Santa Clara Unified School District

Peterson Laurelwood Master Plan
Draft Environmental Impact Report









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Facility Development and Planning
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EXECUTIVE SUMMARY

INTRODUCTION

This Environmental Impact Report (EIR) assesses the potentially significant environmental effects of implementation of the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan") for the Santa Clara Unified School District ("School District", or "SCUSD"). The EIR analysis evaluates, at a program level, the development of a master plan for the Patrick Henry Campus, Peterson Site (fields, tennis courts, parking lots/drop-off areas, and the environmental center), SCUSD Farm, the new Laurelwood Elementary School and the future programs at the existing Laurelwood Elementary School Campus.

ES.1 PROJECT OVERVIEW

The Proposed Master Plan consists of the entire Patrick Henry Campus, the Peterson Middle School Site, and the future use of the existing Laurelwood Elementary School Site. The District's Master Plan includes construction of the new Laurelwood Elementary School, Peterson fields, relocated District storage area, and yet to be determined uses on the closed Patrick Henry Intermediate School field; improvements to Peterson Middle School including the new fields and a fieldhouse; relocation of the existing tennis courts; new vehicular and pedestrian access; expanded administration and media center, a new environmental education center, outdoor learning areas and amphitheater. Program improvements will be made to the SCUSD Farm and compost areas. It also provides an opportunity for an additional school to be built on the property. The Proposed Master Plan is a long-term planning document that provides a visionary site plan to guide future development expansion with enhanced access to the sites.

The Proposed Master Plan was created in response to the passing of a General Obligation Bond Measure BB in 2018, which authorized $720 million to fund critically needed safety, modernization, and new construction projects. Some of Measure BB bond funds will be used to design and build a new Laurelwood Elementary on a portion of the Patrick Henry Campus and new fields at the existing Peterson Middle School. In order to create a plan that encompasses all of the District's assets, the SCUSD is creating a master plan for the area within the plan's boundaries.

ES.2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

A summary of the environmental impacts associated with implementation of the proposed project, mitigation measures included to avoid or lessen the severity of potentially significant impacts, and residual impacts, is provided in **Table ES-1, Summary of Impacts and Mitigation Measures**, below.

Table ES-1
Summary of Impacts and Mitigation Measures

Project Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance After Mitigation
Aesthetics			
Impact AES-1: Have a substantial adverse effect on a scenic vista.	Less than Significant	No mitigation required	Less than Significant
Impact AES-2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	No Impact	No mitigation required	No Impact
Impact AES-3: In non-urbanized areas, 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 required	Less than Significant
Impact AES-4: Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.	Less than Significant	No mitigation required	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance After Mitigation
Agricultural and Forestry Resources			
Impact AG-1: Convert prime farmland, unique farmland, or farmland of statewide importance (farmland), as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.	No Impact	No mitigation required	No Impact
Impact AG-2: Conflict with existing zoning for agricultural use, or a Williamson Act contract.	No Impact	No mitigation required	No Impact
Impact AG-3: Conflict with existing zoning for, or cause rezoning of forest land or timberland zoned Timberland Production.	No Impact	No mitigation required	No Impact
Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use.	No Impact	No mitigation required	No Impact
Impact AG-5: Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.	No Impact	No mitigation required	No Impact
Air Quality			
Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plan.	No Impact	No mitigation required	No Impact
Impact AQ-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.	Less than Significant	No mitigation required	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact AQ-3: Expose sensitive receptors to substantial pollutant concentrations.	Less than Significant	No mitigation required	Less than Significant
Impact AQ-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Less than Significant	No mitigation required	Less than Significant
Biological Resources			
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulation, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	Potentially Significant	**MM BIO-1:** To avoid disturbance of nesting and special-status birds, including raptorial species protected by the Migratory Bird Treaty Act and California Fish and Game Code, activities related to the Proposed Master Plan, including, but not limited to, vegetation removal, ground disturbance, and construction and demolition shall occur outside of the bird breeding season (February 1 through August 31). If construction must begin during the breeding season, then a pre-construction nesting bird survey shall be conducted no more than three days prior to initiation of construction activities. The nesting bird pre-construction survey shall be conducted on-foot inside portions of the area proposed for development, including a 50-foot buffer (100-foot for raptors), and in inaccessible areas (e.g., private lands) from afar using binoculars to the extent practical. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in northern California. If nests are found, an avoidance buffer shall be demarcated by a qualified biologist with bright orange construction fencing, flagging, construction lathe, or other means to mark the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No parking, storage of materials, or construction activities shall occur within this buffer until the avian biologist has confirmed that breeding/nesting is complete, and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist.	Less than Significant
Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	Less than Significant	No mitigation required	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact BIO-3: Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	Less than Significant	No mitigation required	Less than Significant
Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.	Potentially Significant	See **MM BIO-1**	Less than Significant
Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Less than Significant	No mitigation required	Less than Significant
Impact BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	Less than Significant	No mitigation required	Less than Significant
Cultural Resources			
Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.	Less than Significant	No mitigation required	Less than Significant
Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	Potentially Significant	**MM CUL-1**: If archaeological resources are encountered during construction or during ground-disturbing activities, work in the immediate area should be halted and the District shall retain an archaeologist meeting the SOI's Professional Qualification Standards for archaeology (National Park Service 1983) immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility.	Less than Significant
Impact CUL-3: Disturb any human	Less than	No mitigation required	Less than

Project Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance After Mitigation
remains, including those interred outside of dedicated cemeteries.	Significant		Significant
Impact CUL-4: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: 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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	Potentially Significant	**MM CUL-2:** Unanticipated Discovery of Tribal Cultural Resources. In the event that a cultural resource of Native American origin is identified in the Plan Area during the implementation of MM CUL-1 or during any project-related ground disturbance, the District, as Lead Agency, shall consult with local Native American tribes who have requested notification of projects under AB 52. If the District, in consultation with the local Native American tribe(s), determines that the resource is a tribal cultural resource and thus significant under CEQA, a mitigation plan shall be prepared and implemented in accordance with state guidelines and in consultation with representatives of the Native American tribe(s). The mitigation plan may include but would not be limited to avoidance, capping in place, excavation and removal of the resource, interpretive displays, sensitive area signage, or other mutually agreed upon measures.	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance After Mitigation
Energy			
Impact EN-1: 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 required	Less than Significant
Impact EN-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less than Significant	No mitigation required	Less than Significant
Geology and Soils			
Impact GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: (i) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42; (ii) strong seismic ground shaking; (iii) seismic-related ground failure, including liquefaction; (iv) landslides.	Less than Significant	No mitigation required	Less than Significant
Impact GEO-2: Result in substantial soil erosion or the loss of topsoil.	Less than Significant	No mitigation required	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.	Less than Significant	No mitigation required	Less than Significant
Impact GEO-4: Be located on expansive soils, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.	Less than Significant	No mitigation required	Less than Significant
Impact GEO-5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.	No Impact	No mitigation required	No Impact.
Impact GEO-6: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Less than Significant	No mitigation required	Less than Significant
Greenhouse Gas Emissions			
Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Less than Significant	No mitigation required	Less than Significant
Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas emissions.	Less than Significant	No mitigation required	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance After Mitigation
Hazards and Hazardous Materials			
Impact HAZ-1: 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 required	Less than Significant
Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Less than Significant	No mitigation required	Less than Significant
Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.	Less than Significant	No mitigation required	Less than Significant
Hydrology and Water Quality			
Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.	Less than Significant	No mitigation required	Less than Significant
Impact HYD-2: Potential to 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 required	Less than Significant
Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner	Less than Significant	No mitigation required	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance After Mitigation
which would: • result in substantial erosion or siltation on- or off-site; • substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site; • create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or • impede or redirect flood flows.			
Impact HYD-4: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.	No Impact	No mitigation required	No Impact
Land Use and Planning			
Impact LAN-1: Physically divide an established community.	No Impact	No mitigation required	No Impact
Impact LAN-2: Conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Less than Significant	No mitigation required	Less than Significant
Mineral Resources			
Impact MIN-1: Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.	No Impact	No mitigation required	No Impact

Project Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact MIN-2: Result in the loss of availability of a locally- important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.	No Impact	No mitigation required	No Impact
Noise			
Impact NOI-1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Significant	**MM NOI-1**: The SCUSD shall implement the following strategies to reduce construction noise levels to the maximum extent feasible: Mufflers. Construction equipment shall be properly maintained and all internal combustion engine driven machinery with intake and exhaust mufflers and engine shrouds, as applicable, shall be in good condition and appropriate for the equipment. During construction, all equipment, fixed or mobile, shall be operated with closed engine doors and shall be equipped with properly operating and maintained mufflers, consistent with manufacturers' standards. Electrical Power. Electrical power, rather than diesel equipment, shall be used to run compressors and similar power tools and to power any temporary structures, such as construction trailers. Equipment Staging. All stationary equipment shall be staged as far away from the sensitive receptors as feasible. Equipment Idling. Construction vehicles and equipment shall not be left idling for longer than five minutes when not in use. Workers' Radios. All noise from workers' radios shall be controlled to a point that they are not audible at sensitive receptors near construction activity. Smart Back-up Alarms. Mobile construction equipment shall have smart back-up alarms that automatically adjust the sound level of the alarm in response to ambient noise levels. Alternatively, back-up alarms shall be disabled and replaced with human spotters to ensure safety when mobile construction equipment is moving in the reverse direction. Disturbance Coordinator. Designate a disturbance coordinator who shall be responsible for responding to any local complaints about construction noise. The noise disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and identify remedies to correct the problem. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction sites.	Significant and Unavoidable

Project Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact NOI-2: Generation of excessive groundborne vibration or groundborne noise levels.	Significant	See **MM NOI-1**	Significant and Unavoidable
Impact NOI-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.	No Impact	No mitigation required	No Impact
Population and Housing			
Impact POP-1: Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure).	Less than Significant	No mitigation required	Less than Significant
Impact POP-2: Displace substantial numbers of existing housing units or people necessitating the construction of replacement housing.	No Impact	No mitigation required	No Impact
Public Services			
Impact PS-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.	Less than Significant	No mitigation required	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact PS-2: Result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.	Less than Significant	No mitigation required	Less than Significant
Impact PS-3: Result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives of the school district.	No Impact	No mitigation required	No Impact
Impact PS-4: Result in substantial adverse physical impacts associated with the provision of new or physically altered library facilities, need for new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.	No Impact	No mitigation required	No Impact

Project Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact REC-1: 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.	No Impact	No mitigation required	No Impact
Impact REC-2: 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 required	Less than Significant
Transportation			
Impact TRA-1: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	Less than Significant	No mitigation required	Less than significant
Impact TRA-2: Conflict or be inconsistent with CEQA Guidelines section 15064.3(b).	Less than Significant	No mitigation required	Less than significant
Impact TRA-3: Substantially increase hazards due to geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	No Impact	No mitigation required	No Impact
Impact TR-4: Result in inadequate emergency access.	Less than Significant	No mitigation required	Less than significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance After Mitigation
Utilities and Service Systems			
Impact USS-1: 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.	Less than Significant	No mitigation required	Less than Significant
Impact USS-2: 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 required	Less than Significant
Impact USS-3: 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 required	Less than Significant
Impact USS-4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.	Less than Significant	No mitigation required	Less than Significant
Impact USS-5: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	Less than Significant	No mitigation required	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance After Mitigation
Wildfire			
Impact WF-1: Would the proposed Project substantially impair an adopted emergency response plan or emergency evacuation plan.	Less than Significant	No mitigation required	Less than Significant
Impact WF-2: If located in or near state responsibility areas of lands classified as very high fire hazard severity zones, the project would: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.	No Impact	No mitigation required	No Impact
Impact WF-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risks or that may result in temporary or ongoing impacts to the environment.	Less than Significant	No mitigation required	Less than Significant
Impact WF-3: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope stability, or drainage changes.	No Impact	No mitigation required	No Impact

ES.4 SCOPE OF THE EIR

This Draft EIR addresses the potential environmental effects of the Proposed Master Plan and alternatives to the project. The scope of the Draft EIR includes issues identified by SCUSD during the preparation of the Notice of Preparation, as well as environmental issues raised by agencies and the general public in response to the scoping process and Notice of Preparation, as described below.

ES.4.1 Scoping Process

In compliance with the *State CEQA Guidelines*, SCUSD has taken steps to maximize opportunities to participate in the environmental process. A Notice of Preparation (NOP) was distributed on June 27, 2022, to federal, state, regional, and local government agencies and other interested parties to solicit comments and inform the public of the proposed project. The project was described, potential environmental effects associated with project implementation were identified, and agencies and the public were invited to review and comment on the Notice of Preparation. The NOP review and comment period closed on July 28, 2022; although letters received later were accepted and evaluated as part of the preparation of this Draft EIR. A scoping meeting to collect oral comments on the scope of the EIR was held virtually on Tuesday, July 19, 2022, at 6:00 PM via a Zoom Meeting. The meeting was recorded. The purpose of this meeting was to inform the public, campus community, and interested agencies of the proposed project, solicit comments, and identify areas of concern.

The following environmental issues were identified through the scoping process as being potential impacts associated with implementation of the Proposed Master Plan and are addressed in this Draft EIR:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation and Circulation
- Utilities and Service Systems
- Wildfire

Specific impact topics were identified for each of these environmental issues and are discussed in this Draft EIR with respect to existing conditions, potential impacts, the significance of these potential impacts, and proposed mitigation for significant impacts.

Other sections required by CEQA include a discussion of growth inducement, cumulative impacts, significant irreversible environmental changes, and significant environmental effects that cannot be avoided. A discussion of alternatives to the proposed project is also presented in this Draft EIR.

ES.5 AREAS OF KNOWN CONTROVERSY AND ISSUES TO BE RESOLVED

Pursuant to California Public Resources Code section 21083.9 and *State CEQA Guidelines* section 15206, a public scoping meeting was held to receive oral comments concerning the scope of the EIR. The meeting was held on Tuesday, July 19, 2022, at 6:00 PM via a virtual Zoom Meeting. One comment was received during the scoping period and is included in **Appendix 2, Comment Letters**. Issues raised in the comment received include the following:

- Request to provide justification to support exemption from detailed VMT analysis if the project meets the screening criteria established in the District's adopted vehicle miles traveled (VMT) policy to be presumed to have a less-than-significant VMT impact and exempt from detailed VMT analysis, in alignment with the District's VMT policy.
- Request for projects that do not meet screening criteria to include a detailed VMT analysis that includes:
  - Mitigation for projects that result in automobile VMT per capita above the threshold of significance for existing (i.e., baseline) city-wide or regional values for similar land use types .
  - A schematic illustration of walking, biking and auto conditions at the project site and study area roadways.
  - The project's primary and secondary effects on pedestrians, bicycles, travelers with disabilities and transit performance.
  - Clarification of the intensity of events/receptions to be held at the location and how the associated travel demand and VMT will be mitigated.
- Request to identify project-generated travel demand and estimate the costs of transit and active transportation improvements necessitated by the proposed project, and viable funding sources such as development and/or transportation impact fees.
- Request a full discussion of the project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring for all mitigation measures.

- If any Caltrans facilities are impacted by the project, those facilities must meet American Disabilities Act (ADA) Standards after project completion.

- Any permanent work or temporary traffic control that encroaches onto Caltrans' ROW requires a Caltrans-issued encroachment permit.

ES.7 ALTERNATIVES TO THE PROPOSED PROJECT

As required by Section 15126.6 of the *State CEQA Guidelines*, a range of reasonable alternatives to the Proposed Master Plan that would attain most of the basic project objectives but would avoid or substantially lessen any of its significant environmental effects must be examined. Project alternatives aim to identify and disclose ways to mitigate or avoid significant environmental effects that may result from the Proposed Project. Impacts found to be significant and unavoidable in **Section 3.0, Environmental Impact Analysis**, include temporary construction-related noise. Impacts found to be potentially significant but able to be reduced to less than significant with the imposition of proposed mitigation include sensitive species or migratory species impacts from habitat modifications, impacts to archaeological resources, and tribal cultural resources.

Three alternatives were analyzed in detail in this document: No Project Alternative (Alternative 1), and Reduced Scope Alternative (Alternative 2). Alternative 1 would not implement the improvements under the Proposed Master Plan. Alternative 2 assumes that the Proposed Master Plan would be adopted with a reduced student enrollment at Laurelwood Elementary. It proposes to build the Laurelwood Elementary campus with a capacity for 650 students, rather than the 800 students in the Proposed Master Plan. The new Laurelwood School would be one story, rather that two. The Reduced Scope Alternative also excludes currently non-funded improvements, such as the District Farm improvements, the improvements to Peterson Middle School, the Nature Center improvements and Environmental Center, tennis courts, and other improvements such as pedestrian pathways and new bleachers. Project alternatives are further discussed in **Section 4.0, Alternatives.**

ES.8 REVIEW OF THE DRAFT EIR

The Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and other interested parties in accordance with *State CEQA Guidelines* Section 15086. The Notice of Completion for the Draft EIR was also distributed as required by CEQA. During the 45-day public review period, the Draft EIR, including the technical appendices, is available for review at the Santa Clara Unified School District Facility Development and Planning at 1889 Lawrence Road, Santa Clara, CA 95051, and on the City's website at https://www.santaclarausd.org/Petersonlaurelwoodmasterplan.

Written comments on the Draft PEIR should be addressed to:

Michal Healy, Director, Facility Development and Planning
Santa Clara Unified School District, Facility Development and Planning
1889 Lawrence Road
Santa Clara, CA 95051

Upon completion of the 45-day public review period, written responses to all significant environmental issues raised will be prepared and made available for review at least 10 days prior to consideration of the Final EIR before the SCUSD Board. These environmental comments and their responses will be included as part of the Final EIR for consideration by decision makers for the project.

1.0 INTRODUCTION

1.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

This introduction is intended to provide the reader with general information regarding: (1) Santa Clara Unified School District (SCUSD) Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan"); (2) purpose of an environmental impact report (EIR); (3) standards for EIR adequacy; (4) format and content of this EIR; and (5) EIR procedural requirements for the proposed project. This section is intended to educate the reader regarding the intent, format, and content of this EIR so that it can be easily understood.

All discretionary projects within the State of California are required to undergo an environmental review to determine the environmental impacts associated with implementation of the project in accordance with the California Environmental Quality Act (CEQA).

CEQA was enacted in 1970 by the California legislature to disclose to decision makers and the public the significant environmental effects of proposed activities and ways to avoid or reduce the environmental effects by requiring implementation of feasible alternatives or mitigation measures. CEQA applies to all California governmental agencies at all levels, including local agencies, regional agencies, state agencies, boards, commissions, and special districts. The Santa Clara Unified School District is the lead agency for the Proposed Master Plan and, as such, is required to conduct an environmental review to analyze the potential environmental effects associated with the proposed project.

One of the primary objectives of CEQA is to enhance public participation in the planning process. Community members are encouraged to participate in the environmental review process, request to be notified of meetings and release of documents, monitor newspapers for formal announcements, and submit substantive comments at every possible opportunity afforded by the lead agency. The environmental review process provides ample opportunity for the public to participate through scoping, public review of CEQA documents, and public hearings.

1.2 PROJECT BACKGROUND AND PLANNING PROCESS

SCUSD has developed the Proposed Master Plan to support the Santa Clara Unified School District's Vision and Mission as follows:

- **Vision:** Graduates of Santa Clara Unified School District will be resilient, future-ready, lifelong learners who think critically, solve problems collaboratively, and are prepared to thrive in a global society.

- **Mission:** to provide equitable, engaging, and innovative educational experiences so that each student thrives in a global society.

The Proposed Master Plan was created in response to the passing of a General Obligation Bond Measure BB in 2018, which authorized $720 million to fund critically needed safety, modernization, and new construction projects. Some of Measure BB bond funds will be used to design and build a new Laurelwood Elementary on a portion of the Patrick Henry Campus and new fields at the existing Peterson Middle School. In order to create a plan that encompasses all of the District's assets, the SCUSD is creating a master plan for the area within the plan's boundaries.

The Proposed Master Plan is a long-term planning document that provides a visionary site plan to guide future development expansion with enhanced student and community access to the sites. The Proposed Master Plan includes the redevelopment of the entire Patrick Henry campus to accommodate the construction of the new Laurelwood Elementary School and a 300-seat Alternative High School; improvements at the Peterson Middle School (Peterson) site; and the future use of the existing Laurelwood Elementary School site.

More specifically, the Master Plan includes: construction of the new Laurelwood Elementary School and a 300-seat Alternative High School on the closed Patrick Henry site; improvements to Peterson Middle School including new fields and a fieldhouse; relocation of the existing tennis courts; new vehicular and pedestrian access; expanded administration and media center, a new environmental education center, outdoor learning areas and amphitheater; and relocation of certain storage facilities and areas within the Plan Area. Program improvements will be made to the SCUSD Farm and compost areas. For the purposes of this CEQA analysis and document, the existing Laurelwood Elementary School facilities will be used for various non-school uses such as District administrative services, storage and meetings. At such time when a new school use for the campus is developed it will be subject to a supplemental CEQA analysis.

1.3 PROJECT APPROVALS REQUESTED

As defined by CEQA, a Lead Agency is the public agency with the principal responsibility for approving a project. The Santa Clara Unified School District, Facility Development and Planning Department is the Lead Agency for consideration and approval of the Proposed Master Plan. The SCUSD Facility Development and Planning Department will hold at least one public hearing on the Proposed Master Plan before deciding whether to approve it. The school district must certify the Final EIR before making its decision on the Proposed Master Plan.

1.3.1 Other Approvals

Implementation of various project components may also require approvals or permits by the following public agencies:

- Division of the State Architect (DSA) for construction buildings, handicap accessibility, fire and life safety;
- Regional Water Quality Control Board for Stormwater Pollution Prevention Plans required during construction;
- Bay Area Air Quality Management District for any new stationary sources of air emissions; and
- City of Sunnyvale, City and County of Santa Clara, off-site infrastructure improvements for wastewater and water connections, emergency response and access, and fire hydrants/water pressure.

1.4 ENVIRONMENTAL REVIEW PROCESS

The environmental review process, as required under CEQA, is summarized below. The steps are presented in sequential order:

1. **Notice of Preparation (NOP) Distributed**. Immediately after deciding that an EIR is required, the lead agency files an NOP soliciting input on the EIR scope to "responsible," "trustee," and involved federal agencies; to the State Clearinghouse, if one or more state agencies is a responsible or trustee agency; and to parties previously requesting notice in writing. A scoping meeting to solicit public input on the issues to be assessed in the EIR, while not always required, may be conducted by the lead agency.

2. **Draft Environmental Impact Report (Draft EIR) Prepared**. The Draft EIR must contain a (1) table of contents or index, (2) summary, (3) project description, (4) environmental setting, (5) environmental impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts), (6) alternatives, (7) mitigation measures, (8) irreversible changes, and (9) organizations and persons consulted.

3. **Public Notice and Review**. The lead agency must prepare a Notice of Availability (NOA) of an EIR. The Notice must be posted in the County Clerk's office for 30 days (Public Resources Code Section 21092.3) and sent to anyone requesting it. Additionally, public notice of Draft EIR availability must be given through at least one of the following procedures: (1) publication in a newspaper of general circulation, (2) posting on and off the project site, and (3) direct mailing to owners and occupants of contiguous properties. The lead agency must consult with and request comments on the Draft EIR from responsible and trustee agencies, and adjacent cities and counties. The minimum public review period

for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days, unless a shorter period is approved by the State Clearinghouse (Public Resources Code 21091). Distribution of the Draft EIR may be required through the State Clearinghouse.

4. **Notice of Completion.** The lead agency must file a Notice of Completion with the State Clearinghouse as soon as it completes a Draft EIR.

5. **Final EIR.** A Final EIR must include (1) the Draft EIR or a revision thereof, (2) copies of comments received during public review, (3) list of persons and entities commenting, and (4) responses to comments.

6. **Certification of Final EIR.** Prior to approving a project, the lead agency shall certify that (1) the Final EIR has been completed in compliance with CEQA, (2) the Final EIR was presented to the decision-making body of the lead agency, and (3) the decision-making body reviewed and considered the information in the Final EIR. A Notice of Determination must be filed with the County Clerk within five days of the certification of the Final EIR.

7. **Lead Agency Project Decision.** The lead agency may (1) disapprove a project because of its significant environmental effects; (2) require changes to a project to reduce or avoid significant environmental effects; or (3) approve a project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted.

8. **Findings / Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, the lead or responsible agency must find, based on substantial evidence, that either (1) the project has been changed to avoid or substantially reduce the magnitude of the impact; (2) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or (3) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible. If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision.

9. **Mitigation Monitoring and Reporting Program (MMRP).** When an agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.

10. **Notice of Determination.** An agency must file a Notice of Determination after deciding to approve a project for which an EIR is prepared. A local agency must file the Notice with the County Clerk.

The Notice must be posted for 30 days and sent to anyone previously requesting notice. Posting of the Notice starts a 30-day statute of limitations on CEQA challenges.

Notice of Preparation

In compliance with CEQA, SCUSD completed a multi-step process to determine the appropriate scope of issues to be examined in this Draft EIR. Pursuant to *State CEQA Guidelines* Section 15082, an NOP was prepared by SCUSD and distributed on June 27, 2022, to the State Clearinghouse in the Office of Planning and Research, notifying the general public, responsible and trustee agencies, as well as interested parties that an EIR will be prepared for the Proposed Master Plan. The NOP was circulated for a 30-day review period that began on June 27, 2022, and ended on July 28, 2022. A Scoping Meeting was held on July 19, 2022. Written comments were received from agencies and from interested parties during the review period. Refer to **Appendix 1.0-1, CEQA Notices,** to this EIR for a copy of the NOP and refer to **Appendix 1.0-2, Comment Letters,** to this EIR for comments submitted to SCUSD in response to the NOP. The NOP was available for review on the SCUSD's website. SCUSD received a total of one (1) written comment in response to the NOP and did not receive any verbal comments regarding the scope and content of the EIR. Information, data, and observations addressing comments from these comments are included throughout this Draft EIR where relevant.

Public Participation

One of the primary objectives of CEQA is to enhance public participation in the planning process. Community members are encouraged to participate in the environmental review process, request to be notified of meetings and release of documents, monitor newspapers for formal announcements, and submit substantive comments at every possible opportunity afforded by the lead agency. The environmental review process provides various opportunities for the public to participate through scoping, public review of CEQA documents, and public hearings.

The public is invited to provide comments and concerns regarding the accuracy of this Draft EIR and the CEQA process. The comment period is indicated on the cover of this EIR. The Draft EIR will be circulated for review and comment by the public and other interested parties, agencies, and organizations for 45 calendar days. The Draft EIR is available on the SCUSD website at:

Project Website: https://www.santaclarausd.org/Petersonlaurelwoodmasterplan

Hard copies of the Draft EIR will also be available at:

Santa Clara Unified School District
Facility Development and Planning
3350 Brookdale Drive
Santa Clara, CA 95050

Written comments may be submitted via:

1. **Mail:** ATTN: Michal Healy, Director, Facility Development and Planning
Santa Clara Unified School District, Facility Development and Planning
1889 Lawrence Road
Santa Clara, CA 95051

2. **E-mail:** PetersonLaurelwoodPlan@scusd.net

Pursuant to *State CEQA Guidelines* Section 15088, SCUSD will prepare written responses to any comments that raise significant environmental issues received during the noticed comment period and include those responses in the Final EIR. The public will also be provided opportunities to present oral and written comments at future hearings and meetings on the Proposed Master Plan to the School Board. SCUSD may but is not required to provide written responses to comments submitted after the circulation period for the Draft EIR.

1.5 AREAS OF CONTROVERSY / ISSUES TO BE RESOLVED

Potential areas of controversy and issues to be resolved by SCUSD's decision-makers may include those environmental issue areas where the potential for an unavoidable and significant impact has been identified. Based on the NOP comment letters (summarized in **Appendix 1.0-1** of this Draft EIR), issues known to be of concern in the community and therefore, potential areas of controversy, include: housing access, traffic, and open space.

1.6 FINAL EIR AND EIR CERTIFICATION

Following the close of the public review period on the Draft EIR, SCUSD will prepare and publish a Final EIR, which will contain a summary of all written and recorded oral comments on this EIR received during the public review period for the Draft EIR and written responses to those comments that raise environmental concerns, along with copies of the letters received, and any necessary revisions to the EIR. The Draft EIR, comments on the EIR and a list of persons, organizations, and public agencies that commented on the Draft EIR, response to comments, and any revisions to the Draft EIR will constitute the Final EIR. The Final EIR will be available for public review prior to consideration of certification of the document by the decision-makers. SCUSD, in an advertised public meeting(s), will consider the documents

and then, if found adequate, certify the Final EIR as completed in compliance with CEQA and the *State CEQA Guidelines*.

1.7 ORGANIZATION OF THE EIR

The EIR is organized into the following chapters so the reader can easily obtain information about the Proposed Master Plan and its specific issues:

- **Executive Summary:** This section provides a summary of the Proposed Master Plan's potential environmental impacts that would result from implementation of the Proposed Master Plan and development project, proposed mitigation measures where applicable, and the level of significance of the impact before and after mitigation.

- **Chapter 1.0, Introduction**: This chapter contains an overview of the purpose and focus of the Draft EIR, a discussion of the intended use of this Draft EIR, a description of the organization of the Draft EIR, and a discussion of the public review process and potential areas of controversy.

- **Chapter 2.0, Project Description**: This chapter describes the Proposed Master Plan, including project location, project background, project objectives and components, and a description of the proposed changes to existing plans and zoning under the project.

- **Chapter 3.0, Environmental Impact Analysis**: This chapter is the primary focus of this Draft EIR. Each environmental issue is considered in a separate section, which contains a discussion of the environmental settings, the regulatory setting, the methodology and the thresholds of significance. Each section also includes the analyses of environmental impacts of the Proposed Master Plan, mitigation measures, conclusions regarding the level of significance after mitigation, and cumulative impacts for each of the following environmental topics and environmental issues:

  - **Section 3.1, Aesthetics:** Changes to views, scenic resources, and visual quality

  - **Section 3.2, Agricultural:** Changes to agricultural resources

  - **Section 3.3, Air Quality:** Changes in pollutants affecting air quality

  - **Section 3.4, Biological Resources:** Changes to habitats affecting sensitive species

  - **Section 3.5, Cultural Resources:** Changes to historic resources and impacts to archaeological or paleontological resource and human remains

  - **Section 3.6, Energy:** Wasteful or inefficient use of energy resources

- **Section 3.7, Geology and Soils:** Risk from geologic and seismic hazards
- **Section 3.8, Greenhouse Gas Emissions:** Changes to greenhouse gas emissions and conformance to applicable greenhouse has plans, policy, and regulations
- **Section 3.9, Hazards and Hazardous Materials:** Changes in the risk of exposure to hazardous materials, or proximity to wildland fire hazards
- **Section 3.10, Hydrology and Water Quality:** Changes in water quality, drainage patterns and the amount of stormwater runoff
- **Section 3.11, Land Use and Planning:** Changes to land use and zoning
- **Section 3.12, Mineral Resources:** Losses of availability of mineral resources
- **Section 3.13, Noise and Vibration:** Changes in noise and vibration levels due to construction, traffic, and proposed uses
- **Section 3.14, Population and Housing:** Changes in population, jobs/housing balance, and the displacement of a substantial number of housing units or persons
- **Section 3.15, Public Services and Recreation:** Impacts related to the construction of new or expanded public facilities (i.e., fire protection and schools)
- **Section 3.16, Transportation:** Changes in transportation conditions and vehicles miles travelled, review of emergency access, potential hazardous design features, and potential conflict with alternative transportation (e.g., bicycles and public transportation)
- **Section 3.17, Tribal Cultural Resources:** Impacts to cultural resources potentially related to one of more Native American tribes
- **Section 3.18, Utilities and Service Systems:** Impacts related to the increased need for utilities and infrastructure improvements and the construction of new or expanded facilities
- **Section 3.19, Wildfire:** Changes in wildfire risks

- **Chapter 4.0, Alternatives:** This chapter provides analysis of a range of reasonable alternatives to the Proposed Master Plan in accordance with *CEQA Guidelines* Section 15126(f). The range of alternatives considered is based on their ability to feasibly attain most of the project objectives and avoid or substantially lessen any of the significant effects of the Proposed Plan:

- **Alternative 1:** No Project
- **Alternative 2:** Reduced Scope Alternative

- **Chapter 5.0, Other CEQA Considerations:** This chapter provides a summary of significant and unavoidable impacts of the Proposed Master Plan project and a discussion of potential growth inducing effects.
- **Chapter 6.0, List of Preparers**: This chapter lists the individuals involved in preparing the EIR and organizations and persons consulted.

1.8 CEQA FINDINGS FOR PROJECT APPROVAL

Where a certified EIR identifies significant environmental effects, *CEQA Guidelines* Sections 15091 and 15092 require the adoption of findings prior to approval of a project. Prior to approval of a project, one of three findings must be made, as required by PRC Section 21081 and *CEQA Guidelines* Section 15091:

- Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the Final EIR.
- Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
- Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.
- If SCUSD approves the Proposed Master Plan, despite significant impacts identified in the Final EIR that cannot be feasibly mitigated, SCUSD must state in writing the reasons for its actions, under *CEQA Guidelines* Section 15093. Those findings, called a Statement of Overriding Considerations, must be prepared to substantiate SCUSD's decision to accept the unavoidable significant environmental effects of the Proposed Master Plan when balanced against the benefits afforded by the specific plan or project, and must be supported by substantial evidence in the record.

1.9 MITIGATION MONITORING OR REPORTING PROGRAM

At the time of project approval, CEQA and the *State CEQA Guidelines* require lead agencies to adopt a mitigation monitoring or reporting program for monitoring the revisions it has required in the project and

the measures it has imposed to mitigate or avoid significant effects on the environment (*State CEQA Guidelines* Section 21081.6; *CEQA Guidelines* Section 15097). This Draft EIR contains mitigation measures that if found feasible will be included in the Mitigation Monitoring or Reporting Program for the Proposed Master Plan.

2.0 PROJECT DESCRIPTION

INTRODUCTION

This section of the draft environmental impact report (EIR) describes the existing project site and surroundings, and evaluates the project site's regional location, and land uses surrounding the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan") and its general plan and zoning designations. Additionally, this section includes a statement of the objectives sought by the proposed project and a general description of the project's technical, economic, and environmental characteristics. The State CEQA Guidelines state that a Project Description need not be exhaustive but should provide the level of detail needed for the evaluation and review of potential environmental impacts.

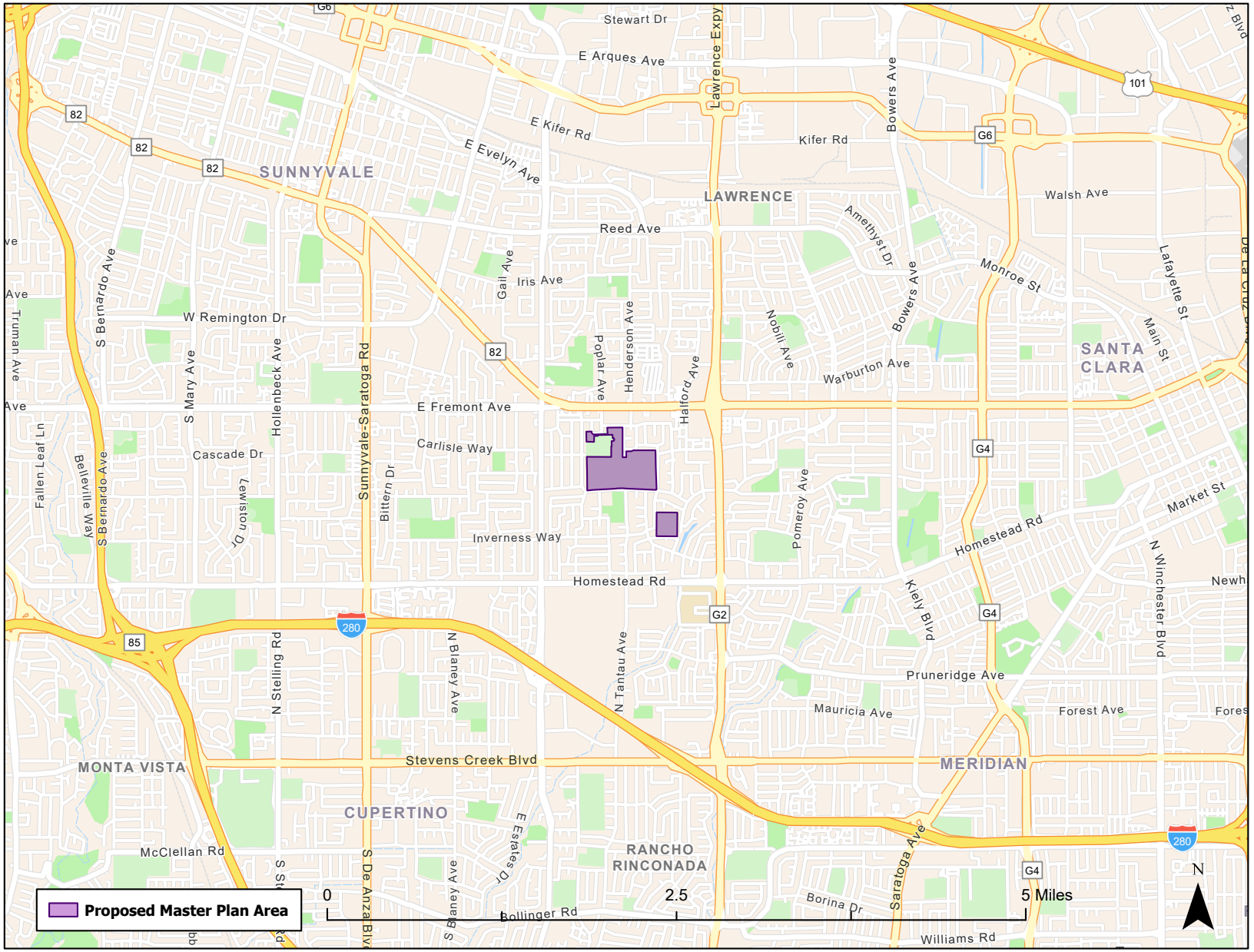
The Project Description is the starting point for all environmental analysis required by the State CEQA Guidelines. Section 15146 of the State CEQA Guidelines states that the degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity, which is described in the EIR. The following Project Description serves as the basis for the environmental analysis contained in this EIR.

2.1 ENVIRONMENTAL SETTING

2.1.1 Project Location

The Proposed Master Plan Area ("Plan Area") is located in northwest Santa Clara County, approximately 4.75 miles south of the San Francisco Bay and approximately one-half mile north of Apple Park. The Plan Area includes the Patrick Henry Middle School campus, located at 1095 Dunford Way, the Santa Clara Unified School District Farm ("District Farm"), and portions of the Peterson Middle School at 1380 Rosalia Avenue, encapsulating 71.5 acres all within the City of Sunnyvale. Additionally, the Plan Area includes the existing 10.4-acre Laurelwood Elementary School, located at 955 Teal Drive in the City of Santa Clara. In total, the Plan Area encapsulates 81.9 acres in the City of Sunnyvale and the City of Santa Clara as shown in as shown in **Figure 2.0-1, Regional Context**.

The Cities of Sunnyvale and Santa Clara are bordered to the south by the Cities of Cupertino and San Jose, to the east by San Jose, to the west by Mountain View and Los Altos, and the San Francisco Bay to the north. The Plan Area is bound to the south by Dunford Way, to the west by a block east of Norman Drive, to the north by Rosalia Avenue and Bryant Way, and to the east by Roadrunner Terrace – connected through Castleton Terrace and Teal Drive to the east (see **Figure 2.0-2, Proposed Master Plan Area**). The Plan Area would serve a maximum capacity of 3,375 students. The existing Laurelwood Elementary School fronts on Teal Drive to the west and is bound by Kensington Avenue to the south, and residences to the north, east and along the southwestern corner of the site.



SOURCE: Esri 2022; SCUSD, 2022

FIGURE **2.0-1**

IMPACT SCIENCES

Regional Context

1375.001•08/22



SOURCE: Esri, 2022

FIGURE **2.0-2**

Peterson Laurelwood Master Plan Area

IMPACT SCIENCES

1375.001•02/22

2.1.2 Existing Conditions

The Plan Area serves as an educational campus for several schools as part of the Santa Clara Unified School District. The Plan Area was originally developed in the 1960s as Marian A. Peterson High School, and the Patrick Henry Intermediate School. Marian A. Peterson High School closed in 1981 and reopened as Marian A. Peterson Middle School due to declining enrollment. The Patrick Henry Intermediate School was closed in the 1980s and the buildings and grounds were leased to or occupied by various tenants including: Appleseed Montessori (650 students); Silicon Valley Academy (300 students); New Concept Chinese School (60 students); Mount Bell (25 students); and the Santa Clara Unified School District (SCUSD) District Resource Center (60 adults). Sunnyvale Alliance Soccer rented the fields and the Patrick Henry site. All occupants have relocated as of February 2022.

The existing Laurelwood Elementary School was also built in the 1960s and continues to be in operation. The Plan Area also contains the Sunnyvale Soccer Complex, which is approximately 10 acres. Located within the Peterson Middle School Campus is the SCUSD Farm (District Farm), which encompasses approximately 11.3 acres; Peterson track and field, which encompasses approximately 6.3 acres, and the Bryan Osborne Nature Center, which encompasses approximately 1.86 acres. The existing Laurelwood Elementary School campus makes up approximately 10.4 acres. The existing Laurelwood Elementary School serves grades K-5 and enrolls 623 students.[1] Peterson Middle School serves grades 6 through 8 and enrolls approximately 871 students.[2]

The District Farm, in operation since 2017, provides produce for Nutrition Services in the cafeterias.

The Peterson Middle School and Patrick Henry Campus, including the SCUSD Farm, and the Peterson Fields are designated Public Facilities (PF) per the City of Sunnyvale Zoning Code, and the Laurelwood Elementary School site is designated Public or Quasi Public Facilities (B) by the City of Santa Clara Zoning Code. These districts are reserved for governmental, public utility, parks and recreational facilities, educational buildings and facilities, and other uses compatible with the public character.

Surrounding Land Uses

The Plan Area is surrounded in all directions by residential uses, primarily consisting of single-family homes. The areas east, west, and south of the Peterson Middle and Patrick Henry Campus is zoned Low Density Residential (R1, and R0), which permit no more than seven dwelling unit per acre. North of the

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1 California School Dashboard. School Performance Overview: Laurelwood Elementary. Available online at: https://www.caschooldashboard.org/reports/43696746048904/2021, accessed July 11, 2022.

2 California School Dashboard. School Performance Overview: Marian A. Peterson Middle. Available online at: https://www.caschooldashboard.org/reports/43696746101760/2021, accessed July 11, 2022.

Peterson Middle and Patrick Henry Campus is zoned Medium Density Residential (R3), which permits up to 24 dwelling units per acre. The district across Bryant Way is made up of a development of one- and two-story townhomes. Laurelwood Elementary is also surrounded by very low residential (R1-6L) to the north, west, and south. East of the Plan Area is zoned as Planned Development (PD) and is currently developed with single-family homes.

The closest commercial district is located one block north of the site on El Camino Real, which is zoned Highway Business (C2). Highway Business zones allow retail commercial buildings, tourist accommodations and service facilities adapted to principal highway commercial zoning districts. This commercial thoroughfare is made up of single-story strip development that is set back with parking lots that front the street. There are also several new higher-density mixed-use buildings along El Camino Real, as well as residential apartment buildings.

There are several community parks within the surrounding community The closest park to the Plan Area is Raynor Park, just south of the Peterson campus, across Dunford Way. Raynor Park is an 11.9-acre park with picnic areas, playgrounds, and sports fields. The Plan Area is also within walking distance to Panama Park, located six blocks west, the Sunken Gardens Golf Course, located one mile north, and Earl R. Carmichael Park, located 0.6 miles east.

Calabazas Creek runs just outside the Plan Area, southeast of Laurelwood Elementary School. Calabazas Creek is a 13.3-mile-long northward flowing stream that culminates in the San Francisco Bay.

Transportation and Circulation

Transit

The Cities of Sunnyvale and Santa Clara are served by two public transit systems: the Santa Clara Valley Transportation Authority (both light rail and buses) and the Caltrain commuter rail. The closest Caltrain stop to the Plan Area is the Lawrence Station, approximately 2.0 miles north of the Plan Area. The Plan Area is also served by several buses, including the Rapid 522 and 22, which run along El Camino Real. The closest stop is located at El Camino and Poplar, 0.2 miles from the Plan Area. The site is also served by the 53, which runs between the Sunnyvale Transit Center and the Santa Clara Transit Center, and the 56, which runs north-south along Sunnyvale Saratoga Road.

Pedestrian Circulation

Primary pedestrian access to the Peterson Middle School is at the main entrance on the southern side of Rosalia Avenue, along the northern boundary of the Plan Area. Pedestrian access to the Patrick Henry

Campus is at the main entrance along Dunford Way at the southern boundary of the Plan Area. Access to the site is also permitted along Teal Drive. The Laurelwood Elementary campus is accessible to pedestrians at the main entrance along Teal Drive at the western edge of the Elementary School site. There is also a pedestrian path that leads from Kensington Avenue to the main entrance on Teal Drive. There are several crosswalks in the area, including seven that cross Dunford Way, two that cross Rosalia Avenue, and one that crosses Teal Drive. These crosswalks increase pedestrian safety and accessibility to the Plan Area.

Bicycle Circulation

The streets surrounding the Plan Area are easily accessible by bicycle. Dunford Way includes a sharrow bike route with pavement markings that indicate that the road is used by both cyclists and vehicles. The markings are intended to improve cycling safety. The Silicon Valley Bicycle Coalition has designated Dunford Way as moderate, which generally indicates roadways have low traffic volumes, moderate to low traffic speeds, wide travel area for bicycles, and no curbside parking.[3] However, the segment in front of the District Farm, on Dunford Way, is not very wide and contains curbside parking. This bike route connects to more established bike lanes in the area, such as along Wolfe Road, four blocks west of the Plan Area. The low density of the surrounding residential area is conducive to creating safe bicycle routes to school due to the low traffic volumes and speeds.

Vehicular Circulation

The roadways surrounding the Plan Area are all local two-way roads. The main entrance to the Peterson Middle School campus is Rosalia Avenue, which curves in front of the entrance of Peterson Middle School and leads into Poplar Avenue. The vehicular entrance to the Patrick Henry Campus is on Dunford Way between Teal Drive and Norman Drive. Laurelwood Elementary school is accessible through a curb cut on Teal Drive. To access the SCUSD Farm, there is a curb cut along Dunford Way. There are no other vehicular access points in the Plan Area.

The local roads surrounding the Plan Area lead into several surrounding arterial boulevards, and expressways with regional access, such as El Camino Real and the Lawrence Expressway. The Plan Area is surrounding by several of the South Bay's major freeways and expressways; including State Route (SR)-85 to the west, SR-82 to the north, Interstate (I)-280 to the south, and Lawrence Expressway to the east. It also has airports nearby, including San Jose International, approximately 4.3 miles northeast of the Plan Area and Moffett Federal Airfield, approximately 4.5 miles northwest. U.S. 101 traverses east-west through the

3 Silicon Valley Bicycle Coalition. Santa Clara Valley Bikeways Map. Available online at: https://www.vta.org/sites/default/files/2020-06/2020%20Bike%20Map_web_0.pdf, accessed July 11, 2022.

center of the two cities, while State Route 237 is located to the north and Interstates 280 runs along the southern border of the cities, and I-880 runs along the southeast border of Santa Clara.

Parking

The Peterson Middle School campus has two parking lots at the northern end of site. One is accessed through an entrance on Rosalia Avenue. The other parking lot is accessed through an entrance on Bryant Avenue, between Poplar Avenue and Roadrunner Terrace and has an exit at the intersection of Rosalia Avenue and Poplar Avenue. The Patrick Henry Campus includes several parking lots, including one at the center of the campus between the former school building and the fields, one at the front entrance to the former Patrick Henry School building, and one located on the corner of Dunford Way and Teal Drive. All are accessible through Dunford Way. The parking area adjacent to the SCUSD Farm is unpaved and accessible via a curb cut by Dunford Way.

2.2 DESCRIPTION OF THE PROJECT

The Proposed Master Plan supports the SCUSD's Vision 2035 and the SCUSD Board of Trustee's direction for Bond Measure BB funding. In 2018, SCUSD voters approved General Obligation Bond Measure BB to authorize $720 million to fund critically needed safety, modernization, and new construction projects (**Appendix 2.0-1, SCUSD Board Resolution #22-39**). Some of Measure BB bond funds will be used to design and build a new Laurelwood Elementary on a portion of the Patrick Henry Campus, and new fields at the existing Peterson Middle School. The SCUSD created a master plan for the area to encompass all SCUSD assets within the plan's boundaries (Plan Area). The Proposed Master Plan also includes the District Farm and Bryan Osborne Nature Center, and focuses on providing amenities, and equal access to spaces for students. Additionally, the Proposed Master Plan allows for connected pathways and open spaces for outdoor learning.

Master Plan Phasing

The buildout of the Proposed Master Plan is envisioned to take place over five distinct phases. Implementing the various elements of the master plan with minimal impact to the continued operation was considered when developing the phasing plan. The phases are identified and broken down into subparts within each phase.

Phase 1 is the only phase currently funded by Measure BB and includes the Peterson track and field, the demolition of the existing Patrick Henry buildings, relocation of District storage, and building the new Laurelwood Elementary school. All other phases will be subject to future funding.

Phase 2 is focused on improvements to Peterson Middle School. This includes developing enhanced pedestrian and bike paths to connect the school to Teal Drive and Elizabeth Way, adding multiuse fields, track and field amenities such as a fieldhouse with restrooms and concessions, bleachers and new tennis courts. Improvements also include a new parking lot with enhanced drop-off and the development of a large outdoor learning area for students in Special Education.

Phase 3 will include modernizations and addition to the Peterson Campus Administration. The new administration space will have a direct view of students and parents entering campus from Rosalia Avenue. Improvements will also be made to the small science building adjacent to the Nature Center.

Phase 4 is focused on improvements to the District Farm and the development of the new Environmental Education Center, which will create a bridge between the Farm and the Nature Center. These improvements may occur at any time and are not subject to the development of prior phases.

Phase 5 is construction of a 300-student Alternative High School and other District programs on the Patrick Henry site.

2.3 OBJECTIVES OF THE PROPOSED PROJECT

The Proposed Master Plan is intended to provide a road map for the Santa Clara Unified School District that:

- Establishes a process for collecting the valuable input from the community including District staff, School site staff, parents, neighbors, students and consultants.
- Assesses, defines, and prioritizes current and future facility needs at each site.
- Provides a plan for the expenditure of Measure BB funds (Laurelwood School and Peterson Fields) and develops a roadmap for future funded projects.
- Develops cost estimates and plans needed to acquire future funding for the identified facility priorities.
- Provides project phasing plans to ensure the facility priorities are addressed. This information will be used to develop detailed design and construction plans as funds become available.
- Establishes a "living" document that will be regularly updated with progress made so it can continue to reflect "current" conditions, providing an accurate picture of remaining needs.

- Aligns the future development of the campuses with the stated Core Values in SCUSD's Vision 2035:
  - Students First
  - Excellence Through Continuous Improvement
  - Integrity and Ethical Stewardship
  - Connected Families and Collaborative Community
  - Equity and Social Justice
  - Empathy and Respect

2.4 PROJECT SUMMARY

The Peterson Laurelwood Master Plan (Proposed Master Plan) consists of the entire Patrick Henry Campus, the Peterson Middle School Site, and the future use of the existing Laurelwood Elementary School Site.

The Proposed Master Plan includes the construction of the new Laurelwood Elementary School on the existing Patrick Henry Campus, Peterson multiuse fields, relocated District storage area, improvements to Peterson Middle School including the new fields and a fieldhouse; relocation of the existing tennis courts; new vehicular and pedestrian access; expanded administration and media center, a new environmental education center, outdoor learning areas and amphitheater. Program improvements will be made to the District Farm and compost areas. It also provides an opportunity for an additional school to be built on the property. The Proposed Master Plan anticipates a maximum student capacity of 3,375 students as follows:

- Peterson Middle School: 1,221 student capacity
- Environmental Center and Farm: 250 student capacity
- New Alternative High School: 300 student capacity
- New Laurelwood Elementary School: 850 student capacity

Note that the capacity of 3,375 students at full build out also includes the capacity of existing Laurelwood School (754 student capacity based on Elementary occupancy). The future use of the Laurelwood site has not been determined at this time and will be subject to a supplemental CEQA process and document, including stakeholder engagement, when the proposed use is determined. For the purposes of this process, the existing Laurelwood site will be used for District administrative uses including storage.



SOURCE: SCUSD, 2022

FIGURE **2.0-3**

Peterson Laurelwood Master Site Plan

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The purpose of the Proposed Master Plan is to provide a long-term planning document that provides a visionary site plan to guide future expansion with enhanced student and community access to the sites. These programs, including the new Laurelwood Elementary School, cover approximately 38.74 acres. A site plan of the Proposed Master Plan is shown in **Figure 2.0-3, Peterson Laurelwood Master Site Plan.** Elements included in the Proposed Master Plan are as follows:

Improvements to Peterson Middle School: Peterson Middle School currently does not have a strong street presence and wayfinding is not clear. This was recognized as an opportunity for a pedestrian boulevard along the front of the school and a new administration building to allow better clarity when approaching the school and enhance curb appeal. Several pedestrian paths will be constructed in and around the Peterson Middle School.

Existing parking lacks clear direction and access points. There is also a need for parking to be expanded into the site for better access to the fields and aquatic center. After exploring various configurations, parking was best suited to be reorganized and expanded to the east side of Peterson Middle School. To greater improve access to the fields, parking extends southwards, and the tennis courts will be moved to the north of the site. The tennis courts relocation was also an opportunity to correct the orientation of the courts. While previously they were in an east/west orientation they are now in the more ideal north/south.

The Peterson Track and Field will be rebuilt, a new field house will be constructed in the northeast corner of the track and field site, and bleachers will be constructed on east and west ends of the track. An amphitheater will be constructed just north of the track and field.

Improvements will also include the modernization of the small science building in the center of the Campus, and expansion of the administration and media center at the entrance on Rosalia Avenue.

New Laurelwood Elementary School: The new Laurelwood Elementary School will be located on the southeast corner of the Patrick Henry Campus, maintaining the location of the buildings of the closed Patrick Henry Campus. The campus will construct five new buildings: three classroom buildings, an administration building and a multipurpose building. A detailed site plan is shown in **Figure 2.0-4, Laurelwood Elementary School Site Plan**.

The administration, multipurpose (MP), and Transitional Kindergarten (TK)/Pre-Kindergarten (PK)/Kindergarten/Extended Day buildings form the perimeter of the campus and face the two drop-off and parking areas for ease of access.

The two-story building features the innovation lab, library/media center, and classroom clusters for the 3rd, 4th and 5th grades. The first-floor interconnects special education, staff collaboration space, innovation

lab, 3rd grade cluster, and the library/media center spaces. The second-floor features 4th and 5th grade clusters. The multipurpose building will include a stage and a kitchen, with a lunch shelter immediately adjacent to the building. The administration building will include the main office, a wellness center, student support, and a health suite.

One of the key planning features is the integration between the indoor and outdoor areas where each classroom and collaboration area have direct access to the outdoors. Hence, linear outdoor learning areas are adjacent to the buildings. The classroom clusters are organized per grade and are designed to have a shared collaboration area. The collaboration areas are open to the outdoor learning areas and will be supported with restrooms, sinks, storage, wi-fi and other features. In addition, the special education program is integrated and distributed throughout the campus and has direct access to the outdoor learning areas. A flexible indoor-outdoor learning environment will also include play areas for the TK and PK students, a quad with an outdoor stage. The plan also includes two hard courts: one for the upper grades and one for the lower grades, as well as a field with running paths around it.

The main school entrance is adjacent to the administration building along Teal Drive and the secondary entrance is between the MP and TK, PK, and Extended Day programs along Dunford Way. A one-way circular driveway will be constructed at each entrance. The buildings and fenced areas between the buildings create a secure perimeter along Teal Drive and Dunford Way while perimeter fencing around the field and hardcourt areas secure the rest of the campus.

The campus is organized in a linear fashion in order to optimize solar orientation, building performance, and natural daylighting. In addition, the buildings are carefully placed to preserve existing trees. The linear outdoor learning, open quad, field and hardcourt areas provide unobstructed views of the campus for continuous supervision.

Sustainability and Net-Zero Strategy: The new Laurelwood Elementary School will be designed with sustainability features and will target Net-Zero Energy performance. One of the key passive strategies is proper building orientation. The buildings are oriented along the east/west axis to maximize building envelope efficiency and optimize daylight into the learning environment. Through further studies, the next stage of the project development will explore design strategies that:

- Maximize roof's solar orientation for photovoltaic panels and solar energy harvesting;
- Evaluate solar shade structures;
- Reduce heat gain through shading and overhangs by protecting south glazing, limiting glazing on east and west facades and maximizing glazing on the north;

- Strategically locate windows to balance natural daylight and increase thermal comfort inside the learning environments;
- Evaluate other sustainable passive design strategies; and
- Explore rainwater collection potential and sustainable building materials.



SOURCE: SCUSD, 2022

FIGURE **2.0-4**

IMPACT SCIENCES

Laurelwood Elementary School Master Plan

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District Farm: The 13.6-acre District Farm includes long-term and short-term plantings that support the District's nutrition program. It also serves as a hands-on learning area for students throughout the district. For the master plan, this element is enhanced with support facilities to aid in the farm's maintenance and operations, as well as events and activities for learners of all ages to enjoy. The District Farm maintains its size and location but gains the addition of a farm amenities building with parking. The District Farm is widely viewed positively by the community and having the farm amenities building allows for the continued success of the farm.

Environmental Education Center: An Environmental Education Center is proposed for the site to support hands-on learning for students and staff of SCUSD. The Environmental Education Center will facilitate connections among the Nature Center, the Farm, the two schools, and other site activities while also inviting participation from other SCUSD schools through field trips, camps, educational activities, exhibits and events. It is anticipated that the Environmental Education Center will house administrative and visitor support spaces as well as space for the staging and storage of science learning kits that are used throughout the district. Outdoor learning areas will be constructed underneath the existing solar panels, and a greenhouse will also be constructed.

Other Site Amenities: Additional site amenities include support spaces, fields, and vehicular areas that will serve various site programs as well as operations and maintenance of the site. A Fieldhouse is proposed to serve outdoor play fields and other activities where participants require restrooms, drinking fountains and space to store equipment. It will be located with easy access to the track and fields.

District Maintenance / Amenities: Storage space for supplies and equipment used district-wide currently exists on the site. Storage is primarily housed in mobile storage units, containers, which are grouped together. The proposed site master plan includes storage for these items. Additional outside area is required for storage of un-used portables. These areas will be easily accessible by maintenance and operations staff, yet visually screened from other site amenities.

Demolition

Buildings planned for demolition under the Proposed Master Plan include the existing Patrick Henry School buildings, to accommodate the new Laurelwood Elementary School, and the Peterson bleachers, track, and field. These buildings are generally located at the southeast portion of the Plan Area, at corner of Dunford Way and Teal Drive. The existing building was built in the 1960s and the school was closed in 1989. The buildings were vacated in Q1 2022. The Quonset hut, which stores athletic supplies and grounds equipment may also be demolished.

Construction Schedule

The first phase of the Proposed Master Plan is anticipated to start in 2023. The decommission, demolition of the Patrick Henry School would begin in 2023, and new construction of the new Laurelwood Elementary School would begin at the end of 2024 and last for approximately 20 months, with a targeted school opening date during the 2026-2027 school year. The construction of the Peterson Middle School Track and Fields is anticipated to start in early 2024 and last approximately 10 months, with an estimated completion date of November 2024. There is currently no estimated construction schedule for phases two through five.

2.5 INTENDED USES OF THE EIR

This EIR will serve as the primary source of environmental information for the actions and approvals associated with the Santa Clara Unified School District. In accordance with Section 21002.1 of CEQA, the purpose of this EIR is to provide the School District, serving as the lead agency, information on: the potentially significant environmental impacts that would result from implementation of the Proposed Master Plan; alternatives to the Proposed Master Plan; and mitigation measures, which may reduce or avoid any significant effects. This EIR will also be used as an information document by other public agencies, in connection with any approvals or permits necessary for construction and operation of the Proposed Master Plan. The projects from the Master Plan evaluated in this EIR does not represent a commitment from SCUSD to implement specific projects. This EIR serves as an informational document regarding the impacts resulting from implementation of the Master Plan, if they are fully realized. Future projects that are not contained within the scope of this EIR will require further environmental review.

The EIR is intended to serve as a Program EIR, as defined in Section 15168 of the *State CEQA Guidelines*, for use by the District as lead agency and by responsible agencies as needed. The EIR will evaluate the broad-scale impacts of the Proposed Master Plan regulations. Program EIRs are typically prepared for public policy programs such as a general plan or new zoning districts; for a series of related actions that can be characterized as one large project; or for large-scale, multi-phase development projects such as specific plans. In a Program EIR, CEQA allows the general analysis of broad environmental effects of the program, with the acknowledgement that subsequent, project-specific environmental review may be required for particular aspects or portions of the program at the time of project implementation, in accordance with Section 15162 of the *State CEQA Guidelines.* The Program EIR serves as the first-tier environmental analysis. The Program EIR can be incorporated by reference into subsequently prepared environmental documentation to address issues such as cumulative impacts and growth-inducing impacts, allowing the subsequent documents to focus on new or site-specific impacts pursuant to Section 15168(d) of the *State CEQA Guidelines*. To assess the potential broad-scale environmental impacts that may result from

implementation of the Proposed Master Plan development assumptions have been made at this time and are described in the above sections.

2.6 REVIEWS AND APPROVALS

As defined by CEQA, a Lead Agency is the public agency with the principal responsibility for approving a project. The Santa Clara Unified School District, Facility Development and Planning Department is the Lead Agency for consideration and approval of the Proposed Master Plan. The SCUSD Facility Development and Planning Department held at least one public hearing on the Proposed Master Plan before deciding to approve the Proposed Master Plan. The school district must certify the Final EIR before moving forward with implementation of the Proposed Master Plan.

Other Approvals

Implementation of various project components may also require approvals or permits by the following public agencies:

- Division of the State Architect (DSA) for buildings, handicap accessibility, fire and life safety
- Department of Toxic Substances Control (DTSC) for hazards and hazardous materials
- Regional Water Quality Control Board (RWQCB) for Stormwater Pollution Prevention Plans (SWPPs) required during construction
- Bay Area Air Quality Management District (BAAQMD) for any new stationary sources of air emissions
- City of Sunnyvale, City and County of Santa Clara, for wastewater and water connections, and fire hydrants / water pressure

3.0 ENVIRONMENTAL IMPACT ANALYSIS

This chapter analyzes the physical environmental impacts associated with the Santa Clara Unified School Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan") described in **Section 2.0, Project Description**. The approach to the CEQA analysis of the Proposed Master Plan considered is also presented in this chapter. For each resource topic analyzed in detail in the EIR, this chapter provides a description of the baseline environmental conditions, the regulatory framework, significance criteria, impacts analysis and identifies mitigation measures, if required.

3.0.1 ORGANIZATION OF THIS CHAPTER

Each section of this chapter contains the following elements, pursuant to the CEQA requirements:

Environmental Setting. This section presents a description of the existing physical environmental conditions on Patrick Henry Campus, Laurelwood Elementary School, SCUSD Farm, and portions of the Peterson Middle School, with respect to each resource topic as of June 2022, the month and year when the Facility Development and Planning Department issued a notice of preparation (NOP) for initiating environmental review. In addition, recent projects that have already been implemented and/or approved in the Plan Area are considered as part of the baseline physical conditions by which potential impacts of the Proposed Master Plan are assessed.

Regulatory Framework. The regulatory section provides an overview of statutory and regulatory considerations that are applicable to the specific environmental topic.

Thresholds of Significance. Provides criteria for determining the significance of project impacts for each environmental issue.

Methodology. Further clarifies which thresholds are used when describing the methods, procedures, and techniques used to estimate the Proposed Master Plan's impacts. The methodology subsection of the chapters associated with each individual impact area will provide further explanation of what geographic area is used for the purposes of the impact analysis.

Impacts Analysis. Provides a discussion of the characteristics of the proposed project that may have an effect on the environment, analyzes the nature and extent to which the proposed project is expected to change the existing environment, and indicates whether the project impacts meet or exceed the levels of significance thresholds.

Mitigation Measures. Identifies mitigation measures to reduce significant adverse impacts to the extent feasible.

Level of Significance after Mitigation. Provides a discussion of significant adverse environmental impacts that cannot be feasibly mitigated or avoided, significant adverse environmental impacts that can be feasibly mitigated or avoided, and adverse environmental impacts that are not significant.

Cumulative Impacts. This section considers the incremental effects of implementing the Proposed Master Plan, together with the environmental effects of other closely related past, present, and reasonably foreseeable probable future projects within the Plan Area and in the surrounding neighborhood.

3.0.2 CLASSIFICATION OF IMPACTS

Impacts are categorized by type of impact, as follows:

No Impact. No adverse changes (or impacts) on the environment are expected.

Less than Significant. An impact that would not involve an adverse physical change to the environment,does not exceed the defined significance criteria, or would be eliminated or reduced to a less-than- significant level through compliance with existing local, state, and federal laws and regulations.

Less than Significant with Mitigation. An impact that is reduced to a less-than-significant level though implementation of the identified mitigation measures.

Significant and Unavoidable with Mitigation. An adverse physical environmental impact that exceedsthe defined significance criteria and can be reduced through compliance with existing local, state, and federal laws and regulations and/or implementation of all feasible mitigation measures but cannot be reduced to a less-than-significant level.

Significant and Unavoidable. An adverse physical environmental impact that exceeds the defined significance criteria and cannot be eliminated or reduced to a less-than-significant level through compliance with existing local, state, and federal laws and regulations and for which there are no feasible mitigation measures.

3.0.3 APPROACH TO CUMULATIVE IMPACTS

In compliance with *State CEQA Guidelines* Section 15130(a)(3), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." If the combined cumulative impact associated with the project's incremental effect is significant, then the analysis must identify the project's fair share of a mitigation measure or measures designed to alleviate the cumulative impact and reduce project's contribution to less than cumulatively considerable level.

Past, present, and future reasonably foreseeable projects within the defined geographic area for a given

cumulative issue must be considered. The cumulative impact analysis in each technical section includes a description of the cumulative analysis methodology and the geographic or temporal context in which the cumulative impact is analyzed.

Consistent with *State CEQA Guidelines* Section 15130(b), the cumulative impact analysis considers the effects of the Proposed Master Plan including the proposed individual projects in combination with known or reasonably foreseeable projects that could combine with potential impacts of the Proposed Master Plan. In addition, the cumulative impact analysis also considers projections contained within previously approved City's planning documents, including but not limited to the *Sunnyvale General Plan* and the *Santa Clara General Plan*, as well as applicable associated environmental review documents. Some projects within one mile of the Plan Area include:

- **1268 Poplar Avenue.** This project is a subdivision of one lot into three lots and construction three two-story single-family residence.

- **1313 S Wolfe Road.** This project is a General Plan Amendment Initiation to consider amending the General Plan designation from Commercial to Medium Density Residential to allow construction of a new 30-unit three-story townhomes and a stand-alone commercial building.

- **Laguna Clara II Development Project.** This project involves the Architectural Review of a residential development proposal involving the demolition of three two-story apartment buildings and one-half of a two-story apartment building (removing 42 dwelling units and retaining 222 dwelling units), two accessory buildings (central boiler room and a clubroom/leasing office) and four carport structures to construct a four-story apartment building with 225 units over a partially subgrade parking garage for a total of 447 dwelling units on the site. The existing site has 394 surface parking spaces and proposes to remove 83 spaces and provide 434 parking spaces in the subgrade parking structure and 16 surface parking spaces for a total of 778 parking spaces on-site at 1.74 spaces per unit.

3.1 AESTHETICS

INTRODUCTION

This section describes the existing visual resources within the cities, identifies the regulatory framework with respect to regulations that address visual resources, and evaluates the significance of the potential changes to visual resources that could result from implementation of the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan"). In addition, to reduce impacts, mitigation measures are included when applicable.

Note also that no physical changes to the existing Laurelwood Elementary School site are included in the Proposed Master Plan.

3.1.1 ENVIRONMENTAL SETTING

3.1.1.1 Definition of Terms

To provide context for the analysis presented below, a discussion of general definitions is necessary. Terms to be discussed include "viewsheds" and "visual quality," both key factors in addressing impacts to aesthetics and views. The environmental setting also generally describes those resources that are regionally significant and lists the designated scenic highways, byways, and vista points.

The aesthetic value of an area is a measure of its visual character and quality, combined with the viewer response to the area. The scenic quality component can best be described as the overall impression that an individual viewer retains after driving through, walking though, or flying over an area. Viewer response is a combination of viewer exposure and viewer sensitivity. Viewer exposure is a function of the number of viewers, the number of views seen, the distance of the viewers, and the viewing duration. Viewer sensitivity relates to the extent of the public's concern for particular viewsheds. These terms and criteria are described in detail below.

Viewshed: A viewshed is a geographic area composed of land, water, biotic and/or cultural elements that may be seen from one or more viewpoints and has inherent scenic qualities and/or aesthetic value as determined by those who view it. The extent of a viewshed can be limited by a number of intervening elements, including trees and other vegetation, built structures, or topography such as hills and mountains.

Visual Quality: Visual quality refers to the character of the landscape, which generally gives visual value to a setting. It is useful to think of scenic resources in terms of "typical views" seen throughout an area,

because scenic resources are rarely encountered in isolation. A typical view may include several types of scenic resources, including both natural and man-made elements. It is also important to distinguish between public and private views. Private views are views seen from privately owned land and are typically viewed by individual viewers, including views from private residences.

Public views are experienced by the collective public. These include views of significant landscape features, as seen from public viewing spaces, not privately-owned properties. CEQA (Public Resources Code § 21000 et seq.) case law has established that, in general, protection of public views is emphasized. For example, in Association for Protection etc. *Values v. City of Ukiah* (1991) 2 Cal. App. 4th 720, 734, the court determined the following:

> *"…we must differentiate between adverse impacts upon particular persons and adverse impacts upon the environment of persons in general. As recognized by the court in Topanga Beach Renters Assn. v. Department of General Services (1976) 58 Cal.App.3d 188 [129 Cal.Rptr. 739]: "[A]ll government activity has some direct or indirect adverse effect on some persons. The issue is not whether [the project] will adversely affect particular persons but whether [the project] will adversely affect the environment of persons in general."*

Therefore, for this analysis, only public views are considered in analyzing the visual impacts of the Proposed Master Plan.

3.1.1.2 Regional and Local Setting

The cities of Sunnyvale and Santa Clara are incorporated municipalities located in the Santa Clara Valley in northwest Santa Clara County. The Santa Clara Valley is defined by San Francisco Bay to the north, the coastal mountain range to the west and south, and the Diablo Range to the east. San Francisco Bay and the mountain ranges that define the valley provide scenic views of a variety of natural features. Sunnyvale lies along the historic El Camino Real and Highway 101. Santa Clara is located in the center of Silicon Valley. Sunnyvale and Santa Clara are almost entirely surrounded by the cities of Mountain View, Cupertino, Los Altos, and San Jose.

The Plan Area is located in a highly developed urban/suburban area. The area is predominantly built out, consisting of residential, commercial, public, industrial, and transportation uses. The majority of the area is developed with residential uses consisting of single-family homes with a few medium-density residential developments (see **Figure 3.1-1**). Commercial businesses are concentrated along major arterial streets, such as El Camino Real.



SOURCE: Impact Sciences, 2022

FIGURE **3.1-1**

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Neighborhood Character (Teal Drive and Lillick Drive, looking east)

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Views and Scenic Resources

While the regional area contains several mountain ranges, Sunnyvale and Santa Clara, including the Plan Area, are relatively flat. The cities' elevation ranges from near sea level in the north, to 175 -to-300 feet at the southern boundaries. The Plan Area is located approximately 4.75 miles south of the San Francisco Bay, approximately 12 miles west of the Diablo mountain range, and approximately 4.5 miles east of the Santa Cruz Mountains.

Views of the Bay and the Diablo Mountain range are largely obstructed by existing structures and do not constitute scenic vistas. The view of the coastal mountain range to the west of the Plan Area is a distant background view from the Plan Area and can be viewed intermittently (see **Figures 3.1-2** through **3.1-4**). The range is particularly visible along Teal Drive, Dunford Way and Kensington Avenue, looking west. There are no designated scenic views in the Plan Area, according to the Cities' General Plans.[1, 2]

Scenic Vistas

Scenic vistas generally encompass long-range or expansive views to natural environmental, historical, or architectural features of visual or aesthetic value to the community. A scenic vista is visible typically from elevated vantage points or open areas. There are no designated scenic vistas or viewsheds within the cities of Sunnyvale or Santa Clara.

