impact is the VMT per capita, which would decrease under the proposed project. Under the No Project Alternative, no TDM plan would be implemented and there would be no change in the per capita VMT. The No Project Alternative would not result any new impacts, but it would also not realize the benefit of the VMT per capita reduction achieved under the proposed project.

Similar to the proposed project, the No Project Alternative would also result in less-than-significant impacts related to conflicts with existing circulation system plans/policies, transportation hazards, and emergency access. However, because this alternative would not achieve VMT reductions to the project site, which would be accomplished under the proposed project, the No Project Alternative would result in *greater* transportation impacts compared to the proposed project.

Tribal Cultural Resources

The proposed project site is in the Bayfront Area which has been identified as archaeologically sensitive. While there are no known tribal cultural resources within or adjacent to the project site, and no tribal consultation was requested for this project, there is a known tribal cultural resource approximately 1.5 miles away from the site, and it is possible that resources could be discovered below the ground surface during project construction. If that were to occur, a significant impact to tribal cultural resources could occur and the project could contribute to the cumulative loss of tribal cultural resources in the project region. Through implementation of MMs 4.4a, 4.4b, 4.4c and 4.15a and compliance with Health and Safety Code Section 7050.5, any resources that may be uncovered during construction

would be evaluated for significance and any recommended treatment measures would be required to be implemented, and therefore the impact to tribal cultural resources would be reduced to a less-than significant level.

Under the No Project Alternative, there would be no change in the project site; no ground-disturbance associated with project construction would occur; and the current structures would remain untouched. This alternative would result in no impacts to tribal cultural resources and would not create a potential for discovery of subsurface resources. Impacts to tribal cultural resources would be *less* than under the proposed project.

Utilities and Service Systems

The proposed project would result in an increase in demand for utilities and service systems in the Bayfront Area, however, the impacts related to water usage and infrastructure, wastewater infrastructure, stormwater management, solid waste, electrical service infrastructure, and telecommunications infrastructure would be less than significant, and no mitigation would be required. New construction would utilize the existing infrastructure and service systems, and the service providers would have capacity to meet the increased demands for service, as discussed in Section 4.15, Utilities and Service Systems.

The No Project Alternative would avoid all increases in demands for public services and utilities at the project site because no change in the current use of the site would occur. Thus, the No Project Alternative would have no impacts to utilities and service systems and impacts would be *less* than those of the proposed project.

7.4.2 Mixed Use Alternative (Alternative 2)

As previously described, the Mixed-Use Alternative would be similar to the originally proposed project design which considered demolition of existing site buildings, construction of 316 rental apartments within one 5-story building, 67 3-story townhomes, approximately 90,000 square feet of office space, a neighborhood park, common areas, and associated parking.

The Mixed-Use Alternative would modify the original project design to introduce a retail land use component within the project site and increase the number of dwelling units. This alternative would continue to include demolition of existing site buildings, construction of 316 rental apartments within one 5-story building, a neighborhood park, common areas, and associated parking. The increase in the number of residential townhomes within the project site (compared to the originally proposed project design) would be achieved by increasing building height for some of the townhome buildings. This would allow for placement of an additional single-story condominium unit above some pairs of the proposed 3-story townhomes. As a result, the Mixed-Use Alternative would provide a variety of both 3- and 4-story residential townhome/condominium buildings and construction of a total of 90 townhome/condominium for-sale units. The proportion of 1-, 2-, 3-, and 4-bedroom units would remain the same as in the proposed project, with the smaller units (1 and 2 bedrooms) located in the 4-story buildings. This alternative would also include a 90,000 square-foot building in the eastern portion of the site that supports retail land uses within the first level (approximately 8,500 square feet) together with the office lobby and approximately 81,500 square feet of office uses in the second through fourth levels. With the increased parking requirements for the additional townhomes and the retail component, a reduction in the size of the park would be required.

Aesthetics

The proposed project would not result in any significant aesthetics impacts related to scenic views, visual character and compatibility with surrounding land uses, or light and glare. Construction activities related to the proposed

project would adhere to the regulations outlined in the City's design standards and Municipal Code, which are described in Table 4.1-1 of Section 4.1, Aesthetics.

Under the Mixed-Use Alternative, proposed townhomes would include a mix of 3- to 4- level structures to accommodate an increase in available residential uses within the project site as well as an approximately 90,000 square foot building to house both retail and office space under. This option also includes a 5-story building with 316 residential apartment units.

Under the Mixed-Use Alternative, the site development would be more intense than under the proposed project because there would be increased building height in the townhome portion of the site and the eastern portion of the site would contain a single large building rather than the townhomes that would be located on that portion of the site under the proposed project, and the amount of park space and other open space would be reduced. However, each building and site landscaping would be subject to the City's design standards. Thus, the additional building intensity would not significantly alter the character of the project site and would not result in visual incompatibilities with surrounding properties. The potential for new light and glare associated with this alternative would also be similar to the proposed project. Therefore, the Mixed-Use Alternative would not result in any new aesthetic-related affects because there would be no substantial changes in the general character and compatibility of the site with the City's design standards and with surrounding properties. Impacts under this alternative would be *similar* to the proposed project.

Air Quality

The proposed project would implement MMs 4.2a and 4.2b to reduce potentially significant impacts related to air pollutant emissions during construction to a less than significant level. The proposed project would result in less-than-significant impacts related to conflicts with applicable air quality plans, increases in criteria air pollutants, other emissions (including odors), and cumulative air quality impacts.

The Mixed-Use Alternative would somewhat increase the building intensity on the project site which could increase air pollutant emissions during construction. Implementation of MMs 4.2a and 4.2b would reduce construction emissions associated with the proposed project as well as this alternative to a less than significant level.