1 City of Sunnyvale. *Land Use and Transportation Element Draft Environmental Impact Report*. 2016. Available online at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/608/637819113538930000, accessed June 30, 2022

2 City of Santa Clara. *2010-2035 General Plan Final Environmental Impact Report*. 2011. Available online at: https://www.santaclaraca.gov/home/showpublisheddocument/12900/635713044859030000, accessed June 30, 2022



SOURCE: Impact Sciences, 2022

FIGURE **3.1-2**

IMPACT SCIENCES

Patrick Henry Campus from Teal Drive, looking west

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SOURCE: Impact Sciences, 2022

FIGURE **3.1-3**

IMPACT SCIENCES

Kensington Avenue, looking west

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SOURCE: Impact Sciences, 2022

FIGURE **3.1-4**

IMPACT SCIENCES

Dunford Way, looking west

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Scenic Highways

The California State Scenic Highway System is a list of scenic highways (mainly state highways) or scenic parkways which have been designated or proposed by the state of California. The scenic highway designation serves to protect California's scenic beauty as well as its scenic resources. There are no state-designated scenic highways (or proposed state scenic highways or parkways) within the Plan Area.[3]

Therefore, there are no scenic resources within the vicinity of a scenic highway. Additionally, there are no scenic resources identified in the *City of Sunnyvale General Plan* or *City of Santa Clara General Plan*. According to the California Department of Transportation (Caltrans), Interstate 280 (the Junipero Serra Freeway), traversing the south border of Sunnyvale, is an eligible state scenic highway, but it is not officially designated. The status of a scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to the Caltrans for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a scenic highway.[4] The City has not taken action to officially designate Interstate 280 as a scenic highway.

Visual Character

The concept of visual character is not explicitly defined in the *State CEQA Guidelines*. In this aesthetics discussion, potential visual character impacts are assessed based on industry-accepted definitions of visual character. Visual character can be defined in terms of the overall impression formed by the relationship between perceived visual elements of the existing built, urban environment. Visual character is the existing features or elements that contribute to the valued image of a neighborhood, community, or localized area. Features that contribute to visual character may include, but are not limited to:

Height and mass of proposed buildings compared to existing development;

- Structures of architectural or historical significance, or visual prominence;
- Public plazas, art, or gardens;
- Landscaping and street trees; or
- Other features of recognized value to the aesthetic or visual character of an area.

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3 Caltrans, California State Scenic Highways. Available online at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa, accessed July 7, 2022.

4 Caltrans. Scenic Highways - Frequently Asked Questions. Available online at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways/lap-liv-i-scenic-highways-faq2, accessed June 30, 2022.

The Plan Area includes public facilities (school campuses) surrounded by single-family residential. Commercial strips that cater to vehicular access are located a block north of the Plan Area along El Camino Real. These uses are comprised of single-story commercial buildings with vast parking lots that front El Camino Real.

Visible Resources

The most visible landmarks in Sunnyvale are the Moffett Federal Airfield dirigible hangars. These hangars are not visible from the Plan Area but are highly visible throughout the Bay Area and orient air travelers flying into the region. Other landmarks in Sunnyvale include vertical landmarks such as the Libby Water Tower, historic landmarks such as the Murphy Avenue Commercial District, and horizontal landmarks such as the cherry orchards on Mathilda Avenue near El Camino Real. These resources are not visible in the Plan Area.

The most prominent visual feature in the City of Santa Clara is the Great America Amusement Park. The park has large, highly visible rides that are the tallest features in the area and is brightly lit at night. There are also several mid-rise office buildings and hotels that give a much more urban appearance to properties along Great America Parkway and Tasman Drive. There are also several historic resources such as Mission Santa Clara, and numerous historic homes. These resources are not visible from the Plan Area.

Transportation Corridors

The Plan Area is surrounding by several of the South Bay's major freeways and expressways State Route (SR)-85 is to the west, SR-82 is to the north, Interstate (I)-280 to the south, and Lawrence Expressway to the east. It also has airports nearby, including San Jose International, approximately 4.3 miles northeast of the Plan Area and Moffett Federal Airfield, approximately 4.5 miles northwest.

U.S. 101 and the Caltrain Corridor traverse east-west through the center of the City, while State Route 237 is located to the north and Interstates 280 runs along the southern border of the cities, and I-880 runs along the southeast border of Santa Clara. The development areas around these transportation facilities are characterized by visually predominant buildings and important cultural centers. There are also open space areas throughout the valley, including active and passive parks, golf courses, natural rivers, and stream corridors.

Civic Districts

The Plan Area is designated as Public Facilities/Quasi Public Facilities. It is entirely comprised of land owned by the SCUSD and contains educational facilities. There are several other pockets of public facility uses throughout the Cities of Sunnyvale and Santa Clara, utilized for institutions, government offices, parks, schools, and other public facilities.

Residential Districts

The Cities of Santa Clara and Sunnyvale are mostly comprised of single-family, low-density residential areas (i.e., single-story) located along residential collector streets between major boulevards. The Plan Area is surrounded by residential uses. To the east, west, and south of the Plan Area is zoned Low Density Residential (R1, and R0), which permits seven dwelling units per acre. North of the Plan Area is zoned Medium Density Residential (R3), which permits up to 24 dwelling units per acre. Several one- and two-story multi-family buildings are interspersed amongst single-family homes directly north across Bryant Way. The existing Laurelwood Elementary is also surrounded by very low residential (R1-6L) to the north, west, and south. East of Laurelwood Elementary is zoned as Planned Development (PD) but contains single-family homes.

Commercial/Industrial Districts

Commercial corridors in the cities of Sunnyvale and Santa Clara are organized along major thoroughfares, including El Camino Real. Some commercial uses can also be found along the Lawrence Expressway, a quarter mile east of the Plan Area, and Homestead Road, approximately one-half mile south. Commercial developments along El Camino Real, one block north of the Plan Area, are automobile-oriented and suburban in character, with one- or two-story buildings and parking lots placed in front of buildings. Two larger regional shopping centers are located at the corner of El Camino Real and the Lawrence Expressway: Lawrence Expressway Plaza and Lawrence Square Shopping Center. These shopping centers are located approximately one-half mile northeast of the Plan Area. Homestead Road is primarily residential, but contains some commercial and larger institutional campuses, such as Apple Park, and the Kaiser Permanente Santa Clara Medical Center.

The Cities' industrial districts are located in the north, between the San Francisco Bay and the Caltrain Corridor. No industrial uses are within proximity of the Plan Area.

Visual Character of the Plan Area

As discussed above, the Plan Area encompasses the Peterson Middle School campus, Patrick Henry campus, SCUSD Farm, and existing Laurelwood Elementary campus. The Plan Area is surrounded by low-density residential in all directions.

Light and Glare

For purpose of this analysis, "light" refers to light emission, or the degree of brightness, generated by a given source. Artificial lighting may be generated from point sources (i.e., focused points of origin representing unshielded light sources) or from indirectly illuminated sources of reflected light. Light may be directed downward to illuminate an area or surface, cast upward into the sky and refracted by atmospheric conditions (skyglow), or cast sideways and outwards onto off-site properties (overspill). Skyglow and overspill are considered forms of light pollution.

The effects of nighttime lighting are contextual and depend upon the light source's intensity, its proximity to light-sensitive land uses (i.e., sensitive receptors such as residential units and schools), and the existing lighting environment in the vicinity of a project site. The primary sources of nighttime illumination include street lighting, security and other types of outdoor lighting on commercial and residential properties, surface-parking illumination, and illuminated commercial signage. Nighttime lighting can impact views, alter the nature of community, or neighborhood character, or illuminates a sensitive land use. Nighttime illumination of sensitive receptors also may adversely affect certain land use functions, such as those of a residential or institutional nature, since such uses are typically occupied during evening hours and can be disturbed by bright lights.

"Glare" or "unwanted source luminance" is defined as focused, intense light directly emanated by source or indirectly reflected by a surface from a source. Daytime glare typically is caused by the reflection of sunlight from highly reflective surfaces at or above eye level. Reflective surfaces generally are associated with buildings clad with broad expanses of highly polished surfaces or with broad, light- colored areas of paving, Daytime glare generally is most pronounced during early morning and late afternoon hours when the sun is at a low angle and potential exists for intense reflected light to interfere with vision and driving conditions. Daytime glare also may hinder outdoor activities conducted in surrounding land uses, such as sports.

The Plan Area is a built-out urban environment with residential, public, and commercial uses. Residential and public uses produce limited amounts of nighttime lighting, but include exterior lighting installed along buildings for safety, architectural accent, or to illuminate nighttime operations; lights in buildings that illuminate the exteriors of buildings through windows; landscape and wayfinding sign lighting;

street and parking lot lighting; vehicle headlights; sports field lighting; and freeway lighting. The Plan Area is near several freeways. Glare is generally a result of reflections off of pavement, vehicle windows and chrome, and building materials that include reflective glass and other shiny materials.

3.1.2 REGULATORY FRAMEWORK

3.1.2.1 State

California Code of Regulations Title 24 Part 6

The California Energy Code (Cal. Code Regs., tit. 24 § 6) creates standards in an effort to reduce energy consumption. The type of luminaries and the allowable wattage of certain outdoor lighting applications are regulated.

Senate Bill 743

On September 2013, the Governor signed into law Senate Bill (SB) 743, which instituted changes to the CEQA when evaluating environmental impacts to projects located in areas served by transit. While the thrust of SB 743 addressed a major overhaul on how transportation impacts are evaluated under CEQA, it also limited the extent to which aesthetics and parking are defined as impacts under CEQA. Specifically, Section 21099 (d)(1) of the Public Resources Code (PRC) states that a project's aesthetic and parking impacts shall not be considered a significant impact on the environment if:

1. The project is a residential, mixed-use residential, or employment center project, and

2. The project is located on an infill site within a transit priority area.

"Transit priority area" means an area within one-half mile of a major transit stop that is existing or planned. Section 21064.3 of the PRC defines a "major transit stop" as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

3.1.2.2 Local

City of Sunnyvale General Plan

The *Sunnyvale General Plan* Community Character chapter is divided into five sub-chapters: Design, Heritage Preservation, Library, Arts, and Recreation. The Design sub-chapter addresses the quality of the city's physical environment in both the public and private realms. This sub-chapter establishes design

policies and action statements to guide future growth and to enhance the visual quality of new development. The policies and action statements are grouped by the following topics or goals:

- Distinguished City Image
- Attractive Street Environment
- Well-Designed Sites and Buildings
- Accessible and Attractive Public Facilities

3.1.3 THRESHOLDS OF SIGNIFICANCE

The following thresholds for determining the significance of impacts related to visual resources are contained in the environmental checklist form contained in Appendix G of the most recent update of the *CEQA Guidelines*. Adoption and/or implementation of the Proposed Master Plan could result in significant adverse impacts to visual resources, if any of the following could occur:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- In non-urbanized areas, 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?
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

3.1.4 METHODOLOGY

This impact discussion evaluates impacts from inside and outside the Plan Area where the visual resources identified in the existing setting may be affected by the Proposed Master Plan. This impact section analyzes impacts from anticipated development of the Proposed Master Plan.

The visual impacts of a project include both the objective visual resource change created by the project and the subjective viewer response to that change. Distance from the project, frequency of view, length of view, viewer activity, viewer perception, and viewing conditions contribute to the assessment of a visual

impact. The physical limits and changes of the views and the quantity of viewers are objective. Viewer perception is subjective.

The perception of different viewer groups to the visual environment and its elements varies based on viewer activity and awareness. Activities such as commuting in heavy traffic can distract an observer from many aspects of the visual environment. Conversely, pleasure driving or relaxing in a scenic environment can encourage an observer to look at the view more closely and at greater length, thus increasing the observer's attention to detail. Sensitivity is also determined by how much the viewer has at stake in the viewshed. Typically, people who own property in an area are more sensitive to change than those just passing through.

The assessment of aesthetic impacts is subjective by nature. Aesthetics generally refer to the identification of visual resources and the quality of what can be seen, as well as an overall visual perception of the environment. The significance determination for the aesthetics analysis is based on consideration of whether any resources exist within or near the Plan Area; and if a resource exists, (1) whether it can be viewed from public areas within or near the Plan Area and (2) the potential for implementation of the Plan to either hinder views of the resource or result in its visual degradation. Should resources not currently exist, implementation of the Proposed Master Plan would not result in impacts.

3.1.5 ENVIRONMENTAL IMPACTS

Impact AES-1 Have a substantial adverse effect on a scenic vista.

The Plan Area is located within a suburban residential community and does not contain any designated scenic vistas, or other visual resources. Nor are there any designated scenic vistas within the cities of Sunnyvale or Santa Clara. However, views of the coastal mountain ranges are visible within certain road corridors surrounding the Plan Area. The coastal mountain range is visible along Teal Drive, Dunford Way, and Kensington Avenue looking west (see **Figure 3.1-2** and **Figure 3.1-4**). The Proposed Master Plan would enable future development within the Plan Area, including two-story school buildings, but it does not propose any changes that would alter any existing views within the road corridors. All existing and proposed buildings are set back from the street and adjoining residences by several hundred feet. Other views of scenic resources in the surrounding area, including the Diablo Mountain Range and the San Francisco Bay, are largely obstructed from within the Plan Area. As a result, the Proposed Master Plan would have a less than significant impact on scenic vistas.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact AES-2 **Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.**

While the Proposed Master Plan is not located near any designated scenic highways,[5] it is located approximately 1.5 miles north of an eligible scenic highway. State Route 280 travels through San Mateo, San Francisco and Santa Clara counties, part of which is designated scenic through San Mateo County west of Stanford University. However, the project site lies far enough away and is buffered by the Apple Campus in Cupertino and surrounding residential neighborhoods that visual impacts would be minimal should that portion of 280 become designated scenic. Therefore, no impact would occur.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No Impact.

Impact AES-3 **In non-urbanized areas, 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**

5 California Department of Transportation. California State Scenic Highways. Available online at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways, accessed July 7, 2022.

project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality.

The Plan Area is located within an urbanized area and is surrounded by residential uses. The neighborhood consists primarily of one- and two-story single-family homes (see **Figure 3.1-1, Neighborhood Character [Teal Drive and Lillick Drive, Looking East]**). The Plan Area includes the Peterson Middle School campus, Patrick Henry Campus, SCUSD Farm, the Peterson Fields, and the existing Laurelwood Elementary School, encapsulating 71.5 acres in the City of Sunnyvale and 10.4 acres in the City of Santa Clara. The Master Plan would enable future development and redevelopment of the school campus, with a two-story school.

Construction. Buildout of the Proposed Master Plan Area is anticipated to occur over five phases. During that time, construction activities could result in short-term visual impacts including the presence of equipment and material storage, such as the maintenance storage at the north-east corner of the Project Area, as well as grading and earthmoving activities. Construction impacts from future projects could be visually obtrusive or out of character with the surrounding landscape. The visual impacts could be created by mobile construction equipment including construction trucks that enter and exit the project sites, unfinished building pads, and unfinished structures without the final building materials, colors, and landscaping. Teachers, students, and faculty would be particularly exposed to these impacts during construction, as operation of the existing Peterson Middle School would continue during construction of the Proposed Master Plan. While the construction truck trips could result in a change in the visual character surrounding the neighborhood, these activities would be temporary and end once the construction activities are complete. Although this impact could be adverse, it would be short-term, and thus impacts would be less than significant.

Operation. The Plan Area is located entirely within a suburban area. Implementation of the Proposed Master Plan would not change the existing uses of the Plan Area, nor would it change the existing area's visual quality. Most of the proposed new construction development takes place within the footprint of the existing development. The proposed new Laurelwood Elementary School would be built within a portion of the Patrick Henry Campus and a 300 seat Alternative High School may be constructed on the fields north of the existing Patrick Henry buildings. The proposed two-story building as part of the Laurelwood Elementary School campus would be in context with the existing neighborhood, as well as setback several hundred feet from adjoining residences and surrounded by mature trees and bushes. Additionally, the location of the two-story Laurelwood Elementary School building would not impede the views of the coastal mountain ranges along Dunford Way or Kensington Avenue. The future design of the Alternative High School will be designed within the context of the existing neighborhood. Other improvements, such as the District Farm amenities

building and environmental education center would similarly not impede views, as they would be located within the existing campus, and not along the roadway where the mountain range is visible.

The Proposed Master Plan is zoned for public facility uses and will remain compatible with the *City of Sunnyvale General Plan*, and the *City of Santa Clara General Plan* which emphasize neighborhood compatibility and preservation of community character through new developments that are contextually appropriate.[6,7] All zoning designations will remain the same. As a result, the Proposed Master Plan would not conflict with the applicable zoning or other regulations regarding scenic quality. Consequently, impacts would be less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact AES-4 **Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.**

The Plan Area is located in an urbanized built-up area with existing ambient night lighting. The Proposed Master Plan may include lighting for the athletic facilities for nighttime use, such as the fields, tennis courts, and swimming pool. Any nighttime lighting would be limited to 10:30pm Sunday through Thursday, and 11:00pm on Friday and Saturday. These lights would increase nighttime lighting in the area, but they would be subject to the Municipal Code that requires any lighting to be shielded or equipped with special lenses in such a manner as to prevent any glare or direct illumination on any public street or other property. This would reduce any potential impacts to nighttime views to a less than

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6 City of Sunnyvale General Plan, *Chapter 4 – Community Character*, 2011. Available online at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/598/637819113519200000, accessed on July 11, 2022.

7 City of Santa Clara General Plan. *Chapter 5 – Goals and Policies*. 2014. Available online at: 635729106120730000 (santaclaraca.gov), accessed July 11, 2022.

significant level. Additionally, as stated in the Focused VMT Analysis for the Peterson Middle School, Laurelwood Elementary School, and District Farm Master Plan, the number of vehicles in the area would remain the same (see **Appendix 3.16-1**).[8] The Proposed Plan will increase the amount of built and paved surfaces, particularly in the area north of the SCUSD Farm. What is currently a field will be developed with an Environmental Center, a parking lot, and a driveway. This may cause a slight increase in glare in the area. However, these new sources of glare would not substantially increase the amount of glare, since the Plan Area is already an urban built-up environment and increase in light sources would be incremental and less than significant. Building materials and lighting plans would be subject to the SCUSD's architectural review process as well as the Division of the State Architects plan review process[9] prior to construction to ensure that the Proposed Master Plan would not create a substantial new source of light or glare. Therefore, light and glare impacts will less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

3.1.6 CUMULATIVE IMPACTS

The cumulative aesthetics study area for the Proposed Master Plan is the viewshed (locations that can view the Proposed Master Plan Area and locations that can be viewed from within the Plan Area) that the Proposed Master Plan lies within. As described above, there are no existing scenic vistas within or nearby the Plan Area. Thus, a scenic vista resource does not exist, and cumulative development in the project vicinity would result in no impact on a scenic vista or scenic highway.

Although the surrounding area is largely built out with few remaining areas of undeveloped open space, cumulative development would likely include residential, retail and mixed-use projects, as well

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8 Hexagon Transportation Consultants. *Focused VMT Analysis for the Peterson Middle School, Laurelwood Elementary School, and District Farm Master Plan*. 2022.

9 Division of the State Architect, *Plan Review for Schools, Essential Services Construction Projects*, 2021. Available online at: https://www.dgs.ca.gov/DSA/Resources/Page-Content/Resources-List-Folder/Plan-Review-for-School-Essential-Services-Construction-Projects, accessed on July 7, 2022.

as industrial projects, office buildings, and school enrollment growth. Future development in the surrounding area has the potential to alter the visual quality and character of the surrounding community through use of new architectural styles and designs as well as increased building heights. However, future projects outside of the Plan Area, would be required to adhere to specific development standards in the cities' zoning ordinances and General Plans designed to enhance the visual appeal of development and public views in the Cities. In addition, as discussed under **Impact AES-3**, the Proposed Master Plan would not have a significant negative impact on the visual quality of the Plan Area or its surroundings and therefore would not contribute to cumulative aesthetic impacts. As a result, potential impacts related to aesthetics would not be cumulatively considerable and would be less than significant.

Development under the Proposed Master Plan may include lighting for the athletic facilities for nighttime use, such as the fields, tennis courts, and swimming pool. These lights would increase nighttime lighting in the area, but they would be subject to the Municipal Code to prevent any glare or direct illumination on any public street or other property. This would reduce any potential increased light and glare in the Plan Area to less than significant levels. Therefore, impacts associated with light and glare as a result of the Proposed Master Plan would not be cumulatively considerable and would be less than significant.

3.1.7 REFERENCES

California Department of Transportation. California State Scenic Highways. Available online at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways, accessed July 7, 2022.

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City of Santa Clara. *2010-2035 General Plan Final Environmental Impact Report*. 2011. Available online at: https://www.santaclaraca.gov/home/showpublisheddocument/12900/635713044859030000, accessed June 30, 2022

City of Santa Clara General Plan. *Chapter 5 – Goals and Policies*. 2014. Available online at: 635729106120730000 (santaclaraca.gov), accessed July 11, 2022.

City of Sunnyvale General Plan, *Chapter 4 – Community Character*, July 2011. Available online at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/598/637819113519200000, accessed on July 11, 2022.

City of Sunnyvale. *Land Use and Transportation Element Draft Environmental Impact Report*. 2016. Available online at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/608/637819113538930000, accessed June 30, 2022

Division of the State Architect, *Plan Review for Schools, Essential Services Construction Projects*, 2021. Available online at: https://www.dgs.ca.gov/DSA/Resources/Page-Content/Resources-List-Folder/Plan-Review-for-School-Essential-Services-Construction-Projects, accessed on July 7, 2022.

Hexagon Transportation Consultants. *Focused VMT Analysis for the Peterson Middle School, Laurelwood Elementary School, and District Farm Master Plan*. 2022.

3.2 AGRICULTURE AND FORESTRY RESOURCES

INTRODUCTION

This section describes the existing agricultural resources within the region and evaluates the significance of the changes in agricultural resources that could result from the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan"). In addition, this EIR provides regional-scale mitigation measures as well as a framework of mitigation measures for subsequent, site-specific environmental review documents prepared by lead agencies to reduce identified impacts as appropriate and feasible.

Note also that no physical changes to the existing Laurelwood Elementary School site are included in the Proposed Master Plan.

3.2.1 ENVIRONMENTAL SETTING

3.2.1.1 Existing Conditions

Agricultural Lands

The Plan Area is located in the Santa Clara Valley in northwest Santa Clara County, which has a rich agricultural history known for its orchards and canneries. Over the last several decades, Santa Clara County has lost 21,171 acres of agricultural land to development.[1]

The Plan Area is located in the northern section of the Santa Clara Valley, which is densely developed and urban. The cities of Sunnyvale and Santa Clara do not contain any agricultural zoning, or any significant agricultural resources or operations. However, the City of Sunnyvale includes two pockets of land used for agricultural purposes. One is an approximately 10.6-acre orchard located at the Sunnyvale Heritage Park Museum, and the other is the 9.7-acre farm located on the Peterson Middle School campus operated by the Santa Clara Unified School District (SCUSD). While these areas are not zoned for agricultural uses, these two pockets are designated by the Department of Conservation as Unique Farmland.[2] Unique Farmland includes areas with lesser quality soils used for the production of the state's leading agricultural crops. This

1 County of Santa Clara/Santa Clara Valley Open Space Authority. *Santa Clara Valley Agricultural Plan: Investing in Our Working Lands for Regional Resilience.* 2018. Available online at: https://www.openspaceauthority.org/system/user_files/Documents/Grids/current_projects/SCV_ActionPlan_010318.pdf, accessed June 30, 2022.

2 California Department of Conservation, California Important Farmland Finder. Available online at: https://maps.conservation.ca.gov/dlrp/ciff/app/, accessed July 1, 2022.

land is usually irrigated but may include non-irrigated orchards or vineyards as found in some climatic zones in California.

The SCUSD Farm located on the Peterson Middle School campus and has been in operation since August 2017. The Farm grows produce that is served in the Santa Clara Unified Cafeterias and used in Nutrition Education.

Williamson Act Lands

The California Legislature passed the Williamson Act in 1965 to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses. An agricultural preserve defines the boundary of an area within which a city or county will enter into Williamson Act contracts with landowners. The Williamson Act creates an arrangement whereby private landowners' contract for a minimum of 10 years with counties and cities to voluntarily restrict their land to agricultural and compatible open space uses. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than potential market value. The cities of Sunnyvale and Santa Clara do not contain any ongoing Williamson Act contracts.[3]

3.2.2 REGULATORY FRAMEWORK

3.2.2.1 Federal

Department of Transportation Act, Section 4(f)

Section 4(f) of the Department of Transportation Act, as amended (49 USC 303), "policy on lands, wildlife and waterfowl refuges, and historic sites" indicates:

- It is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.

- The Secretary of Transportation shall cooperate and consult with the Secretaries of the Interior, Housing and Urban Development, and Agriculture, and with the states, in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of lands crossed by transportation activities or facilities.

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3 Ibid.

- The Secretary may approve a transportation program or project (other than any project for a park road or parkway under Section 204 of Title 23) requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

    1. there is no prudent and feasible alternative to using that land; and

    2. the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) of 1981 (7 USC § 4201, et seq.) is administered by the United States Natural Resources Conservation Service (NRCS). The NRCS maps soils and farmland to provide comprehensive information necessary for understanding, managing, conserving, and sustaining the nation's limited soil resources. The NRCS determines impacts to farmland that could occur due to a proposed project. The determination is made through coordination between the federal agency proposing or supporting the project and the NRCS. The NRCS makes a determination, using set thresholds, as to whether additional project-specific mitigation is required. The FPPA is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to non-agricultural uses. It assures that—to the extent possible—federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.

Federal Farm and Ranchland Protection Program

The Federal Farm and Ranchland Protection Program (FRPP) is a voluntary easement purchase program that helps farmers and ranchers keep their land in agriculture. Pursuant to Sections 1539-1549 of the Farmland Protection Policy Act (FPPA) of 1981 Sections, the Secretary of Agriculture is directed to establish and carry out a program to "minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to the extent practicable, will be compatible with state, unit of local government, and private programs and policies to protect farmland." (7 USC 4201-4209 & 7 USC 658). The program provides matching funds to state, tribal, or local governments

and nongovernmental organizations with existing farmland protection programs to purchase conservation easements or other interests in land.

The FRPP is re-authorized in the Farm Security and Rural Investment Act of 2002 (Farm Bill). The NRCS manages the program. The Technical Committee, awards funds to qualified entities to conduct their farmland protection programs. Although a minimum of 30 years is required for conservation easements, priority is given to applications with perpetual easements. The Farm Bill was amended in 2018 to repeal the Desert Terminal Lakes Program (The Department of Agriculture program requires the transfer of certain Commodity Credit Corporation funds to the Bureau of Reclamation to provide water to at-risk natural desert terminal lakes).

Agricultural Improvement Act of 2018

Every five years, Congress passes a Farm Bill to establish national agriculture, nutrition, conservation, and forestry policy; the Agricultural Improvement Act of 2018 (2018 Farm Bill; H.R. 2; Public Law 115-334) provides for the reform and continuation of agricultural and other programs of the Department of Agriculture through fiscal year 2023. The Agricultural Improvement Act of 2018 is an update to the 2014 Farm Act, which consolidated agricultural conservation programs for flexibility, accountability, and adaptability at the local level; made USFS's Stewardship Contracting Authority over forestry resources permanent; provided funding for agricultural research, development, and promoted local and regional food systems; and encouraged agricultural producers and partners to design conservation projects that focus on and address regional priorities. The Act reauthorizes the Supplemental Nutrition Assistance Program (SNAP), the Food Distribution Program on Indian Reservations, The Emergency Food Assistance Program (TEFAP), Commodity Supplemental Food Program, and other nutrition programs. The 2018 Farm Bill also increased funding for TEFAP and the Food Insecurity Nutrition Incentive grant program. Some previously temporary programs were made permanent in the 2018 farm bill including promotional funds for farmers markets, organic farming research funds, funding of organizing and education of future farmers, and funding for veteran and minority farmers. The Agricultural Conservation Easement Program (ACEP) was continued with the 2018 Farm Bill. ACEP is composed of an Agricultural Land Easement (ALE) component and a Wetlands Reserve Easement (WRE) component; the purposes of the ALE component are to protect the agricultural use and future viability and related conservation values, of eligible land by limiting nonagricultural uses of that land and to protect grazing uses and related conservation values. The NRCS manages the program.

Federal Forest Legacy Program

The Forest Legacy Program (FLP) (16 USC § 2103c) was part of the 1990 Federal Farm Bill. The purpose of the FLP is to protect environmentally important forestland under private ownership from conversion to non-forest uses, such as residential or commercial development. The FLP promotes the use of voluntary conservation easements on these properties. Landowners who wish to participate may sell or transfer particular rights, such as the right to develop the property or to allow public access, while retaining ownership of the property and the right to us it in any way consistent with the terms of the easement. The agency or organization holding the easement is responsible for managing the rights it acquires and for monitoring compliance by the landowner. Forest management activities, including timber harvesting, hunting, fishing, and hiking are encouraged, provided they are consistent with the program's purpose.

Federal Environmental Quality Incentives Program

The Environmental Quality Incentives Program (EQIP) is a voluntary program that provides financial and technical assistance through contracts up to 10 years in length to farmers and ranchers who face threats to soil, water, air, and related natural resources on their land. These contracts provide financial assistance to help plan and implement conservation practices that address natural resource concerns and for opportunities to improve soil, water, plant, animal, air and related resources on agricultural land and non-industrial private forestland. In addition, another purpose of EQIP is to help producers meet Federal, State, Tribal and local environmental regulations.

3.2.2.2 State

Farmland Mapping and Monitoring Program

In 1982, the State of California created the Farmland Mapping and Monitoring Program (FMMP) within the Department of Conservation to carry on the mapping activity from the NRCS on a continuing basis. The FMMP is a non-regulatory program that provides consistent and impartial analysis of agricultural land use and land use changes throughout California for use by decision-makers in assessing present status, reviewing trends, and planning for the future of California's agricultural land resources. The FMMP produces Important Farmland Maps, which are a hybrid of resource quality (soils) and land use information. The FMMP is the primary system by which the extent, distribution, and quality of farmland is evaluated and monitored. Maps of Important Farmland are prepared periodically (approximately every two years) by the FMMP for most of the state's agricultural regions, based on soil survey information and land inventory and monitoring criteria developed by the NRCS. The classification system employed by FMMP consists of eight mapping categories: five categories of agricultural lands and three categories of nonagricultural lands. The characteristics of these eight categories are summarized below. As discussed

above the data provided by FMMP (maps and tables) include farmland in and outside the SOI. Further, under SB 375 farmland is defined as all farmland outside all existing city spheres of influence (SOIs)/city limits and is classified as prime or unique, or farmland of statewide importance, or is farmland is classified by a local agency in its general plan that meets or exceeds the standards for prime or unique farmland or farmland of statewide importance. The following definitions apply to the FMMP:

- **Prime Farmland**: Prime farmlands are lands with the best combination of physical and chemical features able to sustain long-term production of agricultural crops. The land must be supported by a developed water supply that is dependable and of adequate quality during the growing season. It must also have been used for the production of irrigated crops at some time during the four years before the mapping data were collected.

- **Farmland of Statewide Importance**: Farmland of statewide importance are lands with agricultural land use characteristics, irrigation water supplies, and physical characteristics similar to prime farmland but with minor shortcomings, such as steeper slopes or less ability to hold and store moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

- **Unique Farmland**: Unique farmlands are lands with lesser quality soils used for the production of California's leading agricultural crops. These lands are usually irrigated but may include non-irrigated orchards or vineyards as found in some of the state's climatic zones. Land must have been cropped at some time during the four years prior to the mapping date. The District Farm has been mapped by the Department of Conservation as Unique Farmland.

- **Farmland of Local Importance**: Farmlands of local importance are important to the local agricultural economy, as determined by each county's board of supervisors and a local advisory committee.

- **Grazing Land**: Grazing lands are lands on which the existing vegetation is suited to the grazing of livestock.

- **Urban and Built-up Land:** This category describes land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

- **Other Land:** This category encompasses land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not

suitable for livestock grazing; vacant and nonagricultural land surrounded on all sides by urban development; confined livestock, poultry, or aquaculture facilities; strip mines; borrow pits; and water bodies smaller than 40 acres.

- **Water:** This category describes perennial bodies of water with an extent of at least 40 acres.

The California Land Conservation Act (Williamson Act)

The California Land Conservation Act (Williamson Act) of 1965 (Gov. Code, § 51200–51207) was enacted by the California State Legislature in 1965 to encourage the preservation of agricultural lands. The California Department of Conservation administers the Williamson Act, for the conservation of farmland and other resource-oriented laws. The Williamson Act program permits property tax adjustments for landowners who contract with a city or county to keep their land in agricultural production or approved open space uses for at least 10 years. Lands covered by Williamson Act contracts are assessed on the basis of their agricultural value instead of their potential market value under nonagricultural uses. In return for the preferential tax rate, the landowner is required to contractually agree to not develop the land for a period of at least 10 years.

Williamson Act contracts are renewed annually for 10 years unless a party to the contract files for non-renewal. The filing of a non-renewal application by a landowner ends the automatic annual extension of a contract and starts a nine-year phase-out of the contract. During the phase-out period, the land remains restricted to agricultural and open-space uses, but property taxes gradually return to levels associated with the market value of the land. At the end of the nine-year non-renewal process, the contract expires and the owner's uses of the land are restricted only by applicable local zoning.

The Williamson Act defines compatible use of contracted lands as any use determined by the county or city administering the preserve to be compatible with the agricultural, recreational, or open-space use of land within the preserve and subject to contract (Gov. Code, § 51202[e]). However, uses deemed compatible by a county or city government must be consistent with the principles of compatibility set forth in Government Code section 51231, 51238, or 51238.1.

California Forest Legacy

Similar to the Federal Forest Legacy Program, the California Forest Legacy Act of 2007 (Pub. Resources Code, § 12220(G)) is a program of the California Department of Forestry and Fire Protection (CAL FIRE) to promote conservation easements in environmentally sensitive forest areas. Money to fund the Program is obtained from gifts, donations, federal grants and loans, other appropriate funding sources, and from the

sale of bonds pursuant to Proposition 12, the Safe Neighborhood Parks, Clean Water, Clean Air, and Coastal Protection Bond Act (The Villaraigosa-Kelley Act) of 2000 (Pub. Resources Code, div. 5, ch. 1.692).

This act defines "forest land" as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits" (California Department of Forestry and Fire Protection, 2011).

The Right to Farm Act of 1981

The Right to Farm Act of 1981 (Civ. Code, § 3482.5) is designed to protect commercial agricultural operations from nuisance complaints that may arise when an agricultural operation is conducting business in a "manner consistent with proper and accepted customs." The code specifies that established operations that have been in business for three or more years that were not nuisances at the time they began shall not be considered a nuisance as a result of new land use.

California Farmland Conservancy Program Act

The California Farmland Conservancy Program Act of 2010 (Pub. Resources Code, § 10200 et seq.), also known as Sen. Bill No. 1142 (Stats. 2010, ch. 323) (SB 1142), established the California Farmland Conservancy Program (CFCP), which provides grants for agricultural conservation easements. An agricultural conservation easement aims to maintain agricultural land in active production by removing the development pressures from the land. Such an easement prohibits practices that would damage or interfere with the agricultural use of the land. Because the easement is a restriction on the deed of the property, the easement remains in effect even when the land changes ownership. Agricultural conservation easements are created specifically to support agriculture and prevent development on the subject parcels. While other benefits may accrue because the land is not developed (scenic and habitat values, for example), the primary use of the land is agricultural. Easements funded by the CFCP must be of a size and nature suitable for viable commercial agriculture.

Open Space Subvention Act

The Open Space Subvention Act (OSSA) of 1972 (Gov. Code, § 16140 et seq.) was enacted on January 1, 1972, to provide for the partial replacement of local property tax revenue foregone as a result of participation in the Williamson Act and other enforceable open space restriction programs. Participating local governments receive annual payment on the basis of the quantity (number of acres), quality (soil type and agricultural productivity), and, for Farmland Security Zone contracts, location (proximity to a city) of land enrolled under eligible, enforceable open space restrictions.

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000

The Cortese-Knox-Hertzberg Local Government Reorganization Act (Cortese-Knox-Hertzberg Act) of 2000 (Gov. Code, § 56000 et seq.) established procedures for local government changes of organization, including city incorporations, annexations to a city or special district, and city and special district consolidations. This act requires that development or use of land for other than open space shall be guided away from existing prime agricultural lands in open space use toward areas containing nonprime agricultural lands, unless that action would not promote that planned, orderly, efficient development of an area.

Z'berg-Nejedly Forest Practice Act of 1973

The Z'berg-Nejedly Forest Practice Act (Forest Practice Act) of 1973 (Pub. Resource Code, div. 4, ch. 8) established a nine-member Board of Forestry whose mandate is to assure the best economic and environmental practices in timber production in California. The Board requires that a Registered Professional Forester (RPF) prepare a Timber Harvest Plan (THP) before harvesting timber on most non-federal forestland. The goal of the THP is to assure that the continual productivity of timberlands is sustained and enhanced by the timber harvesting that takes place on the site, and that related resources are protected to the extent feasible, including watersheds, fisheries, wildlife, recreation, aesthetics, and employment in the region.

Timberland Production Zones

Under the Z'berg-Warren-Keene-Collier Forest Taxation Reform Act of 1976 (Gov. Code, §§ 51110–51119.5), counties must provide for the zoning of land used for growing and harvesting timber as Timberland Preserve Zones (TPZ). A TPZ is a 10-year restriction on the use of timberland, similar to the Williamson Act for agricultural lands. Land use under a TPZ is restricted to growing and harvesting timber or to compatible uses. In return, taxation of timberland under a TPZ will be based only on such restrictions in use.

California Timberland Productivity Act of 1982

The California Timberland Productivity Act (CTPA) of 1982 (Gov. Code, §§ 51100–51104) describes the powers and duties of local government in protecting timberlands. The law is designed to maintain an optimum amount of timberland, ensuring its current and continued availability by establishing Timberland Preserve Zones (TPZ) on all qualifying timberland, which restrict land use to growing and harvesting timber and other compatible uses. The Act discourages premature or unnecessary conversion of timberland to urban or other uses and expansion of urban services into timberland and encourages investment in timberlands based on reasonable expectation of harvest. The CTPA also provides that timber operations

conducted in accordance with California forest practice rules shall not be restricted or prohibited due to land uses in or around the location of the timber operations

3.2.2.3 Local

Santa Clara Valley Agricultural Plan

The Santa Clara Valley Agricultural Plan, approved in 2018, aims to promote agricultural preservation that will reduce future conversion of local farmland and the associated increase in greenhouse gas emissions while growing a vibrant local food economy that contributes to our quality of life. It includes improved land use policies, a regional agricultural conservation easement program and other voluntary incentives, an agricultural economic development strategy, and a marketing effort to raise awareness about local agricultural producers with residents and employers. The Plan was endorsed by the Santa Clara Valley Open Space Authority's (OSA) Board of Directors and adopted by the Santa Clara County Board of Supervisors, who also voted to create an Agricultural Preservation Task Force. The Task Force will develop specific recommendations to implement the strategies presented in the Plan and to identify possible funding streams to support those strategies.

3.2.3 THRESHOLDS OF SIGNIFICANCE

For the purposes of this EIR, SCUSD has determined that adoption and/or implementation of the Proposed Master Plan would result in significant impacts to agricultural and/or forestry resources, if any of the following could occur:

- Convert prime farmland, unique farmland, or farmland of statewide importance (farmland), as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.
- Conflict with existing zoning or land use designation for agricultural use, or a Williamson Act contract.
- Conflict with existing zoning or land use designation for, or cause rezoning of, forest land (as defined in Pub. Resources Code, § 12220(g)), timberland (as defined by Pub. Resources Code, § 4526), or timberland zoned Timberland Production (as defined by Gov. Code, § 51104(g));
- Result in the loss of forest land or conversion of forest land into non-forest use.
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

3.2.4 METHODOLOGY

The analysis assesses the potential impacts to agricultural, timber, and forest resources that could result from implementation of the Proposed Master Plan. Qualitative impacts were assessed by evaluating the Proposed Master Plan potential for impacting agricultural activities within the City and County.

The methodology for determining the significance of agricultural, timberland, and forest impacts compares the existing conditions to expected development under the Proposed Master Plan, as required by *State CEQA Guidelines* Section 15126.2(a). The known agricultural, timberland, and forest resources located within the Plan were evaluated using the criteria set forth by the California Department of Conservation and the *State CEQA Guidelines*. However, the Plan Area includes non-state-recognized agricultural resources, and these resources were included in the research analysis.

3.2.5 ENVIRONMENTAL IMPACTS

Impact AG-1 **Convert prime farmland, unique farmland, or farmland of statewide importance (farmland), as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.**

The Plan Area consists of the entire Patrick Henry Campus, Peterson Middle School Site, and future use of the existing Laurelwood Elementary School Site. The Plan Area is located within a primarily residential area of the cities of Sunnyvale and Santa Clara. The Plan Area consists of three previously developed educational campuses totaling 81.9-acres. The existing Laurelwood Elementary School site is zoned Public Facility / Quasi Public Facility and is surrounded by residential and commercial uses. There are no agricultural zones within or surrounding the Plan Area, but the Plan Area includes an approximately 11.3-acre farm run by SCUSD. The SCUSD Farm is designated Unique Farmland, but the Proposed Master Plan does not include any land use conversion. Additionally, the Proposed Master Plan includes farm improvements such as a new 4,800 square foot farm amenities building for equipment storage, staging area, an office, and parking. As a result, The Proposed Master Plan would not convert farmland to non-agricultural use, and no impacts would occur. Additionally, the proposed improvements would help preserve agricultural uses, as well as enhance farm operations, leading to a beneficial impact to unique farmland in the area.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No Impact.

Impact AG-2 Conflict with existing zoning for agricultural use, or a Williamson Act contract.

The existing zoning for the Proposed Master Plan is Public Facilities / Quasi Public Facilities. No active Williamson Act contracts are located within the Plan Area, nor in the cities of Sunnyvale and Santa Clara. The existing SCUSD Farm would not be altered or reduced. The Proposed Master Plan includes farm improvements such as a new 4,800 square foot farm amenities building for equipment storage, staging area, an office, and parking. Implementation of the proposed Master Plan would not conflict with existing agricultural zoning nor a Williamson Act Contract. Therefore, no impact would occur.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Impact AG-3 Conflict with existing zoning or land use designation for, or cause rezoning of, forest land (as defined in Pub. Resources Code, § 12220(g)), timberland (as defined by Pub. Resources Code, § 4526), or timberland zoned Timberland Production (as defined by Gov. Code, § 51104(g)).

Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use.

The Plan Area is currently designated as Public Facilities / Quasi -Public Facilities in the cities of Sunnyvale and Santa Clara. The Plan Area and the surrounding area do not contain any forest land or land zoned for timberland production. Implementation of the Proposed Master Plan would not conflict with existing zoning, or cause rezoning of forest land or timberland. No forest land would be converted as a result of the Proposed Master Plan. Therefore, no impacts would occur.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Impact AG-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

The existing zoning for the Proposed Master Plan site is Public Facilities / Quasi Public Facilities. No active Williamson Act contracts are located within the Plan Area, nor in the cities of Sunnyvale and Santa Clara. The City of Sunnyvale includes two pockets of land used for agricultural purposes that are designated by the Department of Conservation as Unique Farmland.[4] In addition to the SCUSD Farm, the closest agricultural land in surrounding area is located approximately one mile northwest of the Plan Area. The Proposed Master Plan will retain the existing SCUSD farm acreage and it includes farm improvements such as program improvements, and a new farm amenity building. The Plan Area and the surrounding area are urban, densely developed, and do not contain any forest land. The Proposed Master Plan does not involve any changes that could result in conversation of farmland or forest land in the surrounding area. Therefore, no impacts would occur.

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4 California Department of Conservation, California Important Farmland Finder. Available online at: https://maps.conservation.ca.gov/dlrp/ciff/app/, accessed July 1, 2022.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measure are required.

Level of Significance After Mitigation

No impact.

3.2.6 CUMULATIVE IMPACTS

Under the Proposed Master Plan, no conversion of farmland, timberland, or forest land is anticipated. As discussed above, the only agricultural land in the surrounding area is within the Plan Area itself, and a pocket located approximately one mile away. The Proposed Master Plan would not impact these pockets of agricultural land. The cities of Sunnyvale and Santa Clara are urban and densely developed. There are no forest lands in the cities or the surrounding areas. As a result, there would be no cumulative impacts on agricultural, timber, and forest resources.

3.2.7 REFERENCES

County of Santa Clara/Santa Clara Valley Open Space Authority. *Santa Clara Valley Agricultural Plan: Investing in Our Working Lands for Regional Resilience*. 2018. Available online at: https://www.openspaceauthority.org/system/user_files/Documents/Grids/current_projects/SCV_ActionPlan_010318.pdf, accessed June 30, 2022.

California Department of Conservation, California Important Farmland Finder. Available online at: https://maps.conservation.ca.gov/dlrp/ciff/app/, accessed July 1, 2022.

3.3 AIR QUALITY

INTRODUCTION

This section describes the ambient air quality of the local and regional area and provides a comparison of existing air quality to applicable state and federal pollutant standards. In addition, sources of air emissions in the vicinity of the Plan Area are identified and discussed. This section also identifies the plans and policies developed in efforts to improve air quality. Finally, this section evaluates potential air quality impacts associated with construction and operation of the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan"); and identifies mitigation measures to reduce those potential impacts. Sources used in this discussion include the Bay Area Air Quality Management District (BAAQMD) Air Quality Guidelines and air quality data from the California Air Resources Board (CARB). Air emission calculations estimated for the Proposed Master Plan are contained within ***Appendix 3.3-1, Air Emission Calculations,*** *of this Environmental Impact Report (EIR).*

3.3.1 ENVIRONMENTAL SETTING

The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. The Plan Area is located within the San Francisco Bay Air Basin (SFBAAB). The SFBAAB encompasses all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma, and the southwestern portion of Solano County. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions.[1]

3.3.1.1 Climate and Meteorology

Climate

The climate is dominated by the strength and location of a semi-permanent, subtropical high-pressure cell. During the summer, the Pacific high-pressure cell is centered over the northeastern Pacific Ocean resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below to the surface because of the northwesterly flow produces a band of cold water off the California coast. The cool and moisture-laden air approaching the coast from the Pacific Ocean is further cooled by the presence of the cold-water band resulting in condensation and the presence of fog and stratus clouds along the Northern California coast.

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1 Bay Area Air Quality Management District. 2017. *CEQA Air Quality Guidelines*. Available online at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed August 10, 2022.

In the winter, the Pacific high-pressure cell weakens and shifts southward resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Weak inversions coupled with moderate winds result in a low air pollution potential.

Topography

The topography of the SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys and bays. This complex terrain, especially the higher elevations, distorts the normal wind flow patterns in the SFBAAB. The greatest distortion occurs when low-level inversions are present and the air beneath the inversion flow independently of air above the inversion, a condition that is common in the summertime.

Wind Patterns

During the summer, winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately south of Mount Tamalpais, the northwesterly winds accelerate considerably and come more directly from the west as they stream through the Golden Gate. This channeling of wind through the Golden Gate produces a jet that sweeps eastward and splits off to the northwest toward Richmond and to the southwest toward San Jose when it meets the East Bay hills.

In the winter, the SFBAAB frequently experiences stormy conditions with moderate to strong winds, as well as periods of stagnation with very light winds. Winter stagnation episodes are characterized by drainage flows in coastal valleys. Drainage is a reversal of the usual daytime air-flow patterns; air moves from the Central Valley towards the coast and back down toward the Bay from the smaller valleys within the SFBAAB.

Temperature

Summertime temperatures in the SFBAAB are determined in large part by the effect of differential heating between land and water surfaces. Because land tends to heat up and cool off more quickly than water, a large-scale gradient (differential) in temperature is often created between the coast and the Central Valley, and small-scale local gradients are often produced along the shorelines of the ocean and bays. The temperature gradient near the ocean is also exaggerated, especially in summer, because of the upwelling of cold ocean bottom water along the coast. On summer afternoons the temperatures at the coast can be 35ºF cooler than temperatures 15 to 20 miles inland. At night, this contrast usually decreases to less than 10º.

In the winter, the relationship of minimum and maximum temperatures is reversed. During the daytime the temperature contrast between the coast and inland areas is small, whereas at night the variation in temperature is large.

Precipitation

The SFBAAB is characterized by moderately wet winters and dry summers. Winter rains account for about 75% of the average annual rainfall. The amount of annual precipitation can vary greatly from one part of the SFBAAB to another even within short distances. In general, total annual rainfall can reach 40 inches in the mountains, but it is often less than 16 inches in sheltered valleys.

During rainy periods, ventilation (rapid horizontal movement of air and injection of cleaner air) and vertical mixing are usually high, and the pollution levels tend to be low. However, frequent dry periods do occur during the winter when mixing and ventilation are low and pollutant levels build up.

3.3.1.2 Regional Quality Setting

Air Pollutants of Concern

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards for outdoor concentrations. The federal and state standards have been set at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons such as children, pregnant women, and the elderly, from illness or discomfort. Criteria air pollutants include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter 2.5 microns or less in diameter (PM2.5), particulate matter ten microns or less in diameter (PM10), and lead (Pb). Note that reactive organic gases (ROGs), which are also known as reactive organic compounds (ROCs) or volatile organic compounds (VOCs), and nitrogen oxide (NOx) are not classified as criteria pollutants. However, ROGs and NOx are widely emitted from land development projects and participate in photochemical reactions in the atmosphere to form O_3; therefore, NOx and ROGs are relevant to the Proposed Master Plan and are of concern in the air basin and are listed below along with the criteria pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in **Table 3.3-1, Criteria Pollutants Summary of Common Sources and Effects**.

Table 3.3-1
Criteria Pollutants Summary of Common Sources and Effects

Pollutant	Major Man-Made Sources	Human Health & Welfare Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuels is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O_3)	Formed by a chemical reaction between volatile organic compounds (VOC) and nitrous oxides (NOx) in the presence of sunlight. VOCs are also commonly referred to as reactive organic gases (ROGs). Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles, and dyes.
Particulate Matter (PM10 & PM2.5)	Produced by power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and others.	Increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Sulfur Dioxide (SO_2)	A colorless, nonflammable gas formed when fuel containing sulfur is burned; when gasoline is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant; aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron, and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.

Source: California Air Pollution Control Officers Association. Health Effects. Available online at: http://www.capcoa.org/health-effects/

Ambient Air Quality

Ambient air quality in the Plan Area can be characterized by ambient air quality measurements conducted at nearby air quality monitoring stations. Existing ambient air quality and historical trends and projections in the vicinity are documented by measurements made by the Bay Area Air Quality Management District (BAAQMD), the air pollution regulatory agency in the SFBAAB region that maintains air quality monitoring stations which process ambient air quality measurements.

The purpose of the monitoring station is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS). O_3 and particulate matter (PM10 and PM2.5) are

pollutants of particular concern in the SFBAAB. The monitoring station located closest to the Plan Area and most representative of air quality is the San Jose-Jackson Street Station located approximately 5.9 miles east of the Plan Area. Ambient air emission concentrations vary due to localized variations in emissions sources and climate and should be considered "generally" representative of ambient concentrations in the Plan Area. The San Jose-Jackson Street station monitors O_3, PM2.5, PM10, and NO_2, see **Table 3.3-2, San Jose-Jackson Street Air Monitoring Station Ambient Pollutant Concentrations**.

Table 3.3-2
San Jose-Jackson Street Air Monitoring Station Ambient Pollutant Concentrations

Pollutant	Standards[1]	Year		
		2018	2019	2020
Ozone (O_3)				
Maximum 1-hour concentration monitored (ppm)		0.078	0.095	0.106
Maximum 8-hour concentration monitored (ppm)		0.061	0.081	0.085
Number of days exceeding state 1-hour standard	0.09 ppm	0	1	1
Number of days exceeding federal/state 8-hour standard	0.070 ppm	0	2	2
Nitrogen Dioxide (NO_2)				
Maximum 1-hour concentration monitored (ppm)		0.086	0.060	0.052
Annual average concentration monitored (ppm)		0.012	0.010	0.009
Number of days exceeding state 1-hour standard	0.18 ppm	0	0	0
Fine Particulate Matter ($PM_{2.5}$)				
Maximum 24-hour concentration monitored (µg/m³)		133.9	27.6	120.5
Annual average concentration monitored (µg/m³)		12.7	9.0	11.5
Number of samples exceeding federal standard	35 µg/m³	15.5	0	12.0
Respirable Particulate Matter (PM_{10})				
Maximum 24-hour concentration monitored (µg/m³)		115.4	75.4	134.9
Annual average concentration monitored (µg/m³)		20.9	18.4	24.6
Number of samples exceeding state standard	50 µg/m³	12.2	11.8	NA

Source: California Air Resources Board. Air Quality Data Statistics. Available online at: https://www.arb.ca.gov/adam.
NA = not available
[1] *Parts by volume per million of air (ppm), micrograms per cubic meter of air (µg/m³), or annual arithmetic mean (aam).*
[2] *The 8-hour federal O_3 standard was revised from 0.075 ppm to 0.070 ppm in 2015. The statistics shown are based on the 2015 standard of 0.070 ppm.*

The attainment status for the SFBAAB region is included in **Table 3.3-3, Attainment Status of the San Francisco Bay Area Air Basin**. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The SFBAAB region is designated as a nonattainment area for federal ozone and are designated as nonattainment for state ozone, PM10, and PM2.5 standards.

Table 3.3-3
Attainment Status of the San Francisco Bay Area Air Basin

Pollutant	State	Federal
Ozone (O_3)	Non-Attainment	Non-attainment
Particulate Matter (PM_{10})	Non-Attainment	Unclassified
Particulate Matter ($PM_{2.5}$)	Non-Attainment	Attainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO_2)	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead	Attainment	Attainment

Source: BAAQMD. 2017. Air Quality Standards and Attainment Status. Available online at: http://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status#ten.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes, such as petroleum refining and chrome-plating operations; commercial operations, such as gasoline stations and dry cleaners; and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute affects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.[2]

To date, the California Air Resources Board (CARB) has designated 244 compounds as TACs. Additionally, CARB has implemented control measures for several compounds that pose high risks and show potential

2 Bay Area Air Quality Management District. 2017. *CEQA Air Quality Guidelines*. Available online at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed August 10, 2022.

for effective control. Most of the estimated health risks from TACs can be attributed to a relatively few compounds.[3]

CARB identified diesel particulate matter (DPM) as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances, including 40 cancer-causing substances. Diesel exhaust is a complex mixture of particulates and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM very between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

3.3.1.3 Plan Area Setting

Existing Conditions

The Plan Area is located in a highly developed urban/suburban area. The area is predominantly built out, consisting of residential, commercial, public, industrial, and transportation uses. The majority of the area is developed with residential uses consisting of single-family homes with a few medium-density residential developments

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiovascular diseases.[4]

Residential areas are sensitive receptors to air pollutants because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Children are considered more susceptible to health effects of air pollution due to their immature

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3 California Air Resources Board. *CARB Identified Toxic Air Contaminants*. Available online at: https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants, accessed August 10, 2022.

4 California Air Resources Board. *Sensitive Receptor Assessment*. Available online at: https://ww2.arb.ca.gov/capp-resource-center/community-assessment/sensitive-receptor-assessment, accessed August 10, 2022.

immune systems and developing organs.[5] As such, schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation.

Based on a review of the existing land uses in the Plan Area vicinity, the closest sensitive receptors include adjacent residences to the west located on Norman Drive; BASIS Independent Silicon Valley Lower School to the south across Dunford Way (65 feet from Plan Area); residences to the south across Dunford Way (65 feet); residences to the east across Teal Drive (65 feet from Plan Area); adjacent residences to the northeast along Castleton Terrace, Roadrunner Terrace, and Castleton Way; and adjacent residences to the north along Rosalia Avenue, Poplar Avenue, and Bryant Way.

3.3.2 REGULATORY FRAMEWORK

3.3.2.1 Federal Regulations

Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the U.S. Environmental Protection Agency (U.S. EPA) to establish NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. On April 2, 2007, the Supreme Court found that carbon dioxide is an air pollutant covered by the CAA; however, no NAAQS have been established for carbon dioxide.

These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The U.S. EPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a

[5] Office of Environmental Health Hazard Assessment and The American Lung Association of California. *Air Pollution and Children's Health*. Available online at: https://oehha.ca.gov/media/downloads/faqs/kidsair4-02.pdf, accessed August 10, 2022.

nonattainment or attainment designations. **Table 3.3-3** lists the federal attainment statuses of the criteria pollutants for the SFBAAB.

National Emissions Standards for Hazardous Air Pollutants Program

Under federal law, 187 substances are currently listed as hazardous air pollutants (HAPs). Major sources of specific HAPs are subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) program. The U.S. EPA is establishing regulatory schemes for specific source categories and requires implementation of the Maximum Achievable Control Technologies (MACT) for major sources of HAPs in each source category. State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program and is aimed at HAPs that are a problem is California. The state has formally identified 244 substances as TACs and is adopting appropriate control measures for each. Once adopted at the state level, each air district will be required to adopt a measure that is equally or more stringent.

National Ambient Air Quality Standards

The federal CAA required the U.S. EPA to establish NAAQS. The NAAQS set primary standards and secondary standards for specific air pollutants**.** Primary standards define limits for the intention of protecting public health, which include sensitive populations such as asthmatics, children, and the elderly. Secondary Standards define limits to protect public welfare to include protection against decreased visibility, damage to animals, crops, vegetation, and buildings. A summary of the federal ambient air quality standards is shown in **Table 3.3-4, National Ambient Air Quality Standards**.

Table 3.3-4
National Ambient Air Quality Standards

Pollutant		Primary/Secondary	Averaging Time	Level
Carbon Monoxide		Primary	8 hours	9 ppm
			1 hour	35 ppm
Lead		Primary and secondary	Rolling 3-month average	0.15 μg/m^3
Nitrogen dioxide		Primary	1 hour	100 ppb
		Primary and secondary	Annual	0.053 ppm
Ozone		Primary and secondary	8 hours	0.070 ppm
Particulate Matter	PM2.5	Primary	Annual	12 μg/m^3
		Secondary	Annual	15 μg/m^3
		Primary and secondary	24 hours	35 μg/m^3
	PM10	Primary and secondary	24 hours	150 μg/m^3
Sulfur dioxide		Primary	1 hour	75 ppb
		Secondary	3 hours	0.5 ppm

Source: California Air Resources Board. May 2016. Ambient Air Quality Standards. Available online at: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf, accessed August 10, 2022.

3.3.2.2 State Regulations

California Clean Air Act of 1988

The federal CAA allows states to adopt ambient air quality standards and other regulations if they are at least as stringent as federal standards. In 1988, the California Clean Air Act (CCAA) was enacted to seek authorization to enforce its own standards for new nonroad engines and vehicles. CARB, a part of the California Environmental Protection Agency (Cal EPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. The CCAA, amended in 1992, requires all air quality management districts (AQMDs) in the state to achieve and maintain the CAAQS. The CAAQS are generally stricter than national standards for the same pollutants and has also established state standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles, for which there are no national standards. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

California Ambient Air Quality Standards

The federal CAA permits states to adopt additional or more protective air quality standards if needed. California has set standards for certain pollutants, such as particulate matter and ozone, which are more protective of public health than respective federal standards. California has also set standards for some pollutants that are not addressed by federal standards. The state standards for ambient air quality are summarized in **Table 3.3-5, California Ambient Air Quality Standards**.

Table 3.3-5
California Ambient Air Quality Standards

Pollutant		Averaging Time	Level
Carbon monoxide		8 hours	9 ppm
		1 hour	20 ppm
Lead		30-day average	1.5 μg/m^3
Nitrogen dioxide		1 hour	0.180 ppm
		Annual	0.030 ppm
Ozone		8 hours	0.070 ppm
		1 hour	0.09 ppm
Particulate matter	PM2.5	Annual	12 μg/m^3
	PM10	24 hours	50 μg/m^3
		Annual	20 μg/m^3
Sulfur dioxide		1 hour	0.25 ppm
		24 hours	0.04 ppm
Sulfates		24 hours	25 μg/m^3
Hydrogen sulfide		1 hour	0.03 ppm
Vinyl chloride		24 hours	0.01 ppm

Source: California Air Resources Board. May 2016. Ambient Air Quality Standards. Available online at: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf, accessed August 10, 2022.

California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as a SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The U.S. EPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the U.S. EPA for approval and publication in the Federal Register. The 2017 Clean Air Plan, "Spare the Air, Cool the Climate" is the SIP for SFBAAB. The 2017 Clean Air Plan is a regional blueprint for achieving air quality standards and healthful air in the SFBAAB. The 2017 Clean Air Plan focuses on two closely related goals: protecting public health and protecting the climate. Consistent with the GHG reduction targets adopted by the state of California, the plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050. The 2017 plan also addressed a multi-pollutant strategy to simultaneously reduce emissions and ambient concentrations of ozone, fine particulate matter, toxic air contaminants, as well as GHG's. The control strategy focuses on the following priorities: reduce emissions of criteria air pollutants and TACs from all key sectors; reduce emissions of "super-GHGs" such as methane, black carbon, and fluorinated gases; decrease demand for fossil fuels (gasoline, diesel, and natural gas); and decarbonize the energy system.[6]

California Air Toxics "Hot Spots" Information and Assessment Act (AB 2588)

The California Air Toxics Program is supplemented by the Air Toxics "Hot Spots" program, which became law (AB 2588, Statutes of 1987) in 1987. In 1992, the AB 2588 program was amended by Senate Bill 1731 to require facilities that pose a significant health risk to the community to perform a risk reduction audit and reduce their emissions through implementation of a risk management plan. Under this program, which is required under the Air Toxics "Hot Spots" Information and Assessment Act (Section 44363 of the California Health and Safety Code), facilities are required to report their air toxics emissions, assess health risks, and notify nearby residents and workers of significant risks when present.

Typically, land development projects generate diesel emissions from construction vehicles during the construction phase, as well as some diesel emissions from small trucks during the operational phase. Diesel exhaust is mainly composed of particulate matter and gases, which contain potential cancer-causing substances. Emissions from diesel engines currently include over 40 substances that are listed by the U.S. EPA as hazardous air pollutants and by CARB as TACs. On August 27, 1998, CARB identified particulate matter in diesel exhaust as a TAC, based on data linking diesel particulate emissions to increased risks of lung cancer and respiratory disease.[7]

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6 BAAQMD. *Clean Air Plan 2017*. Available online at: https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en.

7 Diesel exhaust is included within pollutants subject to the hotspot program. Please refer to OEHHA's Air Toxics Hot Spot Program Risk Assessment Guidelines. https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0

In March 2015, the OEHHA adopted "The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments" in accordance with the Health and Safety Code, Section 44300. The Final Guidance Manual incorporates the scientific basis from three earlier developed Technical Support Documents to assess risk from exposure to facility emissions. The 2015 OEHHA Final Guidance has key changes including greater age sensitivity for children, decreased exposure durations, and higher breathing rate profiles. Because cancer risk could be up to three times greater using this new guidance, it may result in greater mitigation requirements, more agency backlog, and increased difficulty in getting air permits.

The CARB provides a computer program, the Hot Spots Analysis and Reporting Program (HARP), to assist in a coherent and consistent preparation of a Health Risk Assessment (HRA). HARP2, an update to HARP, was released in March 2015. HARP2 has a more refined risk characterization for HRAs and CEQA documents, incorporating the 2015 OEHHA Final Guidance.

3.3.2.3 Regional

Bay Area Air Quality Management District

BAAQMD is the primary agency responsible for assuring that the NAAQS and CAAQS are attained and maintained in the Bay Area. BAAQMD's jurisdiction includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo and Santa Clara counties, and the southern portions of Solano and Sonoma counties. The Air District's responsibilities in improving air quality in the region include: preparing plans for attaining and maintaining air quality standards; adopting and enforcing rules and regulations; issuing permits for stationary sources of air pollutants; inspecting stationary sources and responding to citizen complaints; monitors air quality and meteorological conditions; awarding grants to reduce mobile emissions; implementing public outreach campaigns; and assisting local governments in address climate change.

The BAAQMD recommends that all proposed projects implement the following Basic Construction Mitigation Measures:[8]

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

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8 Bay Area Air Quality Managements District. 2017. *CEQA Guidelines*. Available online at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en.

3. All visible mud or dirt track-out onto adjacent roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4. All vehicle speeds on unpaved roads shall be limited to 15 mph.

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulation [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 the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determine to be running in proper condition prior to operation.

8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

3.3.3 THRESHOLDS OF SIGNIFICANCE

The following thresholds for determining the significance of impacts related to air quality are based on the environmental checklist form contained in Appendix G of the most recent update of the *State CEQA Guidelines*. Adoption and/or implementation of the Proposed Master Plan could result in significant impacts to air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan,

- 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

- Expose sensitive receptors to substantial pollutant concentrations, or

- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The *State CEQA Guidelines* (Section 15064.7) provide that, when available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied

upon to make determinations of significance. The potential air quality impacts of the Proposed Master Plan are, therefore, evaluated according to thresholds developed by the BAAQMD, which are discussed below.

BAAQMD Thresholds

The *BAAQMD CEQA Air Quality Guidelines* (*BAAQMD Guidelines*)[9] set forth methodologies and quantitative significance thresholds that a lead agency may use to estimate and evaluate the significance of a project's air emissions, see **Table 3.3-6, Bay Area Air Quality Management District Regional Significance Thresholds**. The BAAQMD has also established significance thresholds for the excess health risks posed to nearby sensitive receptors, see **Table 3.3-7, Health Risk Significance Thresholds.**

Table 3.3-6
Bay Area Air Quality Management District Regional Significance Thresholds

Pollutant	Construction-Related	Operational-Related	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tpy)
ROG	54	54	10
NOx	54	54	10
PM10	82 (exhaust)	82	15
PM2.5	54 (exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 (1-hour average)	
Fugitive Dust	Best Management Practices	None	

Source : BAAQMD. CEQA Guidelines. Available online at : https ://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

9 Bay Area Air Quality Managements District, *CEQA Guidelines* (May 2017) available online at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

Table 3.3-7
Health Risk Significance Thresholds

Health Risks and Hazards	Single Sources Within 1,000-foot Zone of Influence	Combined Sources (Cumulative from all sources within 1,000-foot zone of influences)
Excess Cancer Risk	>10 per one million	>100 per one million
Hazard Index	>1.0	>10.0
Incremental Annual PM2.5	>0.3 ug/m3	>0.8 ug/m3

Source : BAAQMD. CEQA Guidelines. Available online at : https ://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

3.3.4 METHODOLOGY

Construction and operational criteria air pollutant emissions were calculated in the California Emissions Estimator Model (CalEEMod) Version 2022.1 and were compared to the BAAQMD's significance thresholds. Average daily emissions from the Proposed Master Plan construction and operation were calculated, including both on-site and off-site activities.

The analysis examines temporary construction emissions, long-term operational emissions, localized pollutant concentrations, TACs, and odors. Common sources of construction emissions include heavy-duty off-road construction equipment exhaust, fugitive dust, and architectural coatings. Sources of operational emissions include the use of consumer products, motor vehicle trips attracted to or generated by a land use, and on-site combustion of natural gas. Consistent with the requirements of CEQA, this analysis reflects a best-effort approach to disclose all reasonably foreseeable impacts based on currently available information. To this end, the analysis of construction impacts is based on anticipated construction scenarios for each of the five Proposed Master Plan phases, as described in further detail in **Impact AQ-2** and **Impact AQ-3** below.

3.3.5 ENVIRONMENTAL IMPACTS

Impact AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.

The most recent clean air plan is the Bay Area 2017 Clean Air Plan that was adopted by BAAQMD in April 2017. The Plan includes control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. Projects that are consistent with the development of a regional or local air quality plan are considered not to conflict with the attainment of air quality standards identified in the plan.

Consistency with the air quality plan can be determined through evaluation of project-related air quality impacts and demonstration that project-related emissions would not increase the frequency or severity of existing violations or contribute to a new violation of the national ambient air quality standards. The *BAAQMD Guidelines* include thresholds of significance that are applied to evaluate regional impacts of project-specific emissions of air pollutants and their impact on BAAQMD's ability to reach attainment. Emissions that are above these thresholds have not been accommodated in the air quality plans and would not be consistent with the air quality plans. The Proposed Master Plan would not conflict with the latest Clean Air planning efforts since emissions would not exceed BAAQMD thresholds (see **Table 3.3-8** and **Table 3.3-9** in **Impact AQ-2**). In addition, because the Proposed Master Plan would serve the existing local enrollment demands in the Plan Area and vicinity, it would not have the potential to substantively alter air quality attainment statuses for the region. Therefore, the Proposed Master Plan would not conflict with or obstruct implementation of the applicable air quality plan and no mitigation is necessary.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No Impact.

Impact AQ-2 **Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.**

A project may have a significant impact if project-related emissions would exceed federal, State, or regional standards or thresholds, or if project-related emissions would substantially contribute to an existing or project air quality violation. To determine project significance, emissions were compared to the BAAQMD construction and operational air quality thresholds.

Regional Construction Emissions

Construction associated with the Proposed Master Plan would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the Plan Area include ozone-precursor pollutants (i.e., ROG and Nox), PM10, and PM2.5. Construction-generated emissions are short term and of temporary duration, lasting only when construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the BAAQMD's thresholds of significance.

Construction activities associated with Proposed Master Plan buildout include the following: demolition, grading, construction worker travel to and from the Plan Area, delivery and hauling of construction supplies and debris to and from the Plan Area, and fuel combustion by on-site construction equipment. These activities would generate emissions of ozone precursors (ROG and NO_x), CO, and dust (PM10, and PM2.5). Construction activity under the Proposed Master Plan has the potential to create air quality impacts through emissions produced by the use of heavy-duty construction equipment and by vehicle trips generated by construction worker commuting, construction vendor material deliveries, and haul truck trips to and from the development phases within the Plan Area. Fugitive dust (PM10 and PM2.5) emissions would primarily result from demolition and site preparation (e.g., grading) activities. NO_x emissions, a precursor emission to ozone, would primarily result from the use of construction equipment. During the finishing phases, paving operations and the application of architectural coatings (e.g., paints) and other building materials would release VOCs, the other precursor emission to O_3. 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. Please refer to **Appendix 3.3-1** for more information related to the construction assumptions associated with Proposed Master Plan buildout.

Construction-generated emissions associated with the Proposed Master Plan were calculated using CalEEMod. Predicted average daily construction-generated emissions for the Proposed Master Plan are summarized in **Table 3.3-8, Construction-Related Criteria Pollutant Emissions – Average Pounds per Day.** As shown in **Table 3.3-8**, the peak average daily emissions generated during the construction of the Proposed Master Plan would not exceed the BAAQMD construction emission thresholds for any of the Proposed Master Plan phases or a worst case-construction scenario with all phases overlapping.[10] Therefore, impacts associated with construction emissions are considered *less than significant*.

[10] Although it is unlikely that phase overlap will occur, it has been presented herein for illustrative purposes to disclose a worst-case scenario.

Table 3.3-8
Construction-Related Criteria Pollutant and Precursor Emissions – Average Daily Emissions

Construction Emissions	ROG	Nox	PM10 Exhaust	PM2.5 Exhaust
Phase 1				
Average Daily Emissions	2.82	10.9	0.47	0.43
Regional Threshold (lbs/day)	*54*	*54*	*82*	*54*
Exceed Threshold?	No	No	No	No
Phase 2				
Average Daily Emissions	1.44	9.05	0.34	0.32
Regional Threshold (lbs/day)	*54*	*54*	*82*	*54*
Exceed Threshold?	No	No	No	No
Phase 3				
Average Daily Emissions	0.58	3.50	0.13	0.12
Regional Threshold (lbs/day)	*54*	*54*	*82*	*54*
Exceed Threshold?	No	No	No	No
Phase 4				
Average Daily Emissions	0.74	3.39	0.13	0.12
Regional Threshold (lbs/day)	*54*	*54*	*82*	*54*
Exceed Threshold?	No	No	No	No
Phase 5				
Average Daily Emissions	1.54	7.61	0.28	0.26
Regional Threshold (lbs/day)	*54*	*54*	*82*	*54*
Exceed Threshold?	No	No	No	No
All Phases (Overlapping)				
Average Daily Emissions	7.12	34.45	1.35	1.25
Regional Threshold (lbs/day)	*54*	*54*	*82*	*54*
Exceed Threshold?	No	No	No	No

Source: Impact Sciences, August 2022. See Appendix 3.3-1 to this EIR.

Regional Operational Emissions

Emissions for the Proposed Master Plan would be comprised of mobile source emissions, emissions associated with energy consumption, and area source emissions. **Table 3.3-9, Estimated Operational Emissions,** presents total operational emissions associated with full buildout under the Proposed Master Plan. As shown in **Table 3.3-9**, operational emissions from the Proposed Master Plan would not exceed BAAQMD thresholds of significance for average daily emissions or annual emissions. As such, impacts associated with operational emissions would be *less than significant*.

Table 3.3-9
Estimated Operational Emissions

Emissions Source	ROG	Nox	PM10 Exhaust	PM2.5 Exhaust
Average Daily Emissions				
Mobile Source (lbs./day)	7.05	5.81	0.09	0.08
Area Source (lbs./day)	3.72	0.02	<0.01	0.01
Energy Source (lbs./day)	0.08	1.48	0.11	0.11
Total Average Daily Operational Emissions (lbs./day)	**10.85**	**7.31**	**0.21**	**0.20**
Average Daily Emissions Thresholds (lbs./day)	54	54	82	54
Exceed Thresholds?	*No*	*No*	*No*	*No*
Annual Emissions				
Mobile Source (tons/year)	1.29	1.06	0.02	0.02
Area Source (tons/year)	0.68	<0.01	<0.01	<0.01
Energy Source (tons/year)	0.01	0.27	0.02	0.02
Total Annual Operational Emissions (tons/year)	1.98	1.33	0.04	0.04
Annual Thresholds (tons/year)	**10**	**10**	**15**	**10**
Exceed Thresholds?	*No*	*No*	*No*	*No*

Source: Impact Sciences, August 2022. See Appendix 3.3-1 to this EIR.

Public Health

On December 24, 2018, the California Supreme Court published its opinion on the *Sierra Club et al. v. County of Fresno et. Al.* (Case No. S219783), which determined that an environmental review must adequately analyze a project's potential impacts and inform the public how its bare numbers translate to a potential adverse health impact or explain how existing scientific constraints cannot translate the emissions numbers to the potential health impacts.

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health. As discussed previously, the SFBAAB is in state non-attainment for Ozone (O_3), PM10, and PM2.5 and federal non-attainment for O_3 and PM2.5. Therefore, an increase in emissions of particulate matter or ozone precursors (ROG and NOx) has the potential to push the region further from reaching attainment status and, as a result, are the pollutants of greatest concern in the region.

As discussed above, Proposed Master Plan operations would not exceed BAAQMD thresholds of significance. Also discussed previously, the Proposed Master Plan would not conflict with or obstruct implementation of the AQMP, which has been prepared to achieve the national and state air pollution standards set at levels to protect human health. Therefore, public health impacts associated with air quality for the Proposed Master Plan would be *less than significant*.

The Proposed Master Plan does not include any stationary sources of TAC emissions and most vehicles would operate on gasoline and not diesel, which is the primary source of TACs and DPM. Therefore, operation of the Proposed Master Plan would not generate substantive TAC or PM2.5 emissions that could affect the health of the community near the Plan Area. As such, the Proposed Master Plan would not contribute to human health risk to nearby receptors during operation, and impacts would be *less than significant*.

Regarding health risks from existing emissions sources, the California Supreme Court ruling in *California Building Industry Association vs. Bay Area Air Quality Management District* (December 17, 2015) held that, "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a proposed project's risks exacerbate those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is a project's impact on the environment – and not the environment's impact on the project – that compels an evaluation of how future residents or users could be affected by exacerbated conditions." Assessing health risks from existing land uses equates to assessing the environment's impact on a project. The California Supreme Court ruled that this analysis would not be consistent with CEQA.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact AQ-3 Expose sensitive receptors to substantial pollutant concentrations.

Toxic Air Contaminants

The primary sources of potential TACs under the Proposed Master Plan would be construction activity and the associated generation of DPM emissions from the use of off-road diesel equipment required for demolition, grading, paving, and other construction activities. The amount to which nearby sensitive receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The use of diesel-powered construction equipment would be temporary and episodic (i.e., intermittent during the construction period). The duration of exposure would be short and exhaust from construction equipment dissipates rapidly. Current methodology for conducting health risk assessments is associated with long term exposure periods (9, 30, and 70 years). Therefore, short-term construction activities would not generate a significant health risk. Furthermore, construction would be subject to and would comply with California regulations limiting the idling of heavy-duty construction equipment to no more than 5-minutes, which would reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions.[11] For these reasons the Proposed Master Plan would not expose sensitive receptors to substantial concentrations of air toxics and this impact is *less than significant*.

The greatest potential during long-term operations for exposure to TACs is from the use of heavy-duty diesel trucks and stationary generators that use diesel fuel. However, these activities, and the land uses associated with the Proposed Master Plan are not considered uses that generate substantial TAC emissions based on review of the air toxic sources identified in BAAQMD's and CARB's guidelines. It is expected that quantities of hazardous TACs generated on-site (e.g., cleaning solvents, paints, landscape pesticides, etc.) for the types of proposed land uses would be below thresholds warranting further study under the California Accidental Release Program. For these reasons, the Proposed Master Plan would not expose nearby sensitive receptors to substantial amounts of air toxics and this impact would be *less than significant*.

Carbon Monoxide Hotspots

The *BAAQMD Guidelines* include screening criteria for localized carbon monoxide (CO) concentrations. The *BAAQMD Guidelines* state that a proposed project would be considered to have a less than significant CO concentration if:

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11 California Air Resources Board. 2015. *Frequently Asked Questions Regulation for In-Use Off-Road Diesel-Fueled (Off-Road Regulation)*. Available online at: https://ww3.arb.ca.gov/msprog/ordiesel/faq/idlepolicyfaq.pdf.

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 discussed in **Section 3.16, Transportation**, the Proposed Master Plan would not conflict with a program, plan, ordinance, or policy addressing the circulation system. Furthermore, because the Proposed Master Plan would serve the existing local enrollment demands in the Plan Area and vicinity, it would not have the potential to substantively alter vehicle trips. As such, the Proposed Master Plan would not have the potential to increase traffic volumes at affected intersections to more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizonal mixing is substantially limited. Therefore, the Proposed Master Plan would not have the potential to cause or contribute to an exceedance of the California one-hour or eight-hour CO standards. Impacts with respect to localized CO concentrations would be *less than significant*.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact AQ-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The *BAAQMD Guidelines* identify certain land uses as sources of odors. These land uses include wastewater treatment plants, food processing facilities, composting facilities, petroleum refineries, chemical manufacturing, landfills, dairies, and fiberglass manufacturing. The Proposed Master Plan would not include any of the land uses that have been identified by the BAAQMD as odor sources.

Construction activities associated with the Proposed Master Plan may generate detectable odors from heavy-duty equipment exhaust and architectural coatings. However, construction-related odors would be short-term in nature and cease upon buildout. In addition, the Proposed Master Plan would be required to comply with the California Code of Regulations, Title 13, sections 2449(d)(3) and 2485, which minimizes the idling time of construction equipment either by shutting it off when not in use or by reducing the time of idling to no more than five minutes. This would reduce the detectable odors from heavy-duty equipment exhaust. Any odor impacts to existing adjacent land uses would be short-term and not substantial. As such, the Proposed Master Plan would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people and this impact would be *less than significant*.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

3.3.6 CUMULATIVE IMPACTS

As discussed in **Section 3.3.1, Environmental Setting**, the SFBAAB includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma, and the southwestern portion of Solano County. Cumulative projects would include any reasonably anticipated development in the SFBAAB for regional air quality impacts.

AQMP Consistency. AQMP consistency is discussed under **Impact AQ-1.** As discussed therein, the Proposed Master Plan would not conflict with the Bay Area 2017 Clean Air Plan. The Plan includes control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. Emissions that are above these thresholds have not been accommodated in the air quality plans and would not be consistent with the air quality plans. The Proposed Mater Plan would not facilitate population or employment growth exceeding the population or employment forecasts for the region as a whole. Therefore, implementation of the Proposed Master Plan would not conflict with the 2017 Clean Air Plan. Impacts related to consistency would be less than significant and would not be cumulatively considerable.

Criteria Pollutant Emissions for which the Region is Non-Attainment (Ozone, PM10 and PM2.5). As discussed under **Impact AQ-2**, construction and operational activities would not exceed BAAQMD significance thresholds for criteria pollutants. Thus, the incremental effect of the Proposed Master Plan related to nonattainment pollutants would be less than significant and would not be cumulatively considerable.

Sensitive Receptors and Substantial Pollutant Concentrations. As indicated under **Impact AQ-3**, land uses associated with the Proposed Master Plan typically do not generate TAC emissions that would expose people to substantial pollutant concentrations. Furthermore, the Proposed Master Plan would not exceed BAAQMD screening criteria for localized carbon monoxide impacts. As such, impacts would be less than significant with respect to exposing sensitive receptors to substantial pollutant concentrations and would not be cumulatively considerable**.**

Odor. As indicated under **Impact AQ-4,** the Proposed Master Plan would not facilitate the development of uses typically associated with odor complaints. While construction activity can emit odors, construction activity has not been identified as a source of odor complaints. Therefore, impacts related to odors would be less than significant and would not be cumulatively considerable.

3.3.7 REFERENCES

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Office of Environmental Health Hazard Assessment and The American Lung Association of California. Air Pollution and Children's Health. Available online at: https://oehha.ca.gov/media/downloads/faqs/kidsair4-02.pdf

3.4 BIOLOGICAL RESOURCES

INTRODUCTION

This section discusses the biological resources occurring in the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan") Area, evaluates the significance of potential impacts to these resources based on thresholds defined in CEQA and the State CEQA Guidelines, and provides a determination of significance.

State and federal regulatory agencies that have jurisdiction over biological resources in the project area include the California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), and the California Regional Water Quality Control Board (RWQCB). This section addresses potential impacts to biological resources that are governed by these agencies' laws and regulations.

Note also that no physical changes to the existing Laurelwood Elementary School site are included in the Proposed Master Plan.

3.4.1 ENVIRONMENTAL SETTING

3.4.1.1 General Site Characteristics

Soils

The Plan Area is located in a predominantly flat area with elevations ranging from 40 to 175 feet above mean sea level. The sediments beneath the subject property have been identified as part of the Quaternary Series of the Quaternary System of the Cenozoic Era. According to the United States Department of Agriculture (USDA) Soil Conservation Service, the subject property is underlain by the Botella soil component, which has a surface soil texture of clay loam and exhibits moderate infiltration rates.[1]

Vegetation

The Master Plan Area is comprised of disturbed/developed land, landscaped/ornamental vegetation. Disturbed/developed land is defined to be areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Disturbed/developed lands are characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation. Areas that have been physically disturbed (by previous human activity) and are no longer recognizable as a native or naturalized vegetation association, but continue to retain a soil

1 Santa Clara Unified School District. *Draft Preliminary Environmental Assessment Report Work Plan*. 2022.

substrate, may also be considered disturbed/developed lands. Within the Master Plan Area, disturbed/developed land includes concrete driveways, parking lots, and educational buildings. Landscaped/ornamental vegetation extends throughout the Plan Area and along sidewalks and includes ornamental tree cover, shrubs, lawn areas, mulch, and horticultural gardens.

Trees

A tree inventory conducted in 2021 identified 323 trees located within the Plan Area encompassing twelve groupings and 47 species. The most common species of tree is Ash-Velvet (*velutina*), Cedar-Deodar (*deodara*), Pine-Canary Island (*canariensis*), Oak-Holly (*ilex*), and Beefwood (*cunninghamiana*). Trees are scattered throughout the Plan Area, but are primarily located around the edges of buildings, courtyards, and the perimeter of the Plan Area. The vast majority (77%) of the trees are mature in age.[2]

Non-native Annual Grassland

As described in the Sunnyvale General Plan EIR, non-native annual grassland is the most common "natural community" or undeveloped habitat type within the Plan Area. In urban areas, this habitat type is often called ruderal, or disturbed. This community is composed almost entirely of annual grasses and other herbaceous species. Plants typical of this community include several species of brome (*Bromus spp.*), wild oats (*Avena spp.*), filarees (*Erodium spp.*), schismus (*Schismus spp.*), fescues (*Vulpia spp.*), and a variety of native wildflowers such as California poppy (*Eschscholtzia californica*) and phacelia (*Phacelia spp.*), along with other non-native species. [3]

Ruderal grassland areas can be found in freeway cloverleafs, along roadways, and in vacant, undeveloped urban lots. Although they do not support many native species, these areas can be a refuge for common species such as raccoon (*Procyon lotor*), dark-eyed junco (*Junco hyemalis*), lesser goldfinch (*Carduelis psaltria*), and many others. Special-status species that may occur in ruderal areas include western burrowing owl (*Athene cunicularia*) and Congdon's tarplant (*Centromadia parryi spp. congdonii*). The Western burrowing owl has been found throughout the surrounding area and given the presence of ruderal grassland within the Plan Area, has the potential to occur at the Project Site.

Urban

Urban communities are characterized by residential and commercial developments that generally include structures, roadways and other hardscapes, remnant mature native trees, and ornamental landscaping.

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2 Bartlett Tree Experts. *SCUSD Peterson-Patrick Henry Campus Tree Inventory and Management Plan*. 2022.

3 City of Sunnyvale. *El Camino Real Specific Plan Environmental Impact Report*. 2022

Park communities are integrated into the urban community and include designated open space areas that are predominantly landscaped. As described in the El Camino Real Specific Plan EIR, typical landscape species in the urban community are generally non-natives such as junipers (*Juniperus spp.*), roses (*Rosa spp.*), Bradford pear (*Pyrus callereyana 'Bradford'*), crepe myrtle (*Lagerstroemia indica*), weeping willow (*Salix babylonica*), oleander (*Nerium oleander*), and English ivy (*Hedera helix*). Common urban street trees in the City include California black walnut (*Juglans californica*), Chinese pistache (*Pistacia chinensis*), liquidamber (*Liquidamber styraciflua*), eucalyptus (*Eucalyptus spp.*), London plane (*Plantanus acerifolia),* olive (*Olea europaea*), and tulip tree (*Liriodendron tulipifera*). Ruderal habitats in vacant lots are generally dominated by species such as yellow star thistle (*Centaurea solstitialis*), prickly lettuce (*Latuca serriola*), flax-leaved fleabane (*Conyza bonariensis*), and nonnative grasses, including soft chess, ripgut brome, and foxtail barley. Vegetation in park communities largely consists of turf with occasional non-native tree species similar to those found in urban habitats. Parks can include golf courses, playing fields, and baseball and softball diamonds.

Many common wildlife species have adapted to use urban and park areas for foraging, shelter, and breeding habitat. These species readily adapt to tolerate human disturbance and to nonnative vegetation. Species associated with urban and park areas in the City include mockingbird (*Mimus polyglottos*), scrub jay (*Aphelocoma californica*), house finch (Carpodacus mexicanus), European starling (Sturnus vulgaris), lesser goldfinch, house sparrow (*Passer domesticus*), western gray squirrel (*Sciurus griseus*), California ground squirrel (*Spermophilus beecheyi*), rock dove (*Columba livia*), mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), Brewer's blackbird (*Euphagus cyanocephalus*), sandhill crane (Grus canadensis), various raptor species, egrets, and many species of rodents. A few other species that may be found, particularly in park areas, include raccoon, opossum (*Didelphis virginiana*), Pacific treefrog (*Hyla regilla*), and western toad *(Bufo boreas*).[4]

General Wildlife

The Plan Area and surrounding area provide habitat for wildlife species that commonly occur in urban areas of the region (e.g., raccoon [*Procyon lotor*], striped skunk [*Mephitis mephitis*], and a variety of common avian species). Given the Plan Area's history of disturbance and lack of connectivity with larger expanses of natural habitat, it is unlikely that it would support most special-status species.

4 City of Sunnyvale, *El Camino Real Specific Plan Environmental Impact Report*. 2022

Wildlife Movement

Special-Status Biological Resources

For the purposes of analysis in this EIR, "special-status" refers to those resources that meet one or more of the following criteria:

- Plant and animal species listed by the USFWS or CDFW as threatened or endangered; proposed for listing as threatened or endangered; or listed as a candidate for listing as threatened or endangered.

- Plant and animal species considered as "endangered, rare or threatened" as defined by Section 15380 of the *State CEQA Guidelines*. Section 15380(b) states that a species of animal or plant is "'endangered" when its 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. A species is "rare" when either (A) although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or (B) the species is likely to become endangered within the foreseeable future throughout all or a portion of its range and may be considered "threatened" as that term is used in the Federal Endangered Species Act (FESA).

- Plants included on California Native Plants Society (CNPS) Lists 1 or 2. These species are included because the CNPS is an authority recognized by the CDFW on the status of rare plant species in California, and because the criteria for placement on List 1 or List 2 are similar to criteria that CDFW and USFWS use for species considered as candidates for listing or that are already listed as threatened or endangered.

- Animal species designated as "Species of Special Concern" or "Fully Protected" by the CDFW. Although these species have no legal status under the California Endangered Species Act (CESA), the CDFW recommends their protection as the populations of these species are generally declining and they could be listed as threatened or endangered (under CESA) in the future.

- Birds designated by the USFWS as "Birds of Conservation Concern." Although these species have no legal status under FESA, the USFWS recommends their protection as populations of these species are generally declining and they could be listed as threatened or endangered (under FESA) in the future.

- Riparian habitat or other natural communities considered sensitive or otherwise regulated, by the CDFW.

- Drainages or other aquatic habitats under the jurisdiction of the USACE.

- Established resident or migratory wildlife movement corridors.
- Trees, habitats, or other resources protected by local policies, ordinances, or otherwise considered of local concern.

Sensitive Plant Communities

Special-Status Plants

For the purposes of this analysis, special-status species includes those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS and National Marine Fisheries Service (NMFS) under the federal Endangered Species Act (FESA) (7 U.S.C.§ 136, 16 U.S.C. § 1531 et seq.);[5] those listed or candidates for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA) or Native Plant Protection Act; animals designated as "Fully Protected" by the California Fish and Game Code (CFGC); animals listed as "Species of Special Concern" (SSC), by the CDFW; those species on the Special Animals List;[6] and/or those species on the Special Vascular Plants, Bryophytes, and Lichens List.[7] This latter document includes the CNPS Inventory of Rare and Endangered Vascular Plants of California, Eighth Edition (CNPS 2019) as updated online. Those plants contained on the CNPS Rare Plant Rank (CRPR) Lists 1, 2, 3, and 4 are considered special-status species in this EIR, per the CNPS code definitions:

- List 1A = Plants presumed extinct in California;
- List 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat);
- List 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20- 80 percent occurrences threatened);
- List 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20 percent of occurrences threatened or no current threats known);
- List 2 = Rare, threatened or endangered in California, but more common elsewhere;

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5 United States Fish and Wildlife Service (USFWS). 1973. The Endangered Species Act of 1973, as amended (16 U.S.C 1531 et seq.).

6 CDFW. CNDDB QuickView Tool BIOS Viewer. Available online at: https://apps.wildlife.ca.gov/bios/?tool=cnddbQuick. Accessed July 1, 2022.

7 California Department of Fish & Wildlife. Biogeographic Data Branch. California Natural Diversity Database. *Special Vascular Plants, Bryophytes, and Lichens List*. June 2019.

- List 3 = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CNPS and CESA);
- List 4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80 percent occurrences threatened); and
- List 4.4 = Plants of limited distribution (watch list), not very endangered in California (<20 percent occurrences threatened or no current threats known).

Twelve special-status plants were identified in a search of the CNPS database[8] and CNDDB database records in the Cupertino quadrangle in which the Plan Area is located (**Table 3.4-1, Summary of Special-Status Plant and Wildlife Species Previously Recorded in the Cupertino Quadrangle**).[9]

Special-Status Wildlife Species

Animals on the California Department of Fish and Wildlife's (CDFW) list of "species of special concern" (most of which are species whose breeding populations in California may face extirpation if current population trends continue) meet this definition and are typically provided management consideration through the CEQA process, although they are not legally protected under the ESA or CESA. Additionally, the CDFW includes some animal species that are not assigned any of the other status designations in the California Natural Diversity Database (CNDDB) "Special Animals" list.

The CDFW considers the taxa on this list to be those of greatest conservation need, regardless of their legal or protection status. Raptors (e.g., eagles, hawks, and owls) and their nests are protected under both federal and state laws and regulations. The federal Migratory Bird Treaty Act (MBTA) of 1918 and CDFW Code Section 3513 prohibit killing, possessing, or trading migratory birds except in accordance with regulation prescribed by the Secretary of the Interior. Birds of prey are protected in California under CDFW Code Section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy the nest or eggs of any such bird except otherwise provided by this code or any regulation adopted pursuant thereto." In addition, fully protected species under the California Department of Fish and Game (DFG) Code Section 3511 (birds), Section 4700 (mammals), Section 5515 (fish), and Section 5050 (reptiles and amphibians) are also considered special-status animal species. Species with no formal special-status designation but thought by experts to be rare or in serious decline are also considered special-status animal species (DFG, 2012).

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8 California Native Plant Society, *CNPS Native Inventory of Rare Plants*, 2019. Available online https://www.cnps.org/rare-plants/cnps-inventory-of-rare-plants. Accessed on May 27, 2022.

9 CDFW. CNDDB QuickView Tool BIOS Viewer. Available online at: https://apps.wildlife.ca.gov/bios/?tool=cnddbQuick. Accessed May 17, 2022.

All special-status wildlife species observed, historically occurring, or potentially occurring in the Plan Area or in its vicinity, are presented in **Table 3.4-1, Summary of Special-Status Plant and Wildlife Species Previously Recorded in the Cupertino Quadrangle**. **Table 3.4-1** lists the special-status plant and wildlife species that have been documented by the CNDDB within the area surrounding the Master Plan Area. Based on the database, 35 special-status wildlife species are documented within the Cupertino quadrangle in which the Plan Area is located (**Table 3.4-1**), including five amphibians, 15 birds, two fish, three insects, eight mammals, and two reptile species. Seventeen species are species of special concern in California, two are federally protected, and six are on the watch list. However, according to the *Sunnyvale General Plan*, only one species, the burrowing owl (*Athene cunicularia*), has been identified as having occurred within the surrounding area. Therefore, given the presence of the burrowing owls habitat, it has the potential to occur within the Plan Area.[10] Given the urban landscape, historic disturbance, the potential for other species to occur within the Plan Area is low.

10 City of Sunnyvale. *Land Use and Transportation Element Draft Environmental Impact Report*. 2016. Available online at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/608/637819113538930000. Accessed July 6, 2022.

Table 3.4-1
Summary of Special-Status Plant and Wildlife Species Previously Recorded in the Cupertino Quadrangle

Scientific Name	Common Name	Status		
		Federal	State	CNPS Rank/ CDFW Status
Plants				
Lessingia hololeuca	woolly-headed lessingia	None	None	3
Lessingia tenuis	spring lessingia	None	None	4.3
Monolopia gracilens	woodland woollythreads	None	None	1B.2
Hoita strobilina	Loma Prieta hoita	None	None	1B.1
Iris longipetala	coast iris	None	None	4.2
Malacothamnus arcuatus	arcuate bush-mallow	None	None	1B.2
Calandrinia breweri	Brewer's calandrinia	None	None	4.2
Clarkia concinna ssp. automixa	Santa Clara red ribbons	None	None	4.3
Cypripedium fasciculatum	clustered lady's-slipper	None	None	4.2
Leptosiphon ambiguus	serpentine leptosiphon	None	None	4.2
Leptosiphon grandiflorus	large-flowered leptosiphon	None	None	4.2
Dirca occidentalis	western leatherwood	None	None	1B.2
Amphibians				
Ambystoma californiense pop. 1	California tiger salamander - central California DPS	Threatened	Threatened	WL
Dicamptodon ensatus	California giant salamander	None	None	SSC
Aneides niger	Santa Cruz black salamander	None	None	SSC
Rana boylii	foothill yellow-legged frog	None	Endangered	SSC
Rana draytonii	California red-legged frog	Threatened	None	SSC
Birds				
Accipiter cooperii	Cooper's hawk	None	None	WL
Accipiter striatus	sharp-shinned hawk	None	None	WL
Aquila chrysaetos	golden eagle	None	None	FP ; WL
Circus hudsonius	northern harrier	None	None	SSC
Elanus leucurus	white-tailed kite	None	None	FP
Spinus lawrencei	Lawrence's goldfinch	None	None	-
Pandion haliaetus	osprey	None	None	WL
Poecile atricapillus	black-capped chickadee	None	None	WL
Setophaga petechia	yellow warbler	None	None	SSC
Ammodramus savannarum	grasshopper sparrow	None	None	SSC
Artemisiospiza belli belli	Bell's sage sparrow	None	None	WL
Asio otus	long-eared owl	None	None	SSC
Athene cunicularia	burrowing owl	None	None	SSC

Scientific Name	Common Name	Status		
		Federal	State	CNPS Rank/ CDFW Status
Selasphorus rufus	rufous hummingbird	None	None	-
Contopus cooperi	olive-sided flycatcher	None	None	SSC
Fish				
Hesperoleucus venustus subditus	southern coastal roach	None	None	SSC
Oncorhynchus mykiss irideus pop. 8	steelhead - central California coast DPS	Threatened	None	-
Insects				
Bombus caliginosus	obscure bumble bee	None	None	-
Bombus occidentalis	western bumble bee	None	None	-
Speyeria callippe callippe	callippe silverspot butterfly	Endangered	None	-
Neotoma fuscipes annectens	San Francisco dusky-footed woodrat	None	None	SSC
Dipodomys venustus venustus	Santa Cruz kangaroo rat	None	None	-
Antrozous pallidus	pallid bat	None	None	SSC
Corynorhinus townsendii	Townsend's big-eared bat	None	None	SSC
Lasiurus blossevillii	western red bat	None	None	SSC
Lasiurus cinereus	hoary bat	None	None	-
Myotis volans	long-legged myotis	None	None	-
Myotis yumanensis	Yuma myotis	None	None	-
Reptiles				
Emys marmorata	western pond turtle	None	None	SSC
Phrynosoma blainvillii	coast horned lizard	None	None	SSC

Source: California Native Plant Society, Rare Plant Program. 2022. Inventory of Rare and Endangered Plants of California
Notes: CNDDB: California Natural Diversity Database
California Native Plant Society
1B = rare, threatened, or endangered in California and elsewhere.
2 = rare, threatened, or endangered in California, but more common elsewhere.
3 = a review list – plants about which more information is needed.
4 = plants of limited distribution – a watch list
.1 = seriously endangered in California (over 80% of occurrences threatened-high degree and immediacy of threat).
.2 = fairly endangered in California (20-80% occurrences threatened).
.3 = not very endangered in California (<20% of occurrences threatened).
Source: California Department of Fish and Wildlife, CNDDB 2022.
Notes:
Status Abbreviations:
SSC= species of special concern in California
FP= Fully Protected
WL = Watch List

Nesting Birds

Under the provisions of the Migratory Bird Treaty Act (MBTA), it is unlawful to "take" any migratory birds except as permitted by regulations issued by the USFWS. The term "take" is defined by the USFWS regulation to mean to "pursue, hunt, shoot, wound, kill, trap, capture or collect" any migratory bird or any part, nest, or egg of any migratory bird covered by the MBTA, or to attempt those activities. In addition, Sections 3503, 3503.5, 3511, and 3513 of the CFGC describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 of the CFGC protects all birds of prey and their eggs and nests against take, possession, or destruction. While common birds are not special-status species, destruction of their eggs, nests, or nestlings is prohibited by law and must be avoided.

The Plan Area contains habitat, such as trees and vegetation that can support common nesting birds, including raptors protected under the CFG Code Section 3503 and the MBTA (16 U.S.C. §§ 703–712). Ornamental trees that could provide suitable nesting habitat are present on and adjacent to the Plan Area. Birds may also nest on buildings and structures within and adjacent to the Plan Area. However, the Plan Area has low native habitat diversity and is generally disturbed.

Raptors generally require large home ranges, and individual foraging territories are often measured in terms of tens of acres to square miles. During breeding, demand for prey increases and additional habitat must be available for young birds to disperse from nesting locations and establish new territories. Loss of foraging habitat reduces prey abundance and availability, which reduces and limits the number of raptors a given area can support. In general, smaller populations are less resilient to environmental stress (e.g., drought, disease, and fluctuations in prey availability). Similar to the discussion of foraging habitats for birds, above, the Plan Area offers low quality foraging habitat for raptors given the urbanized landscape and low riparian habitat. Larger and more well-connected open spaces and surrounding regions provide higher value raptor foraging habitats.

Jurisdictional Waters and Wetlands

In accordance with Section 1602 of the CFGC, the CDFW has jurisdiction over lakes and streambeds (including adjacent riparian resources). The CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake. Of particular interest to CDFW are riparian trees greater than two inches in diameter at breast height (DBH; CDFW). Under Section 404 of the Clean Water Act (CWA), the USACE has authority to regulate activities that discharge dredge or fill material into wetlands or other "waters of the United States" through issuance of a Section 404 Permit. Finally, the San Francisco Bay Regional Water Quality Control Board (RWQCB) has jurisdiction over "waters of the state" pursuant to the

Porter-Cologne Water Quality Control Act, and also has the responsibility for issuing Water Quality Certifications per Section 401 of the federal CWA. There are no jurisdictional waterways or wetlands in the Plan Area.

Wildlife Movement Corridors

Wildlife corridors are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as foraging and denning areas, or they may be regional in nature, allowing movement across the landscape. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Examples of barriers or impediments to movement include housing and other urban development, roads, fencing, unsuitable habitat, or open areas with little vegetative cover. The Plan Area is highly disturbed. The entirety of the Plan Area is either developed, paved, or used for sports or other recreational activities. The Area is surrounded by residential and commercial development and is not situated to form a link between blocks of intact habitat. As such, the Plan Area does not afford any high value or benefit to wildlife movement in the area due to the high level of disturbance.

3.4.2 REGULATORY FRAMEWORK

3.4.2.1 Federal Laws and Regulations

Federal Endangered Species Act

Under the Federal Endangered Species Act (FESA), the Secretary of the Interior and the Secretary of Commerce have joint authority to list a species as Threatened or Endangered (16 United States Code [USC] 1533[c]). Pursuant to the requirements of the FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed or proposed species may be present in the project region, and whether the proposed project would result in a "take" of such species. The "take" provision of the FESA applies to actions that would result in injury, death, or harassment of a single member of a species protected under the Act. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under the FESA or result in the destruction or adverse modification of critical habitat for such species (16 USC 1536[3][4]). If it is determined that a project may result in the "take" of a federally listed species, a permit from the U.S. Fish and Wildlife Service (USFWS) would be required under Section 7 or Section 10 of the FESA. Section 7 applies if there is a federal nexus (e.g., the project is on federal land, the lead agency is a federal entity, a permit is required from a federal agency, or federal funds are being used). Section 10 applies if there is no federal nexus.

Clean Water Act

The Federal Water Pollution Control Act of 1972, often referred to as the Clean Water Act, is the nation's primary law for regulating discharges of pollutants into waters of the United States. The objective of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The regulations adopted pursuant to the Act deal extensively with the permitting of actions in waters of the United States, including wetlands. The U.S. Environmental Protection Agency (US EPA) has primary authority under the Clean Water Act to set standards for water quality and for effluents, but the USACE has primary responsibility for permitting the discharge of dredge or fill materials into streams, rivers, wetlands, and other waters of the United States.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (16 USC, Section 703, Supplement I, 1918) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. The Act encompasses whole birds, parts of birds, and bird nests and eggs. With a few exceptions, most birds are considered migratory under the MBTA. Disturbances that cause nest abandonment and/or loss of reproductive effort or loss of habitat upon which these birds depend could be in violation of the MBTA. A December 2017 opinion from the Office of the Solicitor for the U.S. Department of the Interior (M-opinion) concluded the MBTA restrictions apply only to affirmative and purposeful actions, such as hunting and poaching that reduce migratory birds and their nests and eggs, by killing or capturing, to human control and not incidental taking. April 2018 guidance from the Principal Deputy Director of the USFWS provides further guidance on revisions to past policies and guidance regarding the MBTA. This guidance concludes the MBTA's prohibitions on take of migratory birds apply only when the purpose of the action is to take migratory birds, their eggs, or their nests. On April 26, 2020, the USFWS published an updated list of birds protected by the MBTA.

3.4.2.2 State Laws and Regulations

California Endangered Species Act

Under the California Endangered Species Act (CESA), the CDFW has the responsibility for maintaining a list of Threatened and Endangered species (California Fish and Game Code Section 2070). The CDFW also maintains a list of "candidate species," which are species formally under review for addition to either the list of Endangered species or the list of Threatened species. In addition, the CDFW maintains lists of "species of special concern," which serve as watch lists. Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed

Endangered or Threatened species could be present on the project site and determine whether the proposed project could have a potentially significant impact on such species.

California Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (NPPA), which directed the CDFW to carry out the legislature's intent to "preserve, protect, and enhance Endangered plants in this state." The NPPA gave the California Fish and Wildlife Commission the power to designate native plants as Endangered or Rare and to require permits for collecting, transporting, or selling such plants. The CESA expanded upon the original NPPA and enhanced legal protection for plants. There are three listing categories for plants in California: Rare, Threatened, and Endangered.

California Fish and Game Code

The California Fish and Game Code provides a variety of protections for species that are not federally or state listed as Threatened, Endangered, or of special concern.

- Section 3503 protects all breeding native bird species in California by prohibiting the take,[11] possession, or needless destruction of nests and eggs of any bird, with the exception of non-native English sparrows and European starlings (Section 3801).

- Section 3503.5 protects all birds of prey (in the orders Falconiformes and Strigiformes) by prohibiting the take, possession, or killing of raptors and owls, their nests, and their eggs.

- Section 3513 of the code prohibits the take or possession of migratory nongame birds as designated in the MBTA or any parts of such birds except in accordance with regulations prescribed by the Secretary of the Interior.

- Section 3800 of the code prohibits the taking of nongame birds, which are defined as birds occurring naturally in California that are not game birds or fully protected species.

- Section 3511 (birds), Section 5050 (reptiles and amphibians), and Section 4700 (mammals) designate certain wildlife species as fully protected in California.

11 "Take" in this context is defined in Section 86 of the California Fish and Game Code as to "hunt, pursue, catch, capture, or kill, or to attempt to hunt, pursue, catch, capture, or kill."

California Regional Water Quality Control Board

Wetlands and permanent and intermittent drainages, creeks, and streams that fall under the jurisdiction of the USACE are also regulated by the California Regional Water Quality Control Board (RWQCB), as defined by Section 401 of the Clean Water Act, which authorizes the State of California to certify that federal permits and licenses do not violate the state's water quality standards. The state's implementing regulations to conduct certifications are codified under the California Code of Regulations, Title 23 Waters, Sections 3830 through 3869. In addition, waters into which discharge may occur are regulated by the RWQCB, pursuant to the California Porter-Cologne Water Quality Act. This includes surface waters (such as wetlands), groundwater, and point and non-point sources of pollution.

3.4.2.3 Local Regulations

City of Sunnyvale Municipal Code

Sunnyvale Municipal Code (SMC) Chapter 13.16, City Trees, pertains to preserving trees in the public right-of-way (City trees). All City trees with a diameter at breast height (dbh) of 4 inches or greater are protected.

SMC Chapter 19.94 is the City's tree preservation ordinance. The purpose of the ordinance is to "regulate the protection, installation and removal and long term management of significantly sized trees on private property within the City and City owned golf courses and parks; encourage the proper protection and maintenance of significantly sized trees which are located on such property; establish a review and permit procedure to assure the correct planting, maintenance, protection and removal of significant trees on such property; and establish penalties for violation of its provisions." SMC Chapter 19.94.030 defines a significant tree as "a tree thirty-eight inches or greater in circumference measured four and one-half feet above ground for single-trunk trees. For multi-trunk trees, "significant size" means a tree which has at least one trunk with a circumference thirty-eight inches or greater measured four and one-half feet above ground level, or in which the measurements of the circumferences of each of the multi-trunks, when measured four and one-half feet above the ground level, added together equal an overall circumference one hundred thirteen inches or greater."

Chapter 12.60 provides regulation requirements for stormwater and wastewater management under the National Pollutant Discharge Elimination System (NPDES) permitting system, Federal Clean Water Act, and Porter-Cologne Act.

These requirements are discussed in detail in **Section 3.8, Hydrology and Water Quality.**

City of Sunnyvale General Plan

The following provisions of the *City of Sunnyvale General Plan* apply to biological resources:

Policy EM-8.6 Minimize the impacts from stormwater and urban runoff on the biological integrity of natural drainage systems and water bodies.

Policy LT-1.10 Participate in federal, state, and regional programs and processes in order to protect the natural and human environment in Sunnyvale and the region.

Policy LT-1.10e Continue to evaluate and ensure mitigation of potential biological impacts of future development and redevelopment projects in a manner consistent with applicable local, State, and federal laws and regulations.

Policy LT-2.3 Accelerate the planting of large canopy trees to increase tree coverage in Sunnyvale in order to add to the scenic beauty and walkability of the community; provide environmental benefits such as air quality improvements, wildlife habitat, and reduction of heat islands; and enhance the health, safety, and welfare of residents.

Policy LT-2.4 Maintain and regularly review and update regulations and practices for the planting, protection, removal, replacement, and long-term management of large trees on private property and City-owned golf courses and parks.

Action 1: Strictly enforce Chapters 13.16 City Trees and 19.94 Tree Preservation to prevent the unauthorized removal, irreversible damage, and pruning of large, protected trees.

Policy LT-2.5 Recognize the value of protected trees and heritage landmark trees (as defined in City ordinances) to the legacy, character, and livability of the community by expanding the designation and protection of large signature and native trees on private property and in City parks.

Policy LT-9.19 Protect creeks and wetlands as important parts of the community's natural environment and open space and for their contribution to flood control.

LT-9.19a: Work with other agencies to maintain creeks and wetlands in their natural State.

LT-9.19b: Work with appropriate agencies to identify creek channels and wetlands to use as recreational areas.

LT-9.19c: Minimize or divert pollutants from draining into creeks and wetlands by enforcing best management practices during construction, site development, and ongoing operations.

City of Santa Clara General Plan 2010-2035

The existing *City of Santa Clara General Plan* was adopted in 2002 as a Statement of policy for the physical development of the City of Santa Clara. In relation to biological resources, the current *General Plan* has policies and programs in place to protect biological resources, including:

- Restrict development in areas that contain rare or endangered species of plants or animals or in special status species habitat areas unless suitable mitigation can be provided.
- Preclude construction in riparian corridors of structures or improvements, except certain trails, flood control projects, and culverts, fences, pipelines and bridges, and evaluate and mitigate where feasible, biological effects of any such construction.
- Establish a creekside setback to protect riparian vegetation, subject to not precluding reasonable development of a parcel.
- Cooperate with the Santa Clara Valley Water District and other permitting agencies to limit development or flood control measures within riparian corridors to activities necessary for improvement or maintenance of stream flow, or creekside public trails, and to evaluate, for their effects on riparian resources, all actions that could potentially alter stream flow.

Santa Clara City Code – Trees and Shrubs

The Santa Clara City Code, Sections 12.35.020 and 12.35.030 serve to protect all trees planted or growing in the streets or public places of the City from removal without a permit from the City and prohibits the attaching of anything to a tree in the City, unless it is necessary and proper to the growth and care of the tree. The ordinance protects both native and non-native tree species.

3.4.3 THRESHOLDS OF SIGNIFICANCE

The following thresholds for determining the significance of impacts related to biological resources are contained in the environmental checklist form contained in Appendix G of the most recent update of the *State CEQA Guidelines*. Adoption and/or implementation of the Proposed Master Plan could result in significant impacts to biological resources, if any of the following would occur:

- 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. 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 US Fish and Wildlife Service. 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.

- Interfere substantially with the movement of any native or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impedes the use of native wildlife nursery sites.

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

In addition to the above criteria, *State CEQA Guidelines* Section 15065(a), Mandatory Findings of Significance, states that a project may have a significant effect on the environment if "… the project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species …" These mandatory findings of significance are considered in assessing the Plan's impacts on biological resources.

The following is an evaluation of whether proposed impacts to biological resources are significant, considering how each resource is important in a regional or local context. "Significant" impacts are those that would substantially diminish, or result in the loss of, an important biological resource or those impacts that would conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally adverse, but not significant, because, although they would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population or regional level.

State CEQA Guidelines Section 15380 states that a lead agency shall consider a non-listed species to be rare or endangered for the purposes of CEQA, if the species can be determined to meet the applicable criteria established in the section. For the purposes of this impacts analysis, the current scientific knowledge on the

population size and distribution for each special-status species was considered, as instructed in the *State State CEQA Guidelines* Section 15380.

3.4.4 METHODOLOGY

This section outlines the methodology for evaluating impacts to biological resources, including sensitive natural communities and special status species.

For this analysis, "sensitive natural communities" are considered to be habitats or natural communities that are unique, of relatively limited distribution in the region, and/or of particularly high value for wildlife. Sensitive habitats include specific natural communities defined by CDFW, as well as wetlands and riparian communities, which are considered special status natural communities due to their limited distribution in California. Sensitive natural communities are usually identified in regional or local plans, policies, or regulations, and may or may not contain special status species.

For purposes of this analysis, "special status species" include:

- Plants and wildlife species listed as rare, threatened, or endangered under the FESA or the CESA;
- Species that are candidates for listing under federal or state law;
- Species designated by the USFWS as Proposed or Candidates for listing and/or species designated as Species of Special Concern by CDFW;
- Species protected by the Federal Migratory Bird Treaty Act;
- Species identified as rare, threatened, or endangered by the California Native Plant Society (CNPS); and
- Any other species that may be considered endangered or rare pursuant to *State CEQA Guidelines* Section 15380(b).

The impact analysis considers the indirect impacts from Proposed Master Plan to special status species and sensitive natural communities under the threshold questions. Impacts to biological resources could include the direct take of a species or the removal or disturbance of habitats from project development or more indirect delayed or secondary effects from development, such as fragmentation, pollination interruption, plant and wildlife dispersal interruption, increased risk of fire, and increased invasion of non-native animals and plants that out-compete natives.

3.4.5 ENVIRONMENTAL IMPACTS

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

As shown in **Table 3.4-1**, there are 35 animal species and twelve special status plant species reported as being historically observed within the Cupertino Quadrangle, where the Plan Area is located. Two animal species are listed as endangered, and two are listed as threatened by the CDFW and/or the USFWS. Seventeen of the animal species are listed as species of special concern by CDFW, six are on the watch list, and two are federally protected (The golden eagle, "*Aquila chrysaetos*," and the white-tailed kite, "*Elanus leucurus*."). As discussed in **Section 3.4.1, Environmental Setting**, only one species, the burrowing owl (*Athene cunicularia*), has been identified as having occurred within the Plan Area.[12]

The Plan Area is located within an existing urban environment, surrounded by residential development that is suburban in nature. The Plan Area itself is highly disturbed. The campuses are fully built out, consisting of educational buildings, parking lots, and recreational fields. Additionally, there are many mature trees located within the Plan Area that that are likely for nesting (generally from early February through late August) given the presence of trees and shrubs. While only one sensitive species was identified as having occurred on the site, the construction and operational activities associated with the Proposed Master Plan has the potential to affect the burrowing owls and other potential species' habitat.

Development through the implementation of the Proposed Master Plan has the potential to result in direct and indirect impacts to nesting birds and sensitive species such as the burrowing owl, if they are located within the Plan Area and/or immediate vicinity during construction activities. Construction would occur where mature trees are present. Direct impacts from construction activities may include ground disturbance and removal of trees or shrubs, which could potentially contain bird nests. Indirect impacts include construction noise, lighting, and fugitive dust.

On an incremental basis, implementation of the Proposed Master Plan would result in the temporary loss of vegetation that could serve as nesting and foraging habitats.

The Plan Area itself is surrounded by suburban residential communities. Outdoor recreation and general school operation reduces the likelihood that the Plan Area is essential for successful breeding of any

12 City of Sunnyvale. *Land Use and Transportation Element Draft Environmental Impact Report*. 2016. Available online at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/608/637819113538930000.Accessed July 6, 2022.

sensitive species. While there is a low possibility to encounter sensitive species within the Plan Area, the Proposed Master Plan has the potential to have adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, particularly the burrowing owl (*Athene cunicularia*). Therefore, impacts are potentially significant. Additionally, implementation of **Mitigation Measure BIO-1** seeks to reduce potential impacts to nesting birds, including the burrowing owl.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM BIO-1 To avoid disturbance of nesting and special-status birds, including raptorial species protected by the Migratory Bird Treaty Act and California Fish and Game Code, activities related to the Proposed Master Plan, including, but not limited to, vegetation removal, ground disturbance, and construction and demolition shall occur outside of the bird breeding season (February 1 through August 31). If construction must begin during the breeding season, then a pre-construction nesting bird survey shall be conducted no more than three days prior to initiation of construction activities. The nesting bird pre-construction survey shall be conducted on-foot inside portions of the area proposed for development, including a 50-foot buffer (100-foot for raptors), and in inaccessible areas (e.g., private lands) from afar using binoculars to the extent practical. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in California. If nests are found, an avoidance buffer shall be demarcated by a qualified biologist with bright orange construction fencing, flagging, construction lathe, or other means to mark the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No parking, storage of materials, or construction activities shall occur within this buffer until the avian biologist has confirmed that breeding/nesting is complete, and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist.

Significance After Mitigation

Less than Significant Impact with Mitigation Incorporated. Implementation of **MM BIO-1** would further reduce potential direct and indirect impacts to protected nesting birds.

Impact BIO-2 **Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.**

The Bryan Osborn Nature Center, located within the center of Peterson Middle School, contains marsh, pond, and riparian communities. Though, neither California Department of Fish and Wildlife nor U.S. Fish and Wildlife Service has identified the site as a containing riparian or wetland environments or sensitive natural communities.[13] While not officially designated or identified in local or regional plans, the Nature Center's riparian habitat has the potential be impacted by the Proposed Master Plan. However, the Proposed Master Plan would be compatible with the *City of Sunnyvale General Plan* and the *City of Santa Clara General Plan* policies that protect riparian habitats. As a result, impacts to riparian habitat or other sensitive natural community would be less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Less than Significant Impact.

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13 U.S. Fish and Wildlife Service. National Wetlands Inventory. Available at: https://www.fws.gov/wetlands/data/mapper.html, accessed July 6, 2022

Impact BIO-3 **Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.**

Buildout of the Proposed Master Plan would not have a substantial adverse effect on federally protected wetlands through direct removal, filling, hydrological interruption, or other means. Therefore, less than significant impact would occur.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Less than Significant Impact.

Impact BIO-4 **Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

There are several mature trees within and surrounding the Plan Area that may provide suitable habitat for nesting birds protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code §§ 3500 - 5500. Birds may also nest on or within the vacant building on site. The MBTA of 1918 implements the United States' commitment to four treaties with Canada, Japan, Mexico, and Russia for the protection of shared migratory bird resources. The MBTA governs the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. However, while one sensitive species has been identified as having potential to be found within the Plan Area (burrowing owl), the potential for the Plan Area to provide significant habitat for native resident or wildlife species is low. As a result, the potential for the Plan Area to serve as a migratory wildlife corridor or wildlife nursery site is also low. Additionally, the developed nature of the Plan Area has fragmented any potential wildlife corridors. The Plan Area is surrounded by suburban development. Implementation of **MM BIO-1** would reduce any impacts to migratory birds to a less than significant level. Therefore, impacts are *less than significant with mitigation incorporated*.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

See **MM BIO-1**.

Significance After Mitigation

Less than Significant Impact with Mitigation Incorporated.

Impact BIO-5 **Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.**

Both the City of Sunnyvale and the City of Santa Clara have implemented policies and ordinances to protect biological resources, particularly trees. The City of Sunnyvale's Municipal Code (SMC) includes a chapter on City Trees, pertaining to preserving trees in the public right-of-way. The purpose of the ordinance is to regulate the installation, management and removal of significantly sized trees and establish a permit procedure to assure protection of significant trees. A significant tree has at least one trunk with a circumference thirty-eight inches or greater, or in which the measurements of the circumferences of each of the multi-trunks, added together equal an overall circumference one hundred thirteen inches or greater, measured four and one-half feet above the ground level.[14] The *City of Sunnyvale General Plan* also includes several policies related to protecting biological resources.

The *City of Santa Clara General Plan* includes several policies that work to protect biological resources, such as restricting development in areas that contain sensitive species or habitats. The Santa Clara City Code also includes a tree preservation ordinance to protect all trees planted or growing in the streets or public places of the City from removal without a permit.

There are 323 existing trees within the Plan Area, the vast majority of which are mature. These trees have the potential to be impacted by construction activities included the Proposed Master Plan. The existing development on Patrick Henry Campus will be demolished to build the new Laurelwood Elementary School and a potential Alternative High School, which will require the removal of some or all of trees

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14 City of Sunnyvale, *Tree Removal*, last updated June 25, 2021. Available online at: https://sunnyvale.ca.gov/property/trees/removal.htm#:~:text=If%20a%20single%2Dtrunk%20tree,113%20inches%2C%20it%20is%20protected. Accessed on March 31, 2022.

located in the areas surrounding those buildings. The Proposed Master Plan will be subject to both the City of Sunnyvale and City of Santa Clara's Street tree preservation ordinances. This will require SCUSD to acquire a permit to remove any street tree large enough to be considered significant. As a result, the impact will be less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Less than Significant Impact.

Impact BIO-6 **Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.**

The Plan Area lies within an existing school campus in a residential community, and it is not identified within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The Plan Area is located within the Santa Clara Valley, but it is not within the jurisdiction of the Santa Clara Valley Habitat Plan.[15] Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

15 Santa Clara Valley, Habitat Agency Geobrowser. Available online at: http://www.hcpmaps.com/habitat/. Accessed on July 7, 2022.

Significance After Mitigation

Less than Significant Impact.

3.4.6 CUMULATIVE IMPACTS

The following factors are considered with respect to analyzing cumulative impacts to biological resources:

- The cumulative contribution of other approved and proposed projects to fragmentation of open space in the Plan Area vicinity;
- The loss of sensitive habitats and species;
- Contribution of the Proposed Master Plan to urban expansion into natural areas; and
- Isolation of open space within the vicinity by proposed/future projects.

Development associated with the Proposed Master Plan could disturb areas with the potential to contain sensitive habitats and biological resources. It is anticipated that other developments that could potentially have significant impacts on such resources, similar mitigation measures described herein would be imposed, along with requirements to comply with all applicable laws and regulations governing said resources. The proposed mitigation measures identified in this section of the EIR, coupled with policies and regulations applying to this and other projects, such impacts to sensitive habitats and biological resources would be less than significant at the project level. As such, the Proposed Master Plan would not contribute to cumulative impacts on sensitive habitats and biological resources outside the Plan Area. In addition, individual development proposals are reviewed separately by the appropriate jurisdiction and undergo environmental review when it is determined that the potential for significant impacts may occur. Given the urban setting of the city, it is unlikely that future development projects in the city would result in potential impacts to sensitive habitats and biological resources. Regardless, potential impacts would be analyzed and addressed on a case-by-case basis. Therefore, impacts related to sensitive habitats and biological resources would not be cumulatively considerable.

3.4.7 REFERENCES

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California Department of Fish and Wildlife. CNDDB QuickView Tool BIOS Viewer. Available online at: https://apps.wildlife.ca.gov/bios/?tool=cnddbQuick.Accessed July 1, 2022.

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United States Fish and Wildlife Service (USFWS), 1973. The Endangered Species Act of 1973, as amended (16 U.S.C 1531 et seq.).

3.5 CULTURAL & TRIBAL RESOURCES

INTRODUCTION

This section presents an overview of the existing cultural resource conditions within the boundaries of the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan") Area. It also discusses the potential impacts to Cultural Resources (i.e., historical resources and archeological resources), and Tribal Cultural Resources as a result of construction and operation activities associated with the implementation of the Proposed Master Plan. A Cultural Resource Inventory and Architectural Resource Evaluation was completed for the Proposed Master Plan and is included as ***Appendix 3.5-1, Cultural Resource Inventory and Architectural Resource Evaluation,*** *of this EIR.*

3.5.1 ENVIRONMENTAL SETTING

3.5.1.1 Ethnographic and Prehistoric Background

Precolonial Context

Precolonial history of the southern San Francisco Bay area is complex due to the dramatic increase in human populations from middle to late Holocene times. Cultural chronology is quite variable spatially but is generally framed within a tripartite sequence that is commonly used in central California—Early, Middle, and Late. These temporal periods are preceded by early to middle Holocene occupation, often characterized as the Millingstone Period.[1]

The Millingstone Period (9000–5500 years BP) is characterized by small groups who travelled widely and practiced broad spectrum foraging of easily acquired plant and animal resources. Artifacts common to this time period are handstones and millingstones. Flaked stone implements, such as projectile points, are much less common than grinding and battering tools.[2] Common foods are thought to have included a variety of small seeds, shellfish, and small mammals.

The Early Period ranges from approximately 5500–2500 Before Present (BP) and encompasses an era where people are thought to still have practiced wide-ranging residential mobility but placed a greater emphasis on hunting larger game. Large pinnipeds, such as northern fur seal, are common to coastal archaeological

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1 Milliken, R., R.T. Fitzgerald, M. Hylkema, R. Groza, T. Origer, D.G. Bieling, A. Leventhal, R. Wiberg, A. Gottsfield, D. Gillette, V. Bellifemine, E. Strother, R. Cartier, and D.A. Fredrickson. 2007. *Punctuated Culture Change in the San Francisco Bay Area. In California Prehistory: Colonization, Culture, and Complexity*. edited by T. L. Jones and K. A. Klar, pp. 99-123. Altamira Press, New York.

2 Fitzgerald, R.T. 2000. *Cross Creek: An Early Holocene/Millingstone Period Site. California State Water Project*. Coastal Branch Series Paper Number 12. San Luis Obispo.

sites during this time. Several styles of large projectile points correspond to this general time frame, which also marks the initial use of mortar and pestle technology.

The Middle Period dates from 2500–1000 BP and appears to represent a time when people were somewhat more residentially stable and practiced more logistical (short-term) mobility. By this time, people went on extended resource acquisition forays for the purpose of bringing subsistence or trade items back to residential base camps. Large, terrestrial mammals were hunted more often during this time and grinding implements become more common.[3]

The Late Period begins at 1000 BP and extends to ca. 1550 BP or perhaps more recently. The Late Period is characterized by increased sociopolitical complexity and settlement centralization. Large village sites in the northern Santa Clara Valley are often found in the valley center along perennial streams. There is continued prevalence of mortar and pestle technology, thought to signify a greater reliance on acorn than in earlier times. Other labor-intensive foods were also used with greater frequency during this latest time period. For example, sea otter and harbor seal were exploited more heavily. These animals are thought to be more labor-intensive to capture compared to other pinnipeds and large mammals, which were more commonly hunted in earlier time. Bow and arrow technology is also believed to have been adopted by aboriginal hunters during this latest precolonial interval.[4]

Local Colonial Context

Archaeological studies indicate that the Santa Clara Valley was occupied as early as 10,000 years ago. Research identified broad periods of occupation between 7000 and 400 BP.

The earliest period, the Millingstone Horizon (7000–4000 BP), was thought to represent the first aboriginal groups in the Valley. King and Hickman[5] proposed that these populations were the result of overpopulation in the coastal areas of southern California. As population pressures increased in these regions, pioneering groups are thought to have moved into previously unoccupied territories. Archaeological evidence for this period is scant; occupation components reveal low artifact counts, few

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3 Milliken, R., R.T. Fitzgerald, M. Hylkema, R. Groza, T. Origer, D.G. Bieling, A. Leventhal, R. Wiberg, A. Gottsfield, D. Gillette, V. Bellifemine, E. Strother, R. Cartier, and D.A. Fredrickson. 2007. *Punctuated Culture Change in the San Francisco Bay Area. In California Prehistory: Colonization, Culture, and Complexity*. edited by T. L. Jones and K. A. Klar, pp. 107. Altamira Press, New York.

4 Hylkema, M.G. 2002. Tidal Marsh, *Oak Woodlands, and Cultural Florescence in the Southern San Francisco Bay Region. In Catalysts to Complexity: Late Holecene Societies of the California Coast*, edited by J. M. Erlandson and T. L. Jones, pp. 233-262. Perspectives in California Archaeology. Cotsen Instiute of Archaeology, University of California, Los Angeles.

5 King, T., and P. Hickman. 1973 *The Southern Santa Clara Valley: A General Plan for Archaeology*. Report submitted to U.S. Department of the Interior, National Park Service. San Francisco, California.

radiocarbon dates, and poor depositional integrity. Tool assemblages from a cluster of sites located near Coyote Creek just north of Morgan Hill reveal a preponderance of small, informal flake tools, handstones and milling slabs, and an absence of beads and ornaments. Radiocarbon assays from one site range from 10,000 to 8500 BP.[6]

The next period identified by King and Hickman is the Middle Horizon (4000–1500 BP). Aboriginal settlements during this interval are thought be more permanent than during the Millingstone Horizon. They also propose that population densities increased during this time stimulating dependence on a stored food economy with an emphasis on acorn processing. Continued population growth is thought to have resulted in tremendous economic stress and an increase in warfare.

The last period of occupation, the Protohistoric Period (1500–400 BP), is characterized by a return to a settlement system marked by highly dispersed populations and an increase in temporary habitation sites.

Archaeological evidence indicates that acorn processing did indeed grow in importance sometime between 4000 and 2750 BP. This is seen in an increase in the number of mortars and pestles recovered from sites dating to this time.[7] Flake tools continue to dominate assemblages, and there is continued absence of bone tools, beads, and ornaments. Further, investigations of components dating between 2700 and 1450 BP indicate a decline in artifact density and assemblage.

Ethnographic Context

By the time the Spanish began extensively exploring Alta California in the 18th century, a substantial Native American population occupied the Santa Clara Valley. This population, originally called Costanoan but now known as the Ohlone, occupied a large area in north-central California, from the San Francisco Peninsula and the East Bay, south to the Santa Clara Valley down to Monterey, and inland south to San Juan Bautista. This area encompassed a mosaic of different habitat types, including grasslands, woodlands, chaparral, redwood forests, coastal shrub, estuaries, and tidal marshes. Miwok tribelets were to the north and northeast of their Ohlone neighbors. Yokuts tribelets were to the east. Immediate neighbors to the south of the Ohlone included the Hokan-speaking Esselen and Salinan.

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6 Hildebrandt, W., and P. Mikkelsen. 1993. *Archaeological Text Excavations at Fourteen Sites along Highways 101 and 152, Santa Clara and San Benito Counties, California. Report* from Far Western Anthropological Research Group, Inc., Davis, to the California Department of Transportation District 4, Oakland, CA. Report submitted to Report from Far Western Anthropological Research Group, Inc., Davis, to the California Department of Transportation District 4, Oakland, CA.

7 King, T., and P. Hickman. 1973. *The Southern Santa Clara Valley: A General Plan for Archaeology*. Report submitted to U.S. Department of the Interior, National Park Service. San Francisco, California.

Ohlone

The Ohlone spoke a Costanoan language, which belongs to the Utian family of the larger Penutian language stock. Speakers of Penutian inhabited north central California and included tribal groups such as the Maidu, Wintu, Miwok, and Yokuts. Anthropologists have traditionally divided the Costanoan language into eight different dialects.[8]

The original name for the Ohlone, Costanoan, is a derivation of the Spanish term "costeños" or "costaños," which means "coast dwellers." In the early part of the 20th century, many anthropologists used the term "Costanoan" in reference to native peoples who once occupied the Bay Area. Further, Bay Area languages were referred to as "Olhonean," a term derived from the name of a tribelet located on the coast between San Francisco and Santa Cruz that was spelled variously as "Alchone," "Olchone," "Oljon," or "Olhon"). More recently, modern descendants of Costanoan peoples have identified themselves as "Ohlone", a derivation of Olhone, and that is the term that will be used here, except in reference to the language family.[9]

Researchers have hypothesized from linguistic evidence that the Ohlone were late entrants into the area. Anthropologists argue that the ancestors of the Ohlone originally migrated into the San Francisco and Monterey Bay areas from the San Joaquin-Sacramento River system sometime around AD 500. This migration represented movement of several Penutian-speaking peoples westward into areas formerly inhabited by Hokan-speakers. The ancestors of the ethnohistoric Ohlone were fully ensconced in the area by the Late Holocene.[10]

Tamien speakers occupied much of what today is the flat Santa Clara Valley, from the Guadalupe River westward to Stevens Creek, near the present-day city of Cupertino. From north to south, this region encompassed the area from present-day Agnew's Village down to modern downtown San Jose. Within a four-mile radius of the Santa Clara Mission site there were three large villages of over 120 inhabitants and two very small hamlets. Although the native names for these three villages have been lost, the missionaries gave them Spanish designations. The village of San Francisco Solano was located near the mouth of the Guadalupe River, while the village of Santa Ysabel was situated farther east, along the lower Coyote River. The third large village, called San Jose Cupertino, was three miles southwest of the Santa Clara Mission

8 Levy, R. 1978. *Costanoan. In Handbook of North American Indians*, edited by R. F. Heizer, pp. 485 - 495. Vol. 8. Smithsonian Institution Press, Washington D.C.

9 Bean, L.J. 1994. *The Ohlone Past and Present: Native Americans of the San Francisco Bay Region*. Ballena Press Anthropological Papers 42, Menlo Park, CA.

10 Bean, L.J. 1994. *The Ohlone Past and Present: Native Americans of the San Francisco Bay Region*. Ballena Press Anthropological Papers 42, Menlo Park, CA.

site. One of the small hamlets was located very near the site of the original Santa Clara Mission, while the second hamlet was approximately one mile upstream on the Guadalupe River.[11]

3.5.1.2 Historical Background

Historic Context

Spanish Mission Period (1769–1834)

The Ohlone first encountered Europeans in 1602–03 during the voyage of Sebastian Vizcaino, who briefly described the Ohlone inhabitants of Monterey (known as the Rumsen). This contact was brief and it was not until nearly 170 years later that the Spanish again made contact with the Ohlone. In 1769, Gaspar de Portolá, traveling north by land along the Pacific Ocean from San Diego in order to establish a settlement in Monterey, was the first European to sight San Francisco Bay. As he journeyed through Ohlone territory, Portolá gave brief descriptions of the Indians he encountered. Shortly thereafter, in 1770, Lieutenant Pedro Fages led a small expedition inland from Monterey. One of the expedition's chroniclers, Juan Crespí, made extensive notes on the aboriginal inhabitants of the area.

In 1777, the first Mission in Santa Clara was established in what would later be known as the Santa Clara Valley, though at the time was called Llano de Los Robles (or "Plain of the Oaks") by the Spanish. The valley formed a broad, grassy plain that was dotted with oaks and well-watered by creeks and streams. Numerous Native villages also occupied the region, an important reason the Spanish decided to establish a Mission in the area. The reason for colonization in California was to protect the Spanish-owned, northern Mexico silver mines and other New World investments from Russians encroaching from the north. Establishing missions, presidios, and pueblos was seen as an inexpensive way of protecting northern Mexico, while simultaneously attempting to spread Spanish culture and Christian faith. Interactions between Franciscan priests, diverse soldiers of the Crown, and local and non-local indigenous peoples took place under this economic and political regime for nearly sixty years, and under Spanish and later Mexican governments.[12]

The Indigenous Population

Movement of indigenous peoples to the Spanish Missions was one response to the many ways the Spanish and Mexican governments, and their supporters, disrupted local communities. After baptism, indigenous

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11 Milliken, R. 1995. *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769-1810*. Ballena Press, Menlo Park, CA.

12 Garcia, L. 1994. *Our Special Place*. Paper presented at the Paper presented at the American Planning Association National Conference, April 1994, San Francisco, California.

peoples found themselves forging a new community with others who spoke different Indian languages, claimed various tribal territories, and affiliated themselves with dissimilar lineage lines, all the while, interacting with a colonial presence that sought to transform them into "productive citizens" of the colony.[13]

Spain's goal to colonize California depended entirely on the ability of the missionary priests to reorganize the Native populations into an agrarian work force. At the time of the Spanish explorations the indigenous people within the Ohlonean cultural sphere were organized into over fifty political units, or tribelets, with variations of language, custom and appearance. Large populations and their complexity of cultures were generally of little interest to the Spaniards who were intent upon breaking down traditional Indian ways to facilitate their reorganization (redución). Europeans of the 18th century cultivated a perception of moral superiority over non-Christian people, which of course served to justify the management of other cultures to attain their goals.[14]

Franciscan priests reproduced the common Spanish colonial practice of moving Native peoples into mission centers, strategically disassociating them from their homelands and the mythical landscapes, graves of their ancestors, and the named rocks and landmarks contained therein. The historical record tells us this practice created mission populations composed of peoples from variable ethnolinguistic groups and very distant polities. During several population spikes, more than 1,400 Native Americans lived at Mission Santa Clara. Mission Santa Clara's historic documents indicate a steady influx of Ohlone, Northern Valley Yokuts, and Miwok populations from diverse villages within those ethnolinguistic territories.[15]

Thus, the Indian village at Mission Santa Clara is best viewed as a growing and changing amalgam of indigenous peoples drawn at first from the San Francisco Bay region and later as far away as the San Joaquin Valley and the foothills of the Sierra Nevada. The population represented dozens of formerly autonomous tribelets of no more than a few hundred people, some closely related culturally and linguistically, others from vastly different traditions. The community or perhaps communities within the village were adjusting to both the Spanish Colonial regime and to day-to-day relationships with people with whom they had little or no contact prior to the advent of the Mission.

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13 Senkewicz, R. 2002. *The California Context. In Telling the Santa Clara Story: Sesquicentennial Voices*, edited by R. Skowronek, pp. 20-27. City of Santa Clara and Santa Clara University, Santa Clara, California.

14 Bean, L.J. 1994. *The Ohlone Past and Present: Native Americans of the San Francisco Bay Region*. Ballena Press Anthropological Papers 42, Menlo Park, CA.

15 Lightfoot, K. 2005. *Indians, Missionaries, and Merchants: The Legacy of Colonial Encounters on the California Frontiers.* University of California Press, Berkeley.

Mexican Period (1821–1848)

After the Mexican War of Independence ended in 1822, the secularization of Mission lands began. This involved the confiscation of Mission lands and properties by Mexican civil authorities, and the transfer of these to Mexican citizens. Many Mexican Californians strongly supported the transfer of "landed wealth" from the church to the citizens. The Mexican government carved out and granted large ranches to Mexican citizens, who used the land to graze cattle. These ranchos and herds allowed the Californios to engage in trade with ships visiting the coast, exchanging hides and tallow for manufactured goods. Many ranchos were established around Mission Santa Clara, including Rancho Pastoria de Las Borregas, Rancho Quito, Rancho de los Coches, and Rancho Posolmi (Yñigo). Most of the former 80,000 acres of Mission Santa Clara lands were divided among loyal Mexican subjects.[16]

The neophyte population generally scattered away from the mission centers after secularization (1834). However, some mission Indians may have chosen to continue living at Mission Santa Clara. The few neophytes who chose to remain in their ancestral territory did not have legal ownership of their homelands, although some did petition the Mexican government for land grants. Some mission neophytes were successful in their petition. Some indigenous peoples were given jobs as manual laborers or domestic servants on these Mexican Ranchos, which often were later purchased by American settlers and became American cattle ranches. By 1850, the Native American population in the Santa Clara Valley was estimated at approximately 1,000, divided "between rancherias on the Judson place, the Marvin Murphy ranch.[17]

Other California indigenous peoples lived near one of the pueblos, where work was easier to find as foreign settlers began to pour into the region. Others still migrated to the interior hoping to join kin already there or establish new sociopolitical connections.

After the secularization of the Missions (1834), the many Mexican Californio and recent Mexican immigrant residents who were not granted rancho land often clustered near the former missions, reusing former mission adobe structures and constructing new adobes as well. Squatting in abandoned mission buildings was widely practiced, especially in northern California. These squatters may have taken up occupations as farmers, merchants, craftsmen, or campistas (individuals who used their property to grow crops and raise livestock).[18]

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16 Senkewicz, R. 2002. *The California Context. In Telling the Santa Clara Story: Sesquicentennial Voices, edited by R. Skowronek*, pp. 20-27. City of Santa Clara and Santa Clara University, Santa Clara, California.

17 James, W.F., and G.H. McMurray. 1933. *History of San Jose, California, Narrative and Biographical*. A.H. Cawston, San Jose.

18 Hughes, Charles. 1975. *The Decline of the Californios: The Case of San Diego, 1846-1856*. The Journal of San Diego History 21(3).

American Period (1841–Present)

The various cities that make up what is present-day Santa Clara County all stemmed from the establishment of Mission Santa Clara de Asis in 1777. The development of these towns can be attributed to the influx of immigrants and settlers in this area during the American Period. When Americans began moving into the Santa Clara area, around 1841, Californios here "experienced a decline in economic status, political power, and social influence".[19] This was a harbinger of events to come, as small adobe buildings to house individual families were constructed or adapted from former Mission buildings. Following trends seen elsewhere in North America, an American system of land law, which imposed artificial but ordered grids over a landscape, was later established. Consequently, legal contests led to most Californios loosing most of their land to Americans.

In 1846, members of the first large overland immigration reached the Santa Clara Valley. The "Great Migration" of 1846 consisted of entire families, a completely different type of American immigrant than had arrived before. Many of the immigrant families who sought to relocate to California did so based on descriptions in eastern newspapers that encouraged Americans to come and settle the area. The families were informed by Fremont and the Californios that they could shelter during the rainy season at a number of mostly unoccupied Missions, including Mission Santa Clara, furthering the appeal to settle in the Santa Clara Valley. Following patterns of squatting witnessed during the Mexican Period, a group of 175 settlers from Sutter's Fort temporarily inhabited some of the abandoned Mission Santa Clara buildings in 1846.[20]

Among the immigrant families that had arrived in the Great Migration was the Murphy family, who first settled in Sacramento and later made their way to Santa Clara. In contrast to the immigrant families that occupied the Missions by squatting, the Murphy family was privileged enough to have purchased a portion of former Mission Santa Clara sheep pasturage that through land grants and land disputes had come into the possession of Mariano Castro, San Jose's former Alcalde.[21] It was this purchase in 1850 that paved the way for the development of the City of Sunnyvale.

Gold Rush Immigration and Land Disputes

On January 24, 1848, nine days prior to the signing of the Treaty of Guadalupe Hidalgo, James Marshall found gold at Coloma. The discovery of gold and the subsequent rush to the gold fields resulted in an

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19 Hughes, Charles. 1975. *The Decline of the Californios: The Case of San Diego, 1846-1856*. The Journal of San Diego History 21(3).

20 Garcia, L., G. Giacomini, and G. Goodfellow 2002. *A Place of Promise: The City of Santa Clara 1852-2002*, City of Santa Clara, Santa Clara, California.

21 City of Sunnyvale. 2012. *Historic Context Statement*. City of Sunnyvale Community Development Department, Planning Division.

exodus of anyone in California who could leave home. The Santa Clara Valley was no exception. Even Father Real joined the many gold seekers. The Santa Clara/San José area was nearly depopulated. By the end of the year, some returned and found the price of provisions had risen dramatically because crops had not been harvested. In addition to those returning from the gold fields, many newcomers also arrived in the area, further expanding the population.

While immigrants entering the area prior to 1848 had caused problems by squatting on Mission and Rancho lands, these were minor compared to the impacts caused by the onslaught of people entering the area following the discovery of gold. Many newcomers settled on the land to make their fortunes, finding that agriculture was more lucrative than mining. With the influx of people now greater than the outflow, the area looked like a half-military and half-civil settlement with numerous white tents dotting the open areas. As fresh produce became valuable for residents and miners, Santa Clara's Mission pear orchard became of major economic importance. Typical of the litigation over land ownership and/or possession in the area, the ensuing fight over possession and ownership of the pear orchard would not be settled until 1855.[22]

While disputes over land ownership were ongoing, the use of land itself was undergoing change. Before 1846, little American style agriculture existed in the Santa Clara area. The agricultural products needed for sustenance were provided by crops raised at the Mission and individual family plots. Following the arrival of the early American immigrants, wheat farming had quickly become the dominant crop. By the early 1850s, farmers had begun planting small orchards and vineyards; some experimenting with these crops on their grain farms. The productivity of the Mission's orchards had impressed the many agricultural entrepreneurs who settled here after the Gold Rush. Their interest in Santa Clara Valley land inspired this area's earliest development and cultivation of fruit products.

The Murphy family had a large impact on the early development of orchards specific to the town of Sunnyvale, in fact Murphy is credited with having planted some of the first orchards in the Santa Clara Valley and his early use of farm machinery was also noted in historical documents. Furthermore, the land that Murphy attained in 1850 became more than just the City of Sunnyvale. Murphy's Bayview Farm was integral for some of the social and political developments of Sunnyvale, and he gave the Southern Pacific Railroad permission to pass through his land which contributed to the growing development and industries in the broader region.[23]

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22 McKevitt, G.S.J. 1979. *The University of Santa Clara: A History 1851-1977*, Stanford University Press, Stanford, California.

23 City of Sunnyvale. 2012. *Historic Context Statement*. City of Sunnyvale Community Development Department, Planning Division.

Incorporation

The development of the San Francisco and San Jose Railroad passing through Murphy's Bayview Farm in 1864 led to the establishment of Murphy Station, which would become Sunnyvale, as well as the later established Lawrence Station in Santa Clara (City of Sunnyvale 2012). This became important for the fruit agriculture and canning industries that flourished in the following years and the railroad was also a key contribution to the future expansion of Sunnyvale. Upon his death in 1884, Murphy's land was divided and became smaller farms that were self-sufficient for a while but were eventually impacted by the nationwide depression in the 1890s. The portion of Murphy's land that was Bayview Farm ended up in the possession of his son Patrick Murphy, who leased 200 acres to Antone Vargas, an immigrant Portuguese farmer. These 200 acres were subsequently purchased by Walter E. Crossman; it was Crossman who first planned the town of Sunnyvale with the potential for future growth in mind. Crossman is also credited with having come up with the name Sunnyvale ("City of Destiny") which was adopted by the community in 1901. Sunnyvale began rapidly developing in the years that followed. However, broader events contributed to the impacts on economic growth in Sunnyvale in the early 1900s.