Additionally, the Mixed-Use Alternative would add non-residential uses to the site which would increase the total daily traffic and associated air pollutant emissions during project operation. However, under either the proposed project or the Mixed-Use Alternative, the development would be consistent with the existing land use and zoning designations for the project site and would be required to project include applicable control measures from the 2017 Clean Air Plan. This would include implementing a TDM Plan and incorporating green building and sustainability measures into the building design, such as improving water and wastewater efficiency, providing electric vehicle charging stations, and constructing all-electric residential buildings per the City's Municipal Code Chapter 12.16. Since the Mixed-Use Alternative would comply with all applicable Bay Area Qir Quality Management District rules and would meet or exceed state and federal standards and/or local building codes, this alternative would not conflict with any applicable control measures from the 2017 Clean Air Plan, consistent with the proposed project. Thus, the Mixed-Use Alternative would result in *similar* air quality-related impacts compared to the proposed project.

Currently, the project area consists predominantly of office and light industrial uses with very little retail. The Mixed-Use Alternative would provide residents with the ability to walk to retail opportunities rather than drive.

Biological Resources

The proposed project could result in potentially significant impacts related to biological resources associated with bat habitat disturbance and nesting birds. Implementation of MMs 4.3a and 4.3b would reduce potentially significant impacts to a less-than-significant level by requiring pre-construction surveys for bats and nesting birds as well as measure to ensure avoidance of bat roosts.

Under the Mixed-Use Alternative as well as the proposed project, the project would demolish existing site structures and construct new buildings. As described above, the level of development between the Mixed-Use Alternative and the proposed project would generally be similar. As a result, biological resource impacts would also be expected to occur under the Mixed-Use Alternative. Implementation of MMs 4.3a and 4.3b would continue to ensure that impacts related to roosting bats and nesting birds would remain less than significant through requiring pre-construction surveys and measures to avoid disturbance of roosting bats during demolition and construction activities. Thus, the Mixed-Use Alternative, would result in *similar* biological resource impacts compared to the proposed project.

Cultural Resources

The project would result in potentially significant impacts associated with cultural resources. The project includes MMs 4.4a and 4.4b which would require completion of an Extended Phase 1 Assessment to evaluate subsurface conditions at the project site, as well as protocols to be implemented in the event of any discovery of cultural resources during project construction activities. MMs 4.4a and 4.4b would reduce potentially significant cultural resource impacts to a less-than-significant level.

Under the Mixed-Use Alternative, as well as the proposed project, the existing structures on site would be demolished and replaced with new buildings. As described above, the level of development between the Mixed-Use Alternative and the proposed project would generally be similar and would include ground-moving activities, including excavation, during construction. As a result, cultural resource impacts would also be expected to occur under the Mixed-Use Alternative. Implementation of MMs 4.4a and 4.4b would continue to ensure that impacts related to site specific and cumulative archaeological resources would remain less than significant. Thus, the Mixed-Use Alternative would result in *similar* cultural resource impacts as the proposed project.

Energy

The proposed project was determined to result in less than significant impacts with regard to energy consumption and conservation. The Mixed-Use Alternative would somewhat increase the building intensity on the project site. Compared to the proposed project, this option would reduce the residential uses by approximately six percent but would add a 90,000 square foot retail and office building to the project. The increased building intensity could increase the total amount of energy consumption during construction and operation compared to the proposed project. However, this alternative would be required to include green building and sustainability measures to ensure that energy is used efficiently. As a result, the Mixed-Use Alternative would result in *similar* energy-related impacts as the proposed project.

Geology, Soils, Seismicity, and Paleontological Resources

The proposed project would not exacerbate the potential for seismic ground shaking or seismic-related ground failure to occur at the project site or in the vicinity and thus would result in no impacts associated with seismic activity. The project could result in potentially significant impacts associated with subsidence on nearby properties to occur during dewatering

activities in support of excavation, construction of below-grade parking, and installation of the foundation for the apartment building. The project could also result in potentially significant impacts associated with geological and soil stability associated with placement of fill material at the site. MMs 4.6a and 4.6b would lessen these potential impacts to less-than-significant levels by ensuring that design of the dewatering system avoids offsite subsidence, and that fill placement occurs sufficiently prior to construction to allow for settlement.

Although no paleontological resources are known to be present at the project site, such resources could be encountered during excavation activities. MM 4.6c which is the same as MM CULT-3 in the ConnectMenlo EIR, would lessen this potential impact to a less-than-significant level by ensuring that any potential paleontological resources encountered during construction are appropriately evaluated and recovered when necessary to avoid significant impacts.

The Mixed-Use Alternative would also result in no impacts associated with seismic hazards because it would not exacerbate the potential for the project site and other properties in the vicinity to be exposed to seismic activity. Construction of the Mixed-Use Alternative would require similar amounts of ground-disturbance and excavation as the proposed project and thus this alternative would result in the same potentially significant impacts from potential subsidence on nearby properties and changes in geological and soil stability after placement of fill material at the site. Further construction of the Mixed-Use Alternative would have the same potential as the proposed project to encounter paleontological resources within the project site. Implementation of MMs 4.6a, 4.6b, and 4.6c would ensure that impacts would be reduced to a less-than-significant level. As a result, the Mixed-Use Alternative is expected to result in *similar* geology-related impacts as the proposed project.