The San Francisco earthquake in 1906 was one of these events. After the San Francisco earthquake, a nationwide depression that began in 1907 slowed down some of the progress that Sunnyvale had been making. Nevertheless, the city boundaries were able to continue to expand and by 1912 Sunnyvale's population had reached 1,200. In 1912, the economic growth in Sunnyvale continued to be agriculturally based, and this remained the case until the 1930s, though this is not to say that significant industrial economic growth had not occurred. Other significant economic impacts during the first few decades of the 1900s in this area included World War I, which resulted in more industrial development, settlers, and military presence in the Santa Clara region as well as in Sunnyvale specifically.[24]

History of the Plan Area

The Project Site locations are associated with Rancho Quito and Rancho Pastoria de Los Borregas. Rancho Pastoria de Los Borregas is associated with Sunnyvale and Rancho Quito is associated more closely with the modern surrounding areas in Santa Clara County of Cupertino, Campbell, and Saratoga. Rancho Quito was granted to Jose Noriega and his father-in-law Jose Zenon Fernandez in 1842 by Mexican governor Juan Alvarado. In 1844, Noriego sold his portion of Rancho Quito to Jose Manuel Alviso, who then sold the Rancho to Jose Ramon Arguello in 1859. A Plat Map from 1864 indicates the Project Area is within the boundaries of what used to be the Quito Rancho

[24] City of Sunnyvale. City of Sunnyvale Community Development Department, Planning Division. *Historic Context Statement*. 2012.

Plat Maps from 1876 and 1889 both depict the Project Area on plots of land under the care of W. Wilcox and A. Patterson; these appear to be in an area marked as belonging to the Milliken Family A plat map from 1867 indicates the northwest portion of the property upon which the Plan Area is located was once owned by W. Wilcox and the southeast portion of the Project Area was owned by J.W. Johnson. The 1889 plat map indicates that W. Wilcox continued to own portions of the Project Area, but new property owners at this time included Mrs. R.S. Burns and A.J. Landrum.

Aerial photography from 1939 and 1956 shows the Project Area on an orchard. The neighboring plots have similar cultivation areas suggesting farming activities were predominant is this part of Sunnyvale. These aerial photos depict one historic-era structure in the Project Area. This structure first appears in aerial photographs in 1939 and continues to be present in an aerial photo from 1956.

Property deeds provided by the District indicate that the Jefferson School District purchased the western 47.26 acres of the 71-acre subject parcel from Ignazio and Rosalia Castello in 1955. That acreage was part of a larger farming property that the Castellos subdivided in 1949 for building restricted single-family homes. The remaining 23.8 acres to the east was two parcels when it was sold to the Jefferson School District in 1960. 13.518 acres were owned by Dominic, Lena, Salvatore Jr., and Rosie Cirrincione and the remaining 11.817 acres were owned by Frank L., Pearl, Salvatore, and Pauline Teresi. A 1956 aerial photograph shows the entire 71 acres planted in fruit trees. A 1959 topographic survey shows the approximately 23 combined acres as orchards of prune, apricot and cherry trees.

The U.S. Census of 1940 indicates all were farming families or "orchardists." Ignazio and Rosalia Castello were Italian immigrants and were living on Reed Lane, in the Santa Clara Township, according to the 1940 census. The 1940 census identifies the four Cirrinciones named on the deed as California natives. Salvatore Cirrinciones Sr. and his wife Katie, who were born in Italy, lived on Wolf Road Homestead, Santa Clara Township, with Dominic, Lena, Salvatore Jr., and Rosie Cirrincione. Salvatore Sr. and Katie Cirrinciones were likely Dominic's and Salvatore Jr.'s parents. The 1940 census shows Frank Teresi as the son of Sicilian-born Salvatore and Sarah Teresi. The 1950 census indicates Frank and Salvatore Teresi were brothers and lived together on a farm on the south side of El Camino Real with their wives, Pearl and Pauline.

Research has not resulted in any additional information about these Italian immigrants and first-generation California-born farming families. The Italian-born senior members of the families were likely part of the significant influx of Italians into the area during the late 19th and early 20th century, attracted by rich agricultural land and associated opportunities. They appear to have been typical farming families that subdivided and sold their property as Santa Clara County's post-war population grew rapidly and suburban communities developed.

A 1965 aerial photograph shows the current school sites, which public records indicate were constructed in 1964. As the aerial shows, most of the neighboring parcels by the 1960s were no longer farmlands but had been developed into residential plots.

3.5.2 REGULATORY FRAMEWORK

Cultural Resources, Tribal Cultural Resources, and Paleontological Resources are regulated at the federal, state, and local levels as discussed below.

3.5.2.1 Federal

National Historic Preservation Act, Section 106

The National Historic Preservation Act (NHPA) establishes the National Register of Historic Places (NRHP) and defines federal criteria for determining the historical significance of archaeological sites, historic buildings and other resources. To be determined eligible for the NRHP, a potential historic property must meet one of four historical significance criteria (listed below), and also must possess sufficient deposition, architectural, or historic integrity to retain the ability to convey the resource's historic significance. Resources determined to meet these criteria are eligible for listing in the NRHP and are termed historic properties. A resource may be eligible at the local, state, or national level of significance.

Properties are eligible for the NRHP if they possess integrity of location, design, setting, materials, workmanship, feeling, and association, and they:

A. are associated with events that have made a significant contribution to the broad patterns of our history;

B. are associated with the lives of a person or persons of significance in our past;

C. embody the distinctive characteristics of a type, period or method of construction, or represent the work of a master, or possess high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction; or

D. have yielded or may be likely to yield information important in prehistory or history.

These factors are known as "Criteria A, B, C, and D."

A resource that lacks integrity or does not meet one of the NRHP criteria of eligibility is not considered a historic property under federal law, and effects to such a resource are not considered significant under the

NHPA. Archaeological sites are generally evaluated under Criterion D, which concerns the potential to yield information important in prehistory or history.

Secretary of the Interior's Standards

The National Park Service issued the Secretary of the Interior's Standards with accompanying guidelines for four types of treatments for historic resources: Preservation, Rehabilitation, Restoration, and Reconstruction. The most applicable guidelines should be used when evaluating a project for compliance with the Secretary of the Interior's Standards. Although none of the four treatments, as a whole, apply specifically to new construction in the vicinity of historic resources, Standards #9 and #10 of the Secretary of the Interior's Standards for Rehabilitation provides relevant guidance for such projects. The Standards for Rehabilitation are as follows:

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

3. Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

4. Changes to a property that have acquired significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.[25]

It is important to note that the Secretary of the Interior's Standards are not intended to be prescriptive but, instead, provide general guidance. They are intended to be flexible and adaptable to specific project conditions to balance continuity and change, while retaining materials and features to the maximum extent feasible. Their interpretation requires exercising professional judgment and balancing the various opportunities and constraints of any given project. Not every Standard necessarily applies to every aspect of a project, and it is not necessary for a project to comply with every Standard to achieve compliance.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) requires federal agencies to return Native American cultural items to the appropriate Federally recognized Indian tribes or Native Hawaiian groups with which they are associated.[26]

Archaeological Resources Protection Act

The Archaeological Resources Protection Act (ARPA) of 1979 governs the excavation, removal, and disposition of archaeological sites and collections on federal and Native American lands. This act was most recently amended in 1988. ARPA defines archaeological resources as any material remains of human life or activities that are at least 100 years of age, and which are of archeological interest. ARPA makes it illegal for anyone to excavate, remove, sell, purchase, exchange, or transport an archaeological resource from federal or Native American lands without a proper permit.[27]

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25 United States Department of the Interior, National Park Service, the Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Building*s, 2017.

26 United States Department of the Interior, National Park Service, Native American Graves Protection And Repatriation Act. https://www.nps.gov/archeology/tools/laws/nagpra.htm. Accessed May 16, 2022.

27 United States Department of the Interior, National Park Service, *Technical Brief # 20: Archeological Damage Assessment: Legal Basis and Methods*, 2007.

3.5.2.2 State Laws and Regulations

California Environmental Quality Act

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

"Historical resource" is a term of art with a defined statutory meaning (see PRC 21084.1 and *State CEQA Guidelines* Sections 15064.5(a) and 15064.5(b)). The term embraces any resource listed in or determined to be eligible for listing in the California Register of Historic Resources (CRHR). 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.

Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be "historical resources" for purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC 5024.1 and 14 CCR 4850). Unless a resource listed in a survey has been demolished or has lost substantial integrity, or there is a preponderance of evidence indicating that it is otherwise not eligible for listing, a lead agency should consider the resource potentially eligible for the CRHR.

In addition to assessing whether historical resources potentially impacted by a proposed project are listed or have been identified in a survey process, lead agencies have a responsibility to evaluate them against the CRHR criteria prior to making a finding as to a proposed project's impacts to historical resources (PRC 21084.1 and *State CEQA Guidelines* Section 15064.5(a)(3)). In general, a historical resource, under this approach, is defined as any object, building, structure, site, area, place, record, or manuscript that:

A. Is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California; and

B. Meets any of the following criteria:

    1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

    2. Is associated with the lives of persons important in our past;

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

4. Has yielded, or may be likely to yield, information important in prehistory or history (*State CEQA Guidelines* Section 15064.5(a)(3)).

These factors are known as "Criteria 1, 2, 3, and 4" and parallel Criteria A, B, C, and D under the NHPA (discussed earlier). The fact that a resource is not listed or determined to be eligible for listing does not preclude a lead agency from determining that it may be a historical resource (PRC 21084.1 and *State CEQA Guidelines* Section 15064.5(a)(4)).

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." Under CEQA, an archaeological resource is considered "unique" if 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; or

- Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC 21083.2(g)).

CEQA states that if a proposed project would result in an impact that might cause a substantial adverse change in the significance of a historical resource, then an EIR must be prepared, and mitigation measures should be considered. 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 (*State CEQA Guidelines* Section 15064.5(b)(1)).

The *State CEQA Guidelines* (Section 15064.5(c)) also provide 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 21083.2.

State CEQA Guidelines Section 15126.4(b) sets forth principles relevant to means of mitigating impacts on historical resources. It provides as follows:

- Where maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction of the historical resource will be conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (1995), Weeks and Grimmer, the project's impact on the historical resource shall generally be considered mitigated below a level of significance and thus is not significant.

- In some circumstances, documentation of an historical resource, by way of historic narrative, photographs or architectural drawings, as mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur.

- Public agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature. The following factors shall be considered and discussed in an EIR for a project involving such an archaeological site:

  - Preservation in place is the preferred manner of mitigating impacts to archaeological sites. Preservation in place maintains the relationship between artifacts and the archaeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.

  - Preservation in place may be accomplished by, but is not limited to, the following:

    - Planning construction to avoid archaeological sites;

    - Incorporation of sites within parks, greenspace, or other open space;

    - Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site.

    - Deeding the site into a permanent conservation easement.

  - When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken. Such studies shall be deposited with the California Historical Resources Regional Information Center. Archaeological sites known to contain human remains shall be treated in

accordance with the provisions of Section 7050.5 Health and Safety Code. If an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation.

- Data recovery shall not be required for an historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource, provided that the determination is documented in the EIR and that the studies are deposited with the California Historical Resources Regional Information Center.

Section 15064.5(f) deals with potential discoveries of cultural resources during project construction. That provision states that, "[a]s part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.

State 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 (NAHC) 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 *State CEQA Guidelines* directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

Senate Bill 18

Senate Bill (SB) 18 requires cities and counties to contact and consult with California Native American tribes prior to making land use decisions. The bill requires local governments to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to adoption and amendment of general plans (defined in Government Code §65300 et seq.). For projects proposed on or after March 1, 2005, the city or county shall conduct consultations with California Native American tribes that are on the contact list maintained by the NAHC for the purpose of preserving or mitigating impacts to places, features, and objects described in Sections 5097.9 and 5097.995 of the Public Resources Code that are located within the city or county's jurisdiction.

The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level land use decisions are made by a local government.

Assembly Bill 52

Assembly Bill 52 (AB 52), which was approved in September 2014 and became effective on July 1, 2015, requires that CEQA lead agencies consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project, if so, requested by the tribe. A provision of the bill, chaptered in CEQA Section 21084.2, also specifies that a project with an effect that may cause a substantial adverse change in the significance of a Tribal Cultural Resource (TCR) is a project that may have a significant effect on the environment.

Defined in Section 21074(a) of the Public Resources Code, TCRs are:

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 CRHR; or

    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.

TCRs are further defined under Section 21074 as follows:

a. A cultural landscape that meets the criteria of subdivision (a) is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape; and

b. A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a TCR if it conforms with the criteria of subdivision (a).

Mitigation measures for TCRs must be developed in consultation with the affected California Native American tribe(s) pursuant to newly chaptered Section 21080.3.2, or according to Section 21084.3. Section 21084.3 identifies mitigation measures that include avoidance and preservation of TCRs and treating TRCs with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource.

California Register of Historical Resources

The California Register of Historical Resources (California Register) is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change."[28] The California Register was enacted in 1992, and its regulations became official on January 1, 1998. The California Register is administered by the California Office of Historic Preservation (OHP). The criteria for eligibility for the California Register are based upon National Register criteria. Certain resources are determined to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register. To be eligible for the California Register, a prehistoric or historic-period property must be significant at the local, State, and/or federal level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

2. Is associated with the lives of persons important in our past;

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must meet one of the criteria of significance described above and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

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28 California Public Resources Code, Section 5024.1[a]. http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=5024.1. Accessed May 16, 2022.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally determined eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and
- Those California Points of Historical Interest that have been evaluated by the State Office of Historic Preservation (OHP) and have been recommended to the State Historical Resources Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register);
- Individual historical resources;
- Historic districts; and
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Health and Safety Code

California Health and Safety Code Sections 7050.5, 7051, and 7054 address the illegality of interference with human burial remains (except as allowed under applicable PRC Sections), and the disposition of Native American burials in archaeological sites. These regulations protect such remains from disturbance, vandalism, or inadvertent destruction, and establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, including treatment of the remains prior to, during, and after evaluation, and reburial procedures.

California Public Resources Code

PRC Section 5097.5 provides protection for tribal resources on public lands, where Section 5097.5(a) states, in part, that:

> *No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.*

No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.

PRC Section 5097.9 establishes the California Native American Heritage Commission (NAHC) to make recommendations to encourage private property owners to protect and preserve sacred places in a natural state and to allow appropriate access to Native Americans for ceremonial or spiritual activities. NAHC is authorized to assist Native Americans in obtaining appropriate access to sacred places on public lands, and to aid state agencies in any negotiations with federal agencies for the protection of Native American sacred places on federally administered lands in California.

California PRC Section 5097.98, as amended by Assembly Bill 2641, provides procedures in the event human remains of Native American origin are discovered during project implementation. PRC Section 5097.98 requires that no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities consider the possibility of multiple burials. PRC Section 5097.98 further requires the NAHC, upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. Once the MLD has been granted access to the site by the landowner and inspected the discovery, the MLD then has 48 hours to provide recommendations to the landowner for the treatment of the human remains and any associated grave goods. In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the landowner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

PRC Section 5097.99 prohibits acquisition or possession of Native American artifacts or human remains taken from a Native American grave or cairn after January 1, 1984, except in accordance with an agreement reached with the Native American Heritage Commission.

California Penal Code.

California Penal Code Section 622.5 provides the following: "Every person, not the owner thereof, who willfully injures, disfigures, defaces, or destroys any object or thing of archeological or historical interest or value, whether situated on private lands or within any public park or place, is guilty of a misdemeanor."

California Penal Code Section 623 provides the following: "Except as otherwise provided in Section 599c, any person who, without the prior written permission of the owner of a cave, intentionally and knowingly does any of the following acts is guilty of a misdemeanor punishable by imprisonment in the county jail not exceeding one year, or by a fine not exceeding one thousand dollars ($1,000), or by both such fine and imprisonment: (1) breaks, breaks off, cracks, carves upon, paints, writes or otherwise marks upon or in any manner destroys, mutilates, injures, defaces, mars, or harms any natural material found in any cave. (2) disturbs or alters any archaeological evidence of prior occupation in any cave. (3) kills, harms, or removes any animal or plant life found in any cave. (4) burns any material which produces any smoke or gas which is harmful to any plant or animal found in any cave. (5) removes any material found in any cave. (6) breaks, forces, tampers with, removes or otherwise disturbs any lock, gate, door, or any other structure or obstruction designed to prevent entrance to any cave, whether entrance is gained.

3.5.3 EXISTING SETTING

Regional Context - Prehistory and Ethnography

The Plan Area is located near the southern shore of San Francisco Bay. Archaeological investigations around the San Francisco Bay support the hypothesis that the area was a distinct archaeological region with similar temporal changes in artifact assemblages and other cultural practices evident across the region. The region gives the impression that closely related cultures occupied the margins of the San Francisco Bay system for a considerable length of time (Corte Madera 2008).

The archaeological work in the San Francisco Bay Area generated a significant amount of data that was used to correlate archaeological cultures in the Delta with those in the bay. The taxonomic system for Central California, including the San Francisco Bay region, is grouped into adaptive modes or patterns (i.e., specific economic and/or technological characteristics that are restricted in space, but do not imply a temporal sequence). There are five patterns (i.e., Windmiller, Berkeley, Borax Lake, Augustine, and Houx) for the North Coast Ranges, the San Francisco Bay, and the lower Sacramento Valley, assigned to six

periods: Paleo-Indian (10,000 to 6,000 BC); Lower, Middle, and Upper Archaic (6,000 BC to AD 500); and Upper and Lower Emergent (AD 500 to 1800)

The Paleo-Indian Period began with the first entry of people into California. They probably subsisted mainly on big game and minimally processed plant foods and had few or no trade networks. During the Lower Archaic, milling stones for plant processing were abundant and hunting was less important than obtaining plant foods. Artifacts were predominantly of local materials, suggesting that few if any extensive trade networks were established at this time.

During the Middle Archaic, the subsistence base begins to expand and diversify with a developing acorn economy, as evidenced by the mortar and pestle, and the growing importance of hunting. Status and wealth distinctions were evidenced in the Upper Archaic archaeological record, and regional trade networks were well established at this time for the exchange of goods and ideas, such as obsidian and Kuksu ceremonial practices involving spirit impersonations.

Increasing social complexity continued during the Lower Emergent. Territorial boundaries were well established by this time with regularized intergroup exchanges involving more and varied goods, people, and ideas. Bow and arrow technology was also introduced. By the Upper Emergent, a monetary system based on the clamshell disk bead had been established. Native population reached its peak during this time, as evidenced by high site densities and large village sites in the archaeological record (Mountain View 2012).

Sunnyvale is situated in territory once occupied by Costanoan (also commonly referred to as Ohlone) language groups. Eight Ohlone languages were spoken in the area from the southern edge of the Carquinez Strait to portions of the Big Sur and Salinas rivers south of Monterey Bay, to approximately 50 miles inland from the coast (Mountain View 2012). Ohlone territories comprised one or more land-holding groups that anthropologists refer to as tribelets. The tribelet, a nearly universal characteristic throughout native California, consisted of a principal village occupied year-round and a series of smaller hamlets and resource-gathering and processing locations occupied intermittently or seasonally. Populations of tribelets ranged from 50 to 500 persons and were largely determined by the carrying capacity of a tribelet's territory (Mountain View 2012).

Before arrival of the Spanish, what is today known as El Camino Real was originally a trade route that was extensively used by the indigenous people living in the area. The traditional Ohlone lifeway was severely disrupted by 1810 due to introduced diseases, a declining birth rate, and the impact of the mission system. The Ohlone were transformed from hunters and gatherers into agricultural laborers who lived at the missions and worked with former neighboring groups such as the Esselen, Yokuts, and Miwok. The Native

Americans from Mission Santa Clara were apparently involved in the hide and tallow trade along the Guadalupe River between 1820 and 1850. Later, because of Mexico's secularization of the missions in 1834, most of the native population gradually moved to ranchos to work as manual laborers (Mountain View 2012).

Regional Context - Historic

With the Mexican Revolution of 1821, a portion of the land that is now Sunnyvale was given to Estrada and Inez Castro as part of a Mexican land grant. They formed Rancho Pastoria de las Borregas (Pasture of the Sheep Ranch). Missouri settler Martin Murphy Jr. purchased much of the rancho in 1850 and established a wheat farm, which was soon replaced by fruit orchards (Sunnyvale 2011).

The development of Sunnyvale began in 1864, when the Central Railroad built a line from San Francisco to San Jose. Murphy donated right-of-way for the railroad through his property in exchange for a railroad stop at Murphy Station. Industry came to Sunnyvale after the 1906 earthquake. The first industries included the Hendy Ironworks and the Libby cannery, located at the center of town, close to the railroad. Housing was also located downtown and was laid out in a traditional grid pattern, most efficient for the flat terrain. Simple, small bungalows and revival-style homes were predominant. The downtown grew as a mix of uses in proximity and walking distance of each other. When Sunnyvale was incorporated in 1912, the City had 1,800 residents (Sunnyvale 2011).

Transportation routes also played a significant role in the City's development. The earliest transportation facilities were the railroad and El Camino Real. The paving of El Camino Real in 1913 heralded the arrival of the automobile and a profound change in the pattern of development. The automobile allowed businesses and homes to spread out, rather than concentrate in the downtown or along transportation routes.

By the end of World War II, Sunnyvale had made the change from an agricultural community to an industrial center, with its economy focused on defense and aerospace industries. Naval Air Station Sunnyvale (now Moffett Federal Airfield) was built, and Lockheed Martin became the City's largest employer.

In 1909 the Santa Clara County Board of Education, which consisted of the elected county superintendent of schools and four members appointed by the board of supervisors, amended an 1880 political code to provide that a majority of appointed members be experienced teachers who held at least a grammar school teaching certificate. The board of education was now authorized to qualify and hire teachers and set the standards for graduation (Laffey and Detlefs 1995:52). Superintendent D.T. Bateman established the Teachers' Institute of the Santa Clara County Office of Education in 1911 to offer professional development

to teachers. Teacher round tables included topics such as "How to Make Mathematical Work More Nearly Meet the Needs of Daily Life" and "Teaching Peace by Means of History" (Santa Clara County Office of Education 2022b). The supervision of attendance and child welfare was added to the duties of the county superintendent in 1918 (Santa Clara County Office of Education 2022c). These actions further reflect the gaining influence of the progressive education movement and the county's adoption of its theories.

The creation of new school districts in Santa Clara County continued and by 1912 there were at least 102 districts, not counting high schools, outside of the city of San José's corporate limits. Prior to the turn of the 20th century, there was a high school in San José, one in Santa Clara, one in Gilroy, and one in Palo Alto. By 1951 the communities of Santa Clara, Morgan Hill, Los Gatos, Campbell, Mountain View, Fremont, and East Side had high schools. All, except for Palo Alto and San José, served large rural areas and were classified as union high schools (San Jose Mercury News 1951:183). For example, graduates from Jefferson, Santa Clara, and Alviso elementary school districts matriculated to the Santa Clara Union High School District's high school (Evening News 1959:15).

On April 30, 1926, voters in the Jefferson, Agnew, Braly and Milliken elementary school districts elected to consolidate the districts into the Jefferson Union School District. Each of these school districts was comprised of a single school. Both the Milliken and the Braly schools were two-story Mission Revival buildings; the Jefferson school, a simple board and batten single-gabled building located on Kifer Road (formerly unincorporated) constructed in 1857, was said to be the oldest school building in continuous use in the state at the time (see **Appendix 3.5-1**: Figure A-12 and A-19) (San Jose Mercury Herald 1926a:7; 1926b:10). Irvin Pomeroy, trustee of the Milliken school, appealed to the voters, saying that, "the need of better schooling for our children is becoming acute. In the Milliken school children are so crowded for room that classes are held on the stage of the assembly. With these four districts consolidated we will have enough pupils for a separate classroom for each grade and special instruction in such subjects as domestic science and trades" (San Jose Mercury Herald 1926b:10).

The new district quickly applied for and received a $100,000 bond to construct a new Jefferson Grammar School at Lawrence Road and Reed Lane (San Jose Mercury Herald 1926a:7). The new Mission revival style building, designed by architects Wolfe and Higgins, was constructed of reinforced concrete and contained thirteen rooms that included classrooms, manual training and domestic science departments, offices, a library, and an assembly room capable of seating 600. Joseph Hancock, county superintendent of schools, stated that the Jefferson Union School District was the wealthiest in the county, with an assessed value of $3,000,000 (Evening News 1927:6) (**Appendix 3.5-1**: Figure A-20 and A-21).

By 1950, farms and fields were increasingly replaced with homes, factories, and offices as the population grew to 10,000 (Sunnyvale 2011). This change set the stage for the boom decades of the 1950s and 1960s.

Nearly 65 percent of the City's existing housing and 50 percent of the nonresidential buildings were constructed between 1950 and 1969. By 1970, Sunnyvale had a population of 96,000.

Sunnyvale's economy experienced another large shift throughout the last 30 years of the twentieth century, as high-technology companies launched the Silicon Valley era. The federal downsizing of defense development and manufacturing resulted in a loss of defense and aerospace jobs, which were quickly replaced with jobs designing and manufacturing circuits and computers. These in turn gave way to more high-value and knowledge-based jobs in computer programming, administration, and sophisticated research and design functions. The Mid-Peninsula and South Bay area's became known as Silicon Valley, the world center for high technology innovation. The City attracted successful companies such as AMD, Network Appliance, and Juniper Networks. The population grew by 14 percent in the 1990s, rising to 131,800 by 2000.

The high-tech slowdown in the early years of the new century brought rapid growth to a halt, with jobs declining rather dramatically between 2000 and 2005. The economy has since rebounded, adapting to and developing new industries, jobs, and sources of revenue (Sunnyvale 2011).

Plan Area Context - Historic

The Plan Area is associated with Rancho Quito and Rancho Pastoria de Los Borregas (see **Appendix 3.5-1**). Rancho Pastoria de Los Borregas is associated with Sunnyvale and Rancho Quito is associated more closely with the modern surrounding areas in Santa Clara County of Cupertino, Campbell, and Saratoga. Rancho Quito was granted to Jose Noriega and his father-in-law Jose Zenon Fernandez in 1842 by Mexican governor Juan Alvarado. In 1844, Noriego sold his portion of Rancho Quito to Jose Manuel Alviso, who then sold the Rancho to Jose Ramon Arguello in 1859. A Plat Map from 1864 indicates the Plan Area is within the boundaries of what used to be the Quito Rancho (see **Appendix 3.5-1**).

Plat Maps from 1876 and 1889 both depict the Plan Area on plots of land under the care of W. Wilcox and A. Patterson; these appear to be in an area marked as belonging to the Milliken Family (see **Appendix 3.5-1**). A plat map from 1867 indicates the northwest portion of the property upon which the Plan Area is located was once owned by W. Wilcox and the southeast portion of the Plan Area was owned by J.W. Johnson (see **Appendix 3.5-1**). The 1889 plat map indicates that W. Wilcox continued to own portions of the Plan Area, but new property owners at this time included Mrs. R.S. Burns and A.J. Landrum (see **Appendix 3.5-1**).

Aerial photography from 1939 and 1956 shows the Plan Area on an orchard (see **Appendix 3.5-1**). The neighboring plots have similar cultivation areas suggesting farming activities were predominant is this part of Sunnyvale. These aerial photos depict one historic-era structure in the Plan Area. This structure first

appears in aerial photographs in 1939 (see **Appendix 3.5-1**) and continues to be present in an aerial photo from 1956 (see **Appendix 3.5-1**).

Property deeds provided by the SCUSD indicate that the Jefferson School District purchased the western 47.26 acres of the 71-acre subject parcel from Ignazio and Rosalia Castello in 1955. That acreage was part of a larger farming property that the Castellos subdivided in 1949 for building restricted single-family homes. The remaining 23.8 acres to the east was two parcels when it was sold to the Jefferson School District in 1960. 13.518 acres were owned by Dominic, Lena, Salvatore Jr., and Rosie Cirrincione and the remaining 11.817 acres were owned by Frank L., Pearl, Salvatore, and Pauline Teresi. A 1956 aerial photograph shows the entire 71 acres planted in fruit trees (see **Appendix 3.5-1**). A 1959 topographic survey shows the approximately 23 combined acres as orchards of prune, apricot and cherry trees.

The U.S. Census of 1940 indicates all were farming families or "orchardists." Ignazio and Rosalia Castello were Italian immigrants and were living on Reed Lane, in the Santa Clara Township, according to the 1940 census. The 1940 census identifies the four Cirrinciones named on the deed as California natives. Salvatore Cirrinciones Sr. and his wife Katie, who were born in Italy, lived on Wolf Road Homestead, Santa Clara Township, with Dominic, Lena, Salvatore Jr., and Rosie Cirrincione. Salvatore Sr. and Katie Cirrinciones were likely Dominic's and Salvatore Jr.'s parents. The 1940 census shows Frank Teresi as the son of Sicilian-born Salvatore and Sarah Teresi. The 1950 census indicates Frank and Salvatore Teresi were brothers and lived together on a farm on the south side of El Camino Real with their wives, Pearl and Pauline.

Research has not resulted in any additional information about these Italian immigrants and first-generation California-born farming families. The Italian-born senior members of the families were likely part of the significant influx of Italians into the area during the late 19th and early 20th century, attracted by rich agricultural land and associated opportunities. They appear to have been typical farming families that subdivided and sold their property as Santa Clara County's post-war population grew rapidly and suburban communities developed.

A 1965 aerial photograph shows the current school sites, which public records indicate were constructed in 1964 (see **Appendix 3.5-1**). As the aerial shows, most of the neighboring parcels by the 1960s were no longer farmlands but had been developed into residential plots.

3.5.4 THRESHOLDS OF SIGNIFICANCE

The following thresholds for determining the significance of impacts related to Cultural Resources, including Historical Resources, Tribal Cultural Resources and Paleontological Resources are contained in the environmental checklist form contained in Appendix G of the most recent update of the *CEQA*

Guidelines. Adoption and/or implementation of the Proposed Master Plan could result in significant impacts if any of the following would occur:

Impacts related to Cultural Resources are considered significant if the project would:

- Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
- Disturb any human remains, including those interred outside of dedicated cemeteries.

Impacts related to Tribal Cultural Resources are considered significant if the project would:

- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
  - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
  - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.5.5 METHODOLOGY

The cultural resources analysis considers the presence and absence of known cultural resources, as well as the potential for significant cultural resources to occur, within the Plan Area and considers the potential impacts on such resources from adoption and implementation of the Proposed Master Plan.

The analysis of historical resources examines the likelihood that the Proposed Master Plan could cause a substantial adverse change in the significance of a historical resource. A significant impact to historic resources will occur if there is a "substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired, which is

considered to be a significant effect on the environment." *State CEQA Guidelines* Section 15064.5(b)(1). Generally, 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 (1995) is considered to be mitigated to a level of less-than-significant impact on the historical resource.[29]

The analysis of archaeological resources identifies the likelihood of ground disturbing activities to potentially result in a significant impact to unique archaeological resources. PRC 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 meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that 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 example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Similar to archaeological resources, the analysis of human remains considers the likelihood of ground disturbing activities to potentially encounter human remains.

3.5.6 ENVIRONMENTAL IMPACTS

Impact CUL-1 Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.

Section 15064.5(a)(2-3) of the *State CEQA Guidelines* require that state and local public agencies evaluate the potential for historical resources to be impacted by discretionary activities, using the criteria outlined in California public resources code (PRC) section 5024.1. The Marian A. Peterson Middle School campus and the Patrick Henry Intermediate School campus were evaluated for eligibility for listing on the California Register of Historical Resources (CRHR), using the criteria outlined in California PRC section 5024.1. It has been determined that neither property is associated with events that have made a significant contribution to the broad patterns of history; is associated with the lives of persons important to history; or embodies

[29] State of California, California Code of Regulations, Title 14, Chapter 3 15064.5. (b)(3). https://resources.ca.gov/CNRALegacyFiles/ceqa/docs/2018_CEQA_FINAL_TEXT_122818.pdf

the distinctive characteristics of a type, period, region or method of construction. Furthermore, neither is likely to yield important information about architectural design or construction. Because neither is eligible for the CRHR, neither is a historical resource for the purposes of CEQA. No further action is required.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Less than Significant Impact.

Impact CUL-2 **Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.**

Precolonial Archaeological Sensitivity

The Plan Area contains soils hypothesized to be from the Pleistocene to the Holocene (see **Appendix 3.5-1**). These soils are located in a flat alluvial fan with slopes less than 9 degrees and less than 200 meters (656 feet) from a water course. Additionally, Far Western Anthropological Group completed a buried site assessment for Caltrans District 4 of the San Francisco Bay-Delta and immediate vicinity.[30] This study included the current Plan Area and assessed the buried site sensitivity to be moderate-high. While the Plan Area has already been developed as a school, this study and site surveys of the Plan Area indicate that the area holds a moderate-high sensitivity to contain buried precolonial resources.

Therefore, Proposed Master Plan would have the potential to impact buried prehistoric artifacts and impacts may be significant without mitigation.

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30 Byrd, B.F., Whitaker A., Mikkelsen P., and J.S. Rosenthal 2017. *San Francisco Bay-Delta Regional Context and Research Design for Native American Archaeological Resources, Caltrans District 4*. Report submitted to Office of Cultural Resource Studies. California Department of Transportation, District 4. Oakland, CA.

Historic Archeological Sensitivity

The first documented historic-era development of the Plan Area consisted of agricultural fields during the 20th century. Further, site visits inspection of the Plan Area ground surface did not identify any evidence of in-tact historic-era archaeological deposits. Therefore, the Proposed Master Plan is not likely to impact any subsurface historic-era cultural resources.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM CUL-1 If archaeological resources are encountered during construction or during ground-disturbing activities, work in the immediate area should be halted and the District shall retain an archaeologist meeting the SOI's Professional Qualification Standards for archaeology (National Park Service 1983) immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility.

Significance After Mitigation

Implementation of **MM CUL-1** would reduce the Proposed Master Plan's potential impacts to buried pre-historic artifacts to a *less-than-significant impact with mitigation incorporated.*

Impact CUL-3 **Disturb any human remains, including those interred outside of dedicated cemeteries.**

The Plan Area does not include any locations identified as a formal cemetery and is not known to have been used for disposal of historic or prehistoric human remains, and human remains are not expected to be encountered during construction of the proposed project. In the unlikely event that human remains are uncovered during ground-disturbing activities, there are regulatory provisions to address the handling of human remains in California Health and Safety Code § 7050.5, PRC § 5097.98, and *CEQA Guidelines* § 15064.5(e). Pursuant to these codes, in the event that human remains are discovered, it requires that disturbance of the site shall be suspended, and the District and the Santa Clara County Coroner would be immediately notified. The coroner shall conduct an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains

have been made to the person responsible for the excavation or to his or her authorized representative, in the manner provided in § 5097.98 of the PRC. The coroner is required to make a determination within two working days of notification of the discovery of the human remains. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes or has reason to believe the human remains to be those of a Native American, he or she shall consult with the NAHC by telephone within 24 hours, to designate a Most Likely Descendant (MLD) who shall recommend appropriate measures to the landowner regarding the treatment of the remains. If the owner does not accept the MLD's recommendations, the owner or the MLD may request mediation by the NAHC. Compliance with these protocols would ensure impacts are less than significant level.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Less than Significant

Impact CUL-4 **Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:**

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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1,

the lead agency shall consider the significance of the resource to a California Native American tribe.

On June 2, 2022, the SCUSD sent SB 18 and AB 52 notice letters to eleven Native American groups as identified in the Native American Heritage Commission Tribal Consultation List, Santa Clara County received from the Native American Heritage Commission, dated March 27, 2022 (see **Appendix 3.5-2, Tribal Consultation).** Under AB 52, tribes have 30 days to respond, and under SB 18 tribes have 90 days. As of the date of this draft, one response has been received from the Muwekma Ohlone Indian Tribe of the San Franciso Bay Area (Muwekma Tribe) (see **Appendix 3.5-2**). The letter is meant to inform the District that the Muwekma Tribe will be actively participating in the tribal consultation process. The letter states that the Tribe has ancestral ties and cultural affiliation to the District's jurisdictional area and a vested interest in the AB 52 and Section 106 consultation process with District.

Development under the Proposed Master Plan may involve ground disturbance which has the potential to impact previously unidentified tribal cultural resources (TCRs). As of the date of this draft, AB 52 consultation has not identified any specific TCRs in the Plan Area. However, new TCRs may be identified or established over the course of the phased implementation of the Proposed Master Plan, which is expected to occur over the course of several years.

If unknown TCRs are encountered during construction activities, there is a potential for destruction, damage, or loss of the TCRs. The ground-disturbing construction activities that could result in such adverse impacts include demolition, grading, excavation, drilling, or any other activity that disturbs surface or subsurface deposits associated with TCRs. Given the potential to damage these unknown tribal cultural resources, impacts are potentially significant.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM CUL-2 **Unanticipated Discovery of Tribal Cultural Resources**. In the event that a cultural resource of Native American origin is identified in the Plan Area during any project-related ground disturbance, the District, as Lead Agency, shall consult with local Native American tribes who have requested notification of projects under AB 52. If the District, in consultation with the local Native American tribe(s), determines that the resource is a tribal cultural resource and thus significant under CEQA, a mitigation plan shall be prepared and implemented in accordance with state guidelines and in consultation with

representatives of the Native American tribe(s). The mitigation plan may include but would not be limited to avoidance, capping in place, excavation and removal of the resource, interpretive displays, sensitive area signage, or other mutually agreed upon measures.

Significance After Mitigation

Implementation of **MM CUL-2** would reduce the Proposed Master Plan's potential impacts to buried pre-historic artifacts to a *less-than-significant impact with mitigation incorporated.*

3.5.7 CUMULATIVE IMPACTS

Impacts to cultural resources (including historical resources) and TCRs tend to be site specific and are assessed on a site-by-site basis. Where such resources exist, buildout of the Plan Area together with other development in the City of Sunnyvale and region could result in an incremental adverse impact to cultural resources and TCRs. In this case, the cumulative impact would be to unknown cultural resources, and TCRs. However, provided that proper mitigation, as defined by *State CEQA Guidelines* Section 15126.4(b), is implemented in conjunction with cumulative development in the area, no significant cumulative impacts are anticipated.

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3.6 ENERGY

INTRODUCTION

This section evaluates potential impacts associated with energy consumption and demand that would result from the implementation of the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan"). The section also provides a description of the regulatory framework governing the management of energy on a federal, state, regional, and local level. Proposed Master Plan impacts on energy consumption and demand as well as related mitigation measures have also been provided.

3.6.1 EXISTING CONDITIONS

3.6.1.1 Electrical Service

Silicon Valley Power (SVP) and Pacific Gas & Electric (PG&E) provide electrical service to the Plan Area through State-regulated public utility contracts. Over the past 15 years, electricity generation in California has undergone a transition. Historically, California has relied heavily on oil- and gas-fired plants to generate electricity. Spurred by regulatory measures and tax incentives, California's electrical system has become more reliant on renewable energy sources, including cogeneration, wind energy, solar energy, geothermal energy, biomass conversion, transformation plants, and small hydroelectric plants. Unlike petroleum production, generation and transmission of electricity is usually not tied to the location of the fuel source and can travel great distances via the electrical grid. In 2018, 38.9 percent of the power delivered to customers by PG&E came from carbon-free resources (renewable energy sources), which met the State's 2020 renewable energy goal (PG&E 2019). In 2017, SVP's mix of energy generation delivered to retail sales consisted of approximately 35 percent renewable energy sources, which met the state's 2020 renewable energy goal.[1]

The electricity consumption attributable to the entirety of Santa Clara County for is shown in **Table 3.6-1, Electricity Consumption in Santa Clara County (2020)**.

1 Silicon Valley Power. 2018. *2018 Integrated Resource Plan*. Available online at: https://www.siliconvalleypower.com/home/showpublisheddocument/62481/637268684502400000. Accessed November 3, 2022.

Table 3.6-1
Electricity Consumption in Santa Clara County (2020)

Residential	Non-Residential	Total Usage
4,392	12,042	16,435

Note: All Usage Expressed in Millions of kWh (GWh)
Source: California Energy Commission, California Energy Consumption Database, 2020. Accessed August 16, 2022

3.6.1.2 Natural Gas

PG&E provides natural gas service to the County of Santa Clara, including the City of Sunnyvale. The availability of natural gas is based upon recent conditions of gas supply and regulatory policies. As a public utility, PG&E is under the jurisdiction of the California Public Utilities Commission and can be affected by actions of gas supply or the condition under which service is available. Gas service will be provided in accordance with any revised conditions. The core gas supply is purchased from producers and marketers in Canada, the Rockies, and the Southwest.

The Natural Gas consumption attributable to the entirety of Santa Clara County for is shown in **Table 3.6-2, Natural Gas Consumption in Santa Clara County (2020)**.

Table 3.6-2
Natural Gas Consumption in Santa Clara County (2020)

Residential	Non-Residential	Total Usage
245.1	173.5	418.6

Note: All usage expressed in MMThm
Source: California Energy Commission, California Energy Consumption Database, 2020. Accessed August 15, 2022

3.6.1.3 Petroleum

California is one of the top producers of petroleum in the nation, with drilling operations primarily concentrated in Kern and Los Angeles Counties. A network of crude oil pipelines connects production areas to oil refineries in the Los Angeles area, the San Francisco Bay area, and the Central Valley. California oil refineries also process large volumes of Alaskan and foreign crude oil received in ports in Los Angeles, Long Beach, and the San Francisco Bay area. Crude oil production in California and Alaska is in decline, and California refineries have become increasingly dependent on foreign imports. Led by

Saudi Arabia and Ecuador, foreign suppliers now produce more than half of the crude oil refined in California[2,3]

According to the United States Energy Information Administration (EIA), transportation accounted for approximately 34 percent of California's energy demand, amounting to approximately 2,355 trillion British thermal units (Btu) in 2020.[4] Most gasoline and diesel fuel sold in California for motor vehicles is refined in California to meet state-specific formulations required by the California Air Resources Board (CARB).

There are no petroleum refineries located in the City of Sunnyvale or Santa Clara. As discussed below, the closest petroleum refinery is the PBF Petroleum Refinery (formerly Shell) located approximately 39 miles north miles from the Plan Area. Neither the EIA nor the California Energy Commission (CEC) maintain a database of estimated transportation fuels consumption at the city level.

3.6.2 REGULATORY FRAMEWORK

3.6.2.1 Federal

Energy Policy and Conservation Act

Enacted in 1975, this legislation established fuel economy standards for new light-duty vehicles sold in the U.S. The law placed responsibility on the National Highway Traffic and Safety Administration (a part of the U.S. Department of Transportation) for establishing and regularly updating vehicle standards. The U.S. Environmental Protection Agency (U.S. EPA) administers the Corporate Average Fuel Economy (CAFE) program, which determines vehicle manufacturers' compliance with existing fuel economy standards. Since the inception of the CAFE program, the average fuel economy for new light-duty vehicles (autos, pickups, vans, and SUVs) steadily increased from 13.1 miles per gallon (mpg) for the 1975 model year to 27.5 mpg for the 2012 model year and is proposed to increase to 54.5 by 2025.

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2 California Energy Commission (CEC). 2017. Foreign Sources of Crude Oil Imports to California 20162017. Available at: https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/foreign-sources-crude-oil-imports/foreign. Accessed March 29, 2022.

3 California Energy Commission (CEC). Oil Supply Sources to California Refineries. Available at: http://www.energy.ca.gov/almanac/petroleum_data/statistics/crude_oil_receipts.html. Accessed March 29, 2022.

4 United States Energy Information Administration. *California Profile Data*. Available online at: https://www.eia.gov/state/data.php?sid=CA#ConsumptionExpenditures. Accessed November 3, 2022.

Energy Star Program

In 1992, the U.S. EPA introduced Energy Star as a voluntary labeling program designed to identify and promote energy-efficient products to reduce greenhouse gas emissions. The program applies to major household appliances, lighting, computers, and building components such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specifications for maximum energy use established under the program are certified to display the Energy Star label. In 1996, U.S. EPA joined with the Energy Department to expand the program, which now also includes qualifying commercial and industrial buildings, and homes.

3.6.2.2 State

Title 24

Title 24, Part 6, of the California Code of Regulations contains the CEC's Energy Efficiency Standards for Residential and Nonresidential Buildings. Title 24 was first established in 1978, in response to a legislative mandate to reduce California's energy consumption. Since that time, Title 24 has been updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

On April 23, 2008, the CEC adopted the 2008 standards, which applied to projects that submitted an application for a building permit on or after January 1, 2010. The CEC adopted the 2008 standards for a number of reasons: (1) to provide California with an adequate, reasonably priced, and environmentally sound supply of energy; (2) to respond to Assembly Bill 32 (AB 32; the Global Warming Solutions Act of 2006), which requires California to reduce its greenhouse gas emissions to 1990 levels by 2020; (3) to pursue the statewide policy that energy efficiency is the resource of choice for meeting California's energy needs; (4) to act on the findings of California's Integrated Energy Policy Report, which indicate that the 2008 Standards are the most cost-effective means to achieve energy efficiency, reduce the energy demand associated with water supply, and reduce greenhouse gas emissions; (5) to meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures in the update of all state building codes; and (6) to meet the Executive Order in the Green Building Initiative to improve the energy efficiency of nonresidential buildings through aggressive standards. The most recent adopted updates to the standards are known as the 2022 Building Energy Efficiency Standards, which go into effect on January 1, 2023.[5]

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5 California Energy Commission. 2022 Building Energy Efficiency Standards. Available online at: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency. Accessed November 3, 2022.

The California Green Building Standards Code (CalGreen Code), which is Part 11 of the Title 24 Building Standards Code, is commonly referred to as the CALGreen Code. The 2008 edition, the first edition of the CALGreen Code, contained only voluntary standards. The 2022 CALGreen Code is a code with mandatory requirements for new residential and nonresidential buildings (including buildings for retail, office, public schools, and hospitals) throughout California beginning on January 1, 2023. The 2022 CALGreen Code contains regulations for energy efficiency, water efficiency and conservation, material conservation and resource efficiency, environmental quality, and more.

Renewable Portfolio Standard

Established in 2002 under SB 1078, accelerated in 2006 under SB 107, and expanded in 2011 under SB 2, California's Renewables Portfolio Standard (RPS) is one of the most ambitious renewable energy standards in the country. The RPS program required investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020. In general, retail sellers either met or exceeded the 33 percent interim 2020 RPS target.[6]

Assembly Bill 32: Global Warming Solutions Act

In addition to Title 24, Assembly Bill 32 (AB 32) is anticipated to result in the future regulation of energy resources in California (see **Section 3.8, Greenhouse Gas Emissions,** for additional information on AB 32). In order to achieve these emission reductions, it is generally accepted that California will need to improve its overall energy efficiency, which includes the use of more renewable energy resources. Pursuant to AB 32, the California Air Resources Board (CARB) will work with other state agencies (including the CEC), to implement feasible programs and regulations that reduce emissions and improve energy efficiency.

Senate Bill 350

In the 2015 legislative session, the Legislature passed, and the Governor signed, Senate Bill 350 (SB 350). The legislation requires that, by 2030, 50 percent of all electricity provided by power plants in California must be from renewable sources. SB 350 further requires the CEC to establish annual targets for statewide energy efficiency savings and demand reduction that would achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas by retail customers by 2030. The bill requires the Public Utilities Commission (PUC) to establish efficiency targets for investor-owned electrical and gas

6 California Public Utilities Commission. 2021. *2021 California Renewables Portfolio Standard Annual Report*. Available online at: https://www.cpuc.ca.gov/-/media/cpuc-website/industries-and-topics/documents/energy/rps/cpuc-2021-rps-annual-report-to-legislature.pdf. Accessed November 3, 2022.

corporations consistent with the 2030 goal, and the CEC to establish annual targets for energy efficiency savings and demand reductions for local publicly-owned electric utilities consistent with the 2030 goal. Each retailer of electricity must regularly file an integrated resource plan (IRP) for review and approval.

Senate Bill 32

In the 2016 legislative session, the Legislature passed, and the Governor signed, Senate Bill 32 (SB 32). This bill requires CARB to adopt rules and regulations to ensure that statewide greenhouse gas (GHG) emissions are reduced to 40 percent below the 1990 level by 2030.

California's 2019 Building Energy Efficiency Standards

In December 2018, the California Building Standards Commission gave the final approval to a solar PV requirement mandating all new nonresidential buildings under three stories tall include a solar zone, which is a section of the roof designated and reserved for future installation of a solar electric or solar thermal system. The standards took effect on January 1, 2020, and include solar installation, battery storage, and improved energy savings through high-performance walls, attics, and windows.[7]

Green Building Certification Programs for Schools

Other programs that provide third-party verification for green buildings include Leadership in Energy and Environmental Design (LEED) and Collaborative for High Performance Schools (CHPS). LEED is an internationally recognized green building certification system developed by the U.S. Green Building Council. The "LEED for Schools Rating System"[8] was established to recognize the unique nature of the design and construction of K-12 schools. CHPS oversees the nation's first green building rating program especially designed for K-12 schools called "CHPS Verified."[9]

Through their "School Resource Program" and "Energy Reduction Action Plan for Schools," PG&E offers energy efficiency resources and services to public school districts, such as energy audits, staff training, as well as planning and funding assistance to help schools save energy.

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7 California Energy Commission. 2019. *2019 Building Energy Efficiency Standards*. Available online at: Accessed August 15, 2022.

8 U.S. Green Building Council. About Center Green School. Available online: https://www.usgbc.org/press/about-center-green-schools. Accessed July 21, 2022

9 Collaborative for High Performance Schools. https://chps.net/. Accessed July 30, 2022

Other Energy Related Statutes and Executive Orders

Additional legislation and executive orders focused on energy efficiency in California are highlighted briefly below:

- **Assembly Bill 1613:** This legislation, also known as the Waste Heat and Carbon Emissions Reduction Act, was designed to encourage the development of new combined heat and power systems in California with a generating capacity of up to 20 megawatts (MW).

- **Senate Bill 1:** In 2006, this legislation enacted Governor Schwarzenegger's Million Solar Roofs program and has an overall objective of installing 3,000 MW of solar photovoltaic systems. The goal of installing one million solar energy systems was reached in 2019.[10]

- **Senate Bill 1389:** This legislation requires the California Energy Commission to prepare a biennial integrated energy policy report that contains an assessment of major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety.

- **Executive Order S-14-08:** This order established accelerated RPS targets— retail sellers achieved the goal to serve 33 percent of their load with renewable energy by 2020.

- **Executive Order S-21-09:** This order requires CARB to adopt regulations, by July 31, 2010, increasing California's RPS to 33 percent by 2020. In general, retail sellers either met or exceeded the 33 percent interim 2020 RPS target.[11]

- **Executive Order B-18-12:** This order directs state agencies to reduce their grid-based energy purchases by at least 20 percent by 2018, as compared to a 2003 baseline.

- **Executive Order B-48-18:** This order will boost the use of zero-emission vehicles (ZEVs), electric vehicle charging infrastructure, and hydrogen refueling infrastructure in California in order to

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10 California Solar and Storage Association. Million Solar Roofs. Available online at: https://calssa.org/million-solar-roofs#:~:text=In%202006%2C%20California%20made%20international,incorporating%20solar%20into%20new%20homes. Accessed November 3, 2022.

11 California Public Utilities Commission. 2021. *2021 California Renewables Portfolio Standard Annual Report*. Available online at: https://www.cpuc.ca.gov/-/media/cpuc-website/industries-and-topics/documents/energy/rps/cpuc-2021-rps-annual-report-to-legislature.pdf. Accessed November 3, 2022.

implement Governor Brown's target of 5 million ZEVs on the road by 2030 and 250,000 vehicle charging stations and 200 hydrogen refueling stations by 2015.

3.6.2.3 Local

Santa Clara Unified School District

- **Policy 3511:** Energy and Water Management (originally adopted August 8, 2019). The Governing Board recognizes the environmental and financial benefits that can be derived from conserving energy, water, and other natural resources, preparing for extreme weather and other natural events, and providing an environment that promotes the health and well-being of students and staff.

3.6.3 Thresholds of Significance

Pursuant to Appendix G of the *State CEQA Guidelines*, potentially significant impacts would occur if implementation of the Proposed Master Plan would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

3.6.4 METHODOLOGY

The analysis in this section focuses on the nature and magnitude of the change in energy resources due to construction and operation of the Proposed Master Plan. To address the significance thresholds, the focus of this analysis is related to energy efficiency within the context of existing regulatory environment. The methodology used to estimate the construction phase energy use is described in **Impact EN-1** below.

The Plan Area serves as an educational campus for several schools as part of the District. The Plan Area was originally developed in the 1960s as Marian A. Peterson High School, and the Patrick Henry Intermediate School. Marian A. Peterson High School closed in 1981 and reopened as Marian A. Peterson Middle School due to declining enrollment. The Patrick Henry Intermediate School was closed in the 1980s and the buildings and grounds were leased to or occupied by various tenants including: Appleseed Montessori; Silicon Valley Academy; New Concept Chinese School; Mount Bell; and SCUSD District Resource Center. Sunnyvale Alliance Soccer rented the fields at the Patrick Henry site.

The existing Laurelwood Elementary School was also built in the 1960s and continues to be in operation. Located within the Peterson Middle School Campus is the Peterson track and field, which encompasses

approximately 6.3 acres. The District Farm is south of the Peterson Middle School Campus, which encompasses approximately 11.3 acres. The existing Laurelwood Elementary School campus makes up approximately 10.4 acres.

The Proposed Master Plan will support similar uses within the Plan Area. Therefore, energy use will be comparable to current uses. Replacing the Patrick Henry facilities (circa 1960 to 1963) with the new Laurelwood campus built to current energy efficiency standards likely will substantially reduce energy demand and use on the site.

3.6.5 ENVIRONMENTAL IMPACTS

Impact EN-1 **Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.**

Construction

Construction activity would use energy in the form of petroleum-based fuels to power off-road construction vehicles and equipment throughout the Plan Area, construction worker travel to and from project sites, and vehicles used to deliver materials to the Plan Area. Forecast development under the Proposed Master Plan would require demolition, site preparation, and grading, including hauling material off-site; pavement and asphalt installation; building construction; paving; and architectural coating.

Construction equipment would be maintained to applicable standards, and construction activity and associated fuel consumption and energy use would be temporary and typical of construction sites. It is also reasonable to assume contractors would avoid wasteful, inefficient, and unnecessary fuel consumption during construction to reduce construction costs. Therefore, the Proposed Master Plan would not involve the inefficient, wasteful, and unnecessary use of energy during construction, and the construction-phase impact related to energy consumption would be less than significant.

Operation

The operation of the proposed school buildings would consume energy in the form of electricity for building heating and cooling, lighting, water heating, and operation of electronic equipment. In addition, the operation of the outdoor lighting and maintenance of play fields would require energy, and gasoline would be used for vehicle trips to and from the school. It is anticipated that PG&E would provide electricity and natural gas service to the proposed school campuses.

Consistent with Board Policy 3511: Energy and Water Management and in compliance with contemporary best practices for energy efficiency and conservation of resources, the District will incorporate design features to maximize efficiency such as the measures used for the recently completed Agnews Campus:[12]

- Orient the school buildings to maximize solar access and daylighting (monitoring lighting needs without heat gain or glare through building design);
- Install an Energy Management System to provide users with better control of lighting and HVAC systems (heating, ventilation, and air conditioning);
- Incorporate energy-efficient building shell elements such as increased insulation in walls and ceilings to reduce heat loss and gain;
- Use efficient lamps and fixtures (e.g., fluorescent lamps and LED lights);
- Provide occupancy sensors to help limit the use of light to only when it is needed;
- Provide automated daylighting controls that dim electric lighting when sufficient natural light is present; and
- Use building materials and products that are energy-efficient based on life-cycle analyses.

Measures such as these would reduce lighting needs and/or heating and cooling loads, which would conserve energy and reduce demand upon energy resources. In addition, the proposed stadium would include high power lamps to reduce the number of fixtures needed and increase light beam control and efficiency, thereby reducing energy usage. The project also includes material conservation and water efficiency measures, which would indirectly reduce energy use associated with the production of materials and the transport and treatment of water.

Transportation

As presented in the Vehicle Miles Traveled (VMT) Analysis prepared for the Proposed Master Plan (see **Appendix 3.16-1**), the majority of the project uses would remain in the same neighborhood as the existing schools. The distance between the existing Laurelwood Elementary site and its Proposed Master Plan location is approximately 700 feet. Both locations would share access to Teal Drive. Most of the existing trips headed to and from the existing Laurelwood Elementary School would therefore use the same neighborhood streets to access the relocated school. At the existing Laurelwood Elementary School, upon exit from the existing student loading area on Teal Drive, most loading traffic is currently routed

12 Santa Clara Unified School District. *Agnews East School Site Project Draft EIR*. October 2011.

northbound on Teal Drive towards the proposed relocation site. Thus, the Proposed Master Plan would not significantly alter travel patterns outside of the immediate vicinity of the school sites, and as indicated in the discussion regarding existing and proposed student capacity, overall traffic in the neighborhood would be expected to decline. Therefore, energy use related to transportation to and from the Plan Area likely will be reduced.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact

Impact EN-2 **Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.**

Compliance with Title 24 and CALGreen standards and the School Board's policies would ensure the implementation of the Proposed Master Plan would incorporate energy efficient windows, insulation, lighting, ventilation systems, as well as water efficient fixtures and electric vehicles charging infrastructure, which is consistent with the District's goals and policies for energy efficiency. Additionally, per the RPS, the Proposed Master Plan would utilize electricity provided by PG&E and SVP that would achieve 60 percent renewable energy by 2030 and 100 percent renewable energy by 2045.[13] Therefore, the Proposed Master Plan would result in less than significant impacts associated with renewable energy or energy efficiency plans.

Level of Significance Before Mitigation

Less than Significant Impact.

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13 Pacific Gas and Electric Company. Integrated Resource Planning. https://www.pge.com/en_US/for-our-business-partners/energy-supply/integrated-resource-plan/integrated-resource-plan.page. Accessed August 18, 2022.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact

3.6.6 CUMULATIVE IMPACTS

The Proposed Master Plan would not result in wasteful, inefficient, or unnecessary use of energy during construction. The Proposed Master Plan consists of new construction which would reduce wasteful energy consumption at the existing campus by replacing the existing old utility systems with improved systems that achieve the current California Building Energy and Efficiency Standards (Title 24, Part 6 and CALGreen Title 24, Part 11). Energy use from other related projects is unknown but also would be built to current energy efficiency standards. Since VMT for the Plan Area will be reduced, the project will not contribute to increased vehicular emissions in the region.

3.6.7 REFERENCES

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3.7 GEOLOGY AND SOILS

INTRODUCTION

This section addresses impacts to geology and soils resources from implementation of the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan"), identifies the regulatory framework with respect to regulations that address potential geologic and seismic hazards, such as ground shaking and liquefaction, and soil-related hazards such as expansive soils, that may result from development of the Proposed Master Plan.

Note also that no physical changes to the existing Laurelwood Elementary School site are included in the Proposed Master Plan.

3.7.1 ENVIRONMENTAL SETTING

3.7.1.1 Existing Conditions

Regional Geologic Setting

The San Francisco Bay region is located along the boundary between the Pacific and North American plates, two large crustal plates that are separated by the north–northwest-trending San Andreas fault. The geomorphology of the region includes parts of three prominent, northwest rending geologic/geomorphic features, which are, from west to east, the Santa Cruz Mountains, the Santa Clara Valley, and the Diablo Range.

The Plan Area is located in the cities of Sunnyvale and Santa Clara, in the Santa Clara Valley. The Santa Clara Valley forms part of an elongated structural block (the San Francisco Bay block) in the central Coast Ranges that contains San Francisco Bay and its surrounding alluvial margins. This structural block is bounded by the San Andreas fault to the southwest and by the Hayward-Calaveras Fault Zone to the northeast.[1]

Local Geology and Topography

The Plan Area is located on the alluvial plain of the Santa Clara Valley, in the Coast Ranges geomorphic province. The shallow subsurface soils consist of layered, fine-grained silt and clay soils mixed with coarser sands and gravels, described as alluvial fan deposits. The Plan Area is at a surface elevation of

1 USGS. *The geology and tectonic history of Santa Clara County*. 2007. https://www.usgs.gov/publications/geology-and-tectonic-history-santa-clara-county. Accessed on August 9, 2022.

approximately 130 feet above mean sea level and is essentially flat, with northeast slopes of 5 to 15 percent toward San Francisco Bay.[2]

According to a well completion report provided by the California Department of Water Resources (DWR) for a nearby public supply well, soils in the subject property area consist of gravel, sand, and clay from approximately 0 to 23 feet below ground surface (bgs). Deeper soils are a mix of gravel and coarse sands, hard clay, and sandy clays.

According to a 2007 Geologic Map of the Cupertino and San José West quadrangles, Santa Clara, and Santa Cruz counties, California presented in the United States Geological Survey MapView Database, the subject property is underlain by alluvial sand, fine-grained, silt, and gravel. Where differentiated, these surficial sediments represent alluvial fan deposits at the base of slopes and the outer edge of fan areas. According to the database, the subject property is located approximately 7 miles northeast of the nearest serpentine rock deposits.[3]

Faults and Seismicity

Sunnyvale is located between two major earthquake faults: the San Andreas and the Hayward. Sunnyvale has no geographically defined borders, except for the small portion of the City that touches the southern tip of San Francisco Bay. Earthquakes can cause strong ground shaking that may damage property and infrastructure. The strength of an earthquake is generally expressed in two ways: magnitude and intensity. Magnitude is a measure that depends on the seismic energy radiated by the earthquake as recorded on seismographs. Intensity is the measure of earthquake effects (shaking felt, damage, etc.).

The most commonly used scale to measure earthquake intensities (ground shaking and damage) is the Modified Mercalli Intensity (MMI) Scale, which measures the intensity of an earthquake's effects in a given locality and is based on observations of earthquake effects at specific places. On the MMI Scale, values range from I to XII (see **Table 3.7-1**). While an earthquake has only one magnitude, it can have various intensities, which decreases with distance from the epicenter and varies by underlying soil conditions.[4]

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2 Santa Clara Department of Planning and Development. Geological Maps and Data. https://plandev.sccgov.org/ordinances-codes/geology-and-natural-hazards/geological-maps-and-data. Accessed on August 8, 2022.

3 ARCADIS, *Phase I Environmental Site Assessment Report - Patrick Henry School Campus, SCUSD Farm, and Parking Lot Portion of Peterson Middle School Campus: 1095 & 1055 Dunford Way and 1380 Rosalia Avenue, Sunnyvale, California*. June 20, 2022.

4 USGS. The Modified Mercalli Intensity Scale. 2002. https://www.usgs.gov/programs/earthquake-hazards/modified-mercalli-intensity-scale

Table 3.7-1 describes the effects of ground shaking intensities and lists a general range of moment magnitudes that are often associated with those intensities.

Table 3.7-1
Effects of Richter Magnitude and Modified Mercalli Intensity

Mw	Modified Mercalli Scale	Effects of Intensity	
1.0–3.0	I	I.	Not felt except by a very few under especially favorable conditions.
3.0–3.9	II–III	II.	Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing.
		III.	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
4.0–4.9	IV–V	IV.	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rock noticeably.
		V.	Felt by nearly everyone, many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
5.0–5.9	VI–VII	VI.	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
		VII.	Everybody runs outdoors. Damage negligible in building of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.
6.0–6.9	VIII–IX	VIII.	Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motor cars disturbed.
		IX.	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
7.0 and Greater	X or Greater	X.	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from riverbanks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.
		XI.	Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.
		XII.	Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown upward into the air.

Source: U.S. Geological Survey (USGS), 2002
Note: Mw = moment magnitude, based on displacement at the fault.

Faults are classified as "active" and "potentially active." An active fault is one that has had surface displacement within Holocene time (about the last 11,000 years), while a potentially active fault is one that has been active during Quaternary time (last 1.6 million years). These definitions are used in delineating Special Studies Zones as mandated by the Alquist-Priolo Earthquake Fault Zoning Act (1972).

While the Plan Area is not located in a designated Alquist-Priolo Study Zone and contains no active fault traces, it is situated in the San Francisco Bay region, which is the most seismically active zone in the United States. Three active faults and three potentially active faults are located in seismically significant proximity to the planning area—the Stanford fault (approx. 1 mile southwest), the Cascade fault (approx. 2 miles southwest), the San Jose fault (approx. 2.5 miles northeast), the Monte Vista–Shannon fault (approx. 5 miles west), the San Andreas fault (approx. 8 miles west), and the Hayward fault (approx. 12 miles east).[5]

Ground Shaking

Ground shaking is the most widespread effect of an earthquake. The sudden release of energy in an earthquake causes waves to travel through the earth. These waves not only shake structures to the breaking point but can trigger secondary effects such as landslides or other types of ground failure. Strong ground shaking is expected to occur within the Plan Area during moderate to severe earthquakes.[6]

Soils

Little native soil is exposed at the surface in Sunnyvale. Nearly all lands in the City are developed; approximately 0.5 percent remain vacant. Some small pockets of remaining orchards are present; however, the City is almost entirely built out, with very few vacant parcels of land.[7] The Plan Area is developed for ongoing school uses and, therefore, unlikely to have any exposed or near surface native soils.

Erosion

Soil erosion is a process whereby soil materials are worn away and transported to another area by either wind or water. Rates of erosion can vary depending on the soil material and structure, placement, and human activity. Soil with high amounts of silt can be easily eroded, while sandy soils are less susceptible to erosion. Erosion is most prevalent on sloped areas with exposed soil, especially where unnatural slopes are created by cut-and-fill activities. Typically, soil erosion potential is reduced once the soil is graded and

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5 Santa Clara County Open Data Portal. https://data.sccgov.org/Environment/FaultRuptureZone/5etf-qb24. Accessed August 8, 2022.

6 City of Sunnyvale. *Master Plan 2011, Chapter 6.*

7 City of Sunnyvale. *Master Plan 2011.*

covered with concrete, structures, or asphalt. The Plan Area was developed with school uses 1960 through 1963. The site remains in use for school uses and therefore erosion potential is low.

Settlement

Surface settlement can occur due to immediate settlement of coarse-grained soils or consolidation of fine-grained soils under increased loading. Immediate settlement occurs when a load from a structure or placement of new fill material is applied, causing distortion in the underlying materials. This settlement occurs relatively quickly and is typically substantially complete within several hours or days after placement of the final load. Consolidation settlement occurs in saturated or near-saturated fine-grained (clay) soil due to volume change caused by load-induced squeezing of water from the pore spaces.

Consolidation occurs over a relatively long period of time (often years or even decades) and is followed by secondary compression, which is a continued change in void ratio (the volume of voids, i.e., air or fluid, compared to volume of solids) under the continued application of the load from the pore water to the soil grains. Total settlements can vary over an area, referred to as differential settlement, because of variations in loading, soil characteristics, and thickness of compressible layers. Lands are generally susceptible to differential settlement if underlain by compressible sediments, such as poorly engineered artificial fill or young unconsolidated sediments. Sunnyvale is underlain by young alluvial sediments that can be susceptible to settlement.

The Plan Area was developed with school uses 1960 through 1963. The site remains in use for school uses and therefore settlement potential is low.

Subsidence

Land subsidence results in a slow-to-rapid downward movement of the ground surface as a result of the vertical displacement of the ground surface, usually resulting from groundwater withdrawal. Periodic surveys of land elevation have been conducted in Santa Clara County since 1934. The lowest historical water levels were generally observed in the 1960s and 1970s. Since then, groundwater levels have recovered, primarily due to the Santa Clara Valley Water District's (SCVWD) managed recharge and in-lieu recharge programs. The SCVWD measures water levels at ten subsidence index wells on a regular basis (daily to quarterly) to ensure they remain above established thresholds. Measured groundwater levels were consistently above subsidence thresholds from 2003 to 2013 at all index wells. Although human-caused subsidence has been minimal since 1967, a certain amount of subsidence continues to occur naturally

because of regional tectonic movements, peat decay, and a 3-inch rise in the sea level during the last 50 years.[8]

Expansive Soils

Expansive soils are soils that tend to shrink or swell depending on their moisture content. As expansive soils get wet, the clay minerals absorb water molecules and expand; conversely, as they dry, they shrink. When structures are located on expansive soils, foundations have the tendency to rise during the wet season and shrink during the dry season. This movement can create new stresses on various sections of the foundation and connected utilities and can lead to structural failure and damage to infrastructure. Cracked foundations, floors, and basement walls are typical types of damage created by expansive soils. Damage to the upper floors of the building can occur when differential movement of the structure is significant. Surficial soils in Sunnyvale are largely composed of expansive clays. However, locally expansive soils may occur wherever clayey soils exist.[9]

Liquefaction

Liquefaction occurs when loose sand and silt that is saturated with water behaves like a liquid when shaken by an earthquake. The soil can lose its ability to support structures, flow down even very gentle slopes, and erupt to the ground surface to form sand boils. Many of these phenomena are accompanied by settlement of the ground surface, usually in uneven patterns, that can damage buildings, roads, and pipelines. These effects usually occur in soft, fine-grained, water-saturated alluvium, as generally found in the Santa Clara Valley. The Plan Area is not designated as a liquefaction hazard area.[10]

Landslides

The Plan Area is not identified as being located within a landslide hazard zone.[11]

Paleontological Setting

The Plan Area spans Holocene-age alluvium and older Pleistocene-age (2.6 million to 11,700 years ago) alluvium (DOC 2018). The University of California Museum of Paleontology (UCMP) collections database contains no records for Holocene-age fossils and 26 records for Pleistocene-age vertebrate fossils in Santa

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8 City of Sunnyvale. Master Plan 2011, Chapter 6.

9 City of Sunnyvale. Master Plan 2011, Chapter 6.

10 USGS. *Liquefaction Hazard Zones.* https://www.usgs.gov/programs/earthquake-hazards/science/liquefaction-hazard-maps. Accessed on August 8, 2022.

11 Stanford University. *Landslide Hazard Zones: Santa Clara County, California.* 2015. Available online at: https://geodata.mit.edu/catalog/stanford-ng693rw2809. Accessed on August 5, 2022.

Clara County.[12] The specific locations are not identified, but the specimens include Equus, Paramylodon harlani, Capromeryx, Camelops, and bison.

Known fossils from the Holocene in the greater Bay Area are sparse and represent common taxa. The Holocene-age sediments have low potential to yield fossil resources or to contain significant nonrenewable paleontological resources. However, remains of a Rancholabrean Columbian mammoth (*Mammuthus columbi*) were found along the Guadalupe River in San José in strata identified as Holocene on published geologic maps. Either the mammoth remains were reworked from older deposits or some strata identified as Holocene in the Santa Clara Valley are of Pleistocene age. In either case, Holocene materials in the valley may have some level of sensitivity for paleontological resources. The younger Holocene-age deposits may also overlie older Pleistocene sediments, depending on location. These older sediments, often found at depths of greater than 10 feet below the ground surface, have yielded the fossil remains of plants and extinct terrestrial Pleistocene vertebrates. Because of their vertebrate content, Pleistocene alluvial strata are considered highly sensitive for paleontological resources.[13]

While there are no known paleontological resources in the Plan Area, there are known paleontological resources located within Santa Clara County. The Plan Area is therefore considered to be sensitive due to the Holocene- and Pleistocene-age alluvium located throughout.

3.7.2 REGULATORY FRAMEWORK

3.7.2.1 Federal

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act of 1977 (Public Law 95-124) established the National Earthquake Hazards Reduction Program which is coordinated through the Federal Emergency Management Agency (FEMA), the U.S. Geological Survey (USGS), the National Science Foundation, and the National Institute of Standards and Technology. The purpose of the Program is to establish measures for earthquake hazards reduction and promote the adoption of earthquake hazards reduction measures by federal, state, and local governments; national standards and model code organizations; architects and engineers; building owners; and others with a role in planning and constructing buildings, structures, and lifelines through (1) grants, contracts, cooperative agreements, and technical assistance; (2) development of standards, guidelines, and voluntary consensus codes for earthquake hazards reduction for buildings, structures, and lifelines; and

12 The University of California Museum of Paleontology (UCMP) collections database. Available online at: https://ucmp.berkeley.edu/. Accessed on August 12, 2022.

13 The University of California Museum of Paleontology (UCMP) collections database. Available online at: https://ucmp.berkeley.edu/. Accessed on August 12, 2022.

(3) development and maintenance of a repository of information, including technical data, on seismic risk and hazards reduction. The Program is intended to improve the understanding of earthquakes and their effects on communities, buildings, structures, and lifelines through interdisciplinary research that involves engineering, natural sciences, and social, economic, and decisions sciences.

Disaster Mitigation Act (2000)

The federal Disaster Mitigation Act (DMA; Public Law 106-390) provides the legal basis for FEMA mitigation planning requirements for state, local, and Indian Tribal governments as a condition of mitigation grant assistance. DMA 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act by repealing the previous mitigation planning provisions and replacing them with a new set of requirements that emphasize the need for state, local, and Indian Tribal entities to closely coordinate mitigation planning and implementation efforts. The requirement for a state mitigation plan is continued as a condition of disaster assistance, adding incentives for increased coordination and integration of mitigation activities at the state level through the establishment of requirements for two different levels of state plans. DMA 2000 also established a new requirement for local mitigation plans and authorized up to 7 percent of Hazard Mitigation Grand Program funds available to a state for development of state, local, and Indian Tribal mitigation plans.

Clean Water Act Section 402

Section 402 of the Clean Water Act (33 U.S. Code Section 1251 et seq.) establishes a framework for regulating municipal and industrial stormwater discharges under the National Pollutant Discharge Elimination System (NPDES) program. The NPDES program controls water pollution by regulating point sources that discharge pollutants, including rock, sand, dirt, and agricultural, industrial, and municipal waste, into waters of the United States. The Environmental Protection Agency has delegated to the State Water Resources Control Board the authority for the NPDES program in California, which is implemented by the State's nine Regional Water Quality Control Boards. Under the NPDES Phase II Rule, construction activity disturbing 1 or more acres must obtain coverage under the State's General Permit for Discharges of Storm Water Associated with Construction Activity (General Construction Permit). As described further in **Section 3.10, Hydrology and Water Quality,** the Construction General Permit requires that applicants develop and implement a Stormwater Pollution Prevention Plan (SWPPP), which specifies best management practices (BMPs) that reduce pollution in stormwater discharges to the Best Available Technology Economically Achievable / Best Conventional Pollutant Control Technology standards and perform inspections and maintenance of all BMPs.