Greenhouse Gas Emissions

The proposed project would result in less than significant impacts related to GHG emissions. Mixed-Use Alternative would somewhat increase the building intensity on the project site. Compared to the proposed project, these options would reduce the residential uses by approximately six percent but would add a 90,000 square foot retail and office building to the project. As discussed in Section 4.7, GHG emissions from project construction would not result in a conflict with adopted GHG reduction targets and programs and would not result in an exceedance of the applicable GHG emissions thresholds. Specifically, in compliance with the City, regional, and state regulations, the proposed project would reduce landfill waste from construction debris, use low-carbon construction equipment fuel, minimize engine idling time, and plant new trees and landscaping. In addition, as required by MM 4.2b, construction vehicles of 50 horsepower or greater would be required to use Tier 4 engines to minimize diesel particulate matter emissions. These elements would serve to reduce GHG emissions during construction in compliance with adopted GHG reduction plans and strategies. Further, implementation of the TDM Plan and incorporation of green building and sustainability measures in the building design, as discussed previously, would serve to minimize GHG emissions during project operation.

Under the Mixed-Use Alternative the same or similar GHG reduction strategies would be required to be implemented. Thus, the Mixed-Use Alternative is expected to result in *similar* GHG-related impacts as the proposed project.

Hazards and Hazardous Materials

The proposed project would result in potentially significant impacts related to release of hazardous materials, the presence of hazardous conditions, and handling hazardous materials within proximity to existing schools. The project includes implementation of MMs 4.8a, 4.8b, 4.8c, further described in Section 4.8, and MM 4.2a, which would reduce impacts to a less-than-significant level.

The Mixed-Use Alternative would result in demolition of existing site structures and construction of new buildings within the project site. As such, the potential to release hazardous materials and handle hazardous materials within proximity to schools exists under the proposed project and this alternative. Implementation of MMs 4.8a, 4.8b, 4.8c, and 4.2a would be required to ensure that impacts would be reduced to a less-than-significant level by requiring surveys to identify the presence of hazardous materials/conditions and by implementing minimum specifications for construction equipment to reduce TAC emissions. Therefore, the Mixed-Use Alternative is expected to result in *similar* hazardous material-related impacts as the proposed project.

Hydrology and Water Quality

The proposed project would result in less than significant impacts to groundwater supply, stormwater infrastructure, and potential increases in sediment and erosion on local waterways during construction. Mixed-Use Alternative would somewhat increase the building intensity on the project site. Compared to the proposed project, this option would reduce the residential uses by approximately six percent but would add a 90,000 square foot commercial building to the project. With this increased building intensity, there would be a decrease in the amount of open space within the project site, thus this alternative would result in an increase in impervious surface compared to the proposed project. However, with the use of bioretention ponds and flow-through planters as described for the proposed project, water quality and stormwater impacts would remain less than significant. Thus, the Mixed-Use Alternative is expected to result in *similar* impacts related to groundwater supply, stormwater infrastructure, and potential increases in sediment and erosion on local waterways during construction.

Land Use and Planning

As described in Section 4.10, the proposed project would result in less than significant impacts related to division of an established community and conflicts with existing land use plans, policies, or regulations. Under this alternative, the project site would be developed with a mix of residential, office, and retail uses. The land use and zoning designations assigned to the project site are Mixed Use Residential . These designations provide for higher density housing to meet the needs of all income levels and allows mixed use developments with integrated or stand-alone supportive sales and service uses and uses that are consistent with the Office Designation. Therefore, the Mixed-Use Alternative would continue to be consistent with land use and zoning designations established for the project site. Further, the Mixed-Use Alternative would not physically divide any existing communities. As a result, the Mixed-Use Alternative would result in *similar* land use impacts as the proposed project.

Noise

As described in Section 4.11, MMs 4.11a and 4.11b would be implemented to reduce the potentially significant noise impact associated with construction of the proposed project to a less-than-significant level. The Mixed-Use Alternative would require construction activities with a similar intensity and duration as the proposed project and thus would have the same potential for significant construction period noise impacts, requiring implementation of MMs 4.11a and 4.11b. The Mixed-Use Alternative would also not cause significant groundborne noise or vibration. As discussed in the Transportation section below, the Mixed-Use Alternative would generate approximately 936 more daily traffic trips than the proposed project, which could slightly increase roadway noise in the project area compared to the proposed project. However, the impacts would be expected to remain less than significant because these additional trips would not be substantial in relation to existing traffic levels. The Mixed-Use Alternative would result in similar noise levels associated with heating and air conditioning equipment for the onsite buildings. Rooftop mechanical equipment would be shielded to ensure that the associated noise levels comply with the Menlo

Park Municipal Code threshold of 50 dBA L_{eq} at 50 feet. Operational noise impacts under the Mixed-Use Alternative would therefore be *similar* to the proposed project.

Population, Employment, and Housing

As described in Section 4.12, the proposed project would result in less than significant impacts related to unplanned population growth and displacement of people and housing.

Under the Mixed-Use Alternative, the project site would be developed with approximately 90 townhome units in a mixture of 3- and 4-story buildings, a 316-unit apartment building, and an approximately 90,000 square foot building that would support office and retail uses. This alternative would slightly reduce the number of dwelling units constructed onsite while providing additional employment and retail opportunities compared to the proposed project. The employment opportunities would increase the potential for the project to result in indirect growth, however the Mixed-Use Alternative would be consistent with the land use and zoning designations applied to the project site and thus would not result in unplanned population growth. There are no existing residential units within the project site and the Mixed-Use Alternative would not result in displacement of people and/or housing. This alternative would be expected to result in *similar* population, employment, and housing impacts as the proposed project.

Public Services and Recreation

The proposed project would result in less than significant impacts related to the provision of new or physically altered police, fire, school, parks, or other public facilities. As described above, the Mixed-Use Alternative would slightly reduce the number of new residential units within the Bayfront Area and would allow for increased office and retail uses to support employment and commercial opportunities. Overall there would be a higher intensity use at the site and an increase in the number of people (residents, employees, and visitors) within the project site. This would increase the demand for public services. However, the ConnectMenlo General Plan Update anticipated buildout of up to 2.3 million square feet of non-residential space in the Bayfront Area, and the Mixed-Use Alternative would be consistent with the project site's land use and zoning designations. Thus this alternative would be consistent with the assumptions in the ConnectMenlo EIR, which found that there is sufficient facilities, staffing, and funding to meet the public services and recreation demands associated with buildout of the General Plan. Therefore, the public service and recreation impacts under the Mixed Use Alternative would be *similar* to those of the proposed project.

Transportation

Project impacts related to transportation would be less than significant. As described in Section 4.14, the project would include a TDM plan that would reduce project-generated VMT per resident by 20.63 percent compared to the average VMT for the project site transportation analysis zone.

. Under the Mixed-Use Alternative, the project site would be developed with approximately 90 townhome units, 316 apartments, and a 90,000 square foot office and retail building. The retail uses would be expected to be local-serving given the small size of the retail space, which would contribute to VMT reductions by making it possible for residents and employees in the area to bicycle or walk to the retail, and to make a pass-by stop at the retail location while already driving to another destination. Under the Menlo Park Municipal Code, a TDM plan demonstrating that the project would attain a minimum 20percent reduction in daily trips and VMT would be required. Thus, it is expected that the Mixed-Use Alternative would have *similar* impacts associated with VMT as the proposed project.

The reduction in residential units and addition of non-residential space to the project site would alter the daily trip generation as well as AM and PM peak trip volumes compared to the proposed project, as shown in Table 7-1. The Mixed-Use Alternative would result in more than twice as many total daily trips, almost four times as many AM peak hour trips, and more than three times as many PM peak hour trips. However, the additional trips associated with this alternative would not be expected to cause additional vehicle queuing or emergency access deficiencies and impacts would remain *similar* to those of the proposed project.

Table 7-1. Mixed-Use Alternative Project Trip Generation

Land Use	ITE Code	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates ¹									
Research and Development Center	760	per TSF	11.08	0.84	0.19	1.03	0.16	0.82	0.98
Manufacturing	140	per TSF	4.75	0.52	0.16	0.68	0.23	0.51	0.74
Multifamily Housing (Mid-Rise) - buildings 4 to 10 stories in height	221	per DU	4.54	0.09	0.28	0.37	0.24	0.15	0.39
Multifamily Housing (Low-Rise) - buildings 3 stories or less in height	220	per DU	6.74	0.10	0.30	0.40	0.32	0.19	0.51
Strip Retail Plaza (<40k)	822	per TSF	54.45	1.42	0.94	2.36	3.30	3.30	6.59
General Office Building	710	per TSF	10.84	1.34	0.18	1.52	0.24	1.20	1.44
Trip Generation of Existing Uses									
119 Independence Drive - Tree Care	760	12.996 TSF	144	10	2	12	2	11	13
123-25 Independence Drive - Defense Contractor	760	12.335 TSF	137	10	2	12	2	10	12
127 Independence Drive - Medical Device R&D	760	13.822 TSF	153	12	3	15	3	11	14
130 Constitution Drive - Defense Contractor	760	25.528 TSF	283	22	5	27	4	21	25
1205 Chrysler Drive - Energy Company	140	39.302 TSF	187	20	7	27	9	20	29
Existing Uses Subtotal			904	74	19	93	20	73	93
Trip Generation of Mixed-Use Alternative									
Residential - Multifamily (Apartments) - 5 stories in height	221	316 DU	1,435	27	90	117	75	48	123
Residential - Multifamily (Townhomes) - 3 stories in height	220	90 DU	607	9	27	36	29	17	46
Retail Uses	822	8.500 TSF	463	12	8	20	28	28	56

Table 7-1. Mixed-Use Alternative Project Trip Generation

Land Use	ITE Code	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Office Uses	710	81,500 TSF	883	109	15	124	20	97	117
<i>Proposed Project Subtotal</i>			3,388	157	140	297	152	190	343
<i>TDM Plan: 20 percent Reduction²</i>			-678	-31	-28	-59	-30	-38	-69
<i>Proposed Project Total</i>			2,710	126	112	238	122	152	274
Total Net Trip Generation (Alternative – Existing)			1,806	52	93	145	102	79	181
Total Net Proposed Project Trip Generation (Proposed – Existing) per Table 4.14-2			870	-43	81	38	70	-17	53

Source: ITE 2021

Notes: TSF = thousand square feet; DU = dwelling unit

¹ Trip rates from Trip Generation, 11th Edition, Institute of Transportation Engineers, 2021.

² Consistent with the City of Menlo Park City Ordinance 1026, a 20 percent reduction was applied to account for the proposed TDM plan that the project would be required to provide. The TDM would be expected to achieve the required minimum of 20 percent reduction of daily and peak hour vehicle trips.

Tribal Cultural Resources

The proposed project site is in the Bayfront Area, which has been identified as archaeologically sensitive. While there are no known tribal cultural resources within or adjacent to the project site and no tribal consultation was requested for this project, there is a known tribal cultural resource approximately 1.5 miles away from the site and it is possible that resources could be discovered below the ground surface during project construction. If that were to occur, a significant impact to tribal cultural resources could occur and the project could contribute to the cumulative loss of tribal cultural resources in the project region. Through implementation of MMs 4.4a, 4.4b, and 4.15a and compliance with Health and Safety Code Section 7050.5, any resources that may be uncovered during construction would be evaluated for significance and any recommended treatment measures would be required to be implemented, and therefore the impact to tribal cultural resources would be reduced to a less-than significant level.