U.S. Geological Survey Landslide Hazard Program

The USGS Landslide Hazard Program provides information on landslide hazards including information on current landslides, landslide reporting, real time monitoring of landslide areas, mapping of landslides through the National Landslide Hazards Map, local landslide information, landslide education, and research.

3.7.2.2 State

Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act)

The Alquist-Priolo Act (California Code of Regulations, Section 3603(f)) provides policies and criteria to assist cities, counties, and state agencies in the development of structures for human occupancy across the trace of active faults. The Alquist-Priolo Act was intended to provide the citizens of the state with increased safety and to minimize the loss of life during and immediately following earthquakes by facilitating seismic retrofitting to strengthen buildings, including historical buildings, against ground shaking.

Alquist-Priolo Special Study Zones

The Alquist-Priolo Act requires that special geologic studies be conducted to locate and assess any active fault traces in and around known active fault areas prior to development of structures for human occupancy. This state law was a direct result of the 1971 San Fernando Earthquake, which was associated with extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures. The Alquist-Priolo Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. This Act addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code, Chapter 7.8, Sections 2690–2699.6) addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides. The purpose of the Act is to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and other hazards caused by earthquakes. The program and actions mandated by the Seismic Hazards Mapping Act closely resemble those of the Alquist-Priolo Act.

In addition to the Seismic Hazards Mapping Act, the CGS provides guidelines (Guidelines for Evaluating and Mitigating Seismic Hazards in California) for evaluating seismic hazards other than surface fault

rupture, and for mitigation measures as required by PRC Section 2695(a). The most current guidelines are provided in Special Publication 117A of 2008.

California Building Code

The California Building Code (CBC) is a compilation of building standards codified in the California Code of Regulations, Title 24, Part 2. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure in California. The CBC is published on a triennial basis, and supplements and errata can be issued throughout the cycle. The 2019 edition of the CBC became effective on January 1, 2020, and is based on the 2018 International Building Code (IBC) of the International Code Council, with California amendments. The 2019 CBC incorporates the latest seismic design standards for structural loads and materials, as well as provisions from the National Earthquake Hazards Reduction Program to mitigate losses from an earthquake.

CBC standards are based on the following:

- Building standards that have been adopted by state agencies without change from a national model code such as the IBC;
- Building standards based on a national model code that have been changed to address conditions specific to California; and
- Building standards authorized by the California legislature but not covered by the national model code.

The CBC includes provisions for demolition and construction, as well as regulations regarding building foundations and soil types to protect people and property from hazards associated with falling debris or construction processes. Seismic standards within the CBC are among the strictest in the world due to California's susceptibility to earthquakes and other seismic events.

Division of the State Architect

California public K–12 schools, community colleges, and essential services buildings projects must be certified through the Division of the State Architect (DSA). Project certification consists of examination of specific project files for documents required to be submitted before, during and after construction, and to determine if outstanding issues have been resolved. Project Inspectors, design professionals, and districts all have a part in ensuring compliance.[14]

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14 California Department of General Services, Division of the State Architect. Available online at: https://www.dgs.ca.gov/DSA/Services/Page-Content/Division-of-the-State-Architect-Services-List/Certify-Construction-Projects-for-School-Essential-Services_Facilities?search=schools. Accessed August 3, 2022.

Public school construction has been governed by the Field Act since 1933 and enforced by the State Division of the State Architect (DSA). The Field Act was enacted on April 10, 1933, one month after the Long Beach Earthquake in which 70 schools were destroyed, 120 schools suffered major damage, and 300 schools received minor damage. Since: (a) public schools are funded with public money; (b) schools house the children of the electorate; and (c) the State Constitution requires children to attend schools, the state is liable and thus responsible for protecting children and staff from injury in public schools' grades K-12 and protecting the public's investment in school buildings during and after earthquakes.[15]

The Act requires:

- School building construction plans be prepared by qualified California licensed structural engineers and architects;
- Designs and plans be checked by the Division of the State Architect (DSA) for compliance before a contract for construction is awarded;
- Qualified inspectors, independent of the contractors and hired by the school districts, continuously inspect construction and verify full compliance with plans;
- The responsible architects and/or structural engineers observe the construction periodically and prepare changes to plans (if needed) subject to approval by DSA; and
- Architects, engineers, inspectors and contractors must file reports to verify compliance of the construction with the approved plans emphasizing the importance of testing and inspections to achieve seismically safe construction.

3.7.3 THRESHOLDS OF SIGNIFICANCE

The following thresholds for determining the significance of impacts related to geology and soils are contained in the environmental checklist form contained in Appendix G of the most recent update of the *State CEQA Guidelines*. Adoption and/or implementation of the Proposed Master Plan could result in significant adverse impacts to visual resources, if any of the following could occur:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

  – Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.

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15 State of California. *Seismic Safety Commission. Seismic Safety in California's Schools Findings and Recommendations on Seismic Safety Policies and Requirements for Public, Private and Charter Schools.* July 2003.

  - Strong seismic ground shaking.
  - Seismic-related ground failure, including liquefaction.
  - Landslides.

- Result in substantial soil erosion or the loss of topsoil.
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
- 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.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

3.7.4 METHODOLOGY

This section evaluates hazards to people or property from geology and soils, identifies mitigation measures for the impacts, and evaluates the residual impacts. The potential for hazards to people and property from geology and soils was evaluated in accordance with Appendix G of the *2022 State California Environmental Quality Act (CEQA) Guidelines*.

In 2015, the California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District (CBIA v. BAAQMD* (2015) 62 Cal.4th 369), held that CEQA generally does not require a lead agency to consider the impacts of existing environmental conditions on the future residents or users of a project. However, if a project risks exacerbating preexisting environmental hazards or conditions, the lead agency is required to analyze the impact of that exacerbated condition on the environment, which may include future residents and users within the project area. Generally, developments proposed under the Master Plan would not exacerbate existing environmental hazards related to geological and soil conditions.

3.7.5 ENVIRONMENTAL IMPACTS

Impact GEO-1 **Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: (i) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map**

issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42; (ii) strong seismic ground shaking; (iii) seismic-related ground failure, including liquefaction; (iv) landslides.

Development associated with the Proposed Master Plan could expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. As discussed in **Section 3.7.1.1, Existing Conditions,** three active faults and three potentially active faults are located in seismically significant proximity to the planning area—the Stanford fault (approximately 1 mile southwest), the Cascade fault (1.5 miles southwest), the San Jose fault (2.5 miles northeast), the Monte Vista–Shannon fault (4.3 miles west), the San Andreas fault (7.5 miles west), and the Hayward fault (11.7 miles east) (CGS 2010).

Thus, strong ground shaking is expected to occur within the Plan Area. Future development associated with the Proposed Master Plan could expose persons or structures to the effects of strong seismic ground shaking. The intensity of ground shaking and the degree of impact would depend upon the magnitude of the earthquake, distance to the epicenter, and the geology of the area between the epicenter to the Plan Area. Additionally, the soil and geologic structure underlying the development site would influence the amount of damage that the site may experience.

Impacts concerning strong seismic ground shaking would be addressed by compliance with the seismic design requirements identified in a site-specific geotechnical report. In addition to site-specific geotechnical recommendations, the project, design and construction of new buildings will comply with seismic safety requirements of the DSA and CBC. Compliance with DSA and CBC requirements would ensure that potential hazards from strong seismic ground shaking is addressed through the design of the new buildings, modernization/rehabilitation of existing structures, and other Plan Area site modifications.

More specifically, all proposed school facilities in the Plan Area shall be designed and constructed in accordance with a design-level geotechnical investigation prepared for the project. The investigation will assess the existing soil and groundwater conditions at the site and will address the potential for land subsidence, expansive soils, and liquefaction. The report will identify the specific design features that will be required for the project, including site preparation, compaction, trench excavations, foundation and subgrade design, drainage, and pavement design. Additional subsurface exploration, laboratory testing, and engineering analyses may be required. The design-level geotechnical investigation along with the design-level drawings will be submitted to the DSA for review and approval. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact GEO-2 Result in substantial soil erosion or the loss of topsoil.

Grading and tree removal activities would increase the potential for soil erosion during and after project construction. It is possible that existing soil conditions may require the excavation and export of soil from the Plan Area during construction. Although the project could result in the loss of topsoil, the excavated areas would either be filled with imported soil materials or covered with landscaping, pavement, buildings, or artificial turf, which would prevent substantial erosion.

Standard erosion control and grading best management practices (BMPs) will be incorporated in the project and implemented during construction to prevent substantial erosion from occurring during development of the site. The potential for erosion would be further reduced with implementation of the proposed dust control and water quality BMPs. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact GEO-3 **Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.**

The Plan Area is an existing school site that has been previously compacted and graded. The site is not located within an area identified as being susceptible to landslides, nor is the site located within a State Earthquake Induced Landslide Seismic Hazard Zone.[16] Finally, the Plan Area is relatively flat and therefore slope instability and land sliding is not considered an issue for the site.

Therefore, the potential for landslide, lateral spreading, subsidence, liquefaction, or other collapse impacts related to the implementation of transportation projects and anticipated development projects under the Plan, is considered less than significant and no mitigation is required.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact GEO-4 **Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.**

As previously noted, the Plan Area has been previously graded and compacted. However, as with all new school construction and rehabilitation efforts, design-level geotechnical studies will analyze soil samples for expansion potential, and geotechnical recommendations may include ground stabilization, selection of appropriate foundation type and depths, and the selection of appropriate structural systems. Compliance with DSA and CBC requirements will ensure that impacts associated with expansive soil would be less than significant.

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16 California Department of Conservation. *The California Seismic Hazards Program*. Available online at: https://maps.conservation.ca.gov/cgs/lsi/app/. Accessed on August 5, 2022.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact GEO-5 **Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.**

The Proposed Master Plan would be located on an existing school campus that is connected to the municipal sewer system. No septic tanks or alternative wastewater disposal systems would be necessary. Therefore, no impact would occur.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No Impact.

Impact GEO-6 **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.**

The Proposed Master Plan would be located on an existing school campus and will not include excavation into previously undisturbed native soils, as the project site includes areas with existing buildings,

structures and landscaped areas, with no known paleontological content and which has been subject to past subsurface disturbance associated with grading and foundations. The maximum depth of construction work on the site is expected to be less than 30 feet. Therefore, construction activities would not disturb soils at depths of 30 feet or greater, which have a higher sensitivity for paleontological resources.

Although not anticipated, a small potential exists that paleontological resources could be discovered during school construction. Therefore, the Proposed Master Plan includes the following procedures:[17]

- Provide preconstruction worker awareness training to ensure construction personnel receive paleontological resources awareness training that includes information on the possibility of encountering fossils during construction and proper procedures in the event fossils are encountered.

With implementation of the avoidance measures, implementation of the Proposed Master Plan would not result in a significant impact to paleontological resources.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

3.7.6 CUMULATIVE IMPACTS

It is not anticipated that the Proposed Master Plan would contribute to a cumulatively considerable increase in risk associated with geologic hazards. Future development under the Proposed Master Plan would not foreseeably exacerbate any seismic conditions in the Plan Area. This includes fault rupture, seismic-related ground failure, substantial erosion or the loss of topsoil, landslides, lateral spreading, subsidence, collapse, and unstable soil. In addition, no development would occur in areas that do not have existing sewer service.

Cumulative development throughout the City of Sunnyvale could potentially disturb unknown paleontological resources that could be present in the city. It is anticipated that citywide development would have the potential to disturb paleontological resources. Potentially significant cumulative

[17] These procedures will be documented and enforced in all contracts related to construction within the Plan Area.

paleontological resource impacts could, however, be mitigated to below a level of significance through resource avoidance or recovery on a case by-case basis. As discussed under **Impact GEO-6**, the Proposed Master Plan is not anticipated to disturb paleontological resources and Proposed Master Plan procedures have been included to ensure that the impacts would not be cumulatively considerable as they would ensure on-site resources are protected or recovered.

Therefore, the Proposed Master Plan would not result in a cumulatively considerable contribution to a significant impact with respect to geology, soils and paleontological resources.

3.7.7 REFERENCES

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3.8 GREENHOUSE GAS EMISSIONS

INTRODUCTION

This section discusses the global, national, and statewide conditions related to greenhouse gases (GHG) and global climate change. This section also provides a discussion of the applicable federal, state, regional, and local agencies that regulate, monitor, and control GHG emission, potential GHG impacts from implementation of the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan"), and applicable mitigation measures. Calculations made to estimate GHG emissions associated with the Proposed Master Plan and supporting technical data are found in ***Appendix 3.3-1, Air Emission Calculations,*** *of this Environmental Impact Report (EIR).*

3.8.1 ENVIRONMENTAL SETTING

3.8.1.1 Global Climate Change

Global Climate Change Background

Global climate change refers to any significant change in climate measurements, such as temperature, precipitation, or wind, that lasts for an extended period (i.e., decades or longer).[1] Climate change may result from:

- natural factors, such as changes in the sun's intensity or slow changes in the Earth's orbit around the sun;
- natural processes within the climate system (e.g., changes in ocean circulation, reduction in sunlight from the addition of GHG and other gases to the atmosphere from volcanic eruptions); and
- human activities that change the atmosphere's composition (e.g., through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, desertification).

The third bullet is the focus of climate change legislation. The natural process through which heat is retained in the troposphere[2] is called the "greenhouse effect." The greenhouse effect traps heat in the troposphere through a three-fold process as follows: (1) short-wave radiation in the form of visible light emitted by the Sun is absorbed by the Earth as heat; (2) long-wave radiation is re-emitted by the Earth;

1 U.S. Environmental Protection Agency, "Glossary of Climate Change Terms," http://www.epa.gov /climatechange/glossary.html#Climate_change. 2010.

2 The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth's surface to 10 to 12 kilometers.

and (3) greenhouse gases (GHGs) in the atmosphere absorb or trap the long-wave radiation and re-emit it back towards the Earth and into space.

While water vapor and CO_2 are the most abundant GHG, other trace GHGs have a greater ability to absorb and re-radiate long-wave radiation. To gauge the potency of GHGs, scientists have established a Global Warming Potential (GWP) for each GHG based on its ability to absorb and re-emit long-wave radiation over a specific period. The GWP of a gas is determined using CO_2 as the reference gas with a GWP of 1 over 100 years. For example, a gas with a GWP of 10 is 10 times more potent than CO_2 over 100 years. The use of GWP allows GHG emissions to be reported using CO_2 as a baseline. The sum of each GHG multiplied by its associated GWP is referred to as carbon dioxide equivalents (CO_2e). This essentially means that 1 metric ton of a GHG with a GWP of 10 has the same climate change impacts as 10 metric tons of CO_2.

Greenhouse Gases

The compounds described below are GHGs subject to control under state law.[3] Water vapor is also a GHG; however, its concentration in the atmosphere is a function of temperature and vapor pressure and cannot be controlled by any known means; therefore, water vapor is not subject to control under state law.

- **Carbon Dioxide (CO_2)**. Carbon dioxide is primarily generated by fossil fuel combustion from stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources over the past 250 years, the concentration of carbon dioxide in the atmosphere has increased 35 percent.[4] Carbon dioxide is the most widely emitted GHG and is the reference gas (GWP of 1) for determining the GWP of other GHGs. In 2020, 80.2 percent of California's GHG emissions were carbon dioxide.[5]

- **Methane (CH_4)**. Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and enteric fermentation.[6] Methane is the

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3 All GWPs are given as 100-year GWP. Unless noted otherwise, all GWPs were obtained from the Intergovernmental Panel on Climate Change. *Climate Change 1995: The Science of Climate Change – Contribution of Working Group I to the Second Assessment Report of the IPCC*. Cambridge (UK): Cambridge University Press, 1996.

4 U.S. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2006 (EPA 430-R-08-005)*, (2008) 1-3.

5 California Air Resources Board. 2022. California Greenhouse Gas Inventory for 2000 – 2020 by Gas. Available online at: https://ww2.arb.ca.gov/sites/default/files/classic/cc/inventory/ghg_inventory_bygas.pdf. Accessed November 3, 2022.

6 U.S. Environmental Protection Agency, "Methane: Sources and Emissions," http://www.epa.gov/methane/sources.html. n.d.

primary component of natural gas, which is used for space and water heating, steam production, and power generation. The GWP of methane is 21.

- **Nitrous Oxide (N_2O)**. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of nitrous oxide is 310.

- **Hydrofluorocarbons (HFCs)**. HFCs typically are used as refrigerants in both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is growing, particularly as the continued phase-out of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) gains momentum. The GWP of HFCs range from 140 for HFC-152a to 6,300 for HFC-236fa.

- **Perfluorocarbons (PFCs)**. Perfluorocarbons are compounds consisting of carbon and fluorine. They primarily are created as a byproduct of aluminum production and semiconductor manufacturing. Perfluorocarbons are potent GHGs with a GWP several thousand times that of carbon dioxide, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years).[7] The GWPs of PFCs range from 5,700 to 11,900.

- **Sulfur Hexafluoride (SF_6).** Sulfur hexafluoride is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. Sulfur hexafluoride is the most potent GHG that has been evaluated by the IPCC with a GWP of 23,900. However, its global warming contribution is not as high as the GWP would indicate due to its low mixing ratio, as compared to carbon dioxide (4 parts per trillion [ppt] in 1990 versus 365 parts per million [ppm]).[8]

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7 U.S. EPA. "Understanding Global Warming Potentials." Available online at: https://www.epa.gov/ghgemissions/understanding-global-warming-potentials.

8 U.S. Environmental Protection Agency, "Sulfur Hexaflouride (SF6) Basics," https://www.epa.gov/eps-partnership/sulfur-hexafluoride-sf6-basics.

Effects of Global Climate Change

Global climate change refers to any significant change in climate measurements, such as temperature, precipitation, or wind, lasting for an extended period (i.e., decades or longer).[9] Climate change may result from:

- natural factors, such as changes in the sun's intensity or slow changes in the Earth's orbit around the sun;
- natural processes within the climate system (e.g., changes in ocean circulation, reduction in sunlight from the addition of GHGs and other gases to the atmosphere from volcanic eruptions); and
- human activities that change the atmosphere's composition (e.g., through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, desertification).

According to scientists, human activities have resulted in a change in global climate. The primary manifestation of global climate change has been a rise in the average global tropospheric temperature of 0.2 degree Celsius (°C) per decade, determined from meteorological measurements worldwide between 1990 and 2005.

The natural process through which heat is retained in the troposphere[10] is called the greenhouse effect. The greenhouse effect traps heat in the troposphere through a threefold process: (1) short-wave radiation in the form of visible light emitted by the Sun is absorbed by the Earth as heat; (2) long-wave radiation is re-emitted by the Earth; and (3) GHGs in the upper atmosphere absorb or trap the long-wave radiation and re-emit it back towards the Earth and into space. This third process is the focus of current climate change policy because increased quantities of GHGs in the earth's atmosphere result in more of the long-wave radiation being trapped in the atmosphere.

While water vapor and carbon dioxide (CO_2) are the most abundant GHGs, other trace GHGs have a greater ability to absorb and re-radiate long-wave radiation. To gauge the potency of GHGs, scientists have established a Global Warming Potential (GWP) for each GHG based on its ability to absorb and re-emit long-wave radiation over a specific period. The GWP of a gas is determined using CO_2 as the

9 U.S. Environmental Protection Agency, 2010. "Glossary of Climate Change Terms," https://19january2017snapshot.epa.gov/climatechange/glossary-climate-change-terms_.html.

10 The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth's surface from 6 to 7 miles.

reference gas, which has a GWP of 1 over 100 years.[11] For example, a gas with a GWP of 10 is 10 times more potent than CO_2 over 100 years. The use of GWP allows GHG emissions to be reported using CO_2 as a baseline. The sum of each GHG multiplied by its associated GWP is referred to as "carbon dioxide equivalents" (CO_2e). This essentially means that 1 metric ton of a GHG with a GWP of 10 has the same climate change impacts as 10 metric tons of CO_2.

The impacts of climate change have been documented by the Office of Environmental Health Hazard Assessment (OEHHA), which includes the following changes that are already occurring:[12,13]

- A recorded increase in annual average temperatures as well as increases in daily minimum and maximum temperatures.
- An increase in the occurrence of extreme events, including wildfire and heat waves.
- A reduction in spring runoff volumes, as a result of declining snowpack.
- A decrease in winter chill hours, necessary for the production of high-value fruit and nut crops.
- Changes in the timing and location of species sightings, including migration upslope of flora and fauna, and earlier appearance of Central Valley butterflies.

In addition to this, California's recent drought incited land subsidence, pest invasions that killed over 100 million trees, and water shortages. The total statewide economic cost of the 2014 drought was estimated at $2.2 billion, with a total loss of 17,100 jobs.[14] An analysis of water usage between 1990 and 2012 showed that while California's energy policies have supported climate mitigation efforts, the performance of these policies have increased vulnerability to climate impacts.[15]

According to the U.S. Forest Service National Insect and Disease Forest Risk Assessment,[16] California is at risk of losing 12 percent of the total area of forests and woodlands in the State due to insects and disease, or over 5.7 million acres. While future climate change is not modeled within the risk assessment,

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11 All GWPs are given as 100-year GWP. Unless noted otherwise, all GWPs were obtained from the Intergovernmental Panel on Climate Change. *Climate Change 1995: The Science of Climate Change – Contribution of Working Group I to the Second Assessment Report of the IPCC*. Cambridge (UK): Cambridge University Press, 1996.

12 OEHHA, "Indicators of Climate Change in California." Available online at: https://oehha.ca.gov/climate-change/document/indicators-climate-change-california.

13 California Air Resources Board, *California's 2017 Climate Change Scoping Plan.* November 2017.

14 Howitt, R., Medellin-Azuara, J., MacEwan, D., Lund, J., and Summer, D. *Economic Analysis of 2014 Drought for California Agriculture.* 2014.

15 Fulton, J., and Cooley, H., *The Water Footprint of California's Energy System, 1990-2012.* 2015.

16 U.S. Forest Service, *2013-2027 National Insect and Disease Forest Risk Assessment.* January 2014.

and current drought conditions are not accounted for in these estimates, the projected climate changes over a 15-year period (2013-2027) are expected to significantly increase the number of acres at risk and will increase the risk from already highly destructive pests such as the mountain pine beetle. The 2018 update of the National Insect and Disease Risk Map (NIDRM) recognized these effects and adjusted the 2012 NIDRM by subtracting major disturbance events, thus accounting for reductions in hazards due to previous and ongoing tree mortality.[17]

The warming climate also causes sea level rise by warming the oceans which causes water to expand, and by melting land ice which transfers water to the ocean. Sea level rise is expected to magnify the adverse impact of any storm surge and high waves on the California coast. As temperatures warm and GHG concentrations increase more carbon dioxide dissolves in the ocean, making it more acidic. More acidic ocean water affects a wide variety of marine species, including species that people rely on for food.[18]

While more intense dry periods are anticipated under warmer conditions, increased extreme wet conditions are also expected to increase due to more frequent warm, wet atmospheric river events and a higher proportion of precipitation falling as rain instead of snow. In recent years, atmospheric rivers have also been recognized as the cause of the large majority of major floods in rivers all along the U.S. West Coast and as the source of 30-50 percent of all precipitation in the same region.[19] These extreme precipitation events, together with the rising snowline, often cause devastating floods in major river basins (e.g., California's Russian River). Looking ahead, the frequency and severity of atmospheric rivers on the U.S. West Coast will increase due to higher atmospheric water vapor that occurs with rising temperature, leading to more frequent flooding.[20,21]

As GHG emissions continue to accumulate and climate disruption grows, such destructive events will become more frequent. Several recent studies project increased precipitations within hurricanes over ocean regions.[22,23] The primary physical mechanism for this increase is higher water vapor in the

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17 U.S. Forest Service. National Insect & Disease Risk and Hazard Mapping. Available online at: https://www.fs.usda.gov/foresthealth/applied-sciences/mapping-reporting/national-risk-maps.shtml. Accessed November 3, 2022.

18 California Air Resources Board, *California's 2017 Climate Change Scoping Plan.* November 2017.

19 American Meteorological Society, *Atmospheric Rivers as Drought Busters on the U.S. West Coast,* April 2013.

20 Hagos, S., Leung, L.R., Yoon, JH., Lu, J., and Gao, Y., *A projection of changes in landfalling atmospheric river frequency and extreme precipitation over western North America from the Large Ensemble CESM simulations.* January 2016.

21 Payne, Ashley and Magnusdottir, Gudrun, *An Evaluation of Atmospheric Rivers over the North Pacific in CMIP5 and their response to warming under RCP 8.5.* November 2015.

22 Easterling, D.R., Kunkel, K.E., Wehner, M.F., and Sun, L., *Detection and Attribution of Climate Extremes in the Observed Record.* March 2016.

warmer atmosphere, which enhances moisture convergence in a storm for a given circulation strength. Since hurricanes are responsible for many of the most extreme precipitation events, such events are likely to become more extreme. Anthropogenic warming by the end of the 21st century will likely cause tropical cyclones globally to become more intense on average. This change implies an even larger percentage increase in the destructive potential per storm, assuming no changes in storm size.[24,25] Thus, the historical record, which once set our expectations for the traditional range of weather and other natural events, is becoming an increasingly unreliable predictor of the conditions we will face in the future. Consequently, the best available science must drive effective climate policy.[26]

California is committed to further supporting new research on ways to mitigate climate change and how to understand its ongoing and projected impacts. California's Fourth Climate Change Assessment and Indicators of Change Report will further update our understanding of the many impacts from climate change in a way that directly informs State agencies' efforts to safeguard the State's people, economy, and environment.[27,28]

Together, historical data, current conditions, and future projections provide a picture of California's changing climate, with two important messages:

- Change is already being experienced and documented across California, and some of these changes have been directly linked to changing climatic conditions.

- Even with the uncertainty in future climate conditions, every scenario estimates further change in future conditions.

It is critical that California continue to take steps to reduce GHG emissions in order to avoid the worst of the projected impacts of climate change. At the same time, the State is taking steps to make the State more

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23 National Academies of Sciences, Engineering, and Medicine, *Attribution of Extreme Weather Events in the Context of Climate Change.* 2016.

24 Sobel, A.H., Camargo, S.J., Hall, T.M., Lee, C-Y., Tippett, M.K., and Wing, A.A., *Human Influence on Tropical Cyclone Intensity.* 2016.

25 Kossin, James P., NOAA/National Centers for Environmental Information, *Past and Projected Changes in Western North Pacific Tropical Cyclone Exposure*. July 2016.

26 California Air Resources Board, *California's 2017 Climate Change Scoping Plan.* November 2017.

27 California's Fourth Climate Change Assessment. Available online at: http://resources.ca.gov/climate/safeguarding/research/.

28 OEHHA, *Indicators of Climate Change in California*. Available online at: https://oehha.ca.gov/climate-change/document/indicators-climate-change-california.

resilient to ongoing and projected climate impacts as laid out by the Safeguarding California Plan.[29] The Safeguarding California Plan was updated in 2018 to present new policy recommendations and provide a roadmap of all the actions and next steps that state government is taking to adapt to the ongoing and inevitable effects of climate change.[30] California's continuing efforts are vital steps toward minimizing the impact of GHG emissions and a three-pronged approach of reducing emissions, preparing for impacts, and conducting cutting-edge research can serve as a model for action.[31]

Global Greenhouse Gas Emissions Inventory

Worldwide anthropogenic GHG emissions for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I) are tracked through the year 2019. The sum of the top five GHG producing nations (plus the European Union) totaled approximately 28,225 million metric tons of CO_2 equivalents ($MMTCO_2e$).[32,33] The top five countries and the European Union accounted for approximately 63 percent of the total global GHG emissions according to the most recently available data (see **Table 3.8-1, Top Five GHG Producer Countries and the European Union [Annual]**). The GHG emissions in more recent years may differ from the inventories presented in **Table 3.8-1**; however, the data is representative of currently available global inventory data.

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29 California Natural Resources Agency, *Safeguarding California and Climate Change Adaption Policy*, https://www.slc.ca.gov/sea-level-rise/safeguarding-california-plan-2018-update/. Accessed November 3, 2022.

30 California Natural Resources Agency. *Safeguarding California Plan: 2018 Update*. Available online at: https://www.slc.ca.gov/sea-level-rise/safeguarding-california-plan-2018-update/. Accessed November 3, 2022.

31 California Air Resources Board, *California's 2017 Climate Change Scoping Plan.* November 2017.

32 World Resources Institute. Historical GHG Emissions. Available at: https://www.climatewatchdata.org/ghg-emissions?end_year=2019&regions=TOP&start_year=1990. Accessed August 17, 2022.

33 The CO_2 equivalent emissions commonly are expressed as "million metric tons of carbon dioxide equivalent ($MMTCO_2E$)." The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP, such that $MMTCO_2E$ = (million metric tons of a GHG) x (GWP of the GHG). For example, the GWP for methane is 21. This means that the emission of one million metric tons of methane is equivalent to the emission of 21 million metric tons of CO_2.

Table 3.8-1
Top Five GHG Producer Countries and the European Union (Annual)

Top Emitting Countries	2019 GHG Emissions ($MMTCO_2e$)
China	12,055
United States	5,771
India	3,364
European Union (EU), 27 Member States	3,150
Russia	1,960
Indonesia	1,925

Source: World Resources Institute. Climate Watch Historical GHG Emissions. Available at: https://www.climatewatchdata.org/ghg-emissions?end_year=2019&regions=TOP&start_year=1990. Accessed August 17, 2022.
Note: Emissions are based on 2019 data.

As noted in **Table 3.8-1**, the US was the number two producer of global GHG emissions in 2019. The primary GHG emitted by human activities in the US was CO_2, representing approximately 79 percent of total GHG emissions.[34]

Global Ambient CO_2 Concentrations

To determine the global atmospheric variation of CO_2, CH_4, and N_2O from before the start of industrialization, air trapped by ice has been extracted from core samples taken from polar ice sheets. For the period from around 1750 to the present, global CO_2 concentrations increased from a pre-industrialization period concentration to 410 ppm in 2019, which represents an exceedance of 1750 levels by approximately 46 percent.[35,36] Global CH_4 and N_2O concentrations show similar increases for the same period (see **Table 3.8-2, Comparison of Global Pre-Industrial and 2019 GHG Concentrations**).

34 World Resources Institute. Climate Watch Historical GHG Emissions. Available at: https://www.climatewatchdata.org/ghg-emissions?end_year=2019&regions=TOP&start_year=1990. Accessed August 17, 2022.

35 IPCC, *Climate Change 2013 The Physical Science Basis.* 2013.

36 IPCC, *Climate Change 2021 The Physical Science Basis. 2021.*

Table 3.8-2
Comparison of Global Pre-Industrial and 2011 GHG Concentrations

Greenhouse Gas	Early Industrial Period Concentrations[1]	Natural Range for Last 650,000 Years[1]	2019 Concentrations[2]
Carbon Dioxide (CO_2)	280 ppm	180 to 300 ppm	410 ppm
Methane (CH_4)	715 ppb	320 to 790 ppb	1,866 ppb
Nitrous Oxide (N_2O)	270 ppb	NA	332 ppb

Source:
[1] Intergovernmental Panel on Climate Change (IPCC), Climate Change 2013: The Physical Science Basis, Summary for Policymakers 2013. [2] IPCC. Summary for Policy Makers. Inc., Climate Change 2021: The Physical Science Basis, Summary for Policymakers 2021.
ppm=parts per million; ppb=parts per billion.

State of California Greenhouse Gas Emissions Inventory

Based on the GHG inventories compiled by the World Resources Institute, California's total statewide GHG emissions rank second in the US (Texas is number one with 880 $MMTCO_2e$) with emissions of 399 $MMTCO_2e$ in 2018.[37] The California Air Resources Board (CARB) compiles GHG inventories for the State of California. Based on the 2019 GHG inventory data (i.e., the latest year for which data are available), California emitted 418.2 $MMTCO_2e$, a reduction of 7.7 percent.[38]

The primary contributors to GHG emissions in California are transportation, electric power production from both in-state and out-of-state sources, industry, agriculture and forestry, and other sources, which include commercial and residential activities. **Table 3.8-3, GHG Emissions in California**, provides a summary of GHG emissions reported in California in 2000 and 2019 separated by categories defined by the United Nations Intergovernmental Panel on Climate Change (IPCC).

Between 2000 and 2019, the population of California grew by approximately 4.5 million, from 33.9 to 39.5million.[39] This represents an increase of approximately 16 percent from 2000 population levels. In addition, the California economy, measured as gross state product, grew from $1.4 trillion in 2000 to $3.1 trillion in 2019, over doubling the 2000 gross state product.[40] Despite the population and economic

37 World Resources Institute, *U.S. State Inventory*, 2018 data, Available online at: https://www.climatewatchdata.org/ghg-emissions?source=US, accessed August 17, 2022.

38 California Air Resources Board, Current California GHG Emission Inventory Data, 2000-2019 GHG Inventory (2021 Edition), https://ww2.arb.ca.gov/ghg-inventory-data. Accessed April 2022.

39 U.S. Census Bureau, "California," https://data.census.gov/cedsci/profile?g=0400000US06. Accessed April 14, 2022.

40 California Department of Finance, "Gross Domestic Product," https://dof.ca.gov/gross-state-product/. Accessed April 14, 2022.

growth, California's net GHG emissions decreased by approximately 10 percent. The California Energy Commission (CEC) attributes the decrease to the success of California's renewable energy programs and its commitment to clean air and clean energy.

Table 3.8-3
GHG Emissions in California

Source Category	2000 ($MMTCO_2e$)	Percent of Total	2019 ($MMTCO_2e$)	Percent of Total
Transportation	178.4	**38.19%**	166.1	**39.7%**
On-Road Total	164.8	--	151.6	--
Passenger Vehicles	125.2	--	119.1	--
Heavy Duty Vehicles	39.5	--	32.5	--
Aviation + Rail + Ships	9.0	--	9.8	--
Off-Road + Unspecified	4.6	--	4.8	--
Transportation Total	178.4	--	166.1	--
On-Road Total	164.8	--	151.6	--
Industrial Processes & Product Use	96.2	**20.59%**	88.2	**21.1%**
Refineries and Hydrogen Production	28.5	--	28.8	--
Oil & Gas: Production & Processing	19.1	--	16.6	--
General Fuel Use	20.2	--	19.8	--
Cogen (thermal)	11.7	--	7.4	--
Cement	9.5	--	7.8	--
Other	7.3	--	7.8	--
Electric Power	104.7	22%	58.8	**14.1%**
In-State	58.8	--	37.2	--
Imports	45.9	--	21.7	--
Commercial & Residential	43.9	9%	43.8	**10.5%**
Residential	30.2	--	28.0	--
Commercial	13.8	--	15.9	--
Agriculture, Forestry, & Other Land Use	31.0	**7%**	31.8	**7.6%**
Livestock	19.2	--	22.6	--
Crops Growing and Harvesting	8.0	--	6.6	--
High GWP	6.3	**1%**	20.6	**4.9%**
Recycling & Waste	7.4	2%	8.9	**2.1%**
Emissions Summary				
Gross California Emissions	467.19		418.2	

Sources:
1 California Air Resources Board, "California Greenhouse Gas 2000-2019 Emissions Trends and Indicators Report," https://ww2.arb.ca.gov/ghg-inventory-data. Accessed April 14, 2022

3.8.2 REGULATORY FRAMEWORK

3.8.2.1 Federal Regulations

Global Change Research Act (1990)

In 1990, Congress passed, and the President signed Public Law 101-606, the Global Change Research Act. The purpose of the legislation was: "…to require the establishment of a United States Global Change Research Program aimed at understanding and responding to global change, including the cumulative effects of human activities and natural processes on the environment, to promote discussions towards international protocols in global change research, and for other purposes." To that end, the Global Change Research Information Office was established in 1991 to serve as a clearinghouse of information. The Act requires a report to Congress every four years on the environmental, economic, health and safety consequences of climate change; however, the first and only one of these reports to date, the National Assessment on Climate Change, was not published until 2000. In February 2004, operational responsibility for GCRIO shifted to the U.S. Climate Change Science Program.

Supreme Court Ruling

The U.S. Supreme Court ruled in *Massachusetts v. Environmental Protection Agency, 127 S.Ct. 1438 (2007)*, that carbon dioxide and other greenhouse gases are pollutants under the Federal Clean Air Act (CCA), which the US Environmental Protection Agency (U.S. EPA) must regulate if it determines they pose an endangerment to public health or welfare.

U.S. EPA Endangerment Finding

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act (42 USC Section 7521):

- **Endangerment Finding**: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere threaten the public health and welfare of current and future generations.

Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

Energy Policy Act of 1992 (EPAct)

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct 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 EPAct. Federal tax deductions will be 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.

Energy Policy Act of 2005

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

The Energy Independence and Security Act of 2007 includes several key provisions that will increase energy efficiency and the availability of renewable energy, which will reduce greenhouse gas emissions as a result. First, the Act sets a Renewable Fuel Standard that requires fuel producers to use at least 36 billion gallons of biofuel by 2022. Second, it increased Corporate Average Fuel Economy (CAFE) Standards to require a minimum average fuel economy of 35 miles per gallon for the combined fleet of cars and light trucks by 2020. Third, the adopted bill includes a variety of new standards for lighting and for residential and commercial appliance equipment. The equipment includes residential refrigerators, freezers, refrigerator-freezers, metal halide lamps, and commercial walk-in coolers and freezers.

U.S. EPA Reporting Rule

The U.S. Environmental Protection Agency (U.S. EPA) adopted a mandatory GHG reporting rule in September 2009. The rule would require suppliers of fossil fuels or entities that emit industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions to submit annual reports to the U.S. EPA beginning in 2011 (covering the 2010 calendar year emission). Vehicle and engine manufacturers were required to begin reporting GHG emissions for model year 2011.

Fuel Economy Standards

On September 15, 2009, the National Highway Traffic Safety Administration (NHTSA) and U.S. EPA announced a proposed joint rule that would explicitly tie fuel economy to GHG emissions reductions requirements. The proposed new CAFE Standards would cover automobiles for model years 2012 through 2016 and would require passenger cars and light trucks to meet a combined, per mile, carbon dioxide emissions level. It was estimated that by 2016, this GHG emissions limit could equate to an overall light-duty vehicle fleet average fuel economy of as much as 35.5 miles per gallon. The proposed standards would require model year 2016 vehicles to meet an estimated combined average emission level of 250 grams of carbon dioxide per mile under U.S. EPA's GHG program.

On November 16, 2011, U.S. EPA and NHTSA issued a joint proposal to extend the national program of harmonized GHG and fuel economy standards to model year (MY) 2017 through 2025 passenger vehicles. In August 2012, President Obama finalized standards that will increase fuel economy to the equivalent of 54.5 mpg for cars and light-duty trucks by MY 2025.

On January 12, 2017, U.S. EPA Administrator Gina McCarthy signed her determination to maintain the GHG emissions standards for model year (MY) 2022-2025 vehicles. Her final determination found that automakers are well positioned to meet the standards at lower costs than previously estimated.

On March 15, 2017, the new U.S. EPA Administrator Scott Pruitt and Department of Transportation Secretary Elaine Chao announced that U.S. EPA intended to reconsider the final determination, issued on January 12, 2017, that recommended no change to the greenhouse gas standards for light duty vehicles for model years 2022- 2025.

On April 2, 2018, the Administrator signed the Mid-term Evaluation Final Determination which finds that the model year 2022-2025 greenhouse gas standards are not appropriate in light of the record before the U.S. EPA and, therefore, should be revised.

On September 19, 2019, President Trump announced the "One Nation Program Rule," which will enable the federal government to provide nationwide uniform fuel economy and greenhouse gas emission standards for automobiles and light duty trucks. The rule determines that only the federal government may set fuel economy standards, and state and local governments may not establish their own separate fuel economy standard, repealing California's 2013 Clean Air Act waiver.

Heavy-Duty Vehicle Program

In May 2010, President Barack Obama issued a Presidential Memorandum Regarding Fuel Efficiency Standards requesting that U.S. EPA and National Highway Traffic Safety Administration (NHTSA) take additional coordinated steps to produce a new generation of clean vehicles. In response, U.S. EPA and NHTSA adopted regulations governing Medium- and Heavy-Duty Greenhouse Gas Emissions and Fuel Efficiency (title 40, Code of Federal Regulations, Chapter I) on September 15, 2011 (most recently amended on August 16, 2013) to establish the first fuel efficiency requirements for medium- and heavy-duty vehicles beginning with the model year 2014 through model year 2018. On February 18, 2014, the President directed the U.S. EPA and NHTSA to set the next round of fuel efficiency standards for Medium- and heavy-duty vehicles (beyond model year 2018) that will build on the existing standards to further reduce fuel consumption through the application of advanced cost-effective technologies and continue to improve the efficiency of moving goods across the United States. In October 2016, U.S. EPA and NHTSA adopted Phase 2 GHG and fuel efficiency standards for medium- and heavy-duty engines and vehicles.[41]

Clean Power Plan

In 2015, U.S. EPA published the Clean Power Plan (80 Fed. Reg. 64661, October 23, 2015). The Clean Power Plan sets achievable standards to reduce CO_2 emissions by 32 percent from 2005 levels by 2030. This Plan establishes final emissions guidelines for states to follow in developing plans to reduce GHG emissions from existing fossil fuel-fired electric generating units (EGUs). Specifically, U.S. EPA is establishing: (1) CO_2 emission performance rates representing the best system of emission reduction (BSER) for two subcategories of existing fossil-fuel-fired EGUs, fossil-fuel-fired electric utility steam generating units and stationary combustion turbines; (2) state-specific CO_2 goals reflecting the CO_2 emission performance rates; and (3) guidelines for the development, submittal and implementation of state plans that establish emission standards or other measures to implement the CO_2 emission performance rates, which may be accomplished by meeting the state goals. This final rule would continue progress already under way in the United States to reduce CO_2 emissions from the utility power sector. On February 9, 2016, the Supreme Court (Order No. 15A773) stayed implementation of the Clean Power Plan pending judicial review. In addition, U.S. EPA is currently proposing to repeal the Clean Power Plan after completing a thorough review as directed by the Executive Order on Energy Independence (as

41 U.S. Environmental Protection Agency. *Final Rule for Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles - Phase 2*. Available online at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-greenhouse-gas-emissions-and-fuel-efficiency#rule-history. Accessed November 3, 2022.

discussed below). In sum, the Clean Power Plan continues to face multiple legal challenges and its future is uncertain.

Executive Order on Energy Independence

On March 28, 2017, President Donald Trump signed Executive Order 13783, "Promoting Energy Independence and Economic Growth," which calls for:

- Review of the Clean Power Plan.
- Review of the 2016 Oil and Gas New Source Performance Standards for New, Reconstructed, and Modified Sources.
- Review of the Standards of Performance for GHG Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Generating Units.
- Withdrawal of Proposed Rules: Federal Plan Requirements for GHG Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations; and Clean Energy Incentive Program Design Details.

Affordable Clean Energy Rule

The U.S. EPA issued the Affordable Clean Energy (ACE) rule on June 19, 2019 in order to replace the Clean Power Plan. The ACE rule establishes emissions guidelines for states to use when developing plans to limit carbon dioxide at coal-fired power plants. Specifically, the ACE rule aims at improving the heat rate as the best system of emissions reductions for carbon dioxide at coal-fired power plants and these improvements can be made at individual facilities. States will have three years to submit plans. The EPA estimates that the ACE rules will result in a reduction of CO_2 emissions from the electricity sector by as much as 35% below 2005 levels by 2030.[42]

3.8.2.2 State Regulations

Title 24 Building Standards Code

The California Energy Commission first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a

[42] U.S. Environmental Protection Agency. *Final Rule for Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles - Phase 2*. Available online at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-greenhouse-gas-emissions-and-fuel-efficiency#rule-history. Accessed November 3, 2022.

legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

The California Green Building Standards Code, which is Part 11 of the California Code of Regulations (the "CCR"), is commonly referred to as the CALGreen Code. CALGreen was added to Title 24 to represent base standards for reducing water use, recycling construction waste, and reducing polluting materials in new buildings. In contrast, Title 24 focuses on promoting more energy-efficient buildings and considers the building envelope, heating and cooling, water heating, and lighting restrictions. The first edition of the CALGreen Code in 2008 contained only voluntary standards. The 2010 edition included mandatory requirements for state-regulated buildings and structures throughout California, including requirements for construction site selection, storm water control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation and more. Some measures in the CalGreen Code specifically apply to public schools, such as Section 5.106.4.2 Bicycle Parking, which requires bicycle parking when new buildings are constructed.[43]

The CALGreen Code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The CALGreen Code also requires building commissioning which is a process for the verification that all building systems, like heating and cooling equipment and lighting systems are functioning at their maximum efficiency. The most recent 2019 CALGreen Code became effective January 1, 2020, and includes new requirements for residential and non-residential development.

Other programs that provide third-party verification for green buildings include Leadership in Energy and Environmental Design (LEED) and Collaborative for High Performance Schools (CHPS). LEED is an internationally recognized green building certification system developed by the U.S. Green Building Council. The "LEED for Schools Rating System"[44] was established to recognize the unique nature of the design and construction of K-12 schools. CHPS oversees the nation's first green building rating program especially designed for K-12 schools called "CHPS Verified."[45]

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43 CALGreen Code. Available at: https://up.codes/viewer/california/ca-green-code-2022/chapter/5/nonresidential-mandatory-measures#5.106.5.4, accessed August 17, 2022.

44 U.S. Green Building Council. About Center Green School. Available online: https://www.usgbc.org/press/about-center-green-schools. Accessed July 21, 2022.

45 Collaborative for High Performance Schools. Available online at: https://chps.net/. Accessed July 30, 2022.

Through their "School Resource Program" and "Energy Reduction Action Plan for Schools," PG&E offers energy efficiency resources and services to public school districts, such as energy audits, staff training, as well as planning and funding assistance to help schools save energy.

Assembly Bill 1493

In response to the transportation sector's contribution of more than half of California's CO_2 emissions, Assembly Bill 1493 (AB 1493, Pavley) was enacted on July 22, 2002. AB 1493 requires CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles whose primary use is noncommercial personal transportation. However, before these regulations go into effect, the U.S. EPA must grant California a waiver under the federal CAA, which ordinarily preempts state regulation of motor vehicle emission standards. On June 30, 2009, the U.S. EPA formally approved California's waiver request. However, in light of the September 15, 2009, announcement by the U.S. EPA and NHTSA regarding the national program to reduce vehicle GHG emissions, California—and states adopting California emissions standards—have agreed to generally defer to the proposed national standard through model year 2016 if granted a waiver by the U.S. EPA. The 2016 endpoint of the two standards is similar, although the national standard ramps up slightly more slowly than required under the California standard. The Pavley standards require additional reductions in CO_2 emissions beyond 2016 (referred to as Phase II standards). The Phase II standards are currently in development for the 2017-2025 model years.

Executive Order S-3-05

On June 1, 2005, Governor Schwarzenegger issued Executive Order S-3-05, which set the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels. The California Environmental Protection Agency (Cal EPA) formed a Climate Action Team ("CAT") that recommended strategies that can be implemented by state agencies to meet GHG emissions targets. The Team reported several recommendations and strategies for reducing GHG emissions and reaching the targets established in the Executive Order.[46] Furthermore, the report provided to then Governor Schwarzenegger, indicated that smart land use and increased transit availability should be a priority in the State of California.[47] According to the California Climate Action Team, smart land use is an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally

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46 California Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006.

47 California Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, p. 57.

encourage jobs/housing proximity, promote transit-oriented development (TOD), and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population.

Assembly Bill 32

In furtherance of the goals established in Executive Order S-3-05, the Legislature enacted Assembly Bill 32 (AB 32, Nuñez and Pavley), the California Global Warming Solutions Act of 2006, which Governor Schwarzenegger signed on September 27, 2006. AB 32 represents the first enforceable statewide program to limit GHG emissions from all major industries with penalties for noncompliance. AB 32 requires the State to undertake several actions—the major requirements are discussed below.

CARB Early Action Measures

CARB is responsible for carrying out and developing the programs and requirements necessary to achieve the goals of AB 32—the reduction of California's GHG emissions to 1990 levels by 2020. The first action under AB 32 resulted in CARB's adoption of three early action greenhouse gas emission reduction measures on June 21, 2007. On October 25, 2007, CARB approved an additional six early action GHG reduction measures under AB 32. CARB has adopted regulations for all early action measures. The early action measures are divided into three categories:

- Group 1 - GHG rules for immediate adoption and implementation;
- Group 2 - Several additional GHG measures under development; and
- Group 3 - Air pollution controls with potential climate co-benefits.

The original three adopted early action regulations meeting the narrow legal definition of "discrete early action GHG reduction measures" include:

- A low-carbon fuel standard to reduce the "carbon intensity" of California fuels;
- The reduction of refrigerant losses from motor vehicle air conditioning system maintenance to restrict the sale of "do-it-yourself" automotive refrigerants; and
- Increased methane capture from landfills to require broader use of state-of-the-art methane capture technologies.

The additional six early action regulations adopted on October 25, 2007, also meeting the narrow legal definition of "discrete early action GHG reduction measures," include:

- The reduction of aerodynamic drag, and thereby fuel consumption, from existing trucks and trailers through retrofit technology;
- The reduction of auxiliary engine emissions of docked ships by requiring port electrification;
- The reduction of perfluorocarbons from the semiconductor industry;
- The reduction of propellants in consumer products (e.g., aerosols, tire inflators, and dust removal products);
- The requirement that all tune-up, smog check and oil change mechanics ensure proper tire inflation as part of overall service in order to maintain fuel efficiency; and
- The restriction on the use of sulfur hexafluoride from non-electricity sectors if viable alternatives are available.

AB 32 Climate Change Scoping Plan

As indicated above, AB 32 requires CARB to adopt a scoping plan indicating how reductions in significant GHG sources will be achieved through regulations, market mechanisms, and other actions. After receiving public input on their discussion draft of the Proposed Scoping Plan released in June 2008, CARB released the Climate Change Proposed Scoping Plan in October 2008 that contains an outline of the proposed state strategies to achieve the 2020 greenhouse gas emission limits. The CARB Governing Board approved the Scoping Plan on December 11, 2008. Key elements of the Scoping Plan include the following recommendations:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards.
- Achieving a statewide renewable energy mix of 33 percent.
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system.
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California and pursuing policies and incentives to achieve those targets.

- 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.

- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the state's long-term commitment to AB 32 implementation.

Under the Scoping Plan, approximately 85 percent of the state's emissions are subject to a cap-and-trade program where covered sectors are placed under a declining emissions cap. The emissions cap incorporates a margin of safety whereas the 2020 emissions limit will still be achieved even in the event that uncapped sectors do not fully meet their anticipated emission reductions. Emissions reductions will be achieved through regulatory requirements and the option to reduce emissions further or purchase allowances to cover compliance obligations. It is expected that emission reduction from this cap-and-trade program will account for a large portion of the reductions required by AB 32.

In 2017, CARB released an updated Scoping Plan in order to establish a framework of reduction policies and plans in order to meet the state's 2030 GHG reductions set in Senate Bill 32 (see discussion below). This Scoping Plan builds on and integrates efforts already underway to reduce the State's GHG, criteria air pollutant, and toxic air contaminant emissions. The existing plan has put California on track to achieve the 2020 target. Programs such as the Low Carbon Fuel Standard and Renewable Portfolio Standard are delivering cleaner fuels and energy, the Advanced Clean Cars Program has put more than a quarter million clean vehicles on the road, and the Sustainable Freight Action Plan will result in efficient and cleaner systems to move goods throughout the State. Enhancing and implementing these ongoing efforts puts California on the path to achieving the 2030 target. This Scoping Plan relies on these, and other foundational programs paired with an extended, more stringent Cap-and-Trade Program, to deliver climate, air quality, and other benefits.[48]

Senate Bill 375

The California Legislature passed Senate Bill 375 (SB 375) on September 1, 2008, and SB 375 was signed by former Governor Schwarzenegger and chaptered into law on September 30, 2008. SB 375 requires CARB, working in consultation with the metropolitan planning organizations (MPOs), to set regional greenhouse gas reduction targets for the automobile and light truck sector for 2020 and 2035. CARB must provide each MPO with its reduction target by September 30, 2010. The target must then be incorporated within that region's Regional Transportation Plan (RTP), which is used for long-term transportation

48 California Air Resources Board. 2017. *California's 2017 Climate Change Scoping Plan*. Available online at: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed November 3, 2022.

planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either the RTP or SCS.

In accordance with SB 375, on January 23, 2009, CARB appointed a Regional Targets Advisory Committee (RTAC) to provide recommendations and methodologies to be used in the target setting process. The RTAC provided its recommendations in a report to CARB on September 29, 2009. On August 9, 2010, CARB staff issued the *Proposed Regional Greenhouse Gas Emission Reduction Targets For Automobiles And Light Trucks Pursuant To Senate Bill 375*.[49] CARB staff proposed draft reduction targets for the four largest MPOs (Bay Area, Sacramento, Southern California, and San Diego) of 7 to 8 percent for 2020 and reduction targets between 13 to 16 percent for 2035. For the Southern California Association of Governments (SCAG), which is the MPO for the region the proposed project is located; CARB established a draft target of 8 percent for 2020 and 13 percent for 2035, subject to SCAG Board approval. CARB staff proposed a draft reduction target for the combined San Joaquin Valley MPOs of 5 percent for 2020 and 10 percent for 2035, acknowledging that the growth rate in the San Joaquin Valley is projected to be double that of most other areas of California. The remaining six MPOs represent about 5 percent of both the State's greenhouse gas emissions and vehicle miles traveled from passenger vehicles. For these MPOs, CARB staff is proposing to use the most current greenhouse gas per capita projections from each MPO, adjusted for the impacts of the recession, as the basis for individual MPO targets for this first target-setting cycle. This approach allows the focus of this first target-setting cycle to appropriately remain on the largest and fastest growing regions of the state. Of note, the proposed reduction targets explicitly exclude emission reductions expected from the AB 1493 and low carbon fuel standard regulations. As indicated above, CARB was required to adopt the final targets by September 30, 2010. However, further discussion on the draft targets was requested by SCAG, with an additional meeting occurring and SCAG approving the draft targets in February 2011. The draft targets were finalized by Executive Order on February 15, 2011.

California Climate Action Registry

The California Climate Action Registry (CCAR) is a private non-profit organization formed by the State of California that serves as a voluntary GHG registry to protect and promote early actions to reduce GHG emissions by organizations. Senate Bill 1771 (SB 1771, Sher) formally established the CCAR with technical changes made to the statute in SB 527, which finalized the structure of the CCAR. The CCAR began with

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49 California Air Resources Board, *Staff Report: Proposed Regional Greenhouse Gas Emission Reduction Targets For Automobiles And Light Trucks Pursuant To Senate Bill 375*, (2010).

23 charter members and currently has over 300 corporations, universities, cities and counties, government agencies and environment organizations voluntarily measuring, monitoring, and publicly reporting their GHG emissions using the CCAR protocols. The CCAR has published a General Reporting Protocol, as well as project- and industry-specific protocols for landfill activities, livestock activities, the cement sector, the power/utility sector, and the forest sector. The protocols provide the principles, approach, methodology, and procedures required for participation in the CCAR.

Due to the growth of the CCAR, it now operates under the Climate Action Reserve,[50] which is a national offsets program for the United States carbon market. As part of this transition, the California Climate Action Registry was instrumental in establishing the Climate Registry, with the mission of expanding the California Registry's emissions reporting work to include all of North America.[51] Emissions inventory reporting is being transitioned to the Climate Registry, and reports for the 2009 reporting year will be the last the California Registry will accept. However, even after that year, the California Registry will continue to represent its members' emissions reports to the state of California.

Senate Bill 32 (SB 32) and AB 197

On September 8, 2016, California signed into law Senate Bill 32 (SB 32), which adds Section 38566 to the Health and Safety Code and requires a commitment to reducing statewide GHG emissions by 2020 to 1990 levels and by 2030 to 40 percent less than 1990 levels. SB 32 was passed with companion legislation AB 197 Chapter 250, Statutes of 2016), which provides greater legislative oversight of CARB's GHG regulatory programs, requires CARB to account for the social costs of GHG emissions, and establishes a legislative preference for direct reductions of GHG emissions.

In November 2017, CARB adopted California's 2017 Climate Change Scoping Plan (2017 Update), which outlines the proposed framework of action for achieving California's SB 32 2030 GHG target: a 40 percent reduction in GHG emissions by 2030 relative to 1990 levels.[52] The 2030 target is intended to ensure that California remains on track to achieve the goal set forth by E.O. B-30-15 to reduce statewide GHG emissions by 2050 to 80 percent below 1990 levels.

The 2017 Update identifies key sectors of the implementation strategy, which includes improvements in low carbon energy, industry, transportation sustainability, natural and working lands, waste management, and water. Through a combination of data synthesis and modeling, CARB determined that

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50 Additional information about the Climate Action Reserve may be obtained at the following website: http://www.climateactionreserve.org/.

51 Additional information about The Climate Registry may be obtained at the following website: http://www.theclimateregistry.org/.

52 CARB, *California's 2017 Climate Change Scoping Plan*, November 2017.

the target statewide 2030 emissions limit is 260 $MMTCO_2e$, and that further commitments will need to be made to achieve an additional reduction of 50 $MMTCO_2e$ beyond current policies and programs. Key elements of the 2017 Update include a proposed 20 percent reduction in GHG emissions from refineries and an expansion of the Cap-and-Trade program to meet the aggressive 2030 GHG emissions goal and ensure achievement of the 2050 limit set forth by E.O. B-30-15. For the transportations sector, the 2017 Update indicates that while most of the GHG reductions will come from technologies and low carbon fuels, a reduction in the growth of vehicle miles traveled (VMT) is also needed. The 2017 Update indicates that stronger SB 375 GHG reduction targets will enable the State to make significant progress toward this goal, but alone will not provide all of the VMT growth reductions that will be needed. It notes that there is a gap between what SB 375 can provide and what is needed to meet the State's 2030 and 2050 goals. The 2017 Update recommends that local governments consider policies to reduce VMT, including: land use and community design that reduces VMT; transit-oriented development; street design policies that prioritize transit, biking, and walking; and increasing low carbon mobility choices, including improved access to viable and affordable public transportation and active transportation opportunities.

Senate Bill 1383 (SB 1383)—Short-Lived Climate Pollutants

Short-lived climate pollutants (SLCP) SLCPs include black carbon (soot), methane, and fluorinated gases (F-gases). SB 1383 of 2016 (Chapter 395, Statutes of 2016) sets forth legislative direction for control of SLCPs. It requires CARB, no later than January 1, 2018, to approve and begin implementing its SLCP strategy to achieve the following reductions in emissions by 2030 compared to 2013 levels: methane by 40 percent, hydrofluorocarbons by 40 percent, and black carbon (non-forest) by 50 percent. The bill also specifies targets for reducing organic waste in landfills. SB 1383 also requires CARB to adopt regulations to be implemented on or after January 1, 2024, specific to the dairy and livestock industry, requiring a 40 percent reduction in methane emissions below 2013 levels by 2030, if certain conditions are met. Lastly, the bill required CalRecycle to adopt regulations to take effect on or after January 1, 2022, to achieve specified targets for reducing organic waste in landfills. In November 2020, CalRecycle adopted the regulations for them to take effect January 1, 2022.[53]

3.8.2.3 Local Regulations

Bay Area Air Quality Management District (BAAQMD)

For land use development projects, the BAAQMD recommends using the approach endorsed by the California Supreme Court in Center for Biological Diversity v. Department of Fish & Wildlife (2015) (62

[53] California Department of Resources Recycling and Recovery. *California's Short-Lived Climate Pollutant Reduction Strategy.* Available online at: https://calrecycle.ca.gov/organics/slcp/. Accessed November 3, 2022.

Cal.4th 204), which evaluates a project based on its effect on California's efforts to meet the State's long-term climate goals. As the Supreme Court held in that case, a project that would be consistent with meeting those goals can be found to have a less than significant impact on climate change under CEQA. If a project would contribute its "fair share" of what will be required to achieve those long-term climate goals, then a reviewing agency can find that the impact will not be significant because the project will help to solve the problem of global climate change (62 Cal.4th 220–223).

City of Sunnyvale Climate Action Playbook

The Climate Action Playbook (CAP) sets a vision for the City of Sunnyvale to reduce carbon emissions by 2050. Sunnyvale adopted its first Climate Action Plan (CAP 1.0) in 2014 and has already achieved its 2020 greenhouse gas (GHG) emissions target. The Sunnyvale Climate Action Playbook paves the path for meeting or exceeding the state's emissions targets of 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050.

3.8.3 THRESHOLDS OF SIGNIFICANCE

The following thresholds for determining the significance of impacts related to greenhouse gas emissions are contained in the environmental checklist form contained in Appendix G of the most recent update of the *State CEQA Guidelines*. Adoption and/or implementation of the Proposed Master Plan could result in significant impacts associated with greenhouse gas emissions if any of the following would occur:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The BAAQMD does not have an adopted threshold of significance for construction related GHG emissions. The *BAAQMD Guidelines* state that GHG emissions from construction represent a very small portion of a project's lifetime GHG emissions. Although the proposed project is a master plan, the Plan Area is specific to one site and includes reasonably foreseeable development. Therefore, the thresholds for land use projects are designed to address operational GHG emissions which represent the vast majority of project GHG emissions.

The BAAQMD thresholds for GHG emissions during project operation. A proposed land use development project would not have a significant GHG impact, if operation of the project would meet one of the following thresholds (must include **A** or **B**):

A. Projects must include, at a minimum, the following project design elements:

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

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

3.8.4 METHODOLOGY

GHG emissions were calculated with the California Emissions Estimator Model (CalEEMod) Version 2022.1. Operational GHG emissions result from both direct and indirect sources. Direct emissions include emissions from fuel combustion in vehicles and natural gas combustion from stationary sources. Indirect sources include off-site emissions occurring as a result of electricity and water consumption and solid waste.

3.8.5 ENVIRONMENTAL IMPACTS

Greenhouse Gas Emissions Estimate

Section 15064.4(a) of the *State CEQA Guidelines* states, in part, that a lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. As such, **Table 3.8-4, Proposed Master Plan Total Greenhouse Gas Emissions (All Phases),** identifies an estimate of total GHG emissions upon full buildout of the Proposed Master Plan. It should be noted that while this estimate is conservative and likely over-estimates GHG emissions, it has been included for illustrative purposes and to satisfy the requirements of CEQA. The determination of significance for the Proposed Master Plan is discussed under **Impact GHG-1** and **Impact GHG-2**.

Table 3.8-4
Proposed Master Plan Total Greenhouse Gas Emissions (All Phases)

Emissions Source	Metric Tons of Carbon Dioxide Equivalent (per year)
Mobile Sources	2,302
Area Sources	2.01
Energy Sources	348
Water Sources	9.84
Waste Sources	45.6
Refrigerants	0.09
Total – Full Buildout GHG Emissions	**2,786**

*Source: Impact Sciences, Inc. See **Appendix 3.3-1** for CalEEMod data.*

Impact GHG-1 **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.**

BAAQMD Threshold "A" states that projects must provide at a minimum specific building and transportation design elements to ensure efficient energy use and reduce VMT to meet the criteria under *State CEQA Guidelines* Section 15064.4.

Building Design

As discussed in **Section 3.6, Energy**, the Proposed Master Plan would comply with Board Policy 3511 Energy and Water Management as well as contemporary best practices for energy efficiency and conservation of resources. These include strategies such as:

- Orient the school buildings to maximize solar access and daylighting (monitoring lighting needs without heat gain or glare through building design);
- Install an Energy Management System to provide users with better control of lighting and HVAC systems (heating, ventilation, and air conditioning);
- Incorporate energy-efficient building shell elements such as increased insulation in walls and ceilings to reduce heat loss and gain;
- Use efficient lamps and fixtures (e.g., fluorescent lamps and LED lights);
- Provide occupancy sensors to help limit the use of light to only when it is needed;
- Provide automated daylighting controls that dim electric lighting when sufficient natural light is present; and
- Use building materials and products that are energy-efficient based on life-cycle analyses.

All buildings would also comply with Title 24 and CALGreeen standard and the School Board policies to incorporate energy efficient windows, insulation, lighting, ventilation systems, as well as water efficient fixtures and electric vehicle charging infrastructure. Furthermore, the Proposed Master Plan includes a Sustainability and Net Zero Strategy which would include strategies such as maximizing the use of photovoltaic panels, when possible, and reducing heat gain through shading (see **Section 2.0, Project Description,** for a list of other strategies).

Compliance with these applicable measures and polices would ensure that buildings under the Proposed Master Plan would not result in wasteful, inefficient, or unnecessary energy usage. Therefore, buildings under the Proposed Master Plan would be consistent with the BAAQMD project design elements identified under threshold "**A**" and impacts would be ***less than significant***.

Transportation

As discussed in **Section 3.16, Transportation**, state guidelines allow for screening for projects that are local serving. All of the Proposed Master Plan's uses would be local serving, supportive of residential

uses, and daily activity. The relocation of the New Laurelwood Elementary School would be approximately 700 feet from the existing Laurelwood Elementary School site. As such, the Proposed Master Plan would not significantly alter travel patterns outside of the immediate vicinity of the school sites. As further discussed in **Section 3.16, Transportation,** when all factors are considered, the Proposed Master Plan would not have the potential to materially affect trip generation or have an adverse impact upon total VMTs. Therefore, the Proposed Master Plan would be consistent the with BAAQMD project design elements associated with transportation identified under threshold "**A.**"

As stated above, the Proposed Master Plan would include electric vehicle charging infrastructure and comply with applicable CALGreen requirements. Therefore, the Proposed Master Plan would be consistent with the BAAQMD project design elements identified under threshold "**A**" and impacts would be *less than significant*.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact GHG-2 **Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas emissions.**

BAAQMD Threshold "**B**" states that projects must be consistent with a local GHG reduction strategy that meets the criteria under *State CEQA Guidelines* Section 15183.5(b). The City of Sunnyvale's Climate Action Playbook (CAP) satisfies Section 15183.5(b) of the *State CEQA Guidelines* and is therefore the appropriate local GHG reduction plan that the Proposed Master Plan can be compared to for consistency. **Table 3.8-5, Proposed Master Plan Consistency with Sunnyvale CAP**, shows the Proposed Master Plan's consistency with the strategies and actions of the Sunnyvale CAP.

Table 3.8-5
Proposed Master Plan Consistency with Sunnyvale CAP

Strategies and Actions	Consistency Analysis
Strategy 1: Promoting Clean Electricity	
1.1: Promote 100% clean electricity	**Consistent:** The Proposed Master Plan would not interfere with the City's promotion of utilizing Silicon Valley Clean Energy (SVCE) and implementation of measures such as reducing energy use from buildings. The Proposed Master Plan would include strategies in line with reducing building energy use and would not interfere with the City's efforts to support SCVE in its similar strategies. Furthermore, electric service provided to the Plan Area includes service from SVCE and the Proposed Plan would not interfere with any of the State-regulated public utilities contracts.
1.2: Increase local solar photovoltaics	**Consistent:** The Proposed Master Plan's Net-Zero Strategy includes strategies such as maximizing the use of photovoltaics through building orientation. Buildings under the Proposed Master Plan would also comply with building energy efficiency standards which require certain buildings to include solar ready roof infrastructure.
1.3 Increase distributed electricity storage	**Consistent:** The Proposed Master Plan would not interfere with the City's collaborative efforts with SVCE to increase energy storage. The Proposed Master Plan would comply with building energy efficiency standards and no policies would interfere with efforts to increase distributed energy storage.
Strategy 2: Decarbonizing Buildings	
2.1: Reduce energy consumption in existing buildings	**Consistent:** The Proposed Master Plan would comply with Santa Clara Unified School District Policy 3511: Energy and Water Management, which in part aims to reduce energy use through renewable and clean energy technology and/or sources.
2.2: Support electrification of existing buildings	**Consistent:** The Proposed Master Plan would not interfere with City efforts to incentivize upgrades to existing buildings to achieve goals such as adopting electric heat pumps. While the Proposed Project may still use natural gas, there are no identified stationary sources which would conflict with City efforts to electrify existing buildings.
2.3: Achieve all-electric new construction	**Consistent:** While the Proposed Master Plan would not require that all new buildings be all-electric, the Proposed Master Plan includes new construction which emphasizes energy efficiency and would comply with CALGreen standards. Furthermore, the Proposed Master Plan would not interfere with City efforts such as modifying code and permitting processes to streamline electrification of buildings within the City.
Strategy 3: Decarbonizing Transportation & Sustainable Land Use	
3.1: Increase opportunities for and encourage development of mixed-use sites to reduce vehicle miles per person.	**Consistent:** While the Proposed Master Plan would not include a mix of residential and commercial uses, as discussed in Section 3.16, Transportation, the Proposed Master Plan's uses would be local serving, supportive of residential uses, and a daily activity. Overall, the Proposed Master Plan would not significantly alter travel patterns and implementation would adequately reduce VMT.
3.2: Increase transportation options and support shared mobility	**Consistent:** The Proposed Master Plan would include improvements to pedestrian pathways between the school campus and the surrounding community. The Proposed Master Plan would also comply with CALGreen standards which include requirements for bicycle parking.
3.3: Increase Zero-Emission Vehicles	**Not Applicable:** This strategy directs the City to take actions such as developing a Community Electric Vehicle Readiness and Infrastructure Plan and promoting incentives for electric vehicle adoption. The Proposed Master Plan would not interfere with such efforts.
Strategy 4: Managing Resource Sustainability	
4.1: Achieve zero waste goals for solid waste	**Consistent:** According the Sunnyvale CAP, schools are already part of solid waste diversion programs to reduce food waste going to landfills and associated GHG emissions. The Proposed Master Plan would not interfere with such efforts.

4.2: Ensure resilience of water supply	**Consistent:** The Proposed Master Plan includes a net-zero strategy. Furthermore, the Proposed Master Plan would incorporate water efficient fixtures as part of its compliance with CALGreen Standards and School Board policies.
4.3: Enhance natural carbon sequestration capacity	**Not Applicable:** This action directs the City to implement its Urban Forest Management Plan and the City's Green Stormwater Infrastructure Plan.
4.4: Promote awareness of sustainable goods and services	**Consistent:** The Proposed Master Plan would include improvements to the 13.6-acre District Farm, which supports the District's nutrition program. The Proposed Master Plan would include support facilities to improve operations, as well as events and activities for all ages.
Strategy 5: Empowering Our Community	
5.1: Enhance community awareness and engagement	**Not Applicable:** This strategy calls on the City to create programs and take actions to enhance community awareness and engagement on topics such as climate action. While not directly applicable, the Proposed Master Plan would not interfere with such efforts by the City. Furthermore, the Proposed Master Plan includes improvements to community resources and Environmental Education Center to also promote community engagement.
5.2 Track and share data and tools	**Not Applicable:** This action directs the City to take measures such as developing a community dashboard to track project progress, improve transparency, and make climate data available to the public. The Proposed Master Plan would not interfere with such City efforts.
Strategy 6: Adapting to a Changing Climate	
6.1: Assess climate vulnerabilities for Sunnyvale	**Not Applicable:** This strategy calls on the City to take actions such as participating in regional forums on climate vulnerability and adaptation. The Proposed Master Plan would not interfere with such City efforts.
6.2: Protect shoreline areas from sea level rise and coastal flooding	**Not Applicable:** This action calls on the City to take steps to advance shoreline protection projects in collaboration with the US Army Corps of Engineers or other partners. The Proposed Master Plan would not interfere with such City efforts.
6.3 Strengthen community resiliency	**Not Applicable:** This action directs the City to update emergency preparedness plans and develop a community resiliency plan. The Proposed Master Plan would not interfere with such efforts.

Source:
City of Sunnyvale. 2019. Sunnyvale's Climate Action Playbook. Available online at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/1066/637819912874900000. Accessed August 18, 2022.

As shown in **Table 3.8-5**, the Proposed Master Plan would be consistent with the applicable strategies and actions set forth in the Sunnyvale CAP. As such, the Proposed Master Plan would comply with BAAQMD threshold "**B**" which states that projects must be consistent with a local GHG reduction strategy. Therefore, impacts would be ***less than significant***.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

3.8.6 CUMULATIVE IMPACTS

The central requirement of the CEQA environmental analysis is to determine whether implementing a project will result in any significant adverse impact on the environment, either individually or cumulatively. In the cumulative context, the analysis has two parts. To evaluate cumulative impacts, the agency must assess (1) whether the overall cumulative impact will be significant and, (2) if the overall impact is significant, whether the incremental contribution that the individual project under review will add to the overall cumulative problem will be cumulatively considerable.

For land use development projects, the BAAQMD recommends using the approach endorsed by the California Supreme Court in the *Center for Biological Diversity* decision, discussed above, which focuses on determining whether the project would be doing its "fair share" to implement California's ambitious long term climate goals. This approach evaluates whether a project's GHG emissions are cumulatively considerable based on "their effect on the state's efforts to meet [those] goals...." (*Center for Biological Diversity v. Department of Fish & Wildlife* [2015] 62 Cal.4th 221.)

The GHG analysis presented herein is consistent with *State CEQA Guidelines* Section 15064.4(b) and considers whether the incremental contributions of the Proposed Master Plan could be cumulatively considerable. As analyzed under **Impact GHG-1** and **GHG-2,** no significant GHG impacts are expected to result from implementation of the Proposed Master Plan, and cumulative impacts from the Proposed Master Plan related to GHG emissions would be less than significant and would not be cumulatively considerable.

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3.9 HAZARDS AND HAZARDOUS MATERIALS

INTRODUCTION

This section presents an overview of the existing conditions regarding the presence of hazards and/or hazardous materials and analyzes within the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan area (Proposed Master Plan and Plan Area). It also discusses potential impacts associated with construction and implementation of the Proposed Master Plan.

Note also that no physical changes to the existing Laurelwood Elementary School site are included in the Proposed Master Plan.

3.9.1 ENVIRONMENTAL SETTING

3.9.1.1 Hazardous Materials

Section 25501(m) of the California Health and Safety Code defines a "hazardous material" as:

> *A material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous Materials" include, but are not limited to, hazardous substances, hazardous wastes, and any materials which a handler or the unified program agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or environment.*

"Hazardous waste" is any hazardous material that is abandoned, discarded, or recycled, as defined by Sections 25117 and 25124 of the California Health and Safety Code. In addition, hazardous waste may occasionally be generated by actions that change the composition of previously nonhazardous materials. The criteria used to characterize a material as hazardous include ignitability, toxicity, corrosivity, reactivity, radioactivity, or bioactivity.

As will be discussed in more detail below, hazardous materials and wastes are defined and regulated in the United States by federal, state, and local regulations, including those administered by the U.S. Environmental Protection Agency (U.S. EPA), the California Environmental Protection Agency (CalEPA), the U.S. Occupational Safety and Health Administration, the U.S. Department of Transportation, the U.S. Nuclear Regulatory Commission, and various other agencies. Hazardous materials include hazardous wastes and, in the discussion, below (except as noted) hazardous materials refers to both hazardous materials and wastes.

Public health is potentially at risk whenever hazardous materials are, or would be, used and when hazardous wastes are disposed of, including transportation of hazardous materials and wastes. It is necessary to differentiate between the "hazard" of these materials and the acceptability of the "risk" they pose to human health and the environment. A hazard is any situation that has the potential to cause damage to human health and the environment. The California Department of Toxic Substances Control (DTSC) determines the risk to health and public safety by the probability of exposure, in addition to the inherent toxicity of a material. Factors that can influence the health effects when human beings are exposed to hazardous materials or wastes include: the dose the person is exposed to, the frequency of exposure, the duration of exposure, the exposure pathway (route by which a chemical enters a person's body), and the individual's unique biological susceptibility.

3.9.1.2 Existing Conditions

The Plan Area is located in northwest Santa Clara County, approximately 4.75 miles south of the San Francisco Bay and approximately one-half mile north of Apple Park. The Plan Area includes the Patrick Henry Intermediate School campus, located at 1095 Dunford Way, the Santa Clara Unified School District Farm ("District Farm") located at 1055 Dunford Way, and portions of the Peterson Middle School at 1380 Rosalia Avenue, encapsulating 71.5 acres all within the City of Sunnyvale. Additionally, the Plan Area includes the existing 10.4-acre Laurelwood Elementary School, located at 955 Teal Drive in the City of Santa Clara. In total, the Plan Area encapsulates 81.9 acres in the cities of Sunnyvale and Santa Clara.

Sub-Area Subject to (ASTM) Standard E1527-21 Hazardous Materials Due Diligence

In the spring of 2022 Arcadis U.S., Inc. (Arcadis) was retained by the District to conduct a Phase I Environmental Site Assessment (Phase 1 ESA; see **Appendix 3.9-1**) for a portion of the Santa Clara County Assessor Parcel Number (APN) 31310004, excluding the Peterson Middle School structures (subject property). The subject property includes a portion of the Peterson Middle School (specifically, a current parking lot), the Patrick Henry School Campus (including recreational fields), and the District Farm.

The delineation of the Plan Area corresponds to areas where a potential exists for the release of and/or exposure to hazardous materials. Therefore, the existing Laurelwood School and structures on the Peterson campus are not included in this investigation. Based on the results of the ESA, Arcadis prepared a Preliminary Environmental Assessment (PEA) work plan ("the PEA work plan," see **Appendix 3.9-2**). The PEA work plan presents a background due diligence assessment of the subject property and a scope of work to evaluate potential areas of concern (PAOC) found during the background due diligence.

The subject property is comprised of an approximately 54-acre area that is improved with permanent buildings within the Patrick Henry Intermediate School Campus. Structures in the remaining portions of the subject property include small sheds, Conex boxes, and temporary portable classrooms and trailer buildings.

3.9.2 REGULATORY FRAMEWORK

3.9.2.1 Federal Regulations

The U.S. EPA is the main federal agency responsible for enforcing regulations relating to hazardous materials and wastes, including evaluation and remediation of contamination and hazardous wastes. The U.S. EPA works collaboratively with other agencies to enforce materials handling and storage regulations and site cleanup requirements. The Occupational Safety and Health Administration (OSHA) and the Department of Transportation (DOT) are authorized to regulate safe transport of hazardous materials.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) is the public law that creates the framework for the proper management of hazardous and non-hazardous solid waste. The law describes the waste management program mandated by Congress that gave the U.S. EPA authority to develop the RCRA program. The term RCRA is often used interchangeably to refer to the law, regulations, and the U.S. EPA policy and guidance.

U.S. Department of Transportation, Hazardous Materials Transport Act (49 USC 5101)

The U.S. Department of Transportation, in conjunction with the U.S. EPA, is responsible for enforcement and implementation of federal laws and regulations pertaining to transportation of hazardous materials. The Hazardous Materials Transportation Act of 1974 directs the U.S. Department of Transportation to establish criteria and regulations regarding the safe storage and transportation of hazardous materials. Code of Federal Regulations (CFR) 49, 171–180, regulates the transportation of hazardous materials, types of material defined as hazardous, and the marking of vehicles transporting hazardous materials.

Toxic Substances Control Act

Congress enacted the Toxic Substances Control Act (TSCA) of 1976 to give U.S. EPA the ability to track the approximately 75,000 industrial chemicals currently produced or imported into the United States. The U.S. EPA repeatedly screens these chemicals and can require reporting or testing of those that may pose

an environmental or human-health hazard. The U.S. EPA can ban the manufacture and import of those chemicals that pose an unreasonable risk.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) provides a Federal "Superfund" to clean up uncontrolled or abandoned hazardous-waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. Through CERCLA, the U.S. EPA was given power to seek out those parties responsible for any release and assure their cooperation in the cleanup.

Emergency and Community Right to Know Act

The Emergency and Community Right to Know Act (EPCRA) was enacted by Congress as the national legislation on community safety. This law was designated to help local communities protect public health, safety, and the environment from chemical hazards. EPCRA was passed in response to concerns regarding the environmental and safety hazards posed by the storage and handling of toxic chemicals. EPCRA establishes requirements for federal, state, and local governments, tribes and industry regarding emergency planning and "Community Right-to-Know" reporting on hazardous and toxic chemicals. The Community Right-to-Know provisions help increase the public's knowledge and access to information on chemicals at individual facilities, their uses, and releases into the environment. States and communities, working with facilities, can use the information to improve chemical safety and protect public health and the environment. To implement EPCRA, Congress required each state to appoint a State Emergency Response Commission (SERC). The SERCs were required to divide their states into Emergency Planning Districts and to name a Local Emergency Planning Committee for each district.

3.7.2.2 State Regulations

Department of Toxic Substances Control

The State Department of Toxic Substances Control (DTSC) is authorized by CalEPA to administer the hazardous waste laws and oversee remediation of hazardous wastes sites. Regulations require that DTSC "shall compile and update as appropriate, but at least annually, and shall submit to the Secretary for Environmental Protection, a list of all the following: (1) [a]ll hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code (HSC)."[1]

1 California Government Code, Title 22, Section 65962.5.

The hazardous waste facilities identified in HSC Section 25187.5 are those where DTSC has taken or contracted for corrective action because a facility owner/operator has failed to comply with a date for taking corrective action in an order issued under the HSC, or because DTSC determined that immediate corrective action was necessary to abate an imminent or substantial endangerment.[2]

DTSC's Brownfields Restoration and School Evaluation Branch is responsible for assessing, investigating, and cleaning up proposed school sites. The Branch ensures that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who will occupy the new school. All proposed school sites that will receive State funding for acquisition or construction are required to go through a rigorous environmental review and cleanup process under DTSC's oversight.

School districts conduct environmental assessments to provide basic information for determining if there has been a release of hazardous material at the sites, or if a naturally occurring hazardous material that presents a risk to human health, or the environment may be present. Outreach activities integrated into the process allow a more active role for stakeholders in the selection process for school sites. Through the environmental review process, DTSC ensures protection of children, staff and the environment from the potential effects of exposure to hazardous materials. As the only comprehensive school environmental evaluation program in the United States, the DTSC Brownfields Restoration and School Evaluation Branch continues to set the national standard.

Hazardous Waste Control Law of 1972

The Hazardous Waste Control Act (Health and Safety Code Sections 25100 et seq.) created the state hazardous waste management program, which is like but more stringent than the federal RCRA program. The Act is implemented by regulations contained in Title 26 of the California Code of Regulations (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; and 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 DTSC.

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2 California Health and Safety Code, Section 25187.5.

Hazardous Materials Release Response Plans and Inventory Law of 1985

The Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act; HSC Division 20 Chapter 6.95 [25500–25547.8]) governs hazardous materials handling, reporting requirements, and local agency surveillance programs.

Lempert-Keene-Seastrand Oil Spill Prevention and Response Act

The Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990 granted the Office of Spill Prevention and Response (OSPR) the authority to direct prevention, removal, abatement, response, containment, and cleanup efforts with regard to all aspects of any oil spill in marine waters of California. OSPR implements the California Oil Spill Contingency Plan, consistent with the National Contingency Plan, which pays special attention to marine oil spills and impacts to environmentally- and ecologically sensitive areas. In 2014, the OSPR program was expanded to cover all statewide surface waters at risk of oil spills from any source, including pipelines and the increasing shipments of oil transported by railroads.

California Geologic Energy Management Division (CalGEM)

In compliance with Section 3229, Division 3 of the California Public Resources Code, before commencing any work to abandon any well, the owner or operator shall request approval from the California Geologic Energy Management Division (CalGEM), formerly the Division of Oil, Gas, and Geothermal Resources (DOGGR), via a written notice of intention to abandon the well.

California Disaster Assistance Act

The California Disaster Assistance Act (CDAA; CCR Title 19, Chapter 6) authorizes the Director of the California Governor's Office of Emergency Services (Cal OES) to administer a disaster assistance program that provides financial assistance from the state for costs incurred by local governments as a result of a disaster event. Funding for the repair, restoration, or replacement of public real property damaged or destroyed by a disaster is made available when the Director concurs with a local emergency proclamation requesting state disaster assistance.[3]

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3 California Office of Emergency Services. 2019. *California Disaster Assistance Act (CDAA)*. Available online at: https://www.caloes.ca.gov/cal-oes-divisions/recovery/public-assistance/california-disaster-assistance-act, accessed August 16, 2022.

Hazardous Substances Account Act (State Superfund) (HSC Sections 25300–25301)

Chapter 6.8 of the California Health and Safety Code requires the DTSC to include "the largest manageable number" of potentially responsible parties (PRPs) in any cleanup order that applies to a multiple PRP site after considering certain factors, including the adequacy of the evidence of each PRP's liability, the financial viability of each PRP, and the degree to which each PRP contributed to the release of hazardous substances at the site.[4]

Hazardous Materials Release Cleanup (Assembly Bill 440 Chapter 588)

Assembly Bill (AB) 440 Chapter 588, passed into law in 2013, authorizes a local agency to take clean up action similar to that under the Polanco Redevelopment Act that the local agency determines is necessary, consistent with other state and federal laws, to remedy or remove a release of hazardous substances within the boundaries of the local agency. AB 440 allows the local agency to designate another agency, in lieu of the department or the regional board, to review and approve a cleanup plan and to oversee the cleanup of hazardous material from a hazardous material release site, under certain conditions. It also provides immunity to the local agency as long as the action is in accordance with a cleanup plan prepared by a qualified independent contractor, and approved by the department, a regional board, or the designated agency, and the cleanup is undertaken and properly completed. Finally, AB 440 authorizes the local agency to recover cleanup costs from the responsible party.[5]

Asbestos Regulations

In 1990, ARB issued an Airborne Toxic Control Measure (ATCM), which prohibited the use of serpentine aggregate for surfacing if the asbestos content was 5 percent or more.[6] In July 2000, ARB adopted amendments to the existing ATCM prohibiting the use or application of serpentine, serpentine-bearing materials and asbestos-containing ultramafic rock for covering unpaved surfaces unless it has been tested using an approved asbestos bulk test method and determined to have an asbestos content that is less than 0.25 percent.[7] In July 2001, ARB adopted a new ATCM for construction, grading, quarrying, and surface mining operations in areas with serpentine or ultramafic rocks.[8] These regulations are codified in Title 17,

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4 California Legislative Information. 1999. *ARTICLE 1. Short Title and Legislative Intent [25300-25301].*

5 California Legislative Information. 2013. *Assembly Bill No. 440.*

6 California Air Resources Board. 2019. *Asbestos ATCM for Surfacing Applications.* Available online at: https://ww3.arb.ca.gov/toxics/atcm/asbeatcm.htm, accessed August 16, 2022.

7 California Air Resources Board. 2001. *Amendments to the Asbestos Regulation for Surfacing Applications.* Available online at: https://ww3.arb.ca.gov/toxics/asbestos/atcm/regadv1101.pdf, accessed August 16, 2022.

8 California Air Resources Board. 2001. *Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations*. Available online at: https://ww3.arb.ca.gov/toxics/asbestos/atcm/regadv0702.pdf.

Section 93105 of the CCR. The regulations require preparation and implementation of an Asbestos Dust Mitigation Plan for construction or grading activities on sites greater than 1 acre in size with known Naturally Occurring Asbestos (NOA) soils. The air districts enforce this regulation.[9]

In October 2000, the Governor's Office of Planning and Research (OPR) issued a memorandum providing guidance to lead agencies in analyzing the impacts of NOA on the environment through the California Environmental Quality Act (CEQA) review process.[10] In November 2000, the California Department of Real Estate added a section to subdivision forms that includes questions related to NOA on property proposed for development.[11] In 2004, as part of its school-site review program, the DTSC's School Property Evaluation and Cleanup Division released interim guidance on evaluating NOA at school sites.[12]

In addition, HSC Section 19827.5 prohibits the issuance of demolition permits by local and State agencies for any building or structure that has not submitted all required asbestos notifications to the U.S. EPA, pursuant to Part 61 of Title 40 of the Code of Federal Regulations.[13]

California Occupational Safety and Health Administration (Cal/OSHA) Regulations. Cal/OSHA sets forth regulations for the disturbance of Asbestos Containing Construction Materials (ACCMs) including removal operations for all types of ACCMs. Cal/OSHA requires contractors and employers that remove ACCMs to be registered and consultants and technicians who conduct sampling and/or removal to be certified. In addition, the agency has developed standards for general industry and the construction industry hazardous waste operations and emergency response. Cal/OSHA ensures that employers must have controls to reduce and monitor exposure levels of hazardous materials, an informational program describing any exposure during operations and the inspection of drums and containers prior to removal

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9 California Code of Regulations. *Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations.* Available online at: http://www.baaqmd.gov/~/media/Files/Compliance%20and%20Enforcement/Asbestos/final_reg_order.ashx, accessed August 16, 2022.

10 Governor's Office of Planning and Research. 2000. *Addressing Naturally Occurring Asbestos in CEQA Documents*. Available online at: http://www.co.mendocino.ca.us/aqmd/pdf_files/NOA_OPR.pdf, accessed August 16, 2022.

11 California Department of Real Estate. *Subdivision Forms*. Available online at: http://www.bre.ca.gov/Forms/Subdivisions.html, accessed August 16, 2022.

12 Department of Toxic Substances Control. 2004. *Interim Guidance Naturally Occurring Asbestos (NOA) at School Sites*. Available online at: https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/SMBRP_POL_Guidance_Schools_NOA.pdf, accessed August 16, 2022.

13 California Legislative Information. 1979. *ARTICLE 1. Contents [19825-19829].*

or opening. Decontamination procedures and emergency response plans must be in place before employees begin working in hazardous waste operations.[14]

California Code of Regulations (CCR) Title 8 Section 1529. This section of the CCR regulates asbestos exposure for work identified in Section 1502, including demolition or salvage of structures where asbestos is present; removal or encapsulation of materials containing asbestos; construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof, that contain asbestos, installation of products containing asbestos; asbestos spill/emergency cleanup; transportation, disposal, storage, containment of and housekeeping activities involving asbestos or products containing asbestos, on the site or location at which construction activities are performed; and excavation that may involve exposure to asbestos as a natural constituent which is not related to asbestos mining and milling activities.[15]

Lead Regulations

Because of its toxic properties, lead is regulated as a hazardous material. Lead is also regulated as a toxic air contaminant. State-certified contractors must perform inspection, testing, and removal (abatement) of lead-containing building materials in compliance with applicable health and safety and hazardous materials regulations, including those outlined in Title 17 of the CCR.

CCR Title 8 Section 1532.1. This section of the CCR applies to all construction work where employees could be occupationally exposed to lead, including demolition or salvage of structures where lead or materials containing lead are present; removal or encapsulation of materials containing lead; new construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain lead or materials containing lead; installation of products containing lead; lead contamination/emergency clean-up; transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed; and maintenance operations associated with construction activities. This section sets a maximum exposure limit; requires an assessment to determine whether employees may be exposed to lead; requires employees to create a compliance program to ensure that employee exposure to lead are at or below the permissible exposure limit to the extent

14 California Department of Industrial Relations. 2019. *Cal/OSHA*. Available online at: https://www.dir.ca.gov/DOSH/, accessed August 16, 2022.

15 California Code of Regulations. §1529. Asbestos. Available online at: https://www.dir.ca.gov/title8/1529.html, accessed August 16, 2022.

feasible; and requires that employees with exposure to lead are provided with respiratory protection, protective work clothing and equipment.[16]

Other state laws that address lead include:

- Hazardous Waste Control Law
- Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)
- Carpenter-Presley-Tanner Hazardous Substances Account Act
- Hazardous Waste Management Planning and Facility Siting (Tanner Act)
- Hazardous Materials Release Response Plan and Inventory Law of 1985 (Business Plan Act)

California Accidental Release Prevention Program

The California Accidental Release Prevention Program (CalARP; CCR Title 19, Division 2, Chapter 4.5) was implemented on January 1, 1997, and replaced the California Risk Management and Prevention Program (RMPP). The CalARP program encompasses both the federal "Risk Management Program," established in the Code of Federal Regulations, Title 40, Part 68, and the State of California program, in accordance with the Title 19 of the California Code of Regulations, Division 2, Chapter 4.5.

The main objective of the CalARP program is to prevent accidental releases of those substances determined to potentially pose the greatest risk of immediate harm to the public and the environment, and to minimize the consequences if releases do occur. These substances are called regulated substances and include both flammable and toxic hazardous materials listed on the Federal Regulated Substances for Accidental Release Prevention and on the State of California Regulated Substances lists. Businesses that handle regulated substances in industrial processes above threshold quantity levels are subject to CalARP program requirements.

The CalARP program requires businesses to have planning activities that are intended to minimize the possibility of an accidental release by encouraging engineering and administrative controls. It is further intended to mitigate the consequences of an accidental release, by requiring owners or operators of facilities to develop and implement an accident prevention program.

16 California Code of Regulations. §1532.1. Lead. Available online at: https://www.dir.ca.gov/title8/1532_1.html, accessed August 16, 2022.

California Human Health Screening Levels

The California Human Health Screening Levels (CHHSLs) were developed as a tool to assist in the evaluation of contaminated sites for potential adverse threats to human health. Preparation of the CHHSLS was required by the California Land Environmental Restoration and Reuse Act of 2001. The CHHSLs were developed by the Office of Environmental Health Hazard Assessment, an agency under the umbrella of CalEPA, and are contained in its report entitled *Human-Exposure- Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soil1*. The thresholds of concern used to develop the CHHSLs are an excess lifetime cancer risk of one in 1 million and a hazard quotient of 1.0 for non-cancer health effects. The CHHSLs were developed using standard exposure assumptions and chemical toxicity values published by the U.S. EPA and CalEPA. The CHHSLs can be used to screen sites for potential human health concerns where releases of hazardous chemicals to soils have occurred. Under most circumstances, the presence of a chemical in soil, soil gas, or indoor air at concentrations below the corresponding CHHSLs can be assumed to not pose a significant health risk to people who may live (residential CHHSLs) or work (commercial/ industrial CHHSLs) at the site.

California Fire Code

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

2017 State of California Emergency Plan

The 2017 State of California Emergency Plan, also referred to as the State Emergency Plan (SEP), addresses the state's response to extraordinary emergency situations associated with natural disasters or human-caused emergencies. The California Emergency Services Act provides the basic authorities for conducting emergency operations following the proclamation of emergencies by appropriate local officials and/or the Governor. The provisions of this act are further reflected and expanded upon by local emergency ordinances. In accordance with this act, the SEP describes the methods for carrying out emergency operations, the process for rendering mutual aid, the emergency services of governmental agencies, how resources are mobilized, how the public will be informed and the process to ensure

continuity of government during an emergency or disaster. The SEP emphasizes mitigation programs to reduce the vulnerabilities to disaster and preparedness activities to ensure the capabilities and resources are available for an effective response. To assist communities and governments to recover from the disaster, the SEP outlines programs that establish a consistent, statewide framework to enable state, local, tribal governments, federal government and the private sector to work together to mitigate, prepare for, respond to and recover from the effects of emergencies regardless of cause, size, location, or complexity.

2018 State Hazard Mitigation Plan

Approved by the Federal Emergency Management Agency in September 2018, as an Enhanced State Mitigation Plan, the 2018 State Hazard Mitigation Plan (SHMP) update continues to build upon California's commitment to reduce or eliminate the impacts of disasters caused by natural, technological, accidental, and adversarial/human-caused hazards, and further identifies and documents progress made in hazard mitigation efforts, new or revised state and federal statutes and regulations, and emerging hazard conditions and risks that affect the State of California. Resilience depends on the whole community and is a shared responsibility for all levels of government, private and nonprofit sectors, and individuals.

3.7.2.3 Local Regulations

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) works with the California Air Resources Board (CARB) and is responsible for developing and implementing rules and regulations regarding air toxics on a local level. The BAAQMD establishes permitting requirements, inspects emission sources, and enforces measures through educational programs and/or fines. The BAAQMD and regulations related to air quality are discussed in detail in **Section 3.3, Air Quality**.

Santa Clara County Integrated Waste Management Plan

The Santa Clara County Integrated Waste Management Plan adopted in 1996, contains policies and objectives as well as recommendations for hazardous waste minimizations, recycling and reclaiming, treatment, and disposal. The plan identifies future hazardous waste treatment and disposal needs and establishes County wide policy for waste treatment, transportation, and disposal. The plan also outlines criteria for choosing appropriate treatment and disposal sites.

3.9.3 THRESHOLDS OF SIGNIFICANCE

The following thresholds (HAZ 1 through HAZ-8) for determining the significance of impacts related to hazards and hazardous materials are contained in the environmental checklist form contained in Appendix G of the most recent update of the *State CEQA Guidelines*. Thresholds HAZ-9 through Haz-19 are derived from Title 5 of the California Code of Regulation Section 14010 incorporates health and safety factors provided in the California Department of Education's (CDE) School Site Selection and Approval Guide. In combination with the thresholds provided in the *State CEQA Guidelines*, these thresholds ensure that schools provide a safe learning environment for students.

Adoption and/or implementation of the Proposed Master Plan could result in significant impacts due to the use and/or transportation of hazards and hazardous materials, if any of the following would occur:

HAZ-1 **Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials;**

HAZ-2 **Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;**

HAZ-3 **Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;**

HAZ-4 **Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;**

HAZ-5 **For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;**

HAZ-6 **For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;**

HAZ-7 **Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;**

HAZ-8 **Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands;**

HAZ-9 **Be located on a site that is (a) a current or former hazardous waste disposal site or solid waste disposal site and, if so, has the waste been removed; (b) a hazardous substance release site identified by the State Department of Health Services in a current list adopted pursuant to Section 25356 of Division 20 of the Health and Safety Code; or (c) a site that contains one or more pipelines, situated underground or above ground, which carries materials or hazardous wastes, unless the pipeline is a natural gas line which is used only to supply natural gas to that school or neighborhood;**

HAZ-10 **Be located on a site where the property line is less than the following distance from the edge of respective power line easement:**

- **100 feet of a 50-133 kV line**
- **150 feet of a 220-230 kV line, or**
- **350 feet of a 500-550 kV line;**

HAZ–11 **Be located on a site that is within 1,500 feet of a railroad track easement;**

HAZ–12 **Be located on a site that is adjacent or near to a major arterial roadway or freeway that may pose a safety hazard;**

HAZ–13 **Be located on a site that is near a reservoir, water storage tanks or high-pressure water lines;**

HAZ–14 **Be located within 1,500 feet of a pipeline that may pose a safety hazard;**

HAZ–15 **Be located on a site that does not have a proportionate length to width ratio to accommodate the building layout, parking and play fields that can be safely supervised;**

HAZ–16 **Be located on a site where the existing or proposed zoning of the surrounding properties is incompatible with schools and may pose a health or safety risk to students;**

HAZ–17 **Be located on a site that contains, or is near, propane tanks that can pose a safety hazard;**

HAZ–18 **Be located on a site with traffic pattern for school buses that can pose a safety hazard; or**

HAZ–19 **Be located on a site that is within 2,000 feet of a significant disposal of hazardous waste.**

3.9.4 METHODOLOGY

The analysis in this section includes a focus on the use, disposal, transport, and management of hazardous or potentially hazardous materials resulting from potential development or redevelopment resulting from the implementation of the Proposed Master Plan. Disposal options, the probability for risk of upset, and the severity of consequences to people or property associated with the increased use, handling, transport, and/or disposal of hazardous materials associated with the implementation of the Proposed Master Plan is also analyzed. This section addresses potential short-term construction impacts resulting from demolition of existing (usually older) structures, as well as from disturbance of contaminated soils, and impacts related to the operation of development in the Plan Area. Operational impacts would generally be associated with the type of uses proposed and the materials that operation of these uses would entail. In determining the level of significance, the analysis assumes that any development under the Master Plan would comply with relevant federal and state laws and regulations.

In 2015, the California Supreme Court in *CBIA v. BAAQMD*, held that CEQA generally does not require a lead agency to consider the impacts of the existing environment on the future residents or users of a project. However, if a project exacerbates a condition in the existing environment, the lead agency is required to analyze the impact of that exacerbated condition on future residents and users of a project, as well as other impacted individuals.

3.9.5 ENVIRONMENTAL IMPACTS

The Plan Area is an operating school site and will continue as such with implementation of the Proposed Master Plan. Therefore, based on the fact that the use of the site will not change and in compliment to the findings documented in the ESA (**Appendix 3.9-1**) prepared for subject site, it may be determined that the Proposed Master Plan would create no change (i.e., would create no impact) related to the following thresholds:

HAZ-4 **Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;**

HAZ-5 **For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;**

HAZ-6 **For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;**

HAZ-7 **Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;**

HAZ-8 **Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands;**

HAZ-9 **Be located on a site that is (a) a current or former hazardous waste disposal site or solid waste disposal site and, if so, has the waste been removed; (b) a hazardous substance release site identified by the State Department of Health Services in a current list adopted pursuant to Section 25356 of Division 20 of the Health and Safety Code; or (c) a site that contains one or more pipelines, situated underground or above ground, which carries materials or hazardous wastes, unless the pipeline is a natural gas line which is used only to supply natural gas to that school or neighborhood;**

HAZ-10 **Be located on a site where the property line is less than the following distance from the edge of respective power line easement:**

- **100 feet of a 50-133 kV line**
- **150 feet of a 220-230 kV line, or**
- **350 feet of a 500-550 kV line;**

HAZ–11 **Be located on a site that is within 1,500 feet of a railroad track easement;**

HAZ–12 **Be located on a site that is adjacent or near to a major arterial roadway or freeway that may pose a safety hazard;**

HAZ–13 **Be located on a site that is near a reservoir, water storage tanks or high-pressure water lines;**

HAZ–14 **Be located within 1,500 feet of a pipeline that may pose a safety hazard;**

HAZ–15 **Be located on a site that does not have a proportionate length to width ratio to accommodate the building layout, parking and play fields that can be safely supervised;**

HAZ–16 **Be located on a site where the existing or proposed zoning of the surrounding properties is incompatible with schools and may pose a health or safety risk to students;**

HAZ–17 **Be located on a site that contains, or is near, propane tanks that can pose a safety hazard;**

HAZ–18 **Be located on a site with traffic pattern for school buses that can pose a safety hazard; or**

HAZ–19 **Be located on a site that is within 2,000 feet of a significant disposal of hazardous waste**

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No Impact.

Impact HAZ-1 **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.**

Operational Activities

The Proposed Master Plan includes the construction and operation of two new school campuses and improvements to other on-site school facilities. Operation of these school facilities would not involve the routine transport, storage, production, use, or disposal of hazardous materials or use of pressurized tanks during operation. Small amounts of pesticides and fertilizer may be stored for the maintenance of landscaped areas, Nature Center and Farm and limited quantities of custodial and maintenance products, including commercial cleansers, lubricants, and paints would also be stored on-site.

The design and operation of the Proposed Master Plan would satisfy all legal requirements by providing and/or maintaining appropriate storage areas for hazardous materials, installing or affixing appropriate warning signs and labels, using commercial services that specialize in the recycling of used hazardous substances (i.e., collecting hazardous materials on a regular basis to minimize the quantity stored on campus), installing emergency wash areas for flushing irritating substances from eyes and exposed skin areas should such contact occur, providing well-ventilated areas in which to use paints and solvents, and maintaining adult supervision during student's use of hazardous materials. All hazardous materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations. Any associated risk would be adequately reduced to a less than significant level through compliance with these standards and regulations and would not pose significant hazards to the public or the environment.

Construction Activities

As described in the ESA (**Appendix 3.9-1)** the historic agricultural use and current farm, as well as the age of the onsite facilities, suggest that construction activities may encounter pesticides, PCBs, asbestos-containing materials, termiticides and lead based paints. These hazardous materials will be abated in accordance with DTSC, BAAQMD, Cal/OSHA, and California Health and Safety Code requirements prior to demolition or renovation activities commence.

More specifically, any pesticides, asbestos, termiticides, lead, PCBs, or other hazardous materials that may be encountered during demolition or construction activities would be transported and disposed of in compliance with all applicable regulations for the handling of such waste, including DTSC, BAAQMD rules and the California Code of Regulations. Additionally, appropriate documentation for hazardous waste that is transported in connection with activities at development sites (such as disposal of asbestos or building materials containing lead-based paint or PCBs) would be required by the District prior to

issuance of any demolition or construction permits (as required by federal, state, and city regulations) to ensure compliance with the existing hazardous materials regulations described above.

The PEA work plan (**Appendix 3.9-2)** that has been developed for the project, which requires approval by the DTSC, will further identify and delineate any on-site hazardous conditions. Any identified hazardous conditions will be removed or remediated under the oversite of the DTSC and will return the Plan Area to a condition appropriate for use of the site for school operations.

These requirements were developed to protect human health and the environment and compliance with these existing regulations would reduce impacts related to demolition, transport, and disposal of hazardous materials to a less than significant level.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact HAZ-2 **Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.**

Operational Activities

The Proposed Master Plan would not create a hazard through upset or accident conditions involving hazardous materials. As discussed in threshold **HAZ-1** above, the use of hazardous materials and substances at school facilities during operations would be minimal and in small quantities. Additionally, all materials and substances would be subject to applicable health and safety requirements stipulated by the District's policies and procedures for the handling, use and storage of hazardous materials. This would include affixing appropriate warning signs and labels, installing emergency wash areas, providing well-ventilated areas and special plumbing, and maintaining adult supervision.

Compliance with existing regulations would result in no reasonably foreseeable upset or accident conditions that would create a significant hazard to the public due to the release of hazardous materials. Therefore, impacts from the operation activities included in the Proposed Master Plan would be less than significant.

Construction Activities

As discussed above, construction activities related to the Proposed Master Plan may include various removal and remedial activities associated with the discovery of pesticides, PCBs, asbestos-containing materials, termiticides, lead based paints and other hazardous materials. Although the proposed remedial activities could potentially create a significant hazard to the public or the environment through the release of hazardous materials into the environment, as noted in the discussion of the and threshold **HAZ-1** above, compliance with federal, state and local laws and regulations relating to the transport, storage, disposal and sale of hazardous materials would minimize any potential for accidental release or upset of hazardous materials to a less than significant level.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact HAZ-3 **Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.**

The Plan Area is and will continue to operate as a school site. Acutely hazardous materials will not be used or stored on site.

Operational Activities

The Proposed Master Plan would not create hazardous emissions. As discussed in threshold **HAZ-1** above, the use of hazardous materials and substances at school facilities during operations would be

minimal and in small quantities. Additionally, all materials and substances would be subject to applicable health and safety requirements stipulated by the District's policies and procedures for the handling, use and storage of hazardous materials. This would include affixing appropriate warning signs and labels, installing emergency wash areas, providing well-ventilated areas and special plumbing, and maintaining adult supervision.

Compliance with existing regulations would result in no reasonably foreseeable upset or accident conditions that would create a hazardous emission on or off site. Therefore, impacts from the operation activities included in the Proposed Master Plan would be less than significant.

Construction Activities

As discussed above, construction activities related to the Proposed Master Plan may include various removal and remedial activities associated with the discovery of pesticides, PCBs, asbestos-containing materials, termiticides, lead based paints and other hazardous materials. Although the proposed remedial activities could potentially create hazardous emissions, as noted in the discussion of the PEA work plan and threshold **HAZ-1** above, compliance with federal, state and local laws and regulations relating to the transport, storage, disposal and sale of hazardous materials would minimize any potential for accidental release or upset of hazardous materials.

Compliance with existing regulations would result in no reasonably foreseeable upset or accident conditions that would create a hazardous emission on or off-site during construction. Therefore, construction impacts associated with implementation of the Proposed Master Plan would be less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

3.9.6 CUMULATIVE ANALYSIS

Construction and operation of the Proposed Master Plan does not involve significant transport, storage, use, or disposal of hazardous materials. Further, the District must either (1) obtain DTSC review and approval of all new school sites and new school as well as existing school construction projects or (2) avoid sites that are contaminated with hazardous wastes, hazardous substances and hazardous pipeline sites. Compliance with DTSC and other Responsible Agency rules and regulations will ensure that impacts from hazardous materials are less than significant and will not contribute to any cumulative hazard or hazardous material impacts, and the issue is not carried forward for discussion.

3.9.7 REFERENCES

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3.10 HYDROLOGY AND WATER QUALITY

INTRODUCTION

This section addresses impacts to water quality and hydrological resources from implementation of the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan"), identifies the regulatory framework with respect to regulations that address hydrology and water quality, and evaluates the significance of potential changes to hydrologic features and water quality.

Note also that no physical changes to the existing Laurelwood Elementary School site are included in the Master Plan. Therefore, the City of Santa Clara's regulations and relevant planning framework is not discussed in detail in this section.

3.10.1 ENVIRONMENTAL SETTING

3.10.1.1 Watershed

Regional Hydrology

The Plan Area is in the cities of Sunnyvale and Santa Clara, which are located approximately five miles south of the southern shoreline of San Francisco Bay. The entire bay is comprised of a group of interconnecting bays and rivers including the Sacramento River, San Joaquin River, and Napa River; Suisun Bay, San Pablo Bay, and the main San Francisco Bay; and the Carquinez Strait. The main part of San Francisco Bay measures between 3 and 12 miles wide from east to west and between 48 and 60 miles long north to south. However, San Francisco Bay has been deliberately filled in since the mid-1800s by as much as a third, making the actual size difficult to accurately measure. The areas that were filled were primarily wetlands, which once consisted of many thousands of acres that formed the edges of the bay.[1]

Watersheds

The Santa Clara Subbasin encompasses the extreme South Bay and those areas of Santa Clara County that drain to the South Bay, including the eastern slope of the Santa Cruz Mountains, the Santa Clara Valley, and the western slope of the Diablo Range. There are 13 watersheds in Santa Clara County.[2] The Plan

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1 Department of Water Resources. 2020. *California's Groundwater Update 2020 (Bulletin 118).* Available at: https://data.cnra.ca.gov/dataset/calgw_update2020, accessed August 9, 2022.

2 County of Santa Clara. Clean Water Program. Waterbodies. Available online: https://cleanwater.sccgov.org/about-us/waterbodies, accessed August 15, 2022.

Area is located within the Sunnyvale East Channel watershed.[3] A series of small, relatively urbanized watersheds drain into the western side of the valley and baylands.

Natural regional drainage courses convey rainfall runoff from the Plan Area to Stevens Creek and from eastern areas to Calabazas Creek. The regional flood control agency is the Santa Clara Valley Water District (SCVWD). The SCVWD provides flood control protection throughout Santa Clara County, including Sunnyvale. To provide flood protection of urbanized areas, the SCVWD constructed three open channels (Sunnyvale West, Sunnyvale East, and El Camino) to increase drainage capacity to San Francisco Bay.

Surface Water

No naturally occurring surface water bodies are located within the Plan Area. Other water bodies in the surrounding area include Calabazas Creek, located approximately 1,700 feet southeast of the Plan Area, and the San Francisco Bay located approximately 5 miles north of the Plan Area.

Groundwater

Santa Clara County includes portions of two groundwater basins as defined by the California Department of Water Resources (DWR)[4]: the Santa Clara Valley Basin and the Gilroy-Hollister Valley Basin. The SCVWD manages two groundwater subbasins: the Santa Clara Subbasin and the Llagas Subbasin. These subbasins cover approximately 325 square miles and are bordered by the Santa Cruz Mountains to the west and the Diablo Range to the east. The aquifers that comprise the subbasins are made up gravel, sand, and silty sand deposits. In the Santa Clara and Llagas subbasins, aquifers extend to depths of over 1,000 feet in places. The Coyote Valley region of the Santa Clara Subbasin is shallow, extending to a maximum depth of approximately 500 feet. Groundwater in the Santa Clara Subbasin generally flows to the northwest toward San Francisco Bay, while groundwater in the Llagas Subbasin generally flows to the southeast toward San Benito County.

The Plan Area is in the Santa Clara Subbasin area. Groundwater beneath the site includes a shallow water bearing unit that has been divided into three main zones: A-zone, B-zone, and C-zone groundwater. The A-zone was found to extend from the top of the groundwater table at approximately 40 feet below ground surface (bgs) to 115 to 125 bgs, B-zone groundwater was found from 130 to 150 feet bgs, and C-

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3 Santa Clara Valley Water District. March 2016. PUB 903.4. *Sunnyvale East and West Channels Flood Protection Project Fact Sheet*.

4 Department of Water Resources. 2020. *California's Groundwater Update 2020 (Bulletin 118).* Available at: https://data.cnra.ca.gov/dataset/calgw_update2020, accessed August 9, 2022.

zone groundwater was found from 180 to 210 feet bgs. The deep-water bearing unit is separated from the C-zone groundwater by a thick aquitard and extends from approximately 300 to 500 feet bgs. Groundwater flow for the shallow water-bearing zones flows to the north and northeast.[5]

3.10.1.2 Floodplain Mapping and Hydraulic Modeling

Flooding

Flood Hazards and Flood Control

The Santa Clara Valley is essentially an active floodplain that has been severely altered by human activity and is subject to periodic flooding from storm events. Flooding has plagued Santa Clara County since the earliest settlement of the valley floor. Approximately 60 out of 300 square miles of the valley is susceptible to flooding. Despite efforts to provide adequate flood control, many of the streams, rivers, and creeks that flow through the area are still incapable of carrying flows from a 100-year storm event, with flooding issues involving the East Channel and Calabazas Creek, which is located east of the Plan Area. Further, the increased amount of impervious area because of urban development has amplified the volume of stormwater runoff, thereby increasing the flooding potential in the valley.

The SCVWD provides flood control protection throughout Santa Clara County, including the planning area. To provide flood protection of urbanized areas, the SCVWD constructed three open channels (Sunnyvale West Channel, Sunnyvale East Channel, and El Camino Channel) to increase drainage capacity to San Francisco Bay. Currently, the SCVWD is updating the flood control abilities to the Sunnyvale East and West channels. A system of levees protects Sunnyvale and Santa Clara at their northern borders from encroachment of San Francisco Bay waters. Stormwater runoff in low-lying areas is pumped out over the levees for discharge into San Francisco Bay by pump stations.[6]

Tsunami and Seiche

Tsunamis are long period water waves caused by underwater seismic events, volcanic eruptions, or undersea landslides. Tsunamis affecting the San Francisco Bay Area would originate west of San Francisco Bay in the Pacific Ocean. Areas that are highly susceptible to tsunami inundation tend to be

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5 ARCADIS. June 20, 2022. *Santa Clara Unified School District Draft Preliminary Environmental Assessment Report Work Plan Patrick Henry School Campus, Santa Clara Unified School District Farm, and Peterson Middle School Campus 1095 & 1055 Dunford Way, 1380 Rosalia Avenue Sunnyvale, California.*

6 SCVWD (Santa Clara Valley Water District). 2010. *Draft Flood Protection and Stream Stewardship Master Plan.*

low-lying coastal areas, such as tidal flats, marshlands, and former bay margins that have been artificially filled.

A tsunami entering the bay through the relatively narrow Golden Gate Bridge would tend to dissipate as the wave energy spreads out as the bay becomes wider and shallower. A tsunami inundation map prepared as part of a statewide multi-agency effort shows that the bay shoreline and areas along sloughs up to approximately one mile inland could be affected in the region during an extreme but realistic tsunami. Mapped potential inundation areas are limited to marshy, undeveloped areas along the bay shore and portions of salt evaporation ponds adjacent to sloughs. None of these areas are near the Plan Area.[7]

Drainage

Natural regional drainage courses convey rainfall runoff from the southwest portion of the Plan Area to Stevens Creek and from eastern areas to Calabazas Creek. The regional flood control agency is the SCVWD. The SCVWD provides flood control protection throughout Santa Clara County, including Sunnyvale. To provide flood protection of urbanized areas, the SCVWD constructed three open channels (Sunnyvale West, Sunnyvale East, and El Camino) to increase drainage capacity to San Francisco Bay.[8]

Local storm drainage facilities in Sunnyvale are owned by the City of Sunnyvale and maintained by the City's Environmental Services Department. The system consists of approximately 4,200 storm drain inlets, two pump stations, and approximately 300 miles of storm drains. The local system discharges into a regional system managed by the SCVWD. In lower elevation areas, pump stations collect runoff from low-lying urban areas and discharge to creeks and sloughs in higher elevations. The local system then conveys storm runoff to San Francisco Bay.

SCVWD facilities in the Plan Area include the East El Camino Storm Drain Channel (East Channel). The East Channel is approximately six miles long and stretches from Interstate 280 to Guadalupe Slough.[9]

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7 CalEMA, CGS, and USC (California Emergency Management Agency, California Geological Survey, and University of Southern California). 2009. Tsunami Inundation Map for Emergency Planning, Mountain View Quadrangle. http://www.conservation.ca.gov/cgs/geologic_hazards/, accessed August 9, 2022.

8 SCVWD (Santa Clara Valley Water District). 2010. *Draft Flood Protection and Stream Stewardship Master Plan.*

9 Santa Clara Valley Water District. March 2016. PUB 903.4. *Sunnyvale East and West Channels Flood Protection Project Fact Sheet.*

Seiche

A seiche is a rhythmic motion of water in a partially or completely landlocked water body caused by landslides, earthquake-induced ground accelerations, or ground offset. Seiches occur most frequently in enclosed or semi-enclosed basins such as lakes, bays, or harbors and may be triggered by strong winds, changes in atmospheric pressure, earthquakes, tsunamis, or tides. Forces that trigger a seiche are most severe if they operate at specific frequencies relative to the size of an enclosed basin.

Coastal measurements of sea level often show seiches with amplitudes of about an inch and periods of a few minutes due to oscillations of the local harbor, estuary, or bay, superimposed on the normal tidal changes. Tidal records for San Francisco Bay have been maintained for over 100 years and during that time, a damaging seiche has not occurred. A seiche of about 4 inches occurred during the 1906 earthquake, with a magnitude 8.3 on the Richter scale. It is probable that an earthquake like the 1906 earthquake would be the largest to occur in the Bay Area; consequently, seiches with an increase in water elevation of more than 4 inches would be considered unlikely. The Plan Area is located approximately five miles inland of the San Francisco Bay, thus, impacts involving seiche because of the San Francisco Bay are considered negligible.

Levee Failure

Dike and levee systems in Santa Clara County have been constructed along San Francisco Bay, not as a barrier to prevent flooding but to protect salt evaporators and concentrators in the southernmost arm of the bay. Dikes are constructed of weak, locally derived bay materials that are constantly undergoing settlement, erosion by elements, and damage caused by burrowing animals.

Without the present systems of dikes and levees, parts of Sunnyvale would normally be subjected to tidal flooding. To allow use of land subject to tidal flooding and subsidence, the levee systems would have to be extended and strengthened to protect low-lying areas. The Plan Area is located approximately five miles inland from the San Francisco Bay. As a result, the Plan Area is not considered at risk from levee failure.

3.10.1.3 Water Quality

Storm Water Quality Regulations

National Pollutant Discharge Elimination Systems Permits. The National Pollutant Discharge Elimination System (NPDES) permit system was established as part of implementation of the Clean Water Act to regulate municipal and industrial discharges to surface waters of the United States. The

Clean Water Act prohibits the discharge of any pollutant into navigable waters from a point source unless the discharge is in compliance with a NPDES Program permit. The purpose of the NPDES program is to manage urban storm water, thus minimizing pollution of the environment to the maximum extent practicable. The NPDES program consists of characterizing receiving water quality, identifying harmful constituents, targeting potential sources of pollutants, and implementing a comprehensive storm water management program.

The NPDES Program requires local agencies and project applicants to obtain permits to discharge storm water into "waters of the State." The regulations provide that discharges of storm water to waters of the United States from construction activities are effectively prohibited unless the discharge is conducted in compliance with an NPDES permit. Construction activities subject to this General Permit include clearing, grading, disturbances to the ground such as stockpiling, and excavation. Disturbance refers to exposed soil resulting from activities such as clearing, grading, and excavating. Construction activities can include road building, construction of buildings, and demolition.

In 1990, the U.S. Environmental Protection Agency (U.S. EPA) promulgated rules establishing Phase I of the NPDES storm water program. Phase I addresses—among other discharges—discharges from large construction activities disturbing 5 acres or more of land. The U.S. EPA finalized the Phase II Storm Water Program in December 1999. The Phase II Storm Water Program generally provides that regulated operators of small "municipally owned storm water systems (MS4s)" located in urban areas, which are defined to include universities, shall implement programs and policies to control polluted storm water runoff through the use of NPDES permits. Phase II also covers small construction activities that result in land disturbance of equal to or greater than 1 acre and less than 5 acres.

Each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the Clean Water Act contain general requirements regarding NPDES permits. Section 402(p) of the Clean Water Act (an amendment to Section 404) established a framework for regulating construction storm water discharges under the NPDES Program. Section 307 describes the factors that the U.S. EPA must consider in setting effluent limits for priority pollutants.

State Water Quality Regulations. In California, the NPDES Program is administered by the nine California Regional Water Quality Control Boards (RWQCBs). Each RWQCB is required to adopt a water quality control plan, or basin plan, as required by Section 303 of the CWA and the Porter-Cologne Water Quality Control Act. The plans establish water quality standards and objectives for California rivers and their tributaries. The Porter-Cologne Water Quality Control Act requires that basin plans recognize and reflect regional differences in existing water quality, the beneficial uses of the region's ground and surface

waters, local water quality conditions and problems, and that they implement a program for achieving water quality objectives (*California Water Code*, Section 13050[j]).

Regional Water Quality Regulations. General Construction Activity Storm Water NPDES permits (General Permit) are issued for storm water discharges by the RWQCB. The Plan Area is within the jurisdiction of the San Francisco Regional Water Quality Control Board (RWQCB).

The San Francisco RWQCB has established numeric sizing criteria for post-construction best management practices (BMPs) for new development within Bay Area and the incorporated cities under Municipal Regional Stormwater NPDES Permit (MRP), adopted by the San Francisco RWQCB on October 14, 2009. The proposed numeric sizing criteria is intended to reduce adverse impacts to Los Angeles regional waters caused by new sources of urban pollution and increased volumes of storm water and non-storm water flows resulting from new development.

Storm Water Non-Point Source Pollutants

The effects of urbanization, agriculture, and ranching can cause increased levels of non-point source pollutants in storm water runoff. This runoff can have a negative impact on adjacent streams and other receiving waters. Receiving waters can assimilate naturally a limited quantity of various constituent pollutants, but there are thresholds beyond which the measured amount results in an undesirable impact. The evaluation of whether a project includes whether it will impair the beneficial use to the receiving waters. Beneficial uses, as set forth in the Santa Clara Valley Urban Runoff Pollution Prevention Program, include municipal and domestic water supply, industrial water supply, groundwater recharge, freshwater replenishment, contact and non-contact recreation, warm freshwater ecosystem, and wildlife habitat. Non-point source pollutants are characterized by major categories—sediment, nutrients, trace metals, oxygen-demanding substances, bacteria, oil and grease, and other toxic chemicals—to assist in determining the pertinent data and its use. Receiving waters can assimilate a limited quantity of various constituent elements. However, there are thresholds beyond which the measured amount becomes a pollutant and results in an undesirable effect.

Typical non-point source pollutants include the following:

Sediment. Sediment is comprised of tiny soil particles that are washed or blown into surface waters; it is the major pollutant by volume in storm water runoff. Suspended soil particles can cause the water to look cloudy or turbid and act as a vehicle to transport other pollutants including nutrients, trace metals, and hydrocarbons. Construction sites are the largest source of sediment for urban areas under development.

Another major source of sediment is stream bank erosion, which an increase in peak rates and volumes of runoff from urbanization can accelerate. Detention and retention basins, depending on location, often have the effect of adding perennial water to drainage courses that previously had runoff only during the rainy season. Shallow aquifers throughout the area fill due to this constant flow. Perennial flow can be present in locations that did not previously exist. A constant wet bottom in a channel or drainage course causes faster and higher peak flows plus additional erosion in the soft bottom channels, which is considered problematic.

Nutrients. Nutrients are a major concern for surface water quality, especially phosphorous and nitrogen, which can cause algae and excessive vegetative growth. When nitrogen fertilizer is applied to lawns or other areas in excess of plant needs, nitrates can leach below the root zone, eventually reaching groundwater. Orthophosphate from auto emissions also contributes phosphorus in areas with heavy automobile traffic. Nutrient export is typically greatest from development sites with the most impervious areas. Other problems resulting from excess nutrients are surface algae, water discolorations, odors, toxic releases, and overgrowth of plants.

Trace Metals. Trace metals are primarily a concern because of their potential toxic effects on aquatic life and their potential to contaminate drinking water supplies. The most common trace metals found in urban runoff are lead, zinc, and copper. Fallout from automobile emissions is also a major source of lead in urban areas. A large fraction of trace metals in urban runoff is attached to sediment, and this effectively reduces the level that is immediately available for biological uptake and subsequent bioaccumulation. Metals associated with the sediment settle out and accumulate in soils. The toxicity of trace metals in runoff varies with the hardness of the receiving water. As total hardness of the water increases, the threshold concentration levels for adverse effects increases.

Oxygen-Demanding Substances. Aquatic life is dependent on the dissolved oxygen in the water. When organic matter is consumed by microorganisms, dissolved oxygen is consumed in the process. A rainfall event can deposit large quantities of oxygen-demanding substances in receiving waters. The biochemical oxygen demand of typical urban runoff is comparable to effluent from an effective secondary wastewater treatment plant. A water quality problem can occur when the rate of oxygen-demanding material exceeds the rate of oxygen replenishment. Oxygen demand is estimated by direct measure of dissolved oxygen and indirect measures such as levels of biochemical oxygen demand, chemical oxygen demand, oils and greases, and total organic carbon.

Bacteria. Bacteria levels in undiluted urban runoff typically exceed public health standards for water-contact recreation. Total coliform counts typically exceed U.S. EPA water quality criteria at most sites in

most rain events. Although the coliform bacteria that are detected may not be a direct health risk, they are often associated with human pathogens.

Oil and Grease. Runoff containing oil and grease typically contains a wide variety of hydrocarbons, some of which can be toxic to aquatic life in low concentrations. These materials initially float on water and create a rainbow-colored film. Hydrocarbons are quickly absorbed in sediment. The major source of hydrocarbons in urban runoff is leakage of crankcase oil and other lubricating agents from automobiles. Hydrocarbon levels are highest in the runoff from parking lots, roads, and service stations. Residential land uses generate less hydrocarbons; however, illegal disposal of waste oil into storm drains can be a local problem.

Other Toxic Chemicals. Pollutants generally related to hazardous wastes or toxic chemicals can be detected in storm water. Pollutant scans have been conducted in previous national studies of urban runoff, which evaluated the presence of over 120 toxic chemicals and compounds. Scans rarely revealed toxins that exceeded the current safety criteria. The urban runoff scans were primarily conducted in suburban areas not expected to have many sources of toxic pollutants (with the possible exception of illegally disposed or applied household hazardous waste). Measures of toxic pollutants in storm water include (1) phthalate (plasticizer compound), (2) phenols and creosols (wood preservatives), (3) pesticides/herbicides, (4) oils and greases, and (5) metals.

3.10.2 REGULATORY FRAMEWORK

3.10.2.1 Federal Regulations

Rivers and Harbors Appropriation Act of 1899, Section 10

Authorization from the United States Army Corps of Engineers (USACE) must be obtained for construction of a structure in or over any navigable water of the U.S., pursuant to Section 10 of the Rivers and Harbors Appropriation Act of 1899 (33 U.S. Code [USC] 403). Authorization is also needed for structures built near navigable water if they would affect the course, location, condition, or capacity of the water body, as through re-channelization, disposal of fill, and so forth.

Clean Water Act of 1972, as amended (CWA)

The law was originally enacted as the Federal Water Pollution Control Act (FWPCA; Public Law 92–500) in 1948 but took on its modern form when completely rewritten in 1972 in an act entitled the Federal Water Pollution Control Act Amendments of 1972, now commonly known as the Clean Water Act. Major

changes have subsequently been introduced via amendatory legislation including the Clean Water Act of 1977 and the Water Quality Act of 1987.

The Clean Water Act (CWA) is the primary federal law in the United States governing water pollution. Its objective 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. It is one of the United States' first and most influential modern environmental laws. As with many other major U.S. federal environmental statutes, it is administered by the U.S. EPA, in coordination with state governments. Its implementing regulations are codified at 40 C.F.R. Subchapters D, N, and O (Parts 100-140, 401-471, and 501-503).

Section 303(d)

Section 303(d) of the Federal CWA requires the SWRCB to list impaired water bodies and determine TMDLs of pollutants or other stressors that are contributing excessively to these impaired waters.

Section 401 – Water Quality Certification

Section 401 establishes the basic structure for regulating discharges of pollutants into the waters of the U.S. and regulating quality standards for surface waters. Under the CWA, the U.S. EPA has implemented pollution control programs such as setting wastewater standards for industries and surface waters.

Pollution Prevention Act of 1990

The Pollution Prevention Act (42 USC §13101 et seq.) focused on reducing the amount of pollution through cost-effective changes in production, operation, and raw materials. The Act focuses on source reduction which reduces the release of hazardous substances through practices that increase efficiency in energy, water, or other natural resources.

Antidegradation Policy

The Antidegradation Policy under the U.S. EPA's Water Quality Standards Regulations (48 F.R. 51400, 40 CFR 131.12, November 8, 1983), requires states and tribes to establish a three-tiered antidegradation program to prevent a decrease in water quality standards:

- Tier 1—Maintains and protects existing uses and water quality conditions that support such uses. Tier 1 is applicable to all surface waters.

- Tier 2—Maintains and protects "high quality" waters where existing conditions are better than necessary to support "fishable/swimmable" waters. Water quality can be lowered in such waters but not to the point at which it would interfere with existing or designed uses.

- Tier 3—Maintains and protects water quality in outstanding national resource waters (ONRWs). Water quality cannot be lowered in such waters except for certain temporary changes.

Antidegradation was explicitly incorporated into the federal CWA through 1987 amendments, codified in section 303(d)(4)(B), requiring satisfaction of antidegradation requirements before making certain changes in NPDES permits.

Clean Water Rule: Definition of Waters of the United States (WOTUS Rule)

On June 29, 2015, the U.S. EPA and USACE jointly published the final WOTUS Rule (40 CFR Parts 110, 112, 116, et al. and 33 CFR Part 328) for determining the extent to which wetlands and other water features are protected under the CWA. The original final rule:

- **Clearly defines and protects tributaries that impact the health of downstream waters.** The CWA protects navigable waterways and their tributaries. The rule says that a tributary must show physical features of flowing water—a bed, bank, and ordinary high water mark—to warrant protection. The rule provides protection for headwaters that have these features and science shows can have a significant connection to downstream waters.

- **Provides certainty in how far safeguards extend to nearby waters.** The rule protects waters that are next to rivers and lakes and their tributaries because science shows that they impact downstream waters. The rule sets boundaries on covering nearby waters for the first time that are physical and measurable.

- **Protects the nation's regional water treasures.** Science shows that specific water features can function as part of a system and impact the health of downstream waters. The rule protects prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools in California, and Texas coastal prairie wetlands when they impact downstream waters.

- **Focuses on streams, not ditches.** The rule limits protection to ditches that are constructed out of streams or function like streams and can carry pollution downstream. So, ditches that are not constructed as streams and that flow only when it rains are not covered.

- **Maintains the status of waters within Municipal Separate Storm Sewer Systems.** The rule does not change how those waters are treated and encourages the use of green infrastructure.

- **Reduces the use of case-specific analysis of waters.** Previously, almost any water resource could be put through a lengthy case-specific analysis, even if it would not be subject to the Clean Water Act. The rule significantly limits the use of case-specific analysis by creating clarity and certainty on protected waters and limiting the number of similarly situated water features.

A CWA permit is only needed if a "water of the United States" is going to be polluted or destroyed. The Clean Water Rule only protects the types of waters that have historically been covered under the CWA. It does not regulate most ditches and does not regulate groundwater, shallow subsurface flows, or tile drains. It does not make changes to current policies on irrigation or water transfers or apply to erosion in a field. The Clean Water Rule addresses the pollution and destruction of waterways—not land use or private property rights.

States opposing the far-reaching impacts of the WOTUS rule challenged the validity of the rule in 13 states, and the fight has expanded nationwide. Attorney generals from 18 states filed a motion with the 6th Circuit Court of Appeals in Ohio in early September asking the court to place a stay on WOTUS, barring the U.S. EPA from enforcing it for 50 days. The move came after U.S. District Court-District of North Dakota placed a stay on the WOTUS rule in the 13 states under its jurisdiction but, in a separate ruling, refused to expand the injunction nationwide. In February 2018, the U.S. EPA established an applicability date of February 2020 for the 2015 Rule defining WOTUS. The lack of clarity and timeliness has left many agencies confused and the 2015 Rule remains in effect in only 22 states, the District of Columbia, and the U.S. territories. Information is currently being updated on an ongoing basis.

National Flood Insurance Act

The U.S. Congress passed the National Flood Insurance Act in 1968 and the Flood Disaster Protection Act in 1973 to restrict certain types of development on floodplains and to provide for a National Flood Insurance Program (NFIP). The purpose of these acts is to reduce the need for large, publicly-funded flood control structures and disaster relief. The NFIP is a federal program administered by the Flood Insurance Administration of FEMA. It enables individuals who have property (a building or its contents) within the 100-year floodplain to purchase insurance against flood losses. FEMA works with the states and local communities to identify flood hazard areas and publishes a flood hazard boundary map of those areas. Floodplain mapping is an ongoing process in the Bay Area and flood maps must be regularly updated for both major rivers and tributaries as land uses and development patterns change.

Executive Order 11988, Flood Plain Management

The objective of Presidential Executive Order 11988, dated May 24, 1977, is the avoidance of, to the extent possible, long- and short-term adverse impacts associated with the occupancy and modification of the base floodplain (100-year floodplain) and the avoidance of direct and indirect support of development in the base floodplain wherever there is a practicable alternative. Under the Executive Order, the USACE must provide leadership and take action to:

- Avoid development in the base floodplain unless it is the only practicable alternative
- Reduce the hazard and risk associated with floods
- Minimize the impact of floods to human safety, health, and welfare
- Restore and preserve the natural and beneficial values of the base floodplain

3.10.2.2 State

Porter Cologne Water Quality Control Act

The Porter Cologne Water Quality Control Act of 1967 (Cal. Water Code Section 13000 et seq.), requires the SWRCB and the nine RWQCBs to adopt water quality criteria to protect State waters. These criteria include the identification of beneficial uses, narrative to the applicable and numerical water quality standards, and implementation procedures.

The Porter-Cologne Water Quality Control Act also authorizes the State Boards to adopt, review, and revise policies for all waters of the state (including both surface and ground waters) and directs the regional boards to develop Basin Plans. The act also authorizes State Boards to adopt Water Quality Control Plans. In the event of inconsistencies among state and regional board plans, the more stringent provisions apply.

Lake or Streambed Alteration

If the California Department of Fish and Wildlife (CDFW) determines that the activity may substantially adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be prepared. In August 2005, the California Fish and Game Commission policy regarding wetlands resources stated that "it is the policy of the Fish and Game Commission to seek to provide for the protection, preservation, restoration, enhancement and expansion of wetland habitat in California" and to "strongly discourage

development in or conversion of wetlands."[10] As a result, although the Commission has no independent statutory permitting authority related to wetlands, the policy underscores that the Commission does not support wetland development proposals unless "project mitigation assures there will be 'no net loss' of either wetland habitat values or acreage" and "prefers mitigation which would achieve expansion of wetland acreage and enhancement of wetland habitat values." The Agreement includes reasonable conditions necessary to protect those resources and must comply with CEQA. The entity may proceed with the activity in accordance with the final Agreement.

Antidegradation Policy

California's antidegradation policy, formally known as the Statement of Policy with Respect to Maintaining High Quality Waters in California (SWRCB Resolution No. 68-16), restricts degradation of surface and ground waters. It protects waters where existing quality is higher than necessary for the protection of beneficial uses. Any actions with the potential to adversely affect water quality must 1) be consistent with maximum benefit to the people of the State, 2) not unreasonably affect present and anticipated beneficial use of the water, and 3) not result in water quality less than that prescribed in water quality plans and policies. Any actions that can adversely affect surface waters are also subject to the federal antidegradation policy (40 CFR Section 131.12) developed under the CWA.

Sustainable Groundwater Management Act (SGMA)

On September 16, 2014, Governor Edmund G. Brown Jr., signed a three-bill package known as the Sustainable Groundwater Management Act. The legislation allows local agencies to customize groundwater sustainability plans to their regional economic and environmental needs. SGMA creates a framework for sustainable, local groundwater management for the first time in California history.

The three bills that make up SGMA are Assembly Bill (AB) 1739 by Assembly Member Roger Dickinson, Senate Bill (SB) 1319, and SB 1168 by Senator Fran Pavley.

In September 2015, Governor Brown signed SB 13, by Senator Fran Pavley. The Bill makes various technical, clarifying changes to SGMA including requirements for groundwater sustainability agency formation, the process for State Water Board intervention if no responsible agency is specified for a basin, guidelines for high- and medium-priority basins, and participation of mutual water companies in a groundwater sustainability agency.

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10 California Fish and Game Commission. *Miscellaneous Policies: Wetlands Resources*. Available online at: https://fgc.ca.gov/About/Policies/Miscellaneous, accessed February 4, 2022.

Construction General Permit

The California Construction Stormwater Permit (Construction General Permit) 1, adopted by the SWRCB, regulates construction activities that include clearing, grading, and excavation resulting in soil disturbance of at least 1 acre of total land area. The Construction General Permit authorizes the discharge of stormwater to surface waters from construction activities. It prohibits the discharge of materials other than stormwater and authorized non-stormwater discharges and all discharges that contain a hazardous substance in excess of reportable quantities established in Title 40, Sections 117.3 or 302.4 of the CFR, unless a separate NPDES permit has been issued to regulate those discharges. The Construction General Permit requires that all developers of land where construction activities will occur over more than 1 acre do the following:

- Complete a Risk Assessment to determine pollution prevention requirements pursuant to the three Risk Levels established in the General Permit;
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the Nation;
- Develop and implement a stormwater pollution prevention plan (SWPPP), which specifies BMPs that will reduce pollution in stormwater discharges to the Best Available Technology Economically Achievable/ Best Conventional Pollutant Control Technology standards; and
- Perform inspections and maintenance of all BMPs.

To obtain coverage under the NPDES Construction General Permit, the Legally Responsible Person must electronically file all permit registration documents with the SWRCB before the start of construction. Permit registration documents must include:

- Notice of Intent,
- Risk Assessment,
- Site Map,
- SWPPP,
- Annual Fee, and
- Signed Certification Statement.

Typical BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, control pollutants from construction materials, and address post construction runoff quantity (volume) and quality (treatment). The SWPPP must also include a discussion of the program to inspect and maintain all BMPs.

California Stormwater Quality Association Best Management Practices Handbooks

The California Stormwater Quality Association (CASQA) is a professional member association dedicated to the advancement of stormwater quality management through collaboration, education, implementation guidance, regulatory review, and scientific assessment. CASQA's membership is comprised of a diverse range of stormwater quality management organizations and individuals, including cities, counties, special districts, industries, and consulting firms throughout the state. CASQA develops and publishes four BMP Handbooks. The New Development and Redevelopment Handbook provides guidance on developing project-specific SWMPs, including selection and implementation of BMPs, for a particular development or redevelopment project.

Cobey-Alquist Floodplain Management Act

The Cobey-Alquist Floodplain Management Act (California Water Code 8400-8415) and Executive Order B-39-77 support the NFIP. The Act encourages local governments to plan, adopt, and enforce land use regulations for floodplain management, to protect people and property from flooding hazards. The Act also identifies requirements that jurisdictions must meet to receive State financial assistance for flood control. Executive Order B-39-77 requires state agency compliance with good floodplain management practices.

California Fish and Game Code

The California Department of Fish and Wildlife is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the Fish and Game Code (Section 1602) requires an entity to notify the Department of any proposed activity that may substantially modify a river, stream, or lake. Notification is required by any person, business, state or local government agency, or public utility that proposes an activity that will:

- substantially divert or obstruct the natural flow of any river, stream or lake;
- substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

The notification requirement applies to any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. This includes ephemeral streams, desert washes, and

watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.

3.10.2.3 Regional

San Francisco RWQCB (Basin Plan)

The Basin Plan is a master policy document that contains descriptions of the legal, technical, and programmatic bases of water quality regulation in the San Francisco Bay region. The plan, which is updated every three years, describes the beneficial uses to be protected in these waterways, water quality objectives to protect those uses, and implementation measures to ensure those objectives are achieved.

Santa Clara Valley Water District Comprehensive Water Resources Management Plan

The SCVWD's Comprehensive Water Resources Management Plan is organized in the following elements: Water Supply, Natural Flood Protection, and Water Resources Stewardship. Each element includes an informational overview that describes overarching goals and related objectives on a broad level and places them in a countywide context. At the heart of the plan are the goals, objectives, and strategies that serve as the district's framework and provide information for partner agencies. The SCVWD is involved in water management at varying levels of involvement. In some instances, it plays a primary role; in others, the district collaborates with other agencies and/or partners; in still other cases, the SCVWD serves as an informational resource and public advocate. The Comprehensive Water Resources Management Plan clarifies these degrees of involvement.

Santa Clara Valley 2016 Groundwater Management Plan

The SCVWD's Groundwater Management Plan (GWMP) describes the District's comprehensive groundwater management framework, including existing and potential actions to achieve basin sustainability goals and ensure continued sustainable groundwater management. The GWMP covers the Santa Clara and Llagas subbasins, located entirely in Santa Clara County. The SCVWD's prior Groundwater Management Plan was adopted by the Board in 2012 and described the District's comprehensive groundwater management framework, including basin management objectives, strategies, groundwater management programs, and outcome measures. The 2016 GWMP updates and expands on technical information in the 2012 GWMP and is prepared as an alternative to a Groundwater Sustainability Plan under the Sustainable Groundwater Management Act (SGMA).

Santa Clara Valley Urban Runoff Pollution Prevention Program

The Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) is an association of 13 cities and towns in the Santa Clara Valley, the County of Santa Clara, and the SCVWD all working to improve the water quality of south San Francisco Bay and the streams of Santa Clara County, by reducing nonpoint source pollution in storm water runoff and other surface flows. The Program and member agencies collaborate and share in implementation of the NPDES permit and municipal SWPPP to mitigate discharges, also referred to as the Municipal Regional Stormwater Permit (MRP), into the San Francisco Bay. Member agencies include Campbell, Cupertino, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, Sunnyvale, the County of Santa Clara, and the SCVWD.

The MRP includes requirements for controlling regional pollutants of concern (i.e., pesticides, mercury, polychlorinated biphenyls (PCBs), copper, legacy pesticides). Stormwater management requirements in the current MRP include (Santa Clara Valley Urban Runoff Pollution Prevention Program 2019):

- Reducing trash loads from stormwater by 100 percent by July 2022;
- Developing and implementing a trash monitoring program for creeks and shorelines;
- Meeting mercury and PCBs stormwater reduction goals; and
- Developing and implementing Green Stormwater Infrastructure (GSI) Plans.

3.10.2.4 Local

City of Sunnyvale Stormwater Quality BMP Guidance Manual for New and Redevelopment Projects

The City's BMP Guidance Manual instructs project applicants and the City in the preparation, review, and approval of redevelopment projects according to current requirements of the NPDES Stormwater Discharge Permit described above. The focus of the manual is on post-construction BMPs, although BMPs to be implemented during construction are also addressed. The guidance manual satisfied MRP requirements adopted by the San Francisco RWQCB in October 2009 to regulate municipal separate stormwater systems in 76 jurisdictions in the San Francisco Bay Area.

Agencies subject to the MRP include the City of Sunnyvale, 12 other municipalities in the Santa Clara Valley, the SCVWD, and the County of Santa Clara, which together form the SCVURPPP described above. BMPs include any kind of procedure or device designed to minimize the quantity of pollutants

that enter the storm drain system. Procedures can include the use of site design measures early in the planning stages of a project site to incorporate BMPs in the site landscape to minimize water quality impacts. They may also include source control BMPs such as placing signage on storm drain inlets, covering trash enclosures, and implementing practices such as sweeping and spill prevention programs. Treatment BMPs include permanent devices such as permeable paving, infiltration trenches, and bioretention areas. The focus of the BMP Guidance Manual is on postconstruction BMPs, although BMPs to be implemented during construction are also addressed.

City of Sunnyvale General Plan Environmental Management Chapter

The *City of Sunnyvale General Plan* Environmental Management chapter contains the following policies that are relevant to the analysis of hydrology and water quality impacts:

Policy EM-8.3 Ensure that stormwater control measures and best management practices (BMPs) are implemented to reduce the discharge of pollutants in stormwater to the maximum extent practicable.

Policy EM-8.5 Prevent accelerated soil erosion. Continue implementation of a construction site inspection and erosion control program to prevent discharges of sediment from erosion and discharges of other pollutants from new and redevelopment projects.

Policy EM-8.6 Minimize the impacts from stormwater and urban runoff on the biological integrity of natural drainage systems and water bodies.

Policy EM-9.1 Maintain and operate the storm drain system so that storm waters are drained from 95 percent of the streets within one hour after a storm stops.

Policy EM-10.1 Consider the impacts of surface runoff as part of land use and development decisions and implement BMPs to minimize the total volume and rate of runoff of waste quality and quantity (hydromodification) of surface runoff as part of land use and development decisions.

Policy EM-10.2 Consider the ability of a land parcel to detain excess storm water runoff in flood prone areas and require incorporation of appropriate controls. Require the incorporation of appropriate stormwater treatment and control measures for new and redevelopment regulated projects and/or any sites that may reasonably be considered to cause or contribute to the pollution of stormwater and urban

runoff as defined in the current version of the stormwater Municipal Regional Permit.

Policy EM-10.3 Require the incorporation of appropriate stormwater treatment and control measures for industrial and commercial facilities as identified in the stormwater Municipal Regional Permit.

Land Use and Transportation Element

Policy LT-9.19 Protect creeks and wetlands as important parts of the community's natural environment and open space and for their contribution to flood control.

LT-9.19c: Minimize or divert pollutants from draining into creeks and wetlands by enforcing best management practices during construction, site development, and ongoing operations.

City of Sunnyvale Municipal Code

In response to the 2001 NPDES permit amendment, the City adopted an ordinance in 2003 entitled Stormwater Management, which can be found in Sunnyvale Municipal Code (SMC) Chapter 12.60. The purpose of the Stormwater Management ordinance is to provide regulations and give legal effect to certain requirements of the NPDES permit issued to the City. Specifically, Chapter 12.60 includes:

- Discharge prohibitions to the stormwater conveyance system.
- Requirements for stormwater pollution prevention and the development of stormwater management plans.
- Numeric sizing criteria for pollutant removal treatment systems.
- Applicability of hydromodification management requirements to certain areas of the city based on drainage area to creeks and watersheds.
- Requirements for agreements to maintain stormwater treatment best management practices once constructed.
- Guidance on the selection of BMPs as well as minimum best management practices for all dischargers.