Under the Mixed-Use Alternative, as well as the proposed project, the existing site structures would be demolished and replaced with new buildings. As described above, the level of development between the Mixed-Use Alternative and the proposed project would generally be similar and would include ground-moving activities, including excavation, during construction. As a result, the potential for discovery of tribal cultural resources under the Mixed-Use Alternative would be similar to this potential discovery under the proposed project. Implementation of MMs 4.4a, 4.4b and 4.15a would continue to ensure that site specific and cumulative impacts associated with tribal cultural resources would remain less than significant. Thus, the Mixed-Use Alternative would result in *similar* tribal cultural resource impacts as the proposed project.

Utilities and Service Systems

The proposed project would result in less than significant impacts associated with utility infrastructure, water supply, wastewater treatment capacity, generation of solid waste, and compliance with solid waste regulations.

The Mixed-Use Alternative would result in a similar level of development compared to the proposed project because it would develop six percent fewer residential units and add 90,000 square feet of office and retail space. This alternative would not require new or expanded infrastructure, water supply and water treatment capacity,

wastewater treatment capacity, and solid waste disposal capacity. Thus, the Mixed-Use Alternative would result in *similar* utility-related impacts as the proposed project.

7.4.3 Base-level Development Alternative (Alternative 3)

The Base-level Development Alternative would involve reduced development compared to the proposed project because it would not include any bonus-level development. Specifically, this alternative would include demolishing existing site buildings and constructing a 4-story apartment building (155,486 square feet) that would provide 179 residential units, an at-grade (one level) parking structure accommodating 206 parking spaces, and 66 3-story residential townhomes with private garages. With less building space, this alternative would also allow for increased open space compared to the proposed project.

Aesthetics

The proposed project would not result in any significant aesthetics impacts related to scenic views, visual character and compatibility with surrounding land uses, or light and glare. The proposed project would adhere to the regulations outlined in the City's design standards and Municipal Code, which are described in Table 4.1-1 of Section 4.1.

Under the Base-level Development Alternative, overall development of the project site would be reduced. This alternative would develop 187 fewer residential units than the proposed project and building heights would be reduced. Similar to the proposed project, the Base-level Development Alternative would result in demolition of existing office/light industrial buildings that were constructed in the 1960s and construction of new residential structures within the Bayfront Area. This alternative would result in *similar* impacts as the proposed project associated with construction-related visual impacts and introduction of new sources of light and glare. Building design and site landscaping would be subject to the City's design standards. Thus, this alternative would not significantly alter the visual character of the project site compared to the proposed project and would not result in visual incompatibilities with surrounding properties. As described above, the proposed project would not result in any significant effects related to scenic views, visual character and compatibility with surrounding land uses, or light and glare. The Base-level Development Alternative would not result in any new or increased aesthetic-related effects, and impacts would be *similar* to the proposed project.

Air Quality

The proposed project would implement MMs 4.2a and 4.2b to reduce potentially significant impacts related construction emissions to a less than significant level. The proposed project would result in less-than-significant impacts related to conflicts with applicable air quality plans, increases in criteria air pollutants, other emissions (including odors), and cumulative air quality impacts.

The Base-level Development Alternative would result in a reduced level of development and residential units compared to the proposed project. Therefore, construction-related air-emissions would be less than the proposed project. Through implementation of MMs 4.2a and 4.2b, neither the proposed project nor the Base-level Development Alternative would result in adverse air quality impacts during construction. During project operation, the Base-level Development Alternative would generate fewer vehicle trips, consume less energy and water, and generate less wastewater than the proposed project. Thus the operational impacts of the Base-level Development Alternative would remain less than significant, consistent with the proposed project. However, because the Base-level Development Alternative involves reduced construction and reduced operational characteristics compared to

the proposed project, the Base-level Development Alternative would result in *fewer* impacts to air quality than the proposed project.

Biological Resources

The proposed project would result in potentially significant impacts related to biological resources associated with potential disturbance to bat habitat and roosting and potential disturbance to nesting birds. Implementation of MMs 4.3a and 4.3b would reduce potentially significant impacts to a less-than-significant level by requiring pre-construction surveys for bats and nesting birds as well as measure to ensure bat roosts are not disturbed.

Both the Base-level Development Alternative and the proposed project would demolish existing site structures and construct new buildings, which would result in potentially significant impacts due to potential disturbance to bat habitat and roosting and potential disturbance to nesting birds. Implementation of MMs 4.3a and 4.3b would continue to ensure that impacts related to bat habitat, roosting bats, and nesting birds would remain less than significant through requiring pre-construction surveys and measures to avoid roosting bats during demolition and construction activities. Thus, the Base-level Development Alternative would result in *similar* biological resource impacts as the proposed project.

Cultural Resources

The project would result in potentially significant impacts associated with cultural resources. The project would implement MMs 4.4a and 4.4b which require completion of an Extended Phase 1 Assessment to evaluate subsurface conditions at the project site, as well as protocols to be implemented in the event any discovery of cultural resources during project construction activities. MMs 4.4a and 4.4b would reduce potentially significant cultural resource impacts to a less-than-significant level.

Under the Base-level Development Alternative, existing site structures would be demolished and new buildings would be constructed. The parking structure for the proposed project includes one below-grade level and one at-grade level while the Base-level Development Alternative includes only the at-grade level. This would reduce the amount of grading and excavation necessary to construct the project, which would lessen the potential for below-ground cultural resources to be encountered. However, this alternative would still involve earth-moving activities associated with construction and impacts would remain potentially significant. Implementation of MMs 4.4a and 4.4b would continue to ensure that impacts related to site specific and cumulative archaeological resources would remain less than significant. The Base-level Development Alternative would result in *slightly reduced* cultural resource impacts compared to the proposed project.