- Authority for City staff to inspect and require the proper operation and maintenance of treatment devices.
- The process by which waivers and alternative compliance with permit requirements may be demonstrated.
- Penalties for failure to comply with provisions of the chapter.

3.10.3 THRESHOLDS OF SIGNIFICANCE

The following thresholds for determining the significance of impacts related to hydrology and water quality are contained in the environmental checklist form contained in Appendix G of the most recent update of the *State CEQA Guidelines*. Adoption and/or implementation of the Proposed Master Plan could result in significant impacts due to the use and/or transportation of hazards and hazardous materials, if any of the following would occur:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
  - Result in substantial erosion or siltation on- or off-site;
  - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
  - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
  - Impede or redirect flood flows.
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

3.10.4 METHODOLOGY

The analysis of water quality impacts identifies the types of pollutants potentially associated with future development as a result of implementation of the Proposed Master Plan and considers their effects on water quality. Consideration is given to BMPs, which would serve to minimize pollutants in stormwater runoff. Further, the Proposed Master Plan's consistency with relevant regulatory permits/requirements is evaluated to demonstrate how compliance would protect water quality.

As summarized in **Section 3.10.2, Regulatory Framework**, independent of the CEQA process, there is a comprehensive set of regulations implemented at the State and jurisdictional level to impacts related to storm drainage, urban pollutants, and flood hazards. As such, the analysis presented herein assumes future projects would comply with these regulations.

This discussion of hydrology focuses on the Plan Area and the surrounding areas downstream. The impact analysis is based on several factors, including the degree to which existing land uses in the region would change and the thresholds of significance for hydrology and water quality.

3.10.5 ENVIRONMENTAL IMPACTS

Impact HYD-1 **Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.**

As noted in **Section 3.10.2.3, Regional Regulatory Framework**, the Santa Clara Valley Urban Runoff Pollution Prevention Program establishes regulations and includes certain requirements associated with the NPDES permit issued to Sunnyvale regarding municipal stormwater and urban runoff requirements. During construction of projects in the city, the dischargers, through individual coverage under the State's General Construction NPDES permits, must eliminate non-stormwater discharges to stormwater systems, develop and implement a SWPPP, and monitor discharges to stormwater systems during construction and operation (i.e., the MRP regulatory process).

Construction

Implementation of the Proposed Master Plan includes re-development involving demolition of some existing structures, site preparation, construction of new buildings, and infrastructure improvements. Demolition of existing structures, removal of existing pavement and concrete replacement, grading, stockpiling of materials, excavation and the import/export of soil and building materials, construction of new structures, and landscaping activities would expose and loosen sediment and building materials,

which have the potential to mix with stormwater and urban runoff and degrade surface and receiving water quality.

Additionally, construction generally requires the use of heavy equipment and construction-related materials and chemicals, such as concrete, cement, asphalt, fuels, oils, antifreeze, transmission fluid, grease, solvents, and paints. In the absence of proper controls, these potentially harmful materials could be accidentally spilled or improperly disposed of during construction activities and could wash into and pollute surface waters or groundwater, resulting in a significant impact to water quality.

Pollutants of concern during construction activities generally include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. In addition, chemicals, liquid products, petroleum products (such as paints, solvents, and fuels), and concrete-related waste may be spilled or leaked during construction, which would have the potential to be transported via storm runoff into nearby receiving waters and eventually may affect surface or groundwater quality. During construction activities, excavated soil would be exposed thereby increasing the potential for soil erosion and sedimentation to occur compared to existing conditions. In addition, during construction, vehicles and equipment are prone to tracking soil and/or spoil from work areas to paved roadways, which is another form of erosion that could affect water quality

Each phase of development within the Proposed Master Plan would require compliance with applicable regulations to obtain demolition, excavation, grading, or construction permits from the City and/or the California Division of the State Architect. The permitting process would ensure each phase of development would be implemented in compliance with the MRP process. To control the impact of erosion, sedimentation, and other pollutants on receiving waters, the SWRCB Construction General Permit (that would be implemented through the City's permitting process), requires the implementation of BMPs to eliminate or reduce the discharge of pollutants in stormwater discharges, and prohibits the discharge of non-storm water from construction sites as these non-storm water discharges are likely to carry pollutants to receiving waters.

The Plan Area is within the region regulated by the SCVURPPP. The Program and member agencies collaborate and share in implementation of the NPDES permitting for municipal stormwater discharges, also referred to as the Municipal Regional Stormwater Permit (MRP), into the San Francisco Bay.[11]

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11 Santa Clara Valley, Urban Runoff, Pollution Prevention Program. June 2016. *Stormwater Handbook.* Available online: https://cleanwater.sccgov.org/sites/g/files/exjcpb461/files/SCVURPPP_C.pdf, accessed August 7, 2022.

In addition, activities subject to the NPDES General Permit for construction must develop and implement a SWPPP, including a site map and description of construction activities. The SWPPP will identify BMPs that will be employed to prevent soil erosion and discharge of other construction—related pollutants, such as petroleum products, solvents, paints, and cement, that could contaminate nearby water resources. A monitoring program is generally required to ensure that BMPs are implemented according to the SWPPP and are effective at controlling discharges of pollutants that are related to storm water. As a result of compliance with NPDES General Permit and specific BMPs that are required for each construction project, construction impacts related to water quality standards or waste discharge requirements from implementation of the Proposed Master Plan would be less than significant.

Operation

Intensification of land uses that will occur due to implementation of the Proposed Master Plan could introduce new or additional pollutants to the existing area. Pollutants associated with the operation of proposed institutional uses generally include sediments, trash, petroleum products, metals, and chemicals that could potentially discharge into surface waters by storm drains either directly or during storm water runoff events.

Development projects proposed pursuant to the Proposed Master Plan would be required to implement Source Control and Treatment Control BMPs to reduce the discharge of pollutants to the maximum extent practicable. Treatment Control BMPs would also be required to be incorporated into the design of onsite storm drain systems to treat runoff in accordance with the Standard Urban Water Mitigation Plan (SUSMP) standards and as required by the City.

Implementation of site-specific source control and treatment control BMPs in accordance with the County's MRP standards would remove potential pollutants from runoff and would not contribute additional pollutant loads into receiving waters. Applicable BMPs would be implemented on a project by-project basis in accordance with regional and local regulatory requirement including the MRP. Because site-specific development pursuant to the Proposed Master Plan would not violate any water quality or waste discharge requirements, impacts would be less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact HYD-2 **Potential to substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.**

Groundwater levels are managed by the California Department of Water Resources to maintain a safe operating yield of groundwater, which includes a sustainable pumping rate that does not exceed the total recharge into the basin. Further, the SCVWD's Groundwater Management Plan describes the District's comprehensive groundwater management framework, including existing and potential actions to achieve basin sustainability goals and ensure continued sustainable groundwater management.

Buildout of the Proposed Master Plan would result in comparable amounts of impervious surfaces as existing conditions. Further, the Plan Area is not located within a local groundwater recharge area and no groundwater extraction would occur as part of the project. Finally, the Plan Area is underlain by soils with low percolation rates therefore the effect on groundwater recharge would be less than significant.

Implementation of the Proposed Master Plan would not result in the need for new or additional groundwater supplies. Therefore, implementation of the Proposed Master Plan would not result in any groundwater extraction or depletion of groundwater supplies and is not anticipated to interfere with SCVWD's Groundwater Management Plan. Therefore, implementation of the Proposed Master Plan would result in less than significant impacts related to groundwater recharge.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact HYD-3 **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:**

(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 off-site;

(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; or

(iv) impede or redirect flood flows.

Erosion and Flooding

Construction

Grading, excavation, and other construction activities associated with development under the Proposed Master Plan could adversely affect water quality due to erosion resulting from exposed soils and the generation of water pollutants, including trash, construction materials, and equipment fluids.

Associated construction activities would be subject to the NPDES Statewide General Construction Activity Stormwater Permit. Construction site operators would be responsible for preparing and implementing a SWPPP that outlines project-specific BMPs to control erosion, sediment release, and otherwise reduce the potential for discharge of pollutants in stormwater, consistent with the requirements of the NPDES Statewide General Construction Permit. Typical BMPs include:

- Utilizing temporary de-silting basins to ensure that surface water flows do not carry significant amounts of onsite soils and contaminants downstream;
- Conducting construction vehicle maintenance in staging areas where appropriate controls have been established to ensure that fuels, motor oil, coolant, and other hazardous materials are not deposited into areas where they may enter surface water and groundwater;
- Restricting the use of chemicals that may be transferred to surface waters by storm water flows or leach to groundwater basins through water percolation into the soil;
- Requiring that permanent slopes and embankments be vegetated following final grading;

- Installation of silt fences, erosion control blankets;
- Proper handling and disposal of wastes; and
- Installation of anti-tracking pads at site exits to prevent off-site transport of soil material.

Project-specific BMPs would minimize or avoid potential adverse effects associated with drainage pattern alterations, including those associated with infiltration, erosion, and potential for flooding. Project-specific Standard Urban Stormwater Mitigation Plans would include conditions that consist of Low Impact Development (LID) structural and non-structural BMP, source control BMP, and structural and non-structural BMP for specific types of uses. LID controls reduce the amount of impervious area of a completed project site and promote the use of infiltration and other controls that reduce runoff. LID controls would direct surface runoff to the appropriate storm drain ensuring correct drainage flow. Source control BMP prevents runoff contact with pollutants that would otherwise be discharged to the municipal stormwater conveyance system. Specific structural controls are required to address pollutant discharges from certain uses including industrial and commercial facilities where pollutants are disposed, stored, or handled.

Operation

Implementation of the Proposed Master Plan is not anticipated to substantially change the drainage patterns within the Plan Area. At completion, future project sites would be developed with buildings, landscaped areas, roads, and other hardscape improvements; no bare areas of soil would be left vulnerable to erosion. While erosion and siltation impacts could occur during construction of individual development projects, existing state regulations (as discussed above under **Impact HYD-1** and **Impact HYD-2**) would mitigate impacts to a less than significant level.

As the City is responsible for land use planning and development within the municipal limits, City officials shall review and approve all local hydrology and hydraulic analyses. The City has not identified any existing storm drainage deficiencies in the Plan Area. Thus, the projected increase in stormwater runoff would not result in flooding on-or off-site. Impacts would be less than significant.

Stormwater Drainage Systems

Following implementation of a proposed development project, some amount of surface water runoff would exit the Plan Area, particularly in response to heavy storm events, which also occurs under present conditions. With BMPs included in a proposed project's SUSMP, such as those to slow and treat surface water runoff (treatment provided through infiltration and bio-infiltration techniques), it is anticipated

that less runoff would leave the site under project conditions than under present conditions. Upon leaving the Plan Area, runoff would be conveyed through the City of Sunnyvale existing stormwater drainage system and facilities.

Project development could increase the rate and/or amount of stormwater runoff in comparison to existing conditions, which in turn could result in flooding issues on- or off-site. The Proposed Master Plan encourages sustainable features minimize surface water runoff (e.g., permeable pavers, drought tolerant landscaping, and efficient water irrigation). These features would help to mimic natural hydrologic conditions which can help reduce sheet flow and the velocity of stormwater and prevent soil erosion.

Storm water runoff is influenced by rainfall intensity, ground surface permeability, watershed size and shape, and physical barriers. In addition, paved surfaces and drainage conduits can accelerate the velocity of runoff, concentrating peak flows in downstream areas faster than under natural conditions. Significant increases to runoff and peak flow could overwhelm drainage systems and alter flood elevations in downstream locations. Increased runoff velocity can promote scouring of existing drainage facilities, reducing system reliability, and safety. Buildout of the Proposed Master Plan would result in comparable amounts of impervious surfaces as existing conditions. Therefore, implementation of the Proposed Master Plan is not anticipated to increase demand on the existing stormwater drainage systems. Impacts would be less than significant.

Surface Flows

Ground-disturbing activities during construction of proposed development facilitated by the Proposed Master Plan, including but not limited to grading and excavation, could have potential to result in temporarily altered drainage patterns that could redirect surface flows. However, BMPs employed as part of an SWPPP for individual development projects would include measures to secure disturbed soils and require proper drainage in the Plan Area.

Under the Proposed Master Plan, the majority of the Plan Area would remain impervious (similar to existing conditions) due to the presence of parking areas, walkways, hardscape, and building roofs and roadways. The proposed development may include landscaped areas, introducing opportunities for infiltration of stormwater runoff and roof discharges, thereby minimizing potential impacts associated with stormwater runoff exiting the area, and potentially improving conditions associated with current conditions. For these reasons, potential impacts to drainage pattern alterations, including how drainage pattern alterations could affect surface water runoff, erosion/siltation, flooding, and stormwater conveyance facilities, would be less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact HYD-4 In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

The Plan Area is located approximately five miles south of the San Francisco Bay. Due to the distance and elevations, the potential for a tsunami affecting the Plan Area is low. Further, the probability of inundation from mudflows and/or seiches would be low because the Plan Area and vicinity is flat; therefore, mudflow impacts would not occur and there are no bodies of water near the Plan Area that would be subject to a seiches. Additionally, future development occurring within the Sunnyvale East Channel watershed would be required to comply with flood hazard development regulations and requirements.

Therefore, development related to the Proposed Master Plan would not be located in a flood hazard, tsunami, or seiche zones that could risk release of pollutants due to project inundation. There would be no impact associated with the Proposed Master Plan.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No Impact.

3.10.6 CUMULATIVE IMPACTS

Implementation of cumulative development of the Proposed Master Plan and other proximal projects in the region would be required to comply with all pertinent regulations, such as the Construction NPDES General Permit, Stormwater Pollution Control Requirements for Construction Activities Cumulative NPDES permitting, and flood hazard development regulations and requirements. Project-specific BMPs (for all contemporary projects including each phase of the Proposed Master Plan) would minimize or avoid potential adverse effects associated with drainage pattern alterations, including those associated with infiltration, erosion, and potential for flooding. Therefore, construction and operational activities would result in less than significant impacts to surface and groundwater quality.

3.10.7 REFERENCES

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3.11 LAND USE AND PLANNING

INTRODUCTION

This section of the EIR evaluates the potential for implementation of the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan") to impact land uses in the SCUSD. This section discusses regulatory framework (plans and policies from several jurisdictional agencies, as relevant), along with existing land uses throughout the Proposed Master Plan area, and possible environmental impacts that may occur as Master Plan-related site-specific projects are implemented during future phases of the Proposed Master Plan.

Land use impacts can be either direct or indirect. Direct impacts result in land use incompatibilities, division of neighborhoods or communities, or interference with other land use plans, including habitat or wildlife conservation plans. This section focuses on direct land use impacts. Indirect impacts are secondary effects resulting from land use policy implementation, such as an increase in demand for public utilities or services, or increased traffic on roadways. Indirect impacts are addressed in other sections of this EIR.

Note also that no physical changes to the existing Laurelwood Elementary School site are included in the Proposed Master Plan.

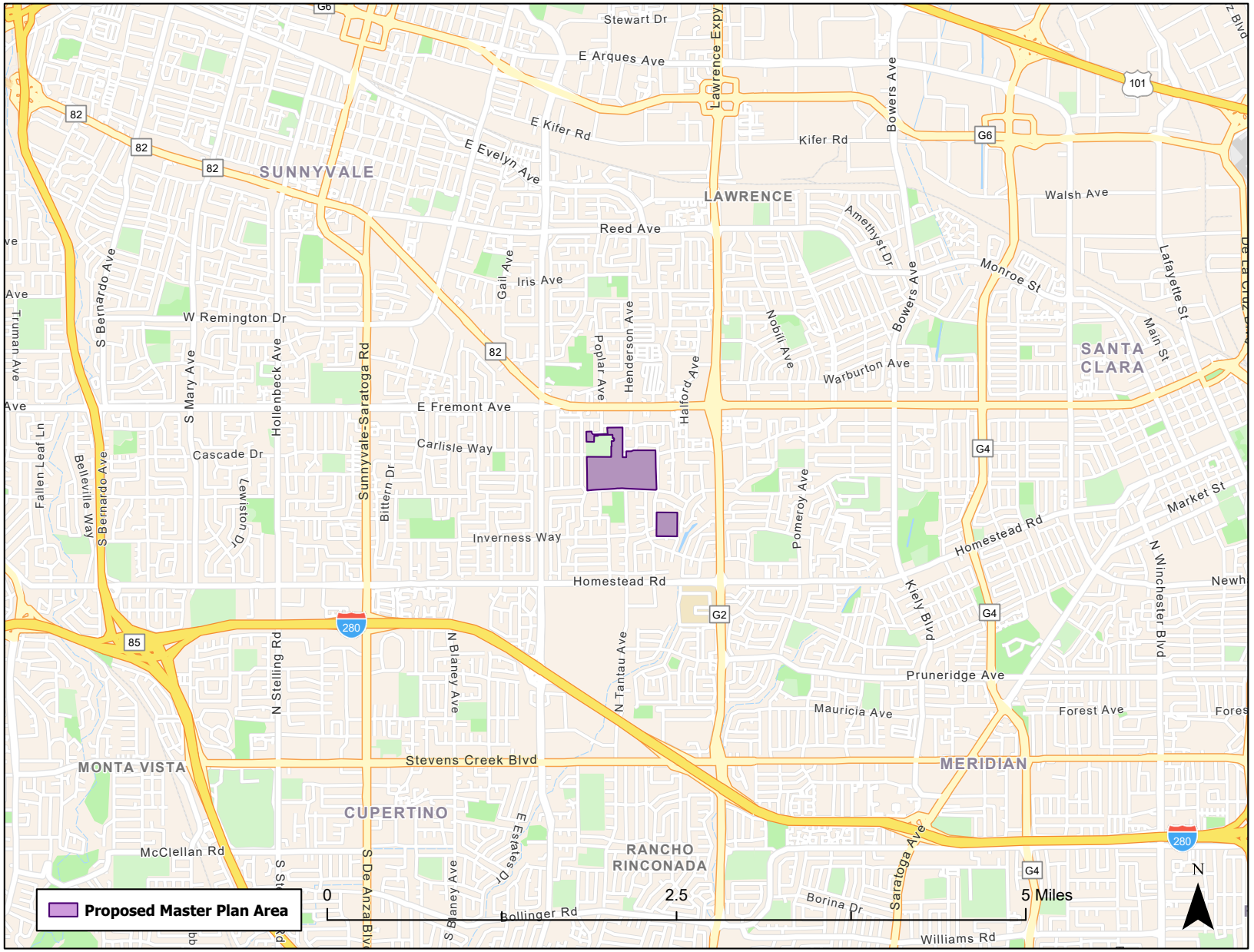
3.11.1 ENVIRONMENTAL SETTING

3.11.1.1 Project Location

The proposed SCUSD Peterson Middle School and the New Laurelwood Elementary School Master Plan Area ("Plan Area") is located in northwest Santa Clara County, approximately 4.75 miles south of the San Francisco Bay. The Plan Area includes the Patrick Henry Campus, located at 1095 Dunford Way, the District Farm at 1055 Dunford Way, and portions of the Peterson Middle School at 1380 Rosalia Avenue, encapsulating 71.5 acres all within the City of Sunnyvale. Additionally, the Plan Area includes the existing 10.4-acre Laurelwood Elementary School, located at 955 Teal Drive in the City of Santa Clara. In total, the Plan Area encapsulates 81.9 acres in the City of Sunnyvale and the City of Santa Clara as shown in as shown in **Figure 3.11-1, Regional Context**.

The cities of Sunnyvale and Santa Clara are bordered to the south by the cities of Cupertino and San Jose, to the east by San Jose, to the west by Mountain View and Los Altos, and the San Francisco Bay to the north. The Plan Area is bound to the south by Dunford Way, to the west by a block east of Norman Drive, to the north by Rosalia Avenue and Bryant Way, and to the east by Roadrunner Terrace—connected through Castleton Terrace and Teal Drive to the east (see **Figure 3.11-2, SCUSD Peterson Middle School**

and the New Laurelwood Elementary School Master Plan Area). The Plan Area would serve a maximum capacity of 3,375 students. The existing Laurelwood Elementary School fronts on Teal Drive to the west and is bound by Kensington Avenue to the south, and residences to the north, east and along the southwestern corner of the site.



SOURCE: Esri 2022; SCUSD, 2022

FIGURE **3.11-1**

IMPACT SCIENCES

Regional Context

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Figure 3.11-2, SCUSD Peterson Middle School and the New Laurelwood Elementary School Master Plan Area

As proposed, the site for new development under this Project is located on the Northwest corner of Dunford Way and Teal Drive in the City of Sunnyvale. The site was developed for Patrick Henry Intermediate School in the early 1960's. The school was closed in the 1980s and the buildings and grounds were leased to various tenants. The site is also adjacent to the Peterson Middle School (formerly Peterson High School) and a portion of the so-called "Peterson site" currently includes the District Farm, current Peterson Middle fields, tennis courts and parking lots.

The other site is the current location of Laurelwood Elementary School, in the City of Santa Clara. The campus is fronted by Teal Drive to the west and Kensington Drive to the south. The school enrolls grades TK-5 and has an enrollment of 522 students.

Both sites are within the Laurelwood Elementary School attendance boundary.

3.11.1.2 General Plan Land Uses

The Plan Area includes the Patrick Henry Campus, District Farm, and the Peterson Fields, encapsulating 71.5 acres in the City of Sunnyvale and is designated as Public Facilities (PF) per the City of Sunnyvale Zoning Code.[1] The Laurelwood Elementary School site, encapsulating 10.4 acres in the City of Santa Clara, is designated as Public or Quasi Public Facilities (B) by the City Zoning Code.[2]

3.11.1.3 Zoning

The Plan Area includes the Patrick Henry Campus, District Farm, and the Peterson Fields, encapsulating 71.5 acres in the City of Sunnyvale and is designated as Public Facilities (PF) per the City of Sunnyvale Zoning Code.[3] The Laurelwood Elementary School site, encapsulating 10.4 acres in the City of Santa Clara, is designated as Public or Quasi Public Facilities (B) by the City Zoning Code.[4]

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1 City of Sunnyvale. General Plan Map. Available online at: https://gis.sunnyvale.ca.gov/portal/apps/webappviewer/index.html?id=ae24dc03fb8b44b999d1367b013c66a6, accessed July 12, 2022.

2 City of Santa Clara, General Plan Map. Available online at: https://map.santaclaraca.gov/public/index.html?viewer=regional, accessed July 12, 2022.

3 City of Sunnyvale. Zoning Map. Available online at: https://gis.sunnyvale.ca.gov/portal/apps/webappviewer/index.html?id=22396bd2d48140088e8931f4780da54c, accessed July 12, 2022.

4 City of Santa Clara, Map of Santa Clara, available online at: https://map.santaclaraca.gov/public/index.html?viewer=regional, accessed July 12, 2022.

3.11.2 REGULATORY FRAMEWORK

State and local laws, regulations, plans, and guidelines are summarized below. The following regulatory framework discussion does not include all plans and policies that relate to land use and planning in the SCUSD area. This section provides a general discussion of the most important plans and policies that apply to the Proposed Master Plan. Although some of these may not be directly applicable to the Proposed Master Plan, they are included to assist in identifying potential impacts and significance thresholds.

3.11.2.1 State

California Government Code, Section 65300

State planning law requires every city in California to adopt a comprehensive, long-term general plan for the physical development of the city, and of any land outside its boundaries (sphere of influence) that in the planning agency's judgment bears relation to its planning. A general plan should consist of an integrated and internally consistent set of goals and policies that are grouped by topic into a set of elements and are guided by a citywide vision. State law requires that a general plan address seven elements or topics (land use, circulation, housing, conservation, open space, noise, and safety), but allows some discretion on the arrangement and content.

California Government Code, Section 53094 (2017)

a) Notwithstanding any other provision of this article, this article does not require a school district to comply with the zoning ordinances of a county or city unless the zoning ordinance makes provision for the location of public schools and unless the city or county has adopted a general plan.

b) Notwithstanding subdivision (a), the governing board of a school district, that has complied with the requirements of Section 65352.2 of this code and Section 21151.2 of the Public Resources Code, by a vote of two-thirds of its members, may render a city or county zoning ordinance inapplicable to a proposed use of property by the school district. The governing board of the school district may not take this action when the proposed use of the property by the school district is for non-classroom facilities, including, but not limited to, warehouses, administrative buildings, and automotive storage and repair buildings.

California Education Code, Section 17251 and California Code of Regulations, Title 5, Section 14001 through 14012

Education Code Section 17251 and the CCR Title 5, Section 14001 through 14012 outline the California Department of Education's (CDE) authority for approving proposed school sites and constructing school buildings. CDE must approve each site in order for that site to receive State acquisition funds under the School Facilities Program administered by the State Allocation Board. According to the CDE School Site Selection and Approval Guide, some of the many factors that affect school site selection include health and safety, location, size, and surrounding land uses. The School Facilities Planning Division (SFPD) has developed screening and ranking procedures applied during the site selection process.[5]

California Education Code, Section 38131.b

The Civic Center Act permits public use of school facilities. School facilities available for Civic Center use include gyms, playing fields, stadiums, auditoriums, multipurpose rooms, cafeterias, and classrooms. Facilities are available within designated time frames outside school hours. Organizations wishing to use a school location for a Civic Center use must apply for a permit from the District. A variety of rules, regulations, and restrictions governing the use of school buildings for civic center purposes appear in detail on the permit and the application.

3.11.2.2 Local

SCUSD Master Plan

The Project is being developed under Measure BB (2018) and SCUSD Vision 2035 SCUSD Facilities Improvement Bond programs and the Peterson and Patrick Henry Facility Master Plan approved in June 2022.[6] Objectives from the Bond programs include:

- **Measure BB-2018**: A General Obligation Bond approved by voters on November 6, 2018. To construct classrooms, labs, and school libraries to support student achievement, college readiness, and career

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5 California Department of Education. *School Site Selection and Approval Guide*. http://www.cde.ca.gov/ls/fa/sf/schoolsiteguide.asp, accessed July 12, 2022.

6 Santa Clara Unified School District, *Citizen's Independent Oversight Committee*, June 23, 2021. Available online at: https://www.santaclarausd.org/site/handlers/filedownload.ashx?moduleinstanceid=5779&dataid=6918&FileName=Consolidated%20CBOC%20Annual%20Report%202021.pdf, accessed on May 2, 2022.

training in math, science, engineering, technology, and arts; acquire, renovate, construct and equip facilities to improve older schools; to fix deteriorating roofs, plumbing and electrical systems.[7]

3.11.3 THRESHOLDS OF SIGNIFICANCE

The following thresholds for determining the significance of impacts related to land use and planning are contained in the environmental checklist form contained in Appendix G of the most recent update of the *State CEQA Guidelines*. Adoption and/or implementation of the Proposed Master Plan could result in significant impacts if any of the following would occur:

- Physically divide an established community.
- 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.

3.11.4 METHODOLOGY

The discussion in this impact section serves two purposes, identifying significant impacts related to land use, and compliance with *State CEQA Guidelines* Section 15125(d), which requires that an EIR include a discussion of any inconsistencies with applicable plans. However, it does not require the EIR to reach a conclusion on whether a conflict exists. Additionally, a conflict between a project and an applicable plan is not necessarily a significant impact under CEQA unless the inconsistency will result in an adverse physical change to the environment that is a "significant environmental effect" as defined by 15382. An inconsistency between a proposed project and an applicable plan is a legal determination that may or may not indicate the likelihood of a physical environmental impact. In some cases, an inconsistency may be evidence that an underlying physical impact is significant and adverse. For example, if a proposed project affected agricultural land, one standard for determining whether the impacts were significant would be to determine whether the project violated a plan or policy protecting agricultural land; the environmental impact, however, would be the physical conversion of agricultural land to non-agricultural uses. Similarly, an excerpt from Section 12.34 of the legal practice guide, practice under the California Environmental Quality Act by the Continuing Education of the Bar, illustrates the point:

> *…if a project affects a river corridor, one standard for determining whether the impact is significant might be whether the project violates plan policies protecting the corridor; the environmental impact, however, is the physical impact on the river corridor.*

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7 Santa Clara Unified School District, *Citizen's Independent Oversight Committee*, June 23, 2021. Available online at: https://www.santaclarausd.org/site/handlers/filedownload.ashx?moduleinstanceid=5779&dataid=6918&FileName=Consolidated%20CBOC%20Annual%20Report%202021.pdf, accessed on May 2, 2022.

Analysis of conflicts and consistency with applicable plans will be included in this impact section. Under State Planning and Zoning law (Gov't Code §§ 65000, et seq.) strict conformity with all aspects of a plan is not required. Generally, plans reflect a range of competing interests and agencies are given great deference to determine consistency with their own plans. A proposed project should be considered consistent with a general plan or elements of a general plan if it furthers one or more policies and does not obstruct other policies. Generally, given that land use plans reflect a range of competing interests, a project should be compatible with a plan's overall goals and objectives but need not be in perfect conformity with every plan policy.

For purpose of identifying significant impacts related to land use impacts, they can be either direct or indirect. Direct impacts result in division of neighborhoods or communities, such as a community that could be physically divided by the construction of a new road, freeway, or railway that effectively isolates a portion of the community from the remainder of the community; or interference with land use plans, including habitat or wildlife conservation plans that result in significant environmental effects. Land use compatibility is typically addressed based on direct physical environmental impacts – primarily noise and air quality but also aesthetics, traffic, hazards, water quality and other physical environmental issues, i.e., where one use generates physical impacts that could significantly adversely affect another use. These issues are generally addressed through existing regulations and policies and are comprehensively addressed in each environmental issue area in this document and summarized as applicable and appropriate in the discussion of **Impact LAN-2** below. As related to impact analysis, this section focuses on direct land use impacts. Indirect impacts are secondary effects resulting from land use policy implementation are generally addressed in other topical sections of this EIR. For example, traffic impacts resulting from increased traffic as a result of anticipated development under the Proposed Master Plan would be discussed in the transportation section of this EIR; public service impacts resulting from increased demand from increased development under the Proposed Master Plan is discussed in public services section of this EIR.

3.11.5 ENVIRONMENTAL IMPACTS

Impact LAN-1 Would the Project physically divide an established community?

The Proposed Master Plan is located in areas designated and zoned as Public Facilities and are surrounded by residential development. The Proposed Master Plan would not include any changes to existing physical features that would physically divide the community (e.g., blocking of roadways or sidewalks) and would not interfere with the movement of residents through a neighborhood. For these reasons, implementation of the Proposed Master Plan would not divide an established community. Therefore, there would be no impact.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No Impact.

Impact LAN-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?**

The SCUSD holds jurisdiction over land use planning and development on the Project sites. As such, the SCUSD Peterson and Patrick Henry Facility Master Plan is the only applicable land use plan, policy, or regulation with jurisdiction over the Project sites, and the Proposed Master Plan is consistent with the priorities of the SCUSD's Bond Measure BB. Furthermore, under the General Plan designations and the Zoning Codes of the cities of Santa Clara and Sunnyvale for the Project sites are designated as Public Facilities and are zoned Public Facilities and Quasi-Public Facilities. The Public Facilities designation provides for public and quasi-public services such as parks, schools, places of assembly, child-care facilities, civic facilities, and public works facilities. As proposed, the Project will maintain the existing land uses and thus will be consistent with the General Plan designations and the Zoning Codes of both the City of Santa Clara and the City of Sunnyvale. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

3.11.6 CUMULATIVE IMPACTS

Cumulative impacts are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."[8] Cumulative impacts are the change caused by the incremental impact of the project evaluated in the EIR together with the incremental impacts from closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Section 15130 of the *State CEQA Guidelines* states that cumulative impacts shall be discussed when the project's incremental effect is cumulatively considerable.[9] It further states that this discussion shall reflect the level and severity of the impact and the likelihood of occurrence, but not in as great a level of detail as that necessary for the project alone.

The potential that the implementation of the Proposed Master Plan in combination with other land use changes would increase the intensity of development in either the City of Santa Clara or Sunnyvale beyond that envisioned in either city's *General Plan* related to land use compatibility would be less than significant, as discussed in **Impact LAN-2**. Implementation of the Proposed Master Plan would be consistent with overall goals and policies of the District Vision 2035 and Measure BB, and in both the *City of Santa Clara General Plan* and the *City of Sunnyvale General Plan*. In addition, any future development proposed within either City would need to be reviewed on a case-by-case basis for compliance with the relevant City's General Plan, Zoning Code, and any other relevant governing policies or plans. Therefore, the project-specific impacts associated with land use consistency would be less than significant and potential impacts would not be cumulatively considerable.

3.11.7 REFERENCES

California Code of Regulations. 14 CCR Section 15065 (a)(3).

California Code of Regulations. 18 14 CCR Section 15130 [b][1].

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8 14 CCR Section 15355.

9 14 CCR Section 15065 (a)(3) "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. 18 14 CCR Section 15130 [b][1].

California Code of Regulations. 14 CCR Section 15355.

California Department of Education. *School Site Selection and Approval Guide.* http://www.cde.ca.gov/ls/fa/sf/schoolsiteguide.asp, accessed July 12, 2022.

City of Santa Clara, General Plan Map. Available online at: https://map.santaclaraca.gov/public/index.html?viewer=regional, accessed July 12, 2022.

City of Santa Clara, Map of Santa Clara, available online at: https://map.santaclaraca.gov/public/index.html?viewer=regional, accessed July 12, 2022.

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3.12 MINERAL RESOURCES

INTRODUCTION

This section describes mineral resources in the region, identifies the regulatory framework with respect to laws and regulations that affect mineral resources, and analyzes the potential impacts of the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan").

Note also that no physical changes to the existing Laurelwood Elementary School site are included in the Proposed Master Plan.

3.12.1 ENVIRONMENTAL SETTING

A mineral resource is a pure inorganic substance occurring in Earth's crust in such form, quantity, or quality that there are reasonable prospects for economic extraction. With over 1,200 mines in California, the state relies on mineral resources as a continuous supply of construction aggregate materials (sand, gravel, and crushed stone) for urban infrastructure and essential to the economy of California. Construction minerals, such as aggregate, constitute the state's most important mineral commodity in terms of tonnage, value, and societal infrastructure. California is number one in the United States (U.S.) for the production of sand and gravel, and fourth in the U.S. for total non-fuel mineral production. The most recent data on non-fuel mineral production is from 2019. As of 2019, there were 560 active construction material mines in the state.[1] In 2018, 107 mines in California produced 18 different industrial and chemical materials, including limestone and gypsum.[2]

Mineral Resource Zones (MRZs) were initially mapped in 1980 because of the Surface Mining and Reclamation Act (SMARA) of 1975. MRZs are designated into four classes that indicate the potential for a specific area to contain significant mineral resources:

- **MRZ-1:** Areas where available geological information indicated there is little or no likelihood for presence of significant mineral resources.

1 California Department of Conservation. 2019. California Non-Fuel Mineral Production 2019. Available online at: https://www.conservation.ca.gov/cgs/Documents/Minerals/california-non-fuel-mineral-production-2019-a11y.pdf. Accessed August 15, 2022.

2 California Department of Conservation. 2019. California Non-Fuel Mineral Production 2019. Available online at: https://www.conservation.ca.gov/cgs/Documents/Minerals/california-non-fuel-mineral-production-2019-a11y.pdf. Accessed August 15, 2022.

- **MRZ-2:** Areas underlain by mineral deposits where geological data indicate that significant measured or indicated resources are present or where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists.
- **MRZ-3:** Areas containing known mineral occurrences of undetermined mineral resources significance.
- **MRZ-4:** Areas of known mineral occurrences where geological information does not rule out the presence or absence of significant mineral resources.

The Plan Area is designated as MRZ-1 and MRZ-3 according to California Department of Conservation maps.[3]

Mineral Resources Project

To organize active and historic mining data as mandated by the SMARA, the California Department of Conservation created the Mineral Resources Project, to provide information about California's non-fuel mineral resources. Under the project, the California Geological Survey (CGS) classifies lands that contain regionally significant mineral resources and then develops objective maps and reports to be used by mining companies and consultants, government agencies, and the public to recognize, utilize, and protect California's mineral resources.

The Mineral Resources Project divides non-fuel mineral resources into three categories: metals (including gold, silver, iron and copper), industrial minerals (like clays, limestone, and gypsum), and construction aggregate (sand, gravel, and crushed stone).[4]

3.12.2 REGULATORY FRAMEWORK

3.12.2.1 Federal

Indian Mineral Development Act of 1982

The Indian Mineral Development Act of 1982 (25 U.S. Code [USC] 2101–2108) permits Indian tribes, through the Secretary of the Interior, to enter into a Minerals Agreement for the disposition of tribal mineral resources. A Minerals Agreement provides for the exploration for or extraction of oil, gas, uranium, coal,

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3 California Department of Conservation. 1996. Generalized Mineral Land Classicization Map of the South San Francisco Bay Production-Consumption Region. Available online at: https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc. Accessed August 15, 2022.

4 California Department of Conservation. 2019. California Non-Fuel Mineral Production 2019. Available online at: https://www.conservation.ca.gov/cgs/Documents/Minerals/california-non-fuel-mineral-production-2019-a11y.pdf. Accessed August 15, 2022.

geothermal, or other energy or non-energy mineral resources for tribes that own a beneficial or restricted interest or provide for the sale or production of tribal mineral resources.[5]

3.12.2.2 State

Surface Mining and Reclamation Act of 1975

The SMARA (Public Resources Code [PRC] 2710–2796) requires that the State Department of Mines and Geology Board map areas throughout the state that contain regionally significant mineral resources. Construction aggregate resources (sand and gravel) deposits were the first commodity selected for classification by the Board. Once mapped, the Mines and Geology Board is required to designate for future use those areas that contain aggregate deposits that are of prime importance in meeting the region's future need for construction-quality aggregates. The primary objective of SMARA is for each jurisdiction to develop policies that would conserve important mineral resources, where feasible, that might otherwise be unavailable when needed. SMARA requires that once policies are adopted, local agency land use decisions must be in accordance with its mineral resource management policies. These decisions must also balance the mineral value of the resource to the market region, not just their importance to the local jurisdiction.[6]

3.12.3 THRESHOLDS OF SIGNIFICANCE

For the purposes of this EIR, the Proposed Master Plan would result in significant adverse impacts to mineral resources if implementation of the Proposed Master Plan would result in any of the following:

- Result in the loss of availability of a known mineral resource that would be of value to the and the residents of the state.
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

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5 U.S. Congress. *S. 1894 – Indian Mineral Development Act of 1982.* Available online at: https://www.congress.gov/bill/97th-congress/senate-bill/1894. Accessed August 15, 2022.

6 California Department of Conservation. 2018. *Surface Mining and Reclamation Act of 1975 Statues and Regulations*. Available online at: https://www.conservation.ca.gov/smgb/Regulations/Documents/SMARA-statutes-regs-7-2018.pdf. Accessed August 15, 2022.

3.12.4 METHODOLOGY

A significant impact would occur if the proposed project would result in the loss of availability of a known mineral resource of regional or statewide value. The Plan Area boundaries were analyzed to determine if the Proposed Master Plan is located within a mineral resource deposit area.

3.12.5 ENVIRONEMNTAL IMPACTS

Impact MIN-1 Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

A significant impact would occur if the Proposed Master Plan would result in the loss of availability of a known mineral resource of regional or statewide value. According to the *City of Sunnyvale General Plan Land Use and Transportation Element EIR*, there are no active mines and no known areas with mineral resource deposits in the city.[7] Furthermore, the State Division of Mines and Geology has not designated the Plan Area as a classified mineral resource deposit area.[8] Due to the urban nature of Plan Area, it is unlikely that mineral resources will be discovered and utilized in the future. The Proposed Master Plan would not involve any oil or mineral extraction activities. Therefore, implementation of the Proposed Master Plan would not result in the loss of availability of a mineral resource that would be of value to the residents of the state or a locally important mineral resource, or mineral resource recovery site, as delineated on a local general plan, specific plan, or land use plan. Therefore, no impact associated with mineral resources would occur.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

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7 City of Sunnyvale. 2016. *Land Use and Transportation Element Draft EIR*. Available online at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/608/637819113538930000. Accessed August 15, 2022.

8 California Department of Conservation. 1996. Generalized Mineral Land Classicization Map of the South San Francisco Bay Production-Consumption Region. Available online at: https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc. Accessed August 15, 2022.

Level of Significance After Mitigation

No Impact.

Impact MIN-2 **Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

As noted above, there are no areas in the Plan Area or City that are classified as mineral resource deposit areas. The Proposed Master Plan would not involve oil or mineral extraction activities. *No impact* would occur.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No Impact.

3.12.6 CUMULATIVE IMPACTS

As noted under **Impact MIN-1** and **Impact MIN-2**, the Proposed Master Plan is not located within a mineral resource zone and would have no impacts on the loss of availability of a mineral of value to the region or residents of the state. As such, the Proposed Master Plan would not combine with other development projects in the area to have any cumulative impacts.

3.12.7 REFERENCES

California Department of Conservation. 1996. Generalized Mineral Land Classicization Map of the South San Francisco Bay Production-Consumption Region. Available online at: https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc. Accessed August 15, 2022.

California Department of Conservation. 2019. California Non-Fuel Mineral Production 2019. Available online at: https://www.conservation.ca.gov/cgs/Documents/Minerals/california-non-fuel-mineral-production-2019-a11y.pdf. Accessed August 15, 2022.

City of Sunnyvale. 2016. *Land Use and Transportation Element Draft EIR*. Available online at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/608/637819113538930000. Accessed August 15, 2022.

U.S. Congress. *S. 1894 – Indian Mineral Development Act of 1982.* Available online at: https://www.congress.gov/bill/97th-congress/senate-bill/1894. Accessed August 15, 2022.

3.13 NOISE AND VIBRATION

INTRODUCTION

The purpose of this report is to evaluate the potential for noise and groundborne vibration impacts resulting from implementation of the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan"). This report includes an evaluation of potential impacts associated with substantial temporary and permanent increases in ambient noise levels in the vicinity of the Plan Area; exposure of people in the vicinity of the Plan Area to excessive noise or groundborne vibration levels; and whether exposure is in excess of any applicable standards. Mitigation measures intended to reduce noise and vibration impacts are proposed, where appropriate, to avoid or reduce potentially significant impacts of the Proposed Master Plan. Noise modeling conducted for the project is contained within ***Appendix 3.13-1*** *of this EIR.*

3.13.1 FUNDAMENTALS OF NOISE AND VIBRATION

3.13.1.1 Characteristics of Noise

Noise is usually defined as unwanted sound that is an undesirable byproduct of society's normal day-to-day activities. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm, and/or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). The human ear does not respond uniformly to sounds at all frequencies. For example, the human ear is less sensitive to low and high frequencies than medium frequencies, which more closely correspond with human speech. In response to the sensitivity of the human ear to different frequencies, the A-weighted noise level (or scale), which corresponds better with people's subjective judgment of sound levels, has been developed. This A-weighted sound level, referenced in units of dB(A), is measured on a logarithmic scale such that a doubling of sound energy results in a 3 dB(A) increase in noise level. Typically, changes in a community noise level of less than 3 dB(A) are not noticed by the human ear.[1] Changes from 3 to 5 dB(A) may be noticed by some individuals who are sensitive to changes in noise. A greater than 5 dB(A) increase is readily noticeable, while the human ear perceives a 10 dB(A) increase in sound level to be a doubling of sound.

On the A-weighted scale, the range of human hearing extends from approximately 3 to 140 dB(A). **Table 3.13-1, A-Weighted Decibel Scale**, provides examples of A-weighted noise levels from common sources. Noise sources occur in two forms: (1) point sources, such as stationary equipment or individual motor vehicles; and (2) line sources, such as a roadway with a large number of point sources (motor vehicles).

1 California Department of Transportation. Technical Noise Supplement to the Traffic Noise Analysis Protocol. 2013. Available online at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf, accessed July 27, 2022.

Sound generated by a point source typically diminishes (attenuates) at a rate of 6 dB(A) for each doubling of distance from the source to the receptor at acoustically "hard" sites and 7.5 dB(A) at acoustically "soft" sites.[2,3] For example, if a noise source produces a noise level of 89 dB(A) at a reference distance of 50 feet, the noise level would be 83 dB(A) at a distance of 100 feet from the noise source, 77 dB(A) at a distance of 200 feet, and so on. Noise generated by a mobile source will decrease by approximately 3 dB(A) over hard surfaces and 4.5 dB(A) over soft surfaces for each doubling of distance.[4]

Table 3.13-1
A-Weighted Decibel Scale

Typical A-Weighted Sound Levels	Sound Level (dB(A), Leq)
Threshold of Pain	140
Jet Takeoff at 100 Meters	125
Jackhammer at 15 Meters	95
Heavy Diesel Truck at 15 Meters	85
Conversation at 1 Meter	60
Soft Whisper at 2 Meters	35

Source: United States Occupational Safety & Health Administration, Noise and Hearing Conservation Technical Manual, 1999.

Sound levels also can be attenuated by man-made or natural barriers (e.g., sound walls, berms, and ridges), as well as elevational differences. Noise is most audible when traveling by direct line-of-sight, an uninterrupted visual path between the noise source and noise receptor. Barriers, such as walls or buildings that break the line-of-sight between the source and the receiver, can greatly reduce noise levels from the source since sound can only reach the receiver by diffraction. However, if a barrier is not high or long enough to break the line-of-sight from the source to the receiver, its effectiveness is greatly reduced.

3.13.1.2 Sound Rating Scales

Various rating scales approximate the human subjective assessment to the "loudness" or "noisiness" of a sound. Noise metrics have been developed to account for additional parameters, such as duration and

2 Federal Highway Administration. *Highway Traffic Noise: Analysis and Abatement Guidance.* 2011. Available online: https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf, accessed July 27, 2022.

3 Examples of "hard" or reflective sites include asphalt, concrete, and hard and sparsely vegetated soils. Examples of acoustically "soft" or absorptive sites include soft, sand, plowed farmland, grass, crops, heavy ground cover, etc.

4 Federal Highway Administration. *Highway Traffic Noise: Analysis and Abatement Guidance.* 2011. Available online: https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf, accessed July 27, 2022.

cumulative effect of multiple events. Noise metrics are categorized as single event metrics and cumulative metrics, as summarized below.

In order to simplify the measurement and computation of sound loudness levels, frequency weighted networks have obtained wide acceptance. The A-weighted scale, discussed above, has become the most prominent of these scales and is widely used in community noise analysis. Its advantages are that it has shown good correlation with community response and is easily measured. The metrics used in this analysis are all based upon the dB(A) scale.

Equivalent Noise Level

Equivalent Noise Level (Leq) is the sound level corresponding to a steady-state A-weighted sound level containing the same total energy as several single event noise exposure level events during a given sample period. Leq is the "acoustic energy" average noise level during the period of the sample. It is based on the observation that the potential for noise annoyance is dependent on the total acoustical energy content of the noise. The equivalent noise level is expressed in units of dB(A). Leq can be measured for any period, but is typically measured for 15 minutes, 1 hour, or 24 hours. Leq for a 1-hour period is used by the Federal Highway Administration (FHWA) for assessing highway noise impacts. Leq for 1 hour is referred to as the Hourly Noise Level (HNL) in the California Airport Noise Regulations and is used to develop Community Noise Equivalent Level values for aircraft operations. Construction noise levels and ambient noise measurements in this section use the Leq scale.

Community Noise Equivalent

Community Noise Equivalent Level (CNEL) is a 24-hour, time-weighted energy average noise level based on the A-weighted decibel. It is a measure of the overall noise experienced during an entire day. The term "time-weighted" refers to the penalties attached to noise events occurring during certain sensitive periods. In the CNEL scale, 5 dB are added to measured noise levels occurring between the hours of 7:00 P.M. and 10:00 P.M. For measured noise levels occurring between the hours of 10:00 P.M. and 7:00 A.M., 10 dB are added. These decibel adjustments are an attempt to account for the higher sensitivity to noise in the evening and nighttime hours and the expected lower ambient noise levels during these periods.

Day-Night Average Noise Level

The day-night average sound level (Ldn) is another average noise level over a 24-hour period. Noise levels occurring between the hours of 10:00 P.M. and 7:00 A.M. are increased by 10 decibels (dB). This

noise is weighted to consider the decrease in community background noise of 10 dB(A) during this period. Noise levels measured using the Ldn scale are typically similar to CNEL measurements.

3.13.1.3 Adverse Effects of Noise Exposure

Noise is known to have several adverse effects on humans, which has led to laws and standards being set to protect public health and safety, and to ensure compatibility between land uses and activities. Adverse effects of noise on people include hearing loss, communication interference, sleep interference, physiological responses, and annoyance. Each of these potential noise impacts on people is briefly discussed in the following narrative.

Hearing Loss

Hearing loss is generally not a community noise concern, even near a major airport or a major freeway. The potential for noise-induced hearing loss is more commonly associated with occupational noise exposures in heavy industry, very noisy work environments with long-term exposure, or certain very loud recreational activities (e.g., target shooting and motorcycle or car racing). The Occupational Safety and Health Administration (OSHA) identifies a noise exposure limit of 90 dB(A) for 8 hours per day to protect from hearing loss (higher limits are allowed for shorter duration exposures). Noise levels in neighborhoods, even in very noisy neighborhoods, are not sufficiently loud enough to cause hearing loss.

Communication Interference

Communication interference is one of the primary concerns in environmental noise. Communication interference includes speech disturbance and intrusion with activities such as watching television. Noise can also interfere with communications such as within school classrooms. Normal conversational speech is in the range of 60 to 65 dB(A) and any noise in this range or louder may interfere with speech.

Sleep Interference

Noise can make it difficult to fall asleep, create momentary disturbances of natural sleep patterns by causing shifts from deep to lighter stages, and cause awakening. Noise may even cause awakening that a person may or may not be able to recall.

Physiological Responses

Physiological responses are those measurable effects of noise on people that are realized as changes in pulse rate, blood pressure, and other physical changes. Studies to determine whether exposure to high

noise levels can adversely affect human health have concluded that, while a relationship between noise and health effects seems plausible, there is no empirical evidence of the relationship.

3.13.1.4 Characteristics of Vibration

Vibration consists of waves transmitted through solid material. Groundborne vibration propagates from a source through the ground to adjacent buildings by surface waves. Vibration may comprise a single pulse, a series of pulses, or a continuous oscillatory motion. The frequency of a vibrating object describes how rapidly it is oscillating and is measured in hertz (Hz). Most environmental vibrations consist of a composite, or "spectrum" of many frequencies, and are generally classified as broadband or random vibrations. The normal frequency range of most groundborne vibration that can be felt generally starts from a low frequency of less than one Hz to a high of about 200 Hz. Vibration is often measured in terms of the peak particle velocity (PPV) in inches per second (in/sec) when considering impacts on buildings or other structures, as PPV represents the maximum instantaneous peak of vibration that can stress buildings. Because it is a representation of acute vibration, PPV is often used to measure the temporary impacts of short-term construction activities that could instantaneously damage existing structures. Vibration is often also measured by the Root Mean Squared (RMS) because it best correlates with human perception and response. Specifically, RMS represents "smoothed" vibration levels over an extended period of time and is often used to gauge the long-term chronic impact of a project's operation on the adjacent environment. RMS amplitude is the average of a signal's squared amplitude. It is most commonly measured in decibel notation (VdB).

Vibration energy attenuates as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source. High frequency vibrations reduce much more rapidly than low frequencies, so that in the far-field from a source, the low frequencies tend to dominate. Soil properties also affect the propagation of vibration. When groundborne vibration interacts with a building, there is usually a ground-to-foundation coupling loss (i.e., the foundation of the structure does not move in sync with the ground vibration), but the vibration can also be amplified by the structural resonances of the walls and floors. Vibration in buildings is typically perceived as rattling of windows or items on shelves, or the motion of building surfaces. At high levels, vibration can result in damage to structures.

Manmade groundborne vibration is generally limited to areas within a few hundred feet of certain types of construction activities, especially pile driving. Road vehicles rarely create enough groundborne vibration to be perceptible to humans unless the road surface is poorly maintained and there are potholes or bumps. If traffic induces perceptible vibration in buildings, such as window rattling or shaking of small loose items (typically caused by heavy trucks in passing), then it is most likely an effect of low-frequency airborne noise or ground characteristics.

3.13.2 ENVIRONMENTAL SETTING

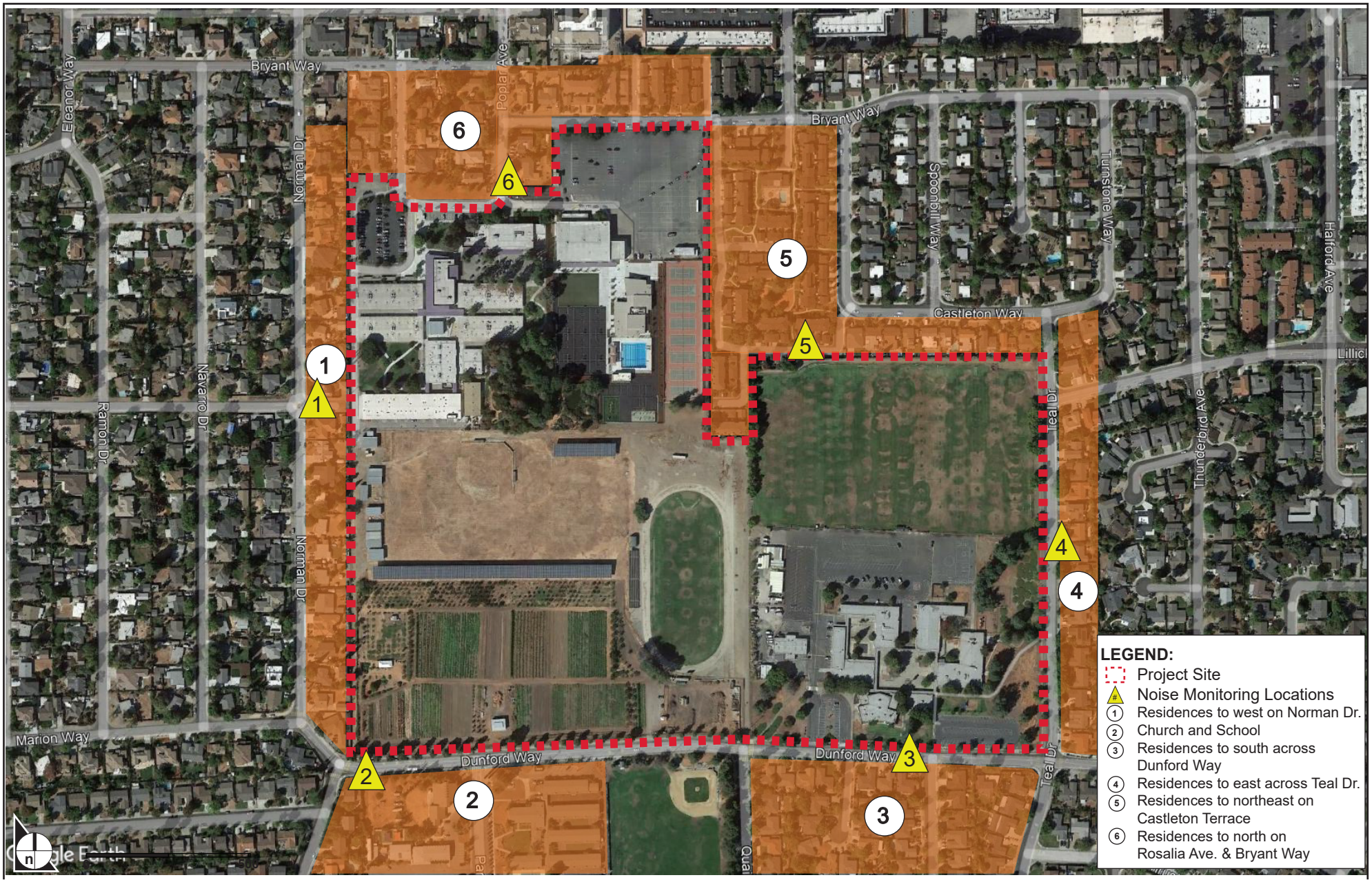
3.13.2.1 Existing Ambient Noise Levels

To establish baseline noise conditions, existing noise levels were monitored at six locations in the vicinity of the Plan Area. The locations of the noise measurements are depicted in **Figure 3.13-1, Noise Monitoring and Sensitive Receptor Location Map**. The noise survey was conducted in July 2022 using the Larson Davis SoundTrack LxT (Type 1) sound level meter, which conforms to industry standards set forth in ANSI S1.4-1983 (R2006) – Specification for Sound Level Meters/Type 1. This instrument was calibrated and operated according to the manufacturer's written specifications. At the measurement sites, the microphone was placed at a height of approximately five feet above grade. The results of the measurements are summarized in **Table 3.13-2, Existing Noise Levels in the Vicinity of the Plan Area**. As shown in **Table 3.13-2**, the daytime ambient noise levels ranged from 48.8 dBA Leq to 58.6 dBA Leq in the vicinity the Plan Area.

Table 3.13-2
Existing Noise Levels in the Vicinity of the Plan Area

Noise Monitoring Locations	Primary Noise Sources	Noise Levels (dBA)		
		Leq	Lmin	Lmax
1. Intersection of Norman Drive and Elizabeth Way	Traffic, Roadway Construction Activity along Norman Drive	53.4	40.8	77.7
2. Dunford Way east of Oriole Avenue	Traffic, Neighborhood Activity	58.2	39.5	82.6
3. Intersection of Dunford Way and Lochinvar Avenue	Traffic, Neighborhood Activity	58.6	39.5	72.8
4. 1400 Block of Teal Drive	Traffic, Neighborhood Activity	58.1	37.1	75.8
5. 1035 Castleton Terrace	Traffic, Neighborhood Activity	48.8	39.3	66.4
6. Intersection of Rosalia Avenue and Poplar Avenue	Traffic, Neighborhood Activity	55.2	51.4	72.8

Source: Impact Sciences, Inc., July 2022. See Appendix 3.13-1: Noise and Vibration Technical Data.



SOURCE: Google Earth, 2022

FIGURE **3.13-1**

IMPACT SCIENCES

Noise Monitoring and Sensitive Receptor Location Map

3.13.2.2 Existing Groundborne Vibration

The main sources of groundborne vibration near the Plan Area are heavy-duty vehicular travel (e.g., refuse trucks, delivery trucks, and transit buses) on local roadways. Trucks and buses typically generate groundborne vibration velocity levels of around 63 VdB at 50 feet, and these levels could reach 72 VdB where trucks and buses pass over bumps in the road.[5] In terms of PPV levels, a heavy-duty vehicle traveling at a distance of 50 feet can result in a vibration level of approximately 0.001 inch per second.

3.13.2.4 Noise Sensitive Receptors

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for individuals to be exposed to increased and prolonged exposure to both interior and exterior noise levels. Land uses such as parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. The closest noise-sensitive receptors to the Plan Area include (1) adjacent residences to the west along Norman Drive; (2) Raynor Park Christian Church, and BASIS Independent Silicon Valley Lower School to the south across Dunford Way; (3) residences to the south across Dunford Way; (4) residences to the east across Teal Drive; (5) adjacent residences to the northeast along Castleton Terrace, Roadrunner Terrace, and Castleton Way; and (6) adjacent residences to the north along Rosalia Avenue, Poplar Avenue, and Bryant Way (see **Figure 3.13-1, Noise Monitoring and Sensitive Receptor Location Map).**

3.13.3 REGULATORY FRAMEWORK

3.13.3.1 Federal Laws and Regulations

Currently, no federal noise standards regulate environmental noise associated with short-term construction or the long-term operations of development projects.

Federal Transit Administration Vibration Guidance

The Federal Transit Administration (FTA) has published guidance relative to vibration impacts. Construction vibration damage criteria are assessed based on structural category (e.g., reinforced-

5 Federal Transit Administration. *Transit Noise and Vibration Impact Assessment Manual.* 2018. Available online at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, accessed August 2, 2022.

concrete, steel, or timber). The FTA guidelines consider 0.2 inch/sec PPV to be the significant impact level for non-engineered timber and masonry buildings. Structures or buildings constructed of reinforced concrete, steel, or timber have a vibration damage criterion of 0.5 inch/sec PPV pursuant to FTA guidelines.[6] The FTA guidelines include a table showing the vibration damage criteria based on structural category and is presented below in **Table 3.13-3, Construction Vibration Damage Criteria.**

Table 3.13-3
Construction Vibration Damage Criteria

Building/Structural Category	PPV, in/sec
I. Reinforced-concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

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

3.13.3.2 State Laws and Regulations

Title 24, California Code of Regulations

The California Noise Insulation Standards of 1988 (California Code of Regulations Title 24, Section 3501 et seq.) require that interior noise levels from the exterior sources not exceed 45 dBA Ldn/community noise equivalent level (CNEL)[7] in any habitable room of a multi-residential use facility (e.g., hotels, motels, dormitories, long-term care facilities, and apartment houses and other dwellings, except detached single-family dwellings) with doors and windows closed. Where exterior noise levels exceed 60 dBA CNEL/Ldn, an acoustical analysis is required to show that the building construction achieves an interior noise level of 45 dBA CNEL/Ldn or less. Compliance is required for newly constructed buildings and additions and alterations to existing buildings.

Title 5, California Code of Regulations

The Standards, Planning and Approval of School Facilities (California Code of Regulations, Title 5, Section 14030 et seq.) provides standards for new schools. Hearing conditions shall complement the

6 Federal Transit Administration. *Transit Noise and Vibration Impact Assessment Manual*. 2018. Available online at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, accessed August 2, 2022.

7 Measurements are based on Ldn or CNEL.

educational function of the building. Specifically, spaces must permit instructional activities to take place; sounds transmitted should not interfere with adjoining instructional spaces; and the ventilation system should not transmit an inordinate sound level to the instructional program.

3.13.3.3 Local Plans and Policies

The SCUSD does not have adopted noise standards. While school districts are not subject to local zoning or general plan requirements, the City of Sunnyvale's criteria provide a measure of acceptability for community noise in Sunnyvale and can be used to identify potential land use compatibility conflicts related to noise.

City of Sunnyvale General Plan Safety and Noise Element

The Safety and Noise Element of the *General Plan* is a comprehensive program for including noise management in the planning process, providing a tool for planners to use in achieving and maintaining land uses that are compatible with existing and future environmental noise levels. The Safety and Noise Element includes information on existing and projected noise conditions with policies and programs to maintain or reduce noise from transportation, land use operations and single-event noise. The Safety and Noise Element of the *City of Sunnyvale General Plan* contains goals and policies that relate to noise. Applicable Goals and Policies include:[8]

Goal SN-8: Maintain or achieve a compatible noise environment for all land uses in the community.

Policy SN-8.4: Prevent significant noise impacts from new development by applying State noise guidelines and Sunnyvale Municipal Code noise regulations in the evaluation of land use issues and proposals.

Policy SN-8.5: Comply with "State of California Noise Guidelines for Land Use Planning" (shown as **Table 3.13-4** below) for the compatibility of land uses with their noise environments, except where the City determines that there are prevailing circumstances of a unique or special nature.

8 City of Sunnyvale. *General Plan Safety and Noise Element.* 2011. Available online at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/602/637819113526630000, accessed August 2, 2022.

Policy SN-8.6: Use Figure 6-6 of the *General Plan*, "Significant Noise Impacts from new Development on Existing Land Use" to determine if proposed development results in a "significant noise impact" on existing development.[9]

Policy SN-8.9: Consider techniques which block the path of noise and insulate people from noise.

Table 3.13-4
Noise and Land Use Compatibility Guidelines (City of Sunnyvale Safety and Noise Element)

Land Use Category	Exterior Noise Exposure (dB, L_{dn} or CNEL)					
	55	60	65	70	75	80
Residential, Hotels and Motels						
Outdoor sports and recreation, neighborhood parks and playgrounds						
Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches						
Office Buildings, Commercial and Professional Businesses						
Auditoriums, Concert Halls, Amphitheaters						
Industrial, Manufacturing, Utilities and Agriculture						

Normally Acceptable - Specified Land Use is satisfactory, based on the assumption that any buildings involved are of normal conventional construction, without any special insulation requirements.

Conditionally Acceptable - Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features are included in the design.

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

**Please note that these guidelines are general and may not apply to specific sites.*
Source: City of Sunnyvale. General Plan Safety and Noise Element. Figure 6-5.

9 Figure 6-6 of the *Sunnyvale General Plan Safety and Noise Element* summarizes what increase of existing noise levels would be considered "significant". Generally, if existing development is within the normally acceptable category, an increase of more than 3 dBA that causes the total Ldn to exceed the "normally acceptable" category would be considered significant. Furthermore, an increase in 5 dBA for development in the "normally acceptable" category and 3 dBA for the "Conditionally Acceptable" and "Unacceptable" categories would be considered significant.

City of Sunnyvale Municipal Code

The City of Sunnyvale Municipal Code (SMC) sets noise standards for construction (Title 16), and operation (Title 19), equipment and maintenance as follow:[10]

16.08.030 Hours of Construction – Time and noise limitations

Construction activity shall be permitted between the hours of seven a.m. and six p.m. daily Monday through Friday. Saturday hours of operation shall be between eight a.m. and five p.m. There shall be no construction activity on Sunday or federal holidays when city offices are closed.

No loud environmentally disruptive noises, such as air compressors without mufflers, continuously running motors or generators, loud playing musical instruments, radios, etc., will be allowed where such noises may be a nuisance to adjacent residential neighborhoods.

Exceptions:

a) Construction activity is permitted for detached single-family residential properties when the work is being performed by the owner of the property, provided no construction activity is conducted prior to seven a.m. or after seven p.m. Monday through Friday, prior to eight a.m. or after seven p.m. on Saturday and prior to nine a.m. or after six p.m. on Sunday and national holidays when city offices are closed. It is permissible for up to two persons to assist the owner of the property so long as they are not hired by the owner to perform the work. For purposes of this section, "detached single-family residential property" refers only to housing that stands completely alone with no adjoining roof, foundation or sides.

b) As determined by the chief building official:

1. *No loud environmentally disruptive noises, such as air compressors without mufflers, continuously running motors or generators, loud playing musical instruments, radios, etc., will be allowed where such noises may be a nuisance to adjacent properties.*

2. *Where emergency conditions exist, construction activity may be permitted at any hour or day of the week. Such emergencies shall be completed as rapidly as possible to prevent any disruption to other properties.*

3. *Where additional construction activity will not be a nuisance to surrounding properties, based on location and type of construction, a waiver may be granted to allow hours of construction other than as stated in this section.*

19.42.030 Noise or sound level

a) Operational noise shall not exceed seventy-five dBA at any point on the property line of the premises upon which the noise or sound is generated or produced; provided, however, that the

10 City of Sunnyvale. Municipal Code. Available online at: https://library.qcode.us/lib/sunnyvale_ca/pub/municipal_code, accessed August 3, 2022.

noise or sound level shall not exceed fifty dBA during nighttime or sixty dBA during daytime hours at any point on adjacent residentially zoned property. If the noise occurs during nighttime hours and the enforcing officer has determined that the noise involves a steady, audible tone such as a whine, screech or hum, or is a staccato or intermittent noise (e.g., hammering) or includes music or speech, the allowable noise or sound level shall not exceed forty-five dBA.

b) Powered equipment used on a temporary, occasional or infrequent basis which produces a noise greater than the applicable operational noise limit set forth in subsection (a) shall be used only during daytime hours when used adjacent to a property with a residential zoning district. Powered equipment used on other than a temporary, occasional or infrequent basis shall comply with the operational noise requirements. For the purpose of this section, powered equipment does not include leaf blowers. Construction activity regulated by Title 16 of this code shall not be governed by this section.

c) It is unlawful for any person to make or allow to be made a nighttime delivery to a commercial or industrial establishment when the loading/unloading area of the establishment is adjacent to a property in a residential zoning district. Businesses legally operating at a specific location as of February 1, 1995, are exempt from this requirement.

d) A "leaf blower" is a small, combustion engine-powered device used for property or landscape maintenance that can be hand-held or carried on the operator's back and which operates by propelling air under pressure through a cylindrical tube. It is unlawful for any person to operate a leaf blower on private property in or adjacent to a residential area except between the hours of 8:00 a.m. and 8:00 p.m. Effective January 1, 2000, all leaf blowers operated in or adjacent to a residential area shall operate at or below a noise level of sixty-five dBA at a distance of fifty feet, as determined by a test conducted by the American National Standards Institute or an equivalent. The dBA rating shall be prominently displayed on the leaf blower.

3.13.4 THRESHOLDS OF SIGNIFICANCE

Pursuant to Appendix G of the *State CEQA Guidelines*, potentially significant noise and vibration impacts would occur if implementation of the Proposed Master Plan would 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.
- Generation of excessive groundborne vibration or groundborne noise levels.
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

The *State CEQA Guidelines* do not define the levels at which groundborne vibration or groundborne noises are considered "excessive." Thus, in terms of construction-related vibration impacts on buildings, the adopted guidelines and recommendations by the FTA to limit groundborne vibration based on the age and/or condition of the structures that are located in close proximity to construction activity are used in this analysis to evaluate potential groundborne vibration impacts. Based on the FTA criteria, construction impacts relative to groundborne vibration would be considered significant if the following were to occur:

- Project construction activities would cause a PPV groundborne vibration level to exceed 0.5 inches per second at any building that is constructed with reinforced-concrete, steel, or timber;
- Project construction activities would cause a PPV groundborne vibration level to exceed 0.3 inches per second at any engineered concrete and masonry buildings;
- Project construction activities would cause a PPV groundborne vibration level to exceed 0.2 inches per second at any non-engineered timber and masonry buildings; or
- Project construction activities would cause a PPV ground-borne vibration level to exceed 0.12 inches per second at any historical building or building that is extremely susceptible to vibration damage.

In terms of groundborne vibration impacts associated with human annoyance, this analysis uses the FTA's vibration impact thresholds for sensitive buildings, residences, and institutional land uses under conditions where there are a frequent number of events per day, which would provide for the most conservative vibration analysis. These thresholds are 65 VdB at buildings where vibration would interfere with interior operations, 72 VdB at residences and buildings where people normally sleep, and 75 VdB at other institutional buildings.[11] The 65 VdB threshold applies to typical land uses where vibration would interfere with interior operations, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. The 72 VdB threshold applies to all residential land uses and any buildings where people sleep, such as hotels and hospitals. The 75 VdB threshold applies to institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference.

11 Federal Transit Administration. *Transit Noise and Vibration Impact Assessment Manual*. 2018. Available online at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, accessed August 2, 2022.

The *State CEQA Guidelines* do not define the levels at which noise would be considered substantial increases. Thus, for purposes of this analysis, the Proposed Master Plan would normally have a significant impact on noise levels from project operations if the Proposed Master Plan causes the ambient noise level measured at the property line of affected uses to increase by 3 dBA if the total ambient noise levels without the Proposed Master Plan exceed the *City of Sunnyvale General Plan* exterior noise standards, or any 5 dBA or greater noise increase when total ambient noise levels without the Proposed Master Plan are within the City's *General Plan* exterior noise standards (see "conditionally acceptable" column in **Table 3.13-4** above).

3.13.5 METHODOLOGY

Noise levels associated with project-related construction activities were calculated using the FHWA Roadway Construction Noise Model (RCNM). Noise levels were compared to the City of Sunnyvale's noise ordinance which includes provisions regarding construction noise levels. The analysis does not account for attenuation from intervening structures between construction equipment and receivers and or for soft-site attenuation.

An analysis of traffic noise was conducted to determine if the project would have a perceptible increase in traffic related noise. Studies have shown that a 3 dB(A) increase in sound level pressure is barely detectable by the human ear. A 3 dB(A) increase in roadway noise levels requires an approximate doubling of roadway traffic volume, assuming that travel speeds and fleet mix remain constant.[12]

Construction activities have the greatest potential to generate groundborne vibration affecting nearby receivers. Since groundborne vibration could cause physical damage to structures, vibration impacts were modeled based on the distance from the location of vibration-intensive construction activities, conservatively assumed to be at edge of a development area to the edge of nearby structures. Due to the anticipated construction phasing for the various development sites in the Plan Area, this analysis assumes that construction would potentially occur as close as 25 feet from vibration receptors.

12 California Department of Transportation. Technical Noise Supplement to the Traffic Noise Analysis Protocol. 2013. Available online at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf, accessed July 27, 2022.

3.13.5 ENVIRONMENTAL IMPACTS

Impact NOI-1 **Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.**

Construction Noise

Construction activities under the Proposed Master Plan would result in temporary increases in ambient noise surrounding the Plan Area on an intermittent basis and, as such, would expose nearby sensitive receivers to increased noise levels. The increase in noise at off-site receivers during construction of each phase under the Proposed Master Plan would be temporary in nature and would not generate continuously high noise levels, although occasional single-event disturbances from construction would occur. Construction noise would typically be higher during the heavier periods of initial construction (i.e., demolition and grading work) and reduced in the later construction phases (i.e., interior building construction) because the physical structure of the building would break line-of-sight noise transmission from the construction area to the nearby sensitive receivers. Noise levels would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise source and receivers, and presence or absence of intervening structures, terrain, or other noise attenuation barriers.

Table 3.13-6, Estimated Construction Noise Levels by Phase, shows the maximum expected noise levels at sensitive receptors which are located within the Plan Area. The analysis shows the impacts from each phase of the Proposed Master Plan and associated noise impacts from construction equipment, based on the use of equipment anticipated to be used concurrently during demolition, grading, building construction, and architectural coating.