Energy

The proposed project was determined to result in less than significant impacts with regard to energy consumption and conservation. The Base-level Development Alternative would decrease the building intensity on the project site. The reduced building intensity could reduce the total amount of energy consumption during construction and operation compared to the proposed project. This alternative would be required to include green building and sustainability measures to ensure that energy is used efficiently. As a result, the Base-level Development Alternative is expected to result in *similar* energy-related impacts as the proposed project.

Geology, Soils, Seismicity, and Paleontological Resources

The proposed project would not exacerbate the potential for seismic ground shaking or seismic-related ground failure to occur at the project site or in the vicinity and thus would result in no impacts associated with seismic activity. The project could result in potentially significant impacts associated with subsidence on nearby properties to occur during dewatering activities in support of excavation, construction of below-grade parking, and installation of the foundation for the apartment building. The project could also result in potentially significant impacts associated with geological and soil stability associated with placement of fill material at the site. MMs 4.6a and 4.6b would lessen these potential impacts to less-than-significant levels by ensuring that design of the dewatering system avoids offsite subsidence, and that fill placement occurs sufficiently prior to construction to allow for settlement.

Although no paleontological resources are known to be present at the project site, such resources could be encountered during excavation activities. MM 4.6c which is the same as MM CULT-3 in the ConnectMenlo EIR, would lessen this potential impact to a less-than-significant level by ensuring that any potential paleontological resources encountered during construction are appropriately evaluated and recovered when necessary to avoid significant impacts.

Implementation of either the proposed project or the Base-level Development Alternative would include demolition of existing site structures and construction of new buildings that support residential uses. This alternative would not exacerbate the potential for the project site and other properties in the vicinity to be exposed to seismic activity. Construction of the Base-Level Development would require less ground-disturbance and excavation as the proposed project and thus would require less dewatering during construction. This would reduce the potential for the alternative to cause subsidence on nearby properties. This alternative would require the same amount of placement of fill material at the project site to raise the ground elevation as required by the Municipal Code to minimize potential risks associated with sea level rise. Thus, this alternative would have the same potential as the proposed project to result in changes in geological and soil stability. MMs 4.6a, 4.6b, and 4.6c would ensure that impacts would be reduced to a less-than-significant level by requiring implementation of recommendations from the project's Geotechnical Investigation regarding dewatering, soil stability following placement of fill material, and implementing appropriate protocol during construction in the event that a potential paleontological discovery is encountered. As a result, the Base-level Development Alternative is expected to result in *similar* geology-related impacts as the proposed project.

Greenhouse Gas Emissions

The proposed project would result in less than significant impacts related to GHG emissions. The Base-level Development Alternative would decrease the building intensity on the project site by constructing 187 fewer residential units. As discussed in Section 4.7, GHG emissions from project construction would not result in a conflict with adopted GHG reduction targets and programs and would not result in an exceedance of the applicable GHG emissions thresholds. Specifically, in compliance with the City, regional, and state regulations, the proposed project would reduce landfill waste from construction debris, use low-carbon construction equipment fuel, minimize engine idling time, and plant new trees and landscaping. In addition, as required by MM 4.2b, construction vehicles of 50 horsepower or greater would be required to use Tier 4 engines to minimize diesel particulate matter emissions. These elements would serve to reduce GHG emissions during construction in compliance with adopted GHG reduction plans and strategies. Additionally, implementation of the TDM Plan and incorporation of green building and sustainability measures in the building design, as discussed previously, would serve to minimize GHG emissions during project operation. Under the Base-level Development Alternative, the same or similar GHG reduction

strategies would be required to be implemented. Thus, this alternative is expected to result in *similar* GHG-related impacts as the proposed project.

Hazards and Hazardous Materials

The proposed project would result in potentially significant impacts related to release of hazardous materials, the presence of hazardous conditions, and handling hazardous materials within proximity to existing schools. The project includes implementation of MMs 4.8a, 4.8b, 4.8c, and 4.2a, which would reduce impacts to a less-than-significant level.

The Base-level Development Alternative would also result in demolition of existing site structures and construction of new buildings within the project site. As such, the potential to release hazardous materials and handle hazardous materials within proximity to schools exists equally under the Base-level Development Alternative and the proposed project. Implementation of MMs 4.8a, 4.8b, 4.8c, and 4.2a would be required for this alternative to ensure that impacts would be reduced to a less-than-significant level by requiring surveys to identify the presence of hazardous materials/conditions and by implementing minimum specifications for construction equipment to reduce TAC emissions. Therefore, the Base-level Development Alternative is expected to result in *similar* hazardous material-related impacts as the proposed project.

Hydrology and Water Quality

The proposed project would result in less than significant impacts to groundwater supply, stormwater infrastructure, and potential increases in sediment and erosion on local waterways during construction. The Base-level Development Alternative would decrease the building intensity on the project site by constructing 187 fewer residential units. With this decreased building intensity, there would be an increase in the amount of open space within the project site, thus this alternative would result in less impervious surface compared to the proposed project. However, the Base-level Development Alternative would still need to use bioretention ponds and flow-through planters, as described for the proposed project, to ensure that water quality and stormwater impacts remain less than significant. Thus, the Base-level Development Alternative is expected to result in *similar* impacts related to groundwater supply, stormwater infrastructure, and potential increases in sediment and erosion on local waterways during construction.

Land Use and Planning

As described in Section 4.10, the proposed project would result in less than significant impacts related to division of an established community and conflicts with existing land use plans, policies, or regulations. The Base-level Development Alternative would develop the same types of residential uses as the proposed project, at a reduced density. The land use and zoning designations assigned to the project site are Mixed Use Residential. These designations provide for higher density housing to meet the needs of all income levels. The Base-level Development Alternative would continue to be consistent with land use and zoning designations established for the project site. Further, this alternative would not physically divide any part of the Bayfront Area. Therefore, the Base-level Development Alternative would result in *similar* land use impacts as the proposed project.

Noise

As described in Section 4.11, MMs 4.11a and 4.11b would be implemented to reduce the potentially significant noise impact associated with construction of the proposed project to a less-than-significant level. The Base-level

Development Alternative would require construction activities with a similar intensity as the proposed project, but due to the reduction in the number of dwelling units, the construction duration would be reduced. During construction activities, the Base-level Development Alternative would have the same potential as the proposed project to create significant noise impacts, requiring implementation of MMs 4.11a and 4.11b. Consistent with the proposed project, this alternative would not cause significant groundborne noise or vibration. As discussed in the Transportation section below, the Base-level Development Alternative would generate approximately 768 fewer daily traffic trips than the proposed project, which could decrease roadway noise in the project area compared to the proposed project. The traffic generated by the proposed project would result in less than significant impacts associated with roadway noise; these effects would be further reduced under the Base-level Development Alternative. This alternative would require fewer heating and air conditioning equipment units for the onsite buildings and all rooftop mechanical equipment would be shielded to ensure that the associated noise levels comply with the Menlo Park Municipal Code threshold of 50 dBA L_{eq} at 50 feet. The proposed project would result in less than significant impacts associated with rooftop mechanical equipment; these effects would be further reduced under this alternative. Therefore, operational noise impacts under the Base-level Development Alternative would therefore be *slightly reduced* compared to the proposed project.

Population, Employment, and Housing

As described in Section 4.12, the proposed project would result in less than significant impacts related to unplanned population growth and displacement of people and housing.

Under the Base-level Development Alternative, the project site would be developed with 187 fewer townhomes and apartments compared to the proposed project. This alternative would be subject to the City's requirement for providing at least 15 percent of the residential units as Below-Market Rate (BMR) units. Though this alternative would result in fewer residents at the project site, population, employment, and housing impacts are expected to be *similar* compared to the proposed project because the Base-level Development Alternative would also not result in unplanned population growth, nor would it result in the displacement of people and/or housing.

However, it is noted that the Base-level Development Alternative would result in construction of only 37 BMR units (15 percent of the total) compared to the 74 BMR units (17 percent of the total) included in the proposed project. The proposed project would provide a greater percentage of BMR units because the additional BMR units are offered as a community amenity, which is required for projects proposing to take advantage of the City's bonus-level development standards. Thus, while the Base-level Development Alternative would not result in an adverse environmental impact associated with population and housing, this alternative would provide less of a contribution to the City's attainment of its affordable housing targets.

Public Services and Recreation

The proposed project would result in less than significant impacts related to the provision of new or physically altered police, fire, school, parks, or other public facilities. As described above, the Base-level Development Alternative would provide 187 fewer new residential units within the Bayfront Area. This would decrease the demand for public services. Therefore, the public service and recreation impacts under the Base-level Development Alternative would be *less* than those of the proposed project.

Transportation

Project impacts related to transportation would be less than significant. As described in Section 4.14, the project would implement a TDM plan that would reduce project-generated VMT per resident by 20.63 percent compared to the average VMT for the project site transportation analysis zone.

Under the Base-level Development Alternative, the project site would be developed with 187 fewer residential units than the proposed project. This would reduce the total number of vehicle trips and total amount of VMT generated from the project site. Under the Menlo Park Municipal Code, a TDM plan demonstrating that the project would attain a minimum 20 percent reduction in daily trips and VMT per capita would be required for this alternative. Thus it is expected that the Base-level Development Alternative would have *similar* impacts associated with VMT as the proposed project.

The reduction in residential units would also reduce the daily trip generation as well as AM and PM peak trip volumes as shown in Table 7-2. The proposed project would have less-than-significant impacts associated with vehicle queuing or emergency access deficiencies; the impacts under the Base-level Development Alternative would remain *similar* to those of the proposed project.

Table 7-2. Base-level Development Alternative Project Trip Generation

Land Use	ITE Code	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates ¹									
Research and Development Center	760	per TSF	11.08	0.84	0.19	1.03	0.16	0.82	0.98
Manufacturing	140	per TSF	4.75	0.52	0.16	0.68	0.23	0.51	0.74
Multifamily Housing (Mid-Rise) - buildings 4 to 10 stories in height	221	per DU	4.54	0.09	0.28	0.37	0.24	0.15	0.39
Multifamily Housing (Low-Rise) - buildings 3 stories or less in height	220	per DU	6.74	0.10	0.30	0.40	0.32	0.19	0.51
Trip Generation of Existing Uses									
119 Independence Drive - Tree Care	760	12.996 TSF	144	10	2	12	2	11	13
123-25 Independence Drive - Defense Contractor	760	12.335 TSF	137	10	2	12	2	10	12
127 Independence Drive - Medical Device R&D	760	13.822 TSF	153	12	3	15	3	11	14
130 Constitution Drive - Defense Contractor	760	25.528 TSF	283	22	5	27	4	21	25
1205 Chrysler Drive - Energy Company	140	39.302 TSF	187	20	7	27	9	20	29
Existing Uses Subtotal			904	74	19	93	20	73	93

Table 7-2. Base-level Development Alternative Project Trip Generation

Land Use	ITE Code	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Generation of Proposed Project									
Residential - Multifamily (Apartments) - 5 stories in height	221	179 DU	813	16	51	66	43	27	70
Residential - Multifamily (Townhomes) - 3 stories in height	220	66 DU	445	7	20	27	21	12	34
Proposed Project Subtotal			1,258	23	71	93	64	40	103
TDM Plan: 20 percent Reduction ²			-252	-5	-14	-19	-13	-8	-21
Proposed Project Total			1,006	18	57	74	51	32	83
Total Net Project Trip Generation (Alternative – Existing)			102	-56	37	-19	31	-41	-10
Total Net Proposed Project Trip Generation (Proposed – Existing) per Table 4.14-2			870	-43	81	38	70	-17	53

Source: ITE 2021

Notes: TSF = thousand square feet; DU = dwelling unit

¹ Trip rates from Trip Generation, 11th Edition, Institute of Transportation Engineers, 2021.

² Consistent with the City of Menlo Park City Ordinance 1026, a 20 percent reduction was applied to account for the proposed TDM plan that the project would be required to provide. The TDM would be expected to achieve the required minimum of 20 percent reduction of daily and peak hour vehicle trips

Tribal Cultural Resources

The proposed project site is in the Bayfront Area, which has been identified as archaeologically sensitive. While there are no known tribal cultural resources within or adjacent to the project site and no tribal consultation was requested for this project, there is a known tribal cultural resource approximately 1.5 miles away from the site, and it is possible that resources could be discovered below the ground surface during project construction. If that were to occur, a significant impact to tribal cultural resources could occur, and the project could contribute to the cumulative loss of tribal cultural resources in the project region. Through implementation of MMs 4.4a, 4.4b, and 4.15a and compliance with Health and Safety Code Section 7050.5, any resources that may be uncovered during construction would be evaluated for significance, and any recommended treatment measures would be required to be implemented, and therefore the impact to tribal cultural resources would be reduced to a less-than significant level.

Under the Base-level Development Alternative, existing site structures would be demolished, and new buildings would be constructed. The parking structure for the proposed project includes one below-grade level and one at-grade level while the Base-level Development Alternative includes only the at-grade level. This would reduce the amount of grading and excavation necessary to construct the project, which would lessen the potential for belowground tribal cultural resources to be encountered. However, this alternative would still involve earth-moving activities associated with construction, and impacts would remain potentially significant. Implementation of MMs 4.4a, 4.4b, and 4.15a would continue to ensure that site specific and cumulative impacts associated with tribal cultural resources would remain less than significant. The Base-level Development Alternative would result in *slightly reduced* tribal cultural resource impacts compared to the proposed project.

Utilities and Service Systems

The proposed project would result in less than significant impacts associated with utility infrastructure, water supply, wastewater treatment capacity, solid waste generation, and compliance with solid waste regulations.

The Base-level Development Alternative would result in the same types of land uses being constructed on site but would construct 187 fewer residential units. This would decrease the demand for utilities and service systems compared to the proposed project. As a result, the Base-level Development Alternative would have *similar* impacts as the proposed project associated with new or expanded infrastructure, water demand, wastewater treatment capacity, solid waste.

7.4 Environmentally Superior Alternative

Because the Base-Level Alternative (Alternative 3) (described above in Section 7.4.3) would result in similar and/or less adverse impacts resulting from construction and operation of the proposed project analyzed in Chapter 4, it is the environmentally superior alternative. As illustrated in Table 7-3, the Base-Level Development Alternative is considered the environmentally superior alternative because it would reduce construction-related air quality impacts, would slightly reduce the potential to uncover cultural resources during construction, would generate less noise during construction and operation, and would reduce demands for public services, recreation, and utilities. However, this alternative would not fully achieve the project objectives to provide a sufficient density and intensity of housing in order to best achieve a better jobs/housing ratio at the project site; would provide fewer affordable housing units than the proposed project, both in terms of absolute numbers of units as well as the percentage of affordable units relative to the total development; and would be less effective at helping to alleviate traffic because it would provide fewer residential units close to a jobs center.

Table 7-3. Project Alternatives Impacts Summary

Environmental Issue	Proposed Project Impacts	Alternative 1: No Project Alternative	Alternative 2: Mixed-Use Alternative	Alternative 3: Base Level Development Alternative
Aesthetics	Less than Significant	Similar	Similar	Similar
Air Quality	Less than Significant with Mitigation	Less	Similar	Less
Biological Resources	Less than Significant with Mitigation	Less	Similar	Similar
Cultural Resources	Less than Significant with Mitigation	Less	Similar	Slightly less
Energy	Less than Significant	Greater	Similar	Similar
Geology, Soils, Seismicity, and Paleontological Resources	Less than Significant with Mitigation	Less	Similar	Similar
Greenhouse Gas Emissions	Less than Significant	Greater	Similar	Similar
Hazards and Hazardous Materials	Less than Significant with Mitigation	Less	Similar	Similar
Hydrology and Water Quality	Less than Significant	Greater	Similar	Similar
Land Use and Planning	Less than Significant	Greater	Similar	Similar

Table 7-3. Project Alternatives Impacts Summary

Environmental Issue	Proposed Project Impacts	Alternative 1: No Project Alternative	Alternative 2: Mixed-Use Alternative	Alternative 3: Base Level Development Alternative
Noise	Less than Significant with Mitigation	Less	Similar	Less
Population and Housing	Less than Significant	Similar	Similar	Similar
Public Services and Recreation	Less than Significant	Less	Similar	Less
Transportation	Less than Significant	Greater	Similar	Similar
Tribal Cultural Resources	Less than Significant with Mitigation	Less	Similar	Slightly less
Utilities and Service Systems	Less than Significant	Less	Similar	Similar

8 List of Preparers

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BAE Urban Economics - Housing Needs Assessment

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