Table 3.13-5
Estimated Construction Noise Levels by SCUSD Master Plan Phase

Sensitive Land Uses	Distance to Project Site (feet)	Existing Monitored Daytime Ambient Noise Levels [dB(A) Leq]	Estimated Peak Construction Noise Levels[1] [dB(A)]	Peak Noise Level Increase
Phase 1				
1. Residences to the west along Norman Ave.	850	53.4	61.8	8.4
2. Raynor Park Christian Church, BASIS Independent Silicon Valley Lower School, and residences to southwest across Dunford Way	265	58.2	70.0	11.8

Sensitive Land Uses	Distance to Project Site (feet)	Existing Monitored Daytime Ambient Noise Levels [dB(A) Leq]	Estimated Peak Construction Noise Levels[1] [dB(A)]	Peak Noise Level Increase
3. Residences to the south across Dunford Way	65	58.6	84.2	25.6
4. Residences to the east across Teal Dr.	70	58.1	83.5	25.4
5. Residences to the northeast along Castleton Terrace	275	48.8	71.6	22.8
6. Residences to the north along Rosalia Ave. and Bryant Way	800	55.2	62.4	7.2
Phase 2				
1. Residences to the west along Norman Ave.	25	53.4	92.3	38.9
2. Raynor Park Christian Church, BASIS Independent Silicon Valley Lower School, and residences to southwest across Dunford Way	470	58.2	66.8	8.6
3. Residences to the south across Dunford Way	700	58.6	63.4	4.8
4. Residences to the east across Teal Dr.	70	58.1	83.4	25.3
5. Residences to the northeast along Castleton Terrace	25	48.8	92.3	43.5
6. Residences to the north along Rosalia Ave. and Bryant Way	25	55.2	92.3	37.1
Phase 3				
1. Residences to the west along Norman Ave.	235	53.4	71.1	17.7
2. Raynor Park Christian Church, BASIS Independent Silicon Valley Lower School, and residences to southwest across Dunford Way	1,000	58.2	58.5	0.3
3. Residences to the south across Dunford Way[1]	1,330	58.6	56.1	--
4. Residences to the east across Teal Dr.	1,745	58.1	53.7	--
5. Residences to the northeast along Castleton Terrace	680	48.8	61.9	13.1
6. Residences to the north along Rosalia Ave. and Bryant Way	110	55.2	77.7	22.5
Phase 4				
1. Residences to the west along Norman Ave.	290	53.4	69.3	15.9
2. Raynor Park Christian Church, BASIS Independent Silicon Valley Lower School, and residences to southwest across Dunford Way	65	58.2	82.3	24.1
3. Residences to the south across Dunford Way	275	58.6	69.8	11.2
4. Residences to the east across Teal Dr.	1,280	58.1	56.4	--
5. Residences to the northeast along Castleton Terrace	230	48.8	71.3	22.5

Sensitive Land Uses	Distance to Project Site (feet)	Existing Monitored Daytime Ambient Noise Levels [dB(A) Leq]	Estimated Peak Construction Noise Levels[1] [dB(A)]	Peak Noise Level Increase
6. Residences to the north along Rosalia Ave. and Bryant Way	735	55.2	61.2	6.0
Phase 5				
1. Residences to the west along Norman Ave.	1,200	53.4	58.3	4.9
2. Raynor Park Christian Church, BASIS Independent Silicon Valley Lower School, and residences to southwest across Dunford Way	860	58.2	61.2	3.0
3. Residences to the south across Dunford Way	730	58.6	62.6	4.0
4. Residences to the east across Teal Dr.	65	58.1	83.6	25.5
5. Residences to the northeast along Castleton Terrace	25	48.8	91.9	43.1
6. Residences to the north along Rosalia Ave. and Bryant Way	900	55.2	60.8	5.6

Source: Impact Sciences, July 2022. See Appendix 3.13-1 for equipment noise data sheets and assumptions.
1 It should be noted that construction activities would generally not take place at the edge of the project site. As construction equipment moves towards the center of the project site, construction noise would be reduced. For example, residences to the south across Dunford Way would experience peak construction noise levels of 72.5 dBA (as opposed to 84.2 dBA during Phase 1 as shown above) when construction equipment is towards the center of the Phase 1 project site area.

As shown in **Table 3.13-5**, construction activity would generate noise levels up to an estimated 92.3 dB(A) Leq at nearby sensitive land uses during Phase 2 of the Proposed Master Plan. As such, temporary construction noise would exceed existing ambient noise levels measured at the closest sensitive receptors, which were measured ranging from 48.8 dB(A) Leq and 55.2 dB(A) Leq (see **Table 3.13-2**). These estimates are conservative because they assume no attenuation of noise by intervening structures and assume construction activity would be concentrated at the closest phase area boundary to sensitive receptors. It should be noted that construction equipment would not routinely operate along the phase area boundaries, although it is possible during a worst-case scenario. As construction equipment is located closer to the center of a phase area, the construction noise levels experienced by the sensitive receptors would be reduced. For example, during Phase 1, construction noise would reach a peak of 72.5 dB(A) Leq at the residences to the south across Dunford Way when construction activity is generally centered in Phase 1 areas, as compared to the maximum estimated noise level of 84.2 dB(A) Leq when construction equipment is located at the closest point of the sensitive receptors and the Phase 1 boundary.

The Proposed Master Plan construction activities would occur in compliance with Section 16.08.030 of the SMC, which would restrict construction activities to the hours between 7:00 A.M. and 6:00 P.M. on weekdays and 8:00 A.M. and 5:00 P.M. on Saturday. Compliance with the SMC would ensure

construction noise levels would be generated during less sensitive times and days of the week. However, because the Proposed Master Plan would have the potential to increase ambient noise levels at all sensitive receptors during construction (see **Table 3.13-6**), construction noise impacts would be significant.

Level of Significance Before Mitigation

Significant Impact.

Mitigation Measures

MM NOI-1 The SCUSD shall implement the following strategies to reduce construction noise levels to the maximum extent feasible:

- Mufflers. Construction equipment shall be properly maintained and all internal combustion engine driven machinery with intake and exhaust mufflers and engine shrouds, as applicable, shall be in good condition and appropriate for the equipment. During construction, all equipment, fixed or mobile, shall be operated with closed engine doors and shall be equipped with properly operating and maintained mufflers, consistent with manufacturers' standards.

- Electrical Power. Electrical power, rather than diesel equipment, shall be used to run compressors and similar power tools and to power any temporary structures, such as construction trailers.

- Equipment Staging. All stationary equipment shall be staged as far away from the sensitive receptors as feasible.

- Equipment Idling. Construction vehicles and equipment shall not be left idling for longer than five minutes when not in use.

- Workers' Radios. All noise from workers' radios shall be controlled to a point that they are not audible at sensitive receptors near construction activity.

- Smart Back-up Alarms. Mobile construction equipment shall have smart back-up alarms that automatically adjust the sound level of the alarm in response to ambient noise levels. Alternatively, back-up alarms may be disabled and replaced with human spotters to ensure safety when mobile construction equipment is moving in the reverse direction.

- Disturbance Coordinator. Designate a disturbance coordinator who shall be responsible for responding to any local complaints about construction noise. The noise disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and identify remedies to correct the problem. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction sites.

Significance After Mitigation

Implementation of **MM NOI-1** would reduce the Proposed Master Plan's construction noise impacts on sensitive receptors to the maximum extent feasible. However, as temporary construction noise would exceed existing ambient noise levels measured in the Plan Area, this impact is considered *significant and unavoidable*.

Operational Noise

Traffic Noise

As discussed previously, operational noise level increases would be significant if ambient noise levels increase by 3 dBA CNEL to or within the "conditionally acceptable" or "unacceptable" categories, as shown previously in **Table 3.13-4**, or any 5 dBA CNEL or more increase.

Studies have shown that a 3 dB(A) increase in sound level pressure is barely detectable by the human ear. A 3 dB(A) increase in roadway noise levels requires an approximate doubling of roadway traffic volume, assuming that travel speeds and fleet mix remain constant.[13] As discussed in the Focused VMT Analysis prepared for the Proposed Master Plan,[14] the relocation of Laurelwood Elementary School would continue to serve the students from the surrounding neighborhoods. The relocation would continue to be a local-serving use and would be in the same neighborhood as the existing school. The distance between the existing site and the New Laurelwood Elementary School site is approximately 700 feet, and both sites would share access to Teal Drive. Therefore, most of the existing trips would use the same neighborhood streets to access the New Laurelwood Elementary School.

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13 California Department of Transportation. Technical Noise Supplement to the Traffic Noise Analysis Protocol. 2013. Available online at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf, accessed July 27, 2022.

14 Hexagon Transportation Consultants, Inc., *Focused VMT Analysis for the Peterson Middle School, Laurelwood Elementary School, and District Farm Master Pla*n, July 14, 2022. (see Appendix 3.16-1 to this EIR).

The New Laurelwood Elementary School would generate 3,288 trips per day. Most, if not all, of the trips are already on the roadway network during the school year. While these trips may be "new" from the relocated Laurelwood Elementary School, a significant portion of them already occur on Dunford Way, Teal Drive, and other neighborhood streets from the existing Laurelwood Elementary School. As concluded in the Focused VMT Analysis, most, if not all, of these trips are already on the roadway network during the school year. As such, the relocation of the New Laurelwood Elementary School would not double traffic volumes on any roadway segment in the Plan Area, and therefore would not have the potential to generate a 3 dB(A) CNEL noise increase along any roadway segment in the Plan Area. Thus, impacts with respect to operational traffic noise are considered ***less than significant***.

On-Site Noise

Operation of the Proposed Master Plan would generate on-site noise from HVAC equipment, delivery trucks, trash hauling trucks, and typical noise associated with school environments. Noise from HVAC equipment serving Plan Area would typically generate noise in the range of 60 to 70 dB(A) Leq at a reference distance of 15 feet from the source.[15] Noise from HVAC equipment would attenuate at a rate of approximately 6 dB(A) per doubling of distance from the source (i.e., 50 to 60 dB(A) Leq at 50 feet). HVAC equipment within the Plan Area would be located and shielded in compliance with Title 5 – Article 4. Standards, Planning and Approval of School Facilities of for the Design and Construction of School Facilities. Therefore, operational noise impacts associated with HVAC equipment would be *less than significant*.

Other operational noise sources are associated with on-site vehicle circulation. The location of the New Laurelwood Elementary School was originally occupied by Patrick Henry Intermediate School and then subsequently occupied by other institutional, and school uses. While the relocation of the New Laurelwood Elementary School would alter on-site traffic patterns and corresponding noise, the Proposed Master Plan does not introduce new noise sources to the Plan Area. Furthermore, under the Proposed Master Plan the maximum student capacity of the proposed new facilities in and around the site would be approximately 2,621 students, or approximately 745 fewer students than the baseline uses.[16] This would result in a decrease in the total number of vehicular trips entering and departing the Plan Area. Therefore, there would be a corresponding decrease in on-site vehicular noise and impacts would be ***less than significant***.

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15 Illingworth & Rodkin. *Environmental Noise Assessment for Wal-Mart Expansion, Williamson Ranch Plaza – Antioch, California*. Available at: https://www.antiochca.gov/fc/community-development/planning/Walmart/DEIR-VOLII-APPENDICES-C-H/Appendix%20G%20Noise%20Assessment.pdf, accessed August 10, 2022.

16 This excludes the capacity of the existing Laurelwood Elementary School.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Less than Significant Impact.

Impact NOI-2 Generation of excessive groundborne vibration or groundborne noise levels.

Construction activities in accordance with the Proposed Master Plan would intermittently generate vibration in the Plan Area when it reaches building walls and floors of sensitive receptors. Vibration-generating equipment could include bulldozers and loaded trucks to move materials and debris, jackhammers to break apart concrete, and caisson drills to install shoring. **Table 3.13-6, Vibration Levels at Off-Site Sensitive Uses from Construction**, identifies vibration velocity levels at sensitive receptors within the Plan Area based on each development phase.

Table 3.13-6
Vibration Levels at Off-Site Sensitive Uses from Construction

Sensitive Uses[a]	Distance to Project Site (ft.)	Receptor Significance Threshold PPV (in./sec)/RMS (VdB)	Estimated PPV (in/sec)/RMS (VdB)
Phase 1			
1. Residences to the west along Norman Ave.	850	0.5/80	0.000/41
2. Raynor Park Christian Church, BASIS Independent Silicon Valley Lower School, and residences to southwest across Dunford Way	265	0.5/83	0.003/56
3. Residences to the south across Dunford Way	65	0.5/80	0.021/75
4. Residences to the east across Teal Dr.	70	0.5/80	0.019/74
5. Residences to the northeast along Castleton Terrace	275	0.5/80	0.002/56
6. Residences to the north along Rosalia Ave. and Bryant Way	800	0.5/80	0.000/42
Phase 2			
1. Residences to the west along Norman Ave.	25	0.5/80	0.089/87

Sensitive Uses[a]	Distance to Project Site (ft.)	Receptor Significance Threshold PPV (in./sec)/RMS (VdB)	Estimated PPV (in/sec)/RMS (VdB)
2. Raynor Park Christian Church, BASIS Independent Silicon Valley Lower School, and residences to southwest across Dunford Way	470	0.5/83	0.001/49
3. Residences to the south across Dunford Way	700	0.5/80	0.001/44
4. Residences to the east across Teal Dr.	70	0.5/80	0.019/74
5. Residences to the northeast along Castleton Terrace	25	0.5/80	0.089/87
6. Residences to the north along Rosalia Ave. and Bryant Way	25	0.5/80	0.089/87
Phase 3			
1. Residences to the west along Norman Ave.	235	0.5/80	0.003/58
2. Raynor Park Christian Church, BASIS Independent Silicon Valley Lower School, and residences to southwest across Dunford Way	1,000	0.5/83	0.000/39
3. Residences to the south across Dunford Way	1,330	0.5/80	0.000/35
4. Residences to the east across Teal Dr.	1,745	0.5/80	0.000/32
5. Residences to the northeast along Castleton Terrace	680	0.5/80	0.001/44
6. Residences to the north along Rosalia Ave. and Bryant Way	110	0.5/80	0.010/68
Phase 4			
1. Residences to the west along Norman Ave.	290	0.5/80	0.002/55
2. Raynor Park Christian Church, BASIS Independent Silicon Valley Lower School, and residences to southwest across Dunford Way	65	0.5/83	0.021/75
3. Residences to the south across Dunford Way	275	0.5/80	0.002/56
4. Residences to the east across Teal Dr.	1,280	0.5/80	0.000/36
5. Residences to the northeast along Castleton Terrace	230	0.5/80	0.003/58
6. Residences to the north along Rosalia Ave. and Bryant Way	735	0.5/80	0.001/43
Phase 5			
1. Residences to the west along Norman Ave.	1,200	0.5/80	0.000/37
2. Raynor Park Christian Church, BASIS Independent Silicon Valley Lower School, and residences to southwest across Dunford Way	860	0.5/83	0.000/41
3. Residences to the south across Dunford Way	730	0.5/80	0.001/43
4. Residences to the east across Teal Dr.	65	0.5/80	0.021/75

Sensitive Uses[a]	Distance to Project Site (ft.)	Receptor Significance Threshold PPV (in./sec)/RMS (VdB)	Estimated PPV (in/sec)/RMS (VdB)
5. Residences to the northeast along Castleton Terrace	25	0.5/80	0.089/87
6. Residences to the north along Rosalia Ave. and Bryant Way	900	0.5/80	0.000/40

[a] *See **Figure 3.13-1**, **Noise Monitoring and Sensitive Receptor Location Map.***
*Source: Impact Sciences, Inc., August 2022. See **Appendix 3.13-1** to this EIR.*

Based on **Table 3.13-6**, construction equipment could reach levels of 87 VdB at the closest sensitive receptors at the boundary of the Plan Area. The 83 VdB standard for institutional buildings such as schools or churches would not be exceeded. It should be noted that vibration levels experienced in the Plan Area vicinity would be temporary and intermittent and would be reduced when construction activities are located toward the center portion of the Plan Area. The Proposed Master Plan would comply with Section 16.08.030 of the SMC, which regulates construction activity and construction hours. However, because the Proposed Master Plan would have the potential to exceed the residential annoyance standard at sensitive receptors (see **Table 3.13-7**), construction vibration impacts would be ***significant***.

Based on **Table 3.13-6**, construction equipment would reach a maximum of 0.089 PPV (in/sec) at the closest sensitive receptors. These vibration levels would not exceed the 0.5 PPV (in/sec) threshold for building damage. As such, construction vibration impacts associated with building damage would be ***less than significant***.

Level of Significance Before Mitigation

Significant Impact.

Mitigation Measures

See **Mitigation Measure NOI-1**.

Significance After Mitigation

Implementation of **MM NOI-1** would reduce the Proposed Master Plan's construction vibration impacts on sensitive receptors to the maximum extent feasible. However, as temporary construction vibration

levels would exceed the residential annoyance standard at sensitive receptors, construction vibration impacts associated with human annoyance would be considered ***significant and unavoidable***.

Impact NOI-3 **For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.**

The Proposed Master Plan is not in the vicinity of a private airstrip or airport land use plan. The nearest boundary of the Plan Area is approximately 3.75 miles southwest of the San Jose International Airport. As such, the Proposed Master Plan would not expose people residing or working in the Plan Area to excessive airport-related noise levels and ***no impact*** would occur

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

No Impact.

3.13.6 CUMULATIVE IMPACTS

Construction

Construction activities associated with various phases of the Proposed Master Plan may overlap for some time with construction activities for other development projects that are adjacent to, or within, the Plan Area. Typically, if a development site is 500 feet or more away from another site, then noise levels would have attenuated to a point that they would not combine to produce a cumulative noise impact. Therefore, construction noise levels would typically become cumulative if two development sites were to have construction occurring within 500 feet of each other.

Projects located near the Plan Area with the City of Sunnyvale would be required to comply with the daytime construction hours permitted by Section 16.08.030 of the SMC. Therefore, construction noise and

vibration would not disturb receptors during sensitive nighttime hours of sleep. However, larger, or more unusual projects could result in significant short-term increases in noise levels. These projects could combine together, or combine with smaller projects, to substantially increase noise levels at specific land uses. Therefore, the significant and unavoidable construction noise impacts identified for the Proposed Master Plan could add to construction noise impacts associated with cumulative development, especially on the periphery of the Plan Area boundaries where receptors could be exposed to noise sources from construction occurring within and outside the Plan Area. None of the identified projects in **Section 3.0, Environmental Impact Analysis,** are located within 500 feet of the Plan Area boundary.

For a combined vibration impact from simultaneous construction projects to reach cumulatively significant levels, intense construction from these projects would have to occur simultaneously in close proximity to a sensitive receptor. Construction-related vibration under the Proposed Master Plan would not result in additive vibration in combination with cumulative development in most areas surround the Plan Area. However, construction activities near the periphery of the Plan Area could potentially be constructed concurrently with other development adjacent to, but outside the Plan Area, such that intense construction from two or more projects would simultaneously occur in close proximity to existing sensitive receptors. The closest identified off-site sensitive receptors are residences located approximately 25 feet from the Plan Area boundaries at multiple locations surrounding site. Construction activities under the Proposed Plan and other projects in the City of Sunnyvale would be required to comply with Section 16.08.030 of the SMC. However, the construction activity under the Proposed Master Plan could still significantly add to vibration impacts associated with cumulative development on the periphery of the Plan Area and impacts would be significant and unavoidable.

Operation

Stationary noise impacts are localized to a project site and sensitive receptors within the immediate vicinity. Therefore, for stationary noise sources, the cumulative setting is development in the Plan Area and areas immediately adjacent to the Plan Area. Future development in the City of Sunnyvale would include mechanical equipment, traffic noise, trash pick-up, and other noise-generating activities. However, such activities would be typical of the urban environment and any on-site activities for projects within the City would be required to comply with applicable provisions of the municipal code. Sources of stationary noise are generally well-regulated. The potential for any individual site to include a source of stationary noise that would be significant is unlikely and would be speculative to address. Similarly, the potential for overlapping of such sources is unlikely and would also be speculative to address. Therefore, the incremental effect of the Proposed Master Plan with respect to stationary noise sources would not be cumulatively considerable**.**

3.13.7 REFERENCES

California Department of Transportation. Technical Noise Supplement to the Traffic Noise Analysis Protocol. 2013. Available online at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf

City of Sunnyvale. *General Plan Safety and Noise Element*. 2011. Available online at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/602/637819113526630000

City of Sunnyvale. Municipal Code. Available online at: https://library.qcode.us/lib/sunnyvale_ca/pub/municipal_code

Federal Highway Administration. *Highway Traffic Noise: Analysis and Abatement Guidance.* 2011. Available online at: https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf

Federal Transit Administration. *Transit Noise and Vibration Impact Assessment Manual.* 2018. Available online at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

Illingworth & Rodkin. *Environmental Noise Assessment for Wal-Mart Expansion, Williamson Ranch Plaza – Antioch, California*. Available at: https://www.antiochca.gov/fc/community-development/planning/Walmart/DEIR-VOLII-APPENDICES-C-H/Appendix%20G%20Noise%20Assessment.pdf

Impact Sciences, Inc. *Appendix 3.13-1 – Noise and Vibration Technical Data for SCUSD Peterson-Laurelwood Master Plan.* July 2022.

United States Occupational Safety & Health Administration. *Noise and Hearing Conservation Technical Manual*, 1999.

3.14 POPULATION AND HOUSING

INTRODUCTION

This section identifies the regulatory framework with respect to regulations that addresses population and housing and evaluates the significance of the potential changes that could result from implementation of the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan"). In addition, to reduce impacts, mitigation measures are included when applicable. Sources of information used in this section include the Proposed Master Plan, the Unites States Census Bureau (U.S. Census Bureau), the State of California Department of Finance (DOF), and the Association of Bay Area Governments (ABAG).

Note also that no physical changes to the existing Laurelwood Elementary School site are included in the Proposed Master Plan.

3.14.1 ENVIRONMENTAL SETTING

3.14.1.1 Demographic Forecasts

Population numbers for cities and counties are provided by three standard sources: the U.S. Census Bureau, the California DOF and ABAG. Since these three organizations use different methods of data collection and calculation, they do not always arrive at the exact same results.

The U.S. Census Bureau decennial census occurs every 10 years in the years ending in zero to count the population and housing units in the entire United States. While its primary purpose is to provide the population counts that determine how seats in the U.S. House of Representatives are apportioned, the census data forms the basis for which most demographic projections are calculated. The most recent census for which data is available was collected in 2020. The 2020 national census data, which was compiled using answers to surveys sent to all households within the United States, are provided for the nation, all states, and all counties, as well as each individual city. Additionally, the U.S. Census Bureau conducts the American Community Survey annually, to provide updated data estimates between its decennial censuses.

The State of California DOF publishes population and housing estimates, updated yearly, for the state's counties and cities. The DOF estimates population growth based on census data and growth calculations.

ABAG has adopted population, dwelling unit, household, and employment forecasts for the nine-county Bay area region. The Bay area region includes all the cities and unincorporated areas in Santa Clara County. These growth forecasts, which are based on U.S. Census data, were developed by ABAG staff with input from the planning staffs of the County and each pertinent city and are used for regional planning efforts

including the Plan Bay Area 2050. Plan Bay Area 2050 is the region's long-range strategic plan focused on the interrelated elements of housing, the economy, transportation and the environment.

Under Plan Bay Area 2050 the nine-county Bay Area is divided into 34 subcounty areas, called "superdistricts." Superdistricts are combinations of cities, towns and unincorporated areas that allow the public to see the more localized growth pattern in Plan Bay Area 2050. The City of Sunnyvale and the relevant section of the City of Santa Clara (i.e., the area where the Project sites are located) are within Superdistrict 9, North Santa Clara County of Plan Bay Area 2050. In addition to Sunnyvale and Santa Clara, Superdistrict 9 also includes portions of the cities of Mountain View, Milpitas, San Jose, and Palo Alto, as well as some unincorporated areas in Santa Clara County.

3.14.1.2 Population

According to the U.S. Census, the County of Santa Clara's population increased from 1,781,642 persons in 2010 to 1,936,259 persons in 2020.[1] This represents an 8.7 percent increase in County population from 2010 to 2020. According to the U.S .Census, the City of Santa Clara's population increased from 116,468 persons in 2010 to 127,647 persons in 2020.[2] This represents a 9.6 percent increase in City population from 2010 to 2020. According to the U.S. Census the City of Sunnyvale's population increased from 140,081 persons in 2010 to 155,805 persons in 2020, an increase of 11.2 percent.[3] **Table 3.14-1** shows Santa Clara's, Sunnyvale's and the County's population in 2000, 2010, and 2020.

1 U.S. Census Bureau. *Santa Clara County Population Data.* Available online at: https://data.census.gov/cedsci/all?q=Santa%20Clara%20County,%20California, accessed July 15, 2022.

2 U.S. Census Bureau. *City of Santa Clara Population Data.* Available online at: https://data.census.gov/cedsci/all?q=santa%20clara%20city%20population, accessed July 15, 2022.

3 U.S. Census Bureau. *City of Sunnyvale Population Data.* Available online at: https://data.census.gov/cedsci/all?q=Sunnyvale%20city,%20California, accessed July 15, 2022.

Table 3.14-1
Population Growth Trends

Jurisdiction	2000	2010	2020	Percent Change 2000-2020
City of Santa Clara	102,361	116,468	127,647	24.7%
City of Sunnyvale	131,760	140,081	155,805	18.3%
Santa Clara County	1,682,585	1,781,642	1,936,259	15.1%

Source: U.S. Census Bureau. City of Santa Clara Population Data. Available online at: https://data.census.gov/cedsci/all?q=santa%20clara%20city%20population
U.S. Census Bureau. City of Sunnyvale Population Data. Available online at: https://data.census.gov/cedsci/all?q=Sunnyvale%20city,%20California
U.S. Census Bureau. Santa Clara County Population Data. Available online at: https://data.census.gov/cedsci/all?q=Santa%20Clara%20County,%20California, accessed July 15, 2022.

According to the California DOF, the estimated 2022 population within the County of Santa Clara 1,894,783, within the City of Santa Clara the estimated 2022 population is 130,127, and within the City of Sunnyvale the estimated 2022 is approximately 156,234.[4]

3.14.1.4 Growth Forecast

The State of California requires that cities plan for changes in population, housing, and employment. If growth is projected, each city must accommodate a share of anticipated regional growth. ABAG is responsible for producing socio-economic estimates and projections at multiple geographic levels. The socio-economic estimates and projections are used for federal and state mandated long-range planning efforts, such as the Plan Bay Area 2050. In preparing Plan Bay Area 2050, ABAG prepares population, housing, and employment projections in consultation with jurisdictions in the region. These projections are derived from a combination of sources and consider factors such as birth rates; migration rates; historical trends; household size; market and economic projections; existing and planned land uses; and consistency with relevant adopted local, regional, and state land use policies and growth strategies. These growth forecasts provide a good basis from which reasonable determinations can be made about planned growth for both the local (i.e., city and county level) and the regional level.

As discussed in Plan Bay Area 2050, Santa Clara County is poised to see the largest share of regional housing and job growth, primarily in the northeastern and central parts of the county. Between 2015 and

4 California Department of Finance. Demographic Estimates, available online at: https://dof.ca.gov/wp-content/uploads/Forecasting/Demographics/Documents/E-1_2022_InternetVersion.xlsx, accessed July 15, 2022.

2050, 33% of all new households[5] and 36% of all new jobs in the Bay Area are anticipated to be located in Santa Clara County.[6]

3.14.2 REGULATORY FRAMEWORK

Relevant state and local laws and regulations are summarized below. Specific requirements of these laws, regulations, plans, and guidelines might not be up to date when the future phases of the Proposed Master Plan undergo review. Therefore, this section provides a general discussion of the most important plans and policies that apply to the current phase of the Proposed Master Plan. Although some of these may not directly applicable to the Proposed Master Plan, they are included to assist in identifying potential impacts and significance thresholds.

3.14.2.2 State

California Government Code, Sections 7260 et seq.

The California Relocation Assistance Law establishes requirements governing relocation assistance and replacement housing for persons displaced due to public agency projects in California. The relocation statute is intended for the benefit of displaced persons in order to ensure that they receive fair and equitable treatment and do not suffer disproportionately as a result of programs designed for the benefit of the public as a whole.

In the acquisition of real property by a public entity, the Relocation Assistance Law ensures consistent and fair treatment for tenants and property owners. It encourages acquisition by agreement with owners and tenants, rather than condemnation, in order to avoid litigation, relieve congestion in courts, and promote confidence in public land acquisition.

California Code of Regulations, Title 25, Division 1, Chapter 6

The California State Relocation Assistance and Real Property Acquisition Guidelines implement the California Relocation Assistance Law. The guidelines are intended to establish only minimum

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5 A "household" is defined by the U.S. Census Bureau as comprised of an average of 2.60 persons. U.S. Census Bureau. Quick Facts. Available online: https://www.census.gov/quickfacts/fact/table/US/HSD410220, accessed July 19, 2022.

6 Plan Bay Area 2050 Santa Clara County Factsheet, available online at https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_Final_Santa_Clara_County_Factsheet_012822_0.pdf, accessed July 19, 2022.

requirements for relocation assistance and payments. They shall not be construed to limit any other authority or obligation that a public entity may have to provide additional assistance and payments.

Homeowners and Private Property Protection Act

In 2008, California voters approved Proposition 99, the Homeowners and Private Property Protection Act, which amended the California Constitution so that local governments are prohibited from using eminent domain authority to acquire an owner-occupied residence for the purposes of conveying it to a private recipient, with limited exceptions. Proposition 99 applies only to owner-occupied residences, but cities may still use eminent domain authority to convey multi-family and non-residential property to other private parties.

3.14.2.3 Local and Regional

Plan Bay Area 2050

Plan Bay Area 2050 is a long-range transportation, land-use, and housing plan intended to support a growing economy, provide more housing and transportation choices, and reduce transportation related pollution and GHG emissions in the Bay Area. Plan Bay Area 2050 promotes compact, mixed-use residential and commercial neighborhoods near transit, particularly within identified Priority Development Areas (PDAs). ABAG allocates regional housing needs to each city and county within the nine-county San Francisco Bay Area, based on statewide goals. ABAG also develops forecasts for population, households, and economic activity in the Bay Area. ABAG, with the assistance of local jurisdiction planning staff, created the "Final Blueprint Compendium," which provides a regional forecast of jobs, population, and housing upon which Plan Bay Area 2050 is based.

SCUSD Master Plan

The Proposed Master Plan is being developed under the SCUSD Facilities Improvement Bond program. Objectives from the Bond programs include:

Measure BB-2018: A General Obligation Bond approved by voters on November 6, 2018. To construct classrooms, labs, and school libraries to support student achievement, college readiness, and career training in math, science, engineering, technology, and arts;

acquire, renovate, construct, and equip facilities to improve older schools; to fix deteriorating roofs, plumbing and electrical systems.[7]

3.14.3 THRESHOLDS OF SIGNIFICANCE

The following thresholds for determining the significance of impacts related to population and housing are contained in the environmental checklist form contained in Appendix G of the most recent update of the *State CEQA Guidelines*. Adoption and/or implementation of the Proposed Master Plan could result in significant impacts due to the unplanned changes in population and housing, if any of the following would occur:

- Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure).

- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

3.14.4 METHODOLOGY

Population growth is considered in the context of local and regional plans and population, housing, and employment projections. Substantial population growth is an increase in population that is unplanned without consideration of or planning for infrastructure services and housing needs to support new residents, employees, and visitors. The Proposed Master Plan would support enhanced student experience on school facilities and sets the framework for improvements to indoor and outdoor student gathering and learning spaces, campus infrastructure, accessibility, and paths of travel. Proposed improvements under the Master Plan include renovation and modernization of the existing buildings' interiors in order to increase efficiency and maximize learning space. At a project level, the Proposed Master Plan would involve the demolition, and construction of a new elementary school and alternative high school on the Patrick Henry Middle School campus. The Proposed Master Plan does not include the construction or development of housing facilities.

The Proposed Master Plan is intended to meet the needs of projected campus enrollment and associated employee increases through 2030, and beyond. However, it would not, in and of itself, increase the enrollment within the SCUSD. The projected increase in student enrollment could result in an increase of

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7 Santa Clara Unified School District. *Citizen's Independent Oversight Committee*. June 23, 2021. Available online at: https://www.santaclarausd.org/site/handlers/filedownload.ashx?moduleinstanceid=5779&dataid=6918&FileName=Consolidated%20CBOC%20Annual%20Report%202021.pdf, accessed on May 2, 2022.

students and employees living in the vicinity of the Proposed Master Plan. For this analysis, population growth is compared to projected growth planned under Plan Bay Area 2050 by the Association of Bay Area Governments.

3.14.5 ENVIRONMENTAL IMPACTS

Impact POP-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 the extension of roads or other infrastructure)?**

Implementation of the Proposed Master Plan would include improvements to the Peterson Middle School track and field, the demolition of the existing Patrick Henry Middle School buildings, and the construction of the new Laurelwood Elementary school and Alternative High School. Phase 1 of the Proposed Master Plan also includes relocating students from the existing Laurelwood Elementary School facility to the new elementary school. All other phases will be subject to future funding.

The Proposed Master Plan would not directly include the construction or development of housing facilities. Further, Santa Clara USD has decreased in regular education enrollment from 14,806 in October 2017 to 13,589 in October 2021. Future projections (2030) for students within Laurelwood attendance boundary are between 409 and 468.[8] Current enrollment at Laurelwood is 516 students.[9] The future projections include currently planned residential developments, which will be accommodated by the Proposed Master Plan. Therefore, implementation of the Proposed Master Plan will not indirectly cause population growth. The unfunded future phases of the Proposed Master Plan largely focus on facilities improvements and modernization, including enhancing parking and improving and adding to existing physical education amenities. Implementation of these phases would not expand enrollment capacity and would not expand operational employment. Such projects would generate short-term construction employment; however, such construction employment is expected to be absorbed from the regional labor force rather than attracting new workers into the region. As a result, the Proposed Master Plan would result in a less-than-significant impact.

Level of Significance Before Mitigation

Less Than Significant Impact.

8 Santa Clara Unified School District. Laurelwood Capacity Scenarios. May 2022. Available online at: https://www.santaclarausd.org/cms/lib/CA49000000/Centricity/Domain/95/2022.05.03%20Presentation%20-%20Laurelwood%20Capacity%20Scenarios.pdf , accessed July 13, 2022.

9 Ibid.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact POP-2 Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

A primary objective of the Proposed Master Plan is to facilitate the modernization, repair, upgrade, renovation, and construction of educational facilities in the SCUSD. The Master Plan proposes no changes or demolition of any of the existing residential housing stock in the Plan Area. As such, implementation of the Proposed Master Plan would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere and there would be no impact.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No Impact.

3.14.6 CUMULATIVE IMPACTS

As previously discussed, implementation of the Proposed Master Plan would not demolish or construct any new housing, nor would it have the potential to increase the intensity of population, housing, and employment growth in the ABAG beyond that envisioned in the Plan Bay Area 2050; therefore, the project-

specific impacts associated with land use consistency would be less than significant. Potential impacts would not be cumulatively considerable.

Mitigation Measures

No mitigation measures are required.

3.14.7 REFERENCES

California Department of Finance. Demographic Estimates, available online at: https://dof.ca.gov/wp-content/uploads/Forecasting/Demographics/Documents/E-1_2022_InternetVersion.xlsx , accessed July 15, 2022.

County of Santa Clara. Plan Bay Area 2050 Santa Clara County Factsheet, available online at https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_Final_Santa_Clara_County_Factsheet_012822_0.pdf , accessed July 19, 2022.

Santa Clara Unified School District, Citizen's Independent Oversight Committee, June 23, 2021. Available online at: https://www.santaclarausd.org/site/handlers/filedownload.ashx?moduleinstanceid=5779&dataid=6918&FileName=Consolidated%20CBOC%20Annual%20Report%202021.pdf , accessed on May 2, 2022.

Santa Clara Unified School District. Laurelwood Capacity Scenarios. May 2022. Available online at: https://www.santaclarausd.org/cms/lib/CA49000000/Centricity/Domain/95/2022.05.03%20Presentation%20-%20Laurelwood%20Capacity%20Scenarios.pdf , accessed July 13, 2022.

U.S. Census Bureau. Santa Clara County Population Data. Available online at: https://data.census.gov/cedsci/all?q=Santa%20Clara%20County,%20California , accessed July 15, 2022.

U.S. Census Bureau. City of Santa Clara Population Data. Available online at: https://data.census.gov/cedsci/all?q=santa%20clara%20city%20population , accessed July 15, 2022.

U.S. Census Bureau. City of Sunnyvale Population Data. Available online at: https://data.census.gov/cedsci/all?q=Sunnyvale%20city,%20California , accessed July 15, 2022.

U.S. Census Bureau. Quick Facts United States. Available online: https://www.census.gov/quickfacts/fact/table/US/HSD410220 , accessed July 19, 2022.

3.15 PUBLIC SERVICES AND RECREATION

INTRODUCTION

This section describes the existing public services within the City, identifies the regulatory framework with respect to regulations that address public services, and evaluates the significance of the potential changes to public services that could result from implementation of the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan"). In addition, to reduce impacts, mitigation measures are included when applicable. The public services evaluated in this section include Fire Services, Police Services, Educational Facilities, Library Services, and Recreational Facilities.

Note also that no physical changes to the existing Laurelwood Elementary School site are included in the Proposed Master Plan.

3.15.1 FIRE PROTECTION

3.15.1.1 Environmental Setting

Fire protection and other related services are provided by the Sunnyvale Department of Public Safety Bureau of Fire Services (Fire Bureau) for the Peterson Middle School and Patrick Henry Campus. The City of Santa Clara Fire Department (SCFD) provides fire services to the existing Laurelwood Elementary School.

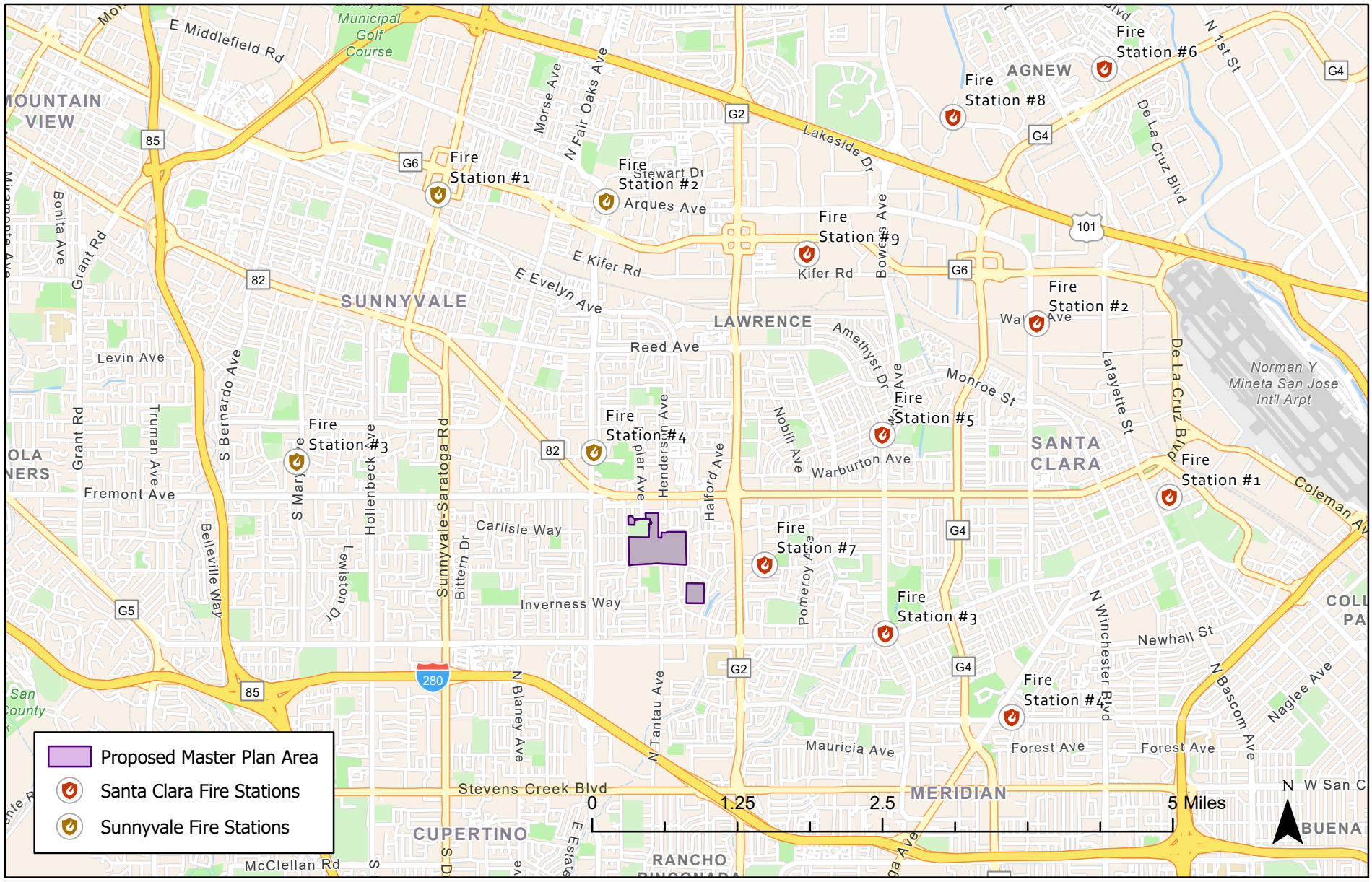
The Sunnyvale Fire Bureau on average responds to approximately 7,300 calls for service annually. Of those calls, approximately 70 percent are emergency medical (EMS) calls. The Fire Bureau responds to approximately 620 hazardous material calls and 140 structure fires per year. There are six fire stations in the city, five of which were remodeled between 1998 and 1999. One station was built in 2016. The stations are situated throughout Sunnyvale, with locations based on a combination of call volume and response time. The closest fire station to the Plan Area is Fire Station #4 located at 996 South Wolfe Road. The department has mutual aid and/or auto aid agreements with Santa Clara County Fire, San Jose Fire, Mountain View Fire, and Santa Clara (City) Fire. These agreements cover responses to freeway incidents and structure fire incidents, in areas of common shared boundaries between jurisdictions.[1]

1 City of Sunnyvale. *General Plan*, Chapter 6: Safety and Noise. July 2011. Available online at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/602/637819113526630000, accessed July 12, 2022.

The SCFD has nine fire stations throughout the City, consisting of 8 engines, 2 trucks, 1 rescue/light unit, 1 hazardous materials unit, and 2 command vehicles. The SCFD has 154.5 paid personnel.[2] The closest station to the Plan Area is Fire Station # 7, located at 3495 Benton Street. The current SCFD response time standard is a three-minute average for all areas of the City.[3] The City also participates in the Santa Clara County Fire and Rescue Mutual Aid Response Plan to further ensure that fires and other emergencies are handled efficiently. **Figure 3.15-1, Cities of Santa Clara and Sunnyvale Fire Stations**, illustrates the location of the fire stations relative to the Plan Area.

2 City of Santa Clara. Fire Department: About Us. Available online at: https://www.santaclaraca.gov/our-city/departments-a-f/fire-department/about-us, accessed July 12, 2022.

3 City of Santa Clara. *Integrated Final EIR 2010-2035 General Plan*. 2011. Available online at: https://www.santaclaraca.gov/home/showpublisheddocument/12900/635713044859030000, accessed July 12, 2022.



SOURCE: Esri 2022; City of Santa Clara, 2022; City of Sunnyvale, 2022

FIGURE **3.15-1**

IMPACT SCIENCES

Fire Stations Surrounding the Plan Area

1375.001•08/22

3.15.1.2 Regulatory Framework

Federal

Federal Emergency Management Act (FEMA)

In March 2003, the Federal Emergency Management Agency (FEMA) became part of the U.S. Department of Homeland Security. FEMA's continuing mission within the new department is to lead the effort to prepare the nation for all hazards and effectively manage federal response and recovery efforts following any national incident. FEMA also initiates proactive mitigation activities, trains first responders, and manages the National Flood Insurance Program and the U.S. Fire Administration

Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 (42 U.S.C. § 5121 note) was signed into law to amend the Robert T. Stafford Disaster Relief Act of 1988 (42 U.S.C. §5121-5207). Among other things, this new legislation reinforces the importance of pre-disaster infrastructure mitigation planning to reduce disaster losses nationwide and is aimed primarily at the control and streamlining of the administration of federal disaster relief and programs to promote mitigation activities. Some of the major provisions of the Act include:

- funding pre-disaster mitigation activities;
- developing experimental multi-hazard maps to better understand risk;
- establishing state and local government infrastructure mitigation planning requirements;
- defining how states can assume more responsibility in managing the Hazard Mitigation Grant Program (HMGP); and
- adjusting ways in which management costs for projects are funded.

The mitigation planning provisions outlined in Section 322 of the Act establish performance-based standards for mitigation plans and requires states to have a public assistance program (Advance Infrastructure Mitigation—AIM) to develop county government plans. The consequence for counties that fail to develop an infrastructure mitigation plan is the chance of a reduced federal share of damage assistance from 75 percent to 25 percent if the damaged facility has been damaged on more than one occasion in the preceding ten-year period by the same type of event.

Federal Fire Safety Act

The Federal Fire Safety Act (FFSA) of 1992 is significantly different from other laws affecting fire safety as the Law applies to federal operations, and there is no requirement for local action unless a private building owner leases space to the federal government. The Federal Fire Safety Act (FFSA) requires federal agencies to provide sprinkler protection in any building, whether owned or leased by the federal government that houses at least 25 federal employees during the course of their employment.

State

California Fire Code

Title 24, Part 9 of the California Code of Regulations (CCR) is the California Fire Code. Title 24, Part 9 of the CCR sets forth regulations regarding building standards, fire protection and notification systems, fire protection devices such as fire extinguishers and smoke alarms, high-rise building standards, and fire suppression training. The 2019 California Fire Code is the incorporation of the 2018 International Fire Code of the International Code Council with necessary California amendments. Development under the Proposed Master Plan would be subject to applicable regulations of the California Fire Code.

Title 8 California Code of Regulations Sections 1270 and 6773. In accordance with C.C.R., Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment," the California Occupational Safety and Health Administration (Cal OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hosing sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

Uniform Fire Code

The Uniform Fire Code (UFC) contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 *et seq.* of the California Health and Safety Code, which includes regulations for building standards (as set forth in the California Building Code), fire protection and notification systems, fire protection devices, and fire suppression training.

Mutual Aid Agreements (MAA)

The Emergency Managers Mutual Aid (EMMA) system is a collaborated effort between city and county emergency managers in the Office of Emergency Services (OES) in the coastal, southern, and inland regions of the state. EMMA provides service in the emergency response and recovery efforts at the Southern Regional Emergency Operations Center (REOC), local Emergency Operations Centers (EOCs), the Disaster Field Office (DFO), and community service centers. The purpose of EMMA is to support disaster operations in affected jurisdictions by providing professional emergency management personnel. In accordance with the Master Mutual Aid Agreement, local and state emergency managers have responded in support of each other under a variety of plans and procedures.

California Code of Regulations Division 2 Section 16

The State of California passed legislation creating the California Emergency Management Agency (Cal EMA) and authorizing it to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

Cal EMA serves as the lead state agency for emergency management in the state. Cal EMA coordinates the state response to major emergencies in support of local government. The primary responsibility for emergency management resides with local government. Local jurisdictions first use their own resources and, as they are exhausted, obtain more from neighboring cities and special districts, the county in which they are located, and other counties throughout the state through the statewide mutual aid system.

Assembly Bill 9

Passed in September of 2021, AB 9 establishes in the Department of Conservation the Regional Forest and Fire Capacity Program to support regional leadership to build local and regional capacity and develop, prioritize, and implement strategies and projects that create fire adapted communities and landscapes by improving ecosystem health, community wildfire preparedness, and fire resilience. The bill requires, among other things, the department, upon an appropriation by the Legislature, to provide block grants to

regional entities, as defined, to develop regional strategies that develop governance structures, identify wildfire risks, foster collaboration, and prioritize and implement projects within the region to achieve the goals of the program. The bill also requires the department, upon an appropriation by the Legislature, to provide block grants to eligible coordinating organizations, as defined, to support the statewide implementation of the program through coordination of and technical assistance to regional entities, as well as to support forest health and resilience efforts across regions and throughout the state. Finally, the bill requires the department to publish and update information on program implementation, as specified, on its internet website.[4]

Local

City of Sunnyvale Municipal Code

Municipal Code Chapter 16.52, Fire Code, prescribes regulations governing conditions hazardous to life and property from fire or explosion through adoption of the 2013 California Fire Code.

City of Sunnyvale General Plan

Relevant *City of Sunnyvale General Plan* policies that directly address reducing and avoiding impacts to fire services include the following:

Goal SN-5 Provide a fire service response system that will control the spread of fire in buildings and other properties and maintain minimal casualties and property loss from fire and other related emergencies

Policy SN-5.1 Assure that equipment and facilities are provided and maintained to meet reasonable standards of safety, dependability and compatibility with fire service operations

Policy SN-5.2 Provide training that is adequate for required duties

Policy SN-5.3 Respond to request for services

Policy SN-5.4 Conduct field operations and emergency scene management in a safe, effective and efficient manner

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4 Assembly Bill No. 9. California State Legislature. September 24, 2021. Available online at: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB9, accessed on November 24, 2021.

Goal SN-6 Provide effective response capability for emergency medical events and other non-fire incidents that may directly endanger the lives, property and well-being of the community

Policy SN-6.1 Provide immediate life support to those threatened by situations requiring emergency medical services or rescue

City of Santa Clara General Plan

Relevant *General Plan* policies that directly address reducing and avoiding impacts to fire services include the following:

Goal 5.9.3-G1 A safe and secure environment for people and property in the community.

Goal 5.9.3-G2 Public safety response-time goals met throughout the City.

Policy 5.9.3-P1 Encourage design techniques that promote public and property safety in new development and public spaces.

Policy 5.9.3-P2 Provide police and fire services that respond to community goals for a safe and secure environment for people and property.

Policy 5.9.3-P4 Maintain a City-wide average three-minute response time for fire emergency service calls.

Policy 5.9.3-P6 Maintain the fire and hazardous materials mutual aid agreements with surrounding jurisdictions.

Policy 5.9.3-P5 Maintain emergency traffic preemption controls for traffic signals.

Policy 5.9.3-P7 Encourage property maintenance and pursue appropriate code enforcement to reduce crime associated with blight.

Santa Clara City Code

The Santa Clara City Code includes the Santa Clara Municipal Fire and Environmental Code, which adopts by reference the International Fire Code (2006 Edition), including the State of California Amendments, and various portions of the Health and Safety Code of the State of California, enforced and administered by the City of Santa Clara (Chapter 15.60).

3.15.1.3 Thresholds of Significance

The following thresholds for determining the significance of impacts related to fire and emergency response services are contained in the environmental checklist form contained in Appendix G of the most recent update of the *State CEQA Guidelines*. Adoption and/or implementation of the Proposed Master Plan could result in significant impacts due to the use of fire services, if any of the following would occur:

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

3.15.1.4 Methodology

The need for, or deficiency in, adequate fire and emergency response services in and of itself is not a CEQA impact, but a social or economic impact. (*City of Hayward v. B'd of Trustees* (2015) 242 Cal.App. 4th 833, 843.) To the extent that the Proposed Master Plan causes a need for additional fire and emergency response services that result in the construction of new facilities or additions to existing facilities and the impact from that construction results in a potential impact to the environment, that is a CEQA impact that needs to be assessed in this EIR. Any discussion in this EIR that relates solely to the level of fire and life safety services provided to the residents or users of the Proposed Master Plan and its surrounding community, including any existing or future needs and deficiencies, is for informational purposes only. The ultimate determination of whether there is a significant impact related to fire and emergency response services is based on whether a significant impact will result from the construction of new facilities.

3.15.1.5 Environmental Impacts

PS-1 **Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?**

The Proposed Master Plan includes improvements the Peterson Middle School and the construction of a new Laurelwood Elementary School and a new 300-seat Alternative High School. The new student capacity as a result of the Proposed Master Plan is 3,375 students, which includes the existing Laurelwood Elementary School; the future use of which has not yet been determined. While the capacity

of the campuses will increase slightly to accommodate potential growth, student enrollment is projected to decline over time.[5] As a result, the demand for fire protection will not be impacted by the Proposed Master Plan.

Construction

Buildout of the Proposed Master Plan over five phases include the construction of a new Laurelwood Elementary School, 300-seat Alternative High School, a new track and field, improvements and additions to Peterson Middle School, a new environmental education center, improvements to the District Farm, and other improvements. Construction activities associated with buildout of the Proposed Master Plan have the potential to increase fire hazards. Construction of future projects could require flammable construction materials (including wood framing) and the installation of electrical, plumbing, and mechanical systems. Although rare, fires do occur at construction sites, thus, all future projects would be subject to local codes and inspection by Fire personnel. In addition, all future projects would be subject to City requirements relative to water availability and accessibility to firefighting equipment, as well as comply with City, County, and state fire protection regulations. Construction activities could also result in traffic delays in the Plan Area and increase emergency response times and the potential for vehicle traffic accidents.

Since the Plan Area is owned by the School District, and will be used for public educational facilities, the Proposed Master Plan will not be subject to Development Impact Fees. However, the Proposed Master Plan would be required to comply with Fire Safety and California Building Code and all projects would require approval by the City of Sunnyvale's Community Development Departments and Sunnyvale Fire Department.

The installation of fire protection systems and automatic sprinkler systems will be required prior to project approval and certification. As discussed in **Section 3.9, Hazards,** and **Section 3.17**, **Transportation,** construction activities related to the Proposed Master Plan's development is not expected to result in significant impacts to emergency services or response times. Construction activities would not result in the need for expansion of existing fire stations or construction of new fire stations due to the temporary nature of construction.

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5 Santa Clara Unified School District. Laurelwood Capacity Scenarios Special Board Meeting. May 2022. Available online at: https://www.santaclarausd.org/cms/lib/CA49000000/Centricity/Domain/95/2022.05.03%20Presentation%20-%20Laurelwood%20Capacity%20Scenarios.pdf, accessed July 12, 2022.

Operation

As discussed above, while capacity of the campuses is projected to increase slightly enrollment is projected to decline over time. As the residential population of the cities of Sunnyvale and Santa Clara shift over time, the Cities will monitor fire protection resources to ensure adequate facilities, staffing, and equipment are available.

The ability of emergency medical service (EMS) and fire protection services to respond to calls in a timely manner depends primarily on the distance of the station to the incident and the speed at which the emergency vehicles are able navigate intervening roadways. No growth is anticipated under the Proposed Master Plan that would result in higher overall traffic volumes in the Plan Area. The Proposed Master Plan would not impede emergency response, since California State law requires that drivers yield the right-of-way to emergency vehicles and remain stopped until the emergency vehicles have passed. Therefore, EMS and fire protection services response times generally would not change.

The California Fire Code includes requirements related to fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings in the Plan Area. The California Fire Code contains specialized technical regulations related to fire and life safety. All new buildings proposed under the Proposed Master Plan would be designed to meet minimum fire and emergency safety requirements identified in the California Building Code and California Fire Code and would include appropriate fire safety measures and equipment, including but not limited to, use of fire retardant building materials, inclusion of emergency water infrastructure (fire hydrants and sprinkler systems), installation of smoke detectors and fire extinguishers, emergency response notification systems and provision of adequate emergency access ways for emergency vehicles.

For CEQA purposes, the determination of impacts is not based on response times themselves, but response times can be one indication of a need for new facilities that should be considered by the City. While new facilities are not anticipated to be needed as a result of the Proposed Master Plan, if new facilities are needed, the primary concern is if the construction of those facilities would have a significant effect on the environment. Construction of new fire stations or expansion of an existing fire stations to serve the Plan area would occur in an urban area and would be limited in size. Any new facility would also be required to comply with applicable federal, State, and local regulations and policies discussed in this EIR, such as NPDES permit requirements, the City's Noise Ordinance, and the California Building Code, including CALGreen requirements.

Potential environmental impacts of construction and operation of any new facility, as an allowed land use, have been evaluated throughout this EIR. Construction and operational impacts to air, noise, traffic, as well as other impacts of new developments are discussed throughout this EIR, and they would not be any different for a fire station. It is not foreseeable that impacts from building any other station in the Plan area would have greater or different impacts than those identified in this EIR for construction or operations. Similar to other types of development, the construction of new or expanded fire protection facilities could contribute to construction noise impacts identified in **Section 4.13, Noise and Vibration**, of this EIR and would be subject to applicable mitigation measures.

In addition, should new facilities be needed, such facilities would be located on parcels that are infill opportunities on lots approximately less than five acres in size. Based on the urban location and the relatively small size of typical facilities, the construction of a new fire facility or expansion of an existing facility would likely qualify for an infill exemption or result in less–than-significant impacts with standard compliance measures and design features. To the extent that any significant impacts could result from the unique characteristics of a specific site, those impacts would be speculative at this time. Therefore, impacts related to the need for new or expanded fire facilities would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

3.15.1.6 Cumulative Impacts

Buildout of the Proposed Master Plan and related projects ongoing and planned in the City could increase the demand for fire protection services in the City. The City would continue to monitor impacts to fire services and facilities and review each future development project on a project-by-project basis to determine the need for additional resources. Increased sales tax revenues from leased commercial spaces on the ground floor of future developments and property taxes from the related projects could be used to fund increases in staffing and equipment. Furthermore, all future development projects would be required to submit site design plans to the City during the planning and building permit check process. In conformance with standard City procedures, these plans will be reviewed by the Building and Safety

with respect to access and building design. Incorporation of such reviews would avoid any significant cumulative impacts to fire resources and services. The potential for new fire facility construction is speculative at the present time and is, therefore, not analyzed in this document. It is assumed that if new facilities are determined to be necessary at some point in the future, such facilities would occur where allowed under the designated land use. Therefore, the incremental effect of the Proposed Master Plan with respect to fire protection would not be cumulatively considerable.

3.15.2 LAW ENFORCEMENT SERVICES

3.15.2.1 Environmental Setting

Law enforcement protection services for the City of Sunnyvale are provided by Sunnyvale Department of Public Safety Bureau of Police Services (Police Bureau). There is one police station in the City, located at 700 All America Way. Five patrol squads cover the city 24 hours a day. The number of officers in each of the squads changes depending on the time of day the shift covers. Services provided by the Police Bureau also include a traffic safety unit, a SWAT team, a crisis negotiations team, a canine unit, desk officers, a police training lieutenant, a crime scene investigator unit, bicycle patrol, a crisis intervention team, a mobile field force team, and technical services.[6]

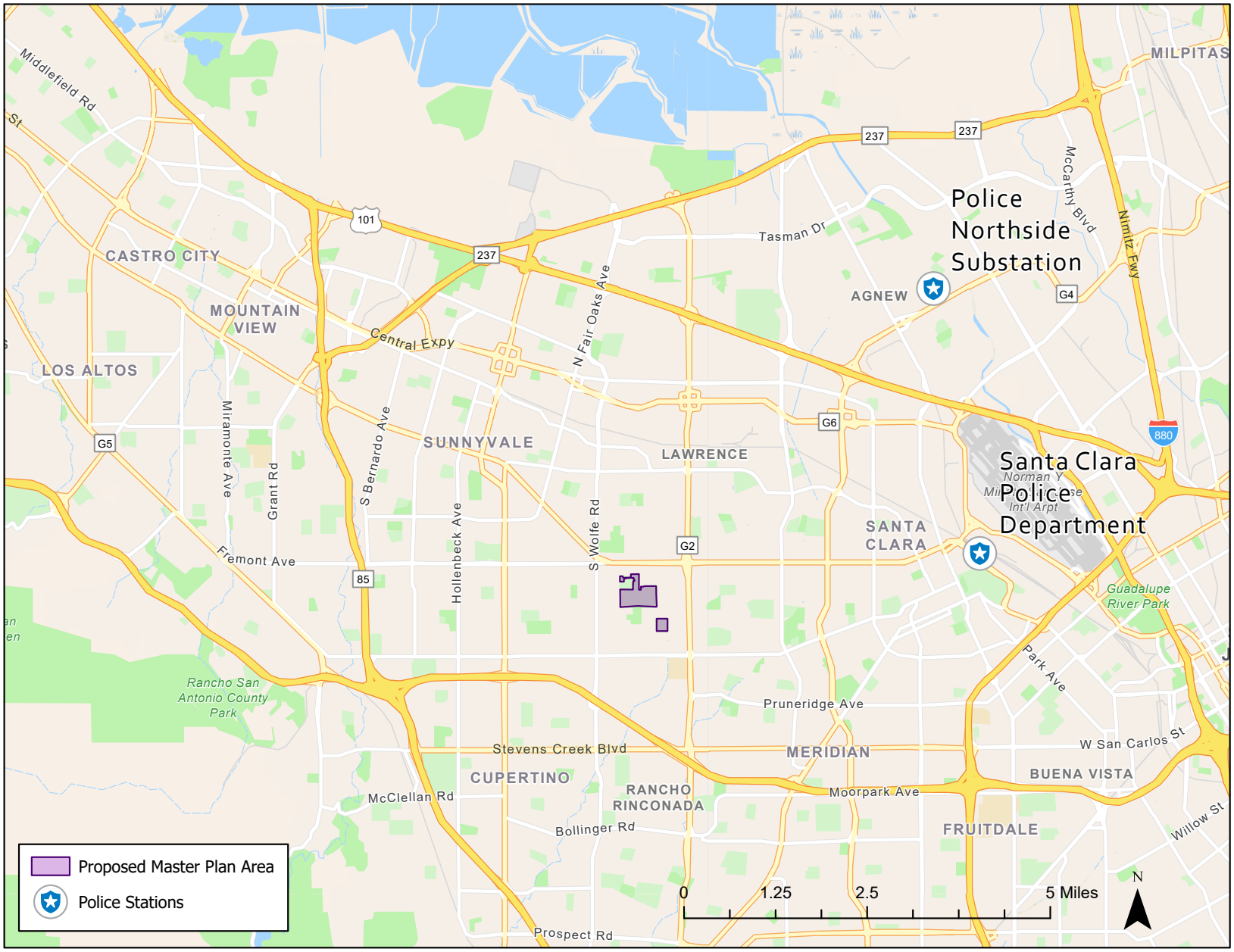
Within the City of Santa Clara, police services are provided by the Santa Clara Police Department (SCPD). SCPD has maintained a relatively low crime rate since the mid-1980s. Most common concerns expressed by residents and business representatives are graffiti, vandalism and drug activity. The Department currently has two police stations: the headquarters located on El Camino Real at Benton Street/Railroad Avenue and a substation in Rivermark, near Agnew Road and Montague Expressway (see **Figure 3.15-2**). The SCPD also operates the Firearms Training Center, Tech Service Center, and 911 Dispatch. The SCPD had 153 sworn police officers and 79 non-sworn personnel serving a population of approximately 129,089 residents, resulting in 1.13 sworn officers per 1,000 residents.[7] The police services are divided into four divisions: Field Operations Division, Investigations Division, Special Operations Division, and Administrative Services. The SCPD's response time standard is three minutes or less for high priority

6 City of Sunnyvale. *Land Use and Transportation Element Draft Environmental Impact Report*. 2016. Available online at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/608/637819113538930000, accessed July 15, 2022.

7 City of Santa Clara. Santa Clara Police Department: Fact Sheet. Available online at: https://www.santaclaraca.gov/our-city/departments-g-z/police-department/about-us/fact-sheet, accessed July 12, 2022.

calls. In 2021, the SCPD received 61,421 emergency and non-emergency calls to the communication center and had a response time of two minutes and 59 seconds.[8]

8 City of Santa Clara. Santa Clara Police Department: Fact Sheet. Available online at: https://www.santaclaraca.gov/our-city/departments-g-z/police-department/about-us/fact-sheet, accessed July 12, 2022.



SOURCE: Esri 2022; City of Santa Clara, 2022

FIGURE **3.15-2**

IMPACT SCIENCES

Police Stations Surrounding the Plan Area

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3.15.2.2 Regulatory Framework

State

All law enforcement agencies within the State of California are organized and operate in accordance with the applicable provisions of the California Penal Code. This code sets forth the authority, rules of conduct, and training for peace officers. Under state law, all sworn municipal and County officers are state peace officers.

Local

City of Sunnyvale Emergency Plan

The City's Emergency Plan addresses the planned response that will be coordinated from the Emergency Operations Center (EOC) to emergency situations associated with natural disasters and technological incidents. The operational concepts reflected in the plan focus on potential large-scale emergencies that can generate unique situations requiring unusual response. Such emergencies pose major threats to life and property and can affect the well-being of large numbers of people. The intent of the plan is to save lives and protect property by developing operational capabilities that mitigate, prepare for, respond to, and recover from any emergency or disaster.

City of Sunnyvale General Plan

Relevant *General Plan* policies that directly address reducing and avoiding impacts to police facilities include the following:

Goal SN-3 Ensure a safe and secure environment for people and property in the community by providing effective public safety response and prevention and education services

Policy SN-3.1 Provide rapid and timely response to all emergencies

Policy SN-3.2 Control conduct recognized as threatening to life and proper

Policy SN-3.3 Provide investigative services directed toward successful prosecution and conviction of criminal offenders

Policy SN-3.4 Reduce crime and fear by strengthening the police/ community partnership

Policy SN-3.5 Facilitate the safe movement of pedestrians, bicyclists and vehicles

Policy SN-3.6 Aid those who cannot care for themselves (intoxicated, addicted, mentally ill, physically disabled, the young, the old)

Policy SN-3.7 Provide crisis intervention, conflict management and resolution

Goal SN-4 Increase and maintain public confidence in the ability of the Public Safety Department to provide quality police services

Policy SN-4.1 Provide inspection and control of personnel and Department operations which is responsive to citizens' concerns

City of Santa Clara General Plan

Relevant *General Plan* policies that directly address reducing and avoiding impacts to police facilities include the following:

Goal 5.9.3-G1 A safe and secure environment for people and property in the community.

Goal 5.9.3-G2 Public safety response-time goals met throughout the City.

Policy 5.9.3-P1 Encourage design techniques that promote public and property safety in new development and public spaces.

Policy 5.9.3-P2 Provide police and fire services that respond to community goals for a safe and secure environment for people and property.

Policy 5.9.3-P3 Maintain a City-wide average three-minute response time for 90 percent of police emergency service calls.

Policy 5.9.3-P5 Maintain emergency traffic preemption controls for traffic signals.

Policy 5.9.3-P7 Encourage property maintenance and pursue appropriate code enforcement to reduce crime associated with blight.

3.15.2.3 Thresholds of Significance

The following thresholds for determining the significance of impacts related to police services are contained in the environmental checklist form contained in Appendix G of the most recent update of the

State CEQA Guidelines. Adoption and/or implementation of the Proposed Master Plan could result in significant impacts related to police services, if any of the following would occur:

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

3.15.2.4 Methodology

The need for or deficiency in adequate police services in and of itself is not a CEQA impact, but a social or economic impact. (*City of Hayward v. B'd of Trustees* (2015) 242 Cal.App. 4th 833, 843). To the extent that the Proposed Master Plan causes a need for additional police services and that results in the construction of new facilities or additions to existing facilities and the impact from that construction results in a potential impact to the environment which is a CEQA impact that needs to be assessed in this EIR. Any discussion in this EIR that relates solely to the level of police protection services provided to the residents or users of the Plan Area and its surrounding community, including any existing or future needs and deficiencies, is for informational purposes only. The ultimate determination of whether there is a significant impact related to police protection services is based on whether a significant impact will result from the construction of new or expanded police facilities.

Police protection service needs are dependent on the size of the service population and the geographic area served, the number and types of calls for service, and the characteristics of a project and its surrounding community. Impacts on police protection services are considered significant if the demand for services exceeds the capacity of existing facilities, or if a station area is located outside of specified distances from a project area.

To the extent that the Proposed Master Plan results in the need for new police services that will cause the need for new or altered police facilities, the analysis below evaluates the potential need for new facilities and associated potential impacts from the construction of new police protection facilities or the expansion of existing police protection facilities if they could be required. Police protection impacts are also evaluated for the Proposed Master Plan within the context of applicable local policies and codes described in the Regulatory Framework.

This discussion of impacts to police protection services addresses impacts for the Plan Area.

3.15.2.5 Environmental Impacts

PS-2 **Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?**

Construction

Buildout of the Proposed Master Plan over five phases include the construction of a new Laurelwood Elementary School, a new track and field, improvements and additions to Peterson Middle School, a new environmental education center, improvements to the District Farm, and other programs. Site development and construction would not normally require services from the Police Department, except in the cases of trespassing, theft, or vandalism. Such activities at a construction site occur, but do not typically place undue demands on law enforcement services. Construction activity would increase traffic both on and adjacent to the Plan Area during working hours because commuting construction workers, trucks, and other large construction vehicles would be added to normal traffic during the buildout period. Slow-moving, construction-related traffic along local roadways may reduce optimal traffic flows and could conceivably delay emergency vehicles or contribute to a vehicle accident. However, this potential is considered less than significant given the periodic and temporary nature of construction-related traffic. Implementation of standard construction traffic control procedures, such as the use of flagmen, and signage showing traffic detour plans, haul routes, hours of operation, protective devices, warning signs, and access to abutting properties would further reduce any potential impact. Construction activities for anticipated development would not result in the need for expansion of existing police facilities or construction of new police facilities due to the temporary nature of construction.

Operation

Buildout of the Proposed Master Plan over five phases include the construction of a new Laurelwood Elementary School, a new track and field, improvements and additions to Peterson Middle School, a new environmental education center, improvements to the District Farm, and other programs.

The Sunnyvale Police Bureau is responsible for providing police protection services to the Peterson Middle School and Patrick Henry Campus, and SCPD is responsible for providing police protection services to the existing Laurelwood Elementary School. A significant impact may occur if either the Police Bureau or SCPD could not adequately serve a project, necessitating a new or physically altered station.

While the capacity of the campuses is projected to increase slightly enrollment is projected to decline over time. No population increase is projected to increase demand for Police Bureau or SCPD services by increasing the opportunities for crime. An area's crime rate is influenced by many factors, such as police presence, implementation of crime prevention measures, department funding, and socioeconomic factors. To ensure that necessary police services, facilities, and equipment are provided for the public safety needs of all neighborhoods, demand for existing and projected police services and facilities is monitored and forecasted by the Police Bureau and SCPD in order to maintain standards. Accordingly, police protection service levels would continue to be evaluated and maintained by the Police Bureau and SCPD in accordance with existing policies, procedures and practices.

California State law requires that drivers yield the right of way to emergency vehicles and remain stopped until the emergency vehicles have passed. Designated emergency and disaster routes surrounding the Plan Area would be maintained. Generally, multi-lane arterial roadways allow emergency vehicles to travel at higher speeds and permit other traffic to maneuver out of the path of the emergency vehicle. On congested roadways, multi-lane arterial roadways with continuous center left-turn lanes facilitate emergency access when the thru lanes experience delays. The ability of police protection services to respond to calls in a timely manner depends primarily on the distance of responding car to the incident and the speed at which vehicles are able navigate intervening roadways. California State law requires that drivers yield the right-of-way to emergency and police vehicles and remain stopped until the vehicles have passed.

There are no planned police facilities to be constructed in the surrounding area at this time. However, the potential for construction or expansion of police facilities over the plan horizon may be possible. Such facilities would more likely be small neighborhood facilities and could be accommodated in existing buildings or small new structures. New facilities would be required to comply with applicable federal, State, and local regulations and policies discussed in this EIR, such as NPDES permit requirements, the City's Noise Ordinance, and the California Building Code, including CALGreen requirements. Construction of such development would likely not result in new significant impacts and would likely qualify for infill exemptions. To the extent there are site specific conditions that would result in impacts, such impacts would be speculative at this time. To the extent construction would result in any impacts those would not be different from other infill development analyzed throughout the EIR. Therefore, impacts related to the need for new or expanded police protection facilities would be less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

3.15.2.6 Cumulative Impacts

Future needs for police protection are reviewed regularly, including during the City budgeting process. As described above, development projects within the City would be subject to review upon project submittal of the development application.

The Proposed Master Plan and other planned and approved developments throughout the City could cumulatively increase the need for services from the sheriff's department. Cumulative projects outside of the Plan Area could also increase the need for police services and would require additional police staffing. Development projects located in other areas of the City would be required to submit site designs and comply with City regulations. As discussed, there are no planned facilities at this time. However, the potential for construction or expansion of new facilities due to increased growth in the surrounding area is possible. Such facilities would more likely be small neighborhood facilities and could be accommodated in existing buildings or small new structures. Construction of such development would likely not result in new significant impacts and would likely qualify for infill exemptions. To the extent there are site specific conditions that would result in impacts, such impacts would be speculative at this time. Depending on the location of new police stations, if they are determined to be needed, impacts. Based on the above information, implementation of the Proposed Master Plan and other related projects would not result in cumulatively considerable impacts resulting in the need for new or expanded police facilities.

3.15.3 PUBLIC SCHOOLS

3.15.3.1 Environmental Setting

The Plan Area is owned and operated by the Santa Clara Unified School District (SCUSD). SCUSD serves approximately 15,300 K-12 students and an additional 6,000 students in preschool through adult school. in the cities of Santa Clara, Sunnyvale, Cupertino, and San José.[9] SCUSD is responsible for 18 elementary,

[9] Santa Clara Unified School District. About Us. Available online at: https://www.santaclarausd.org/domain/15, accessed July 13, 2022.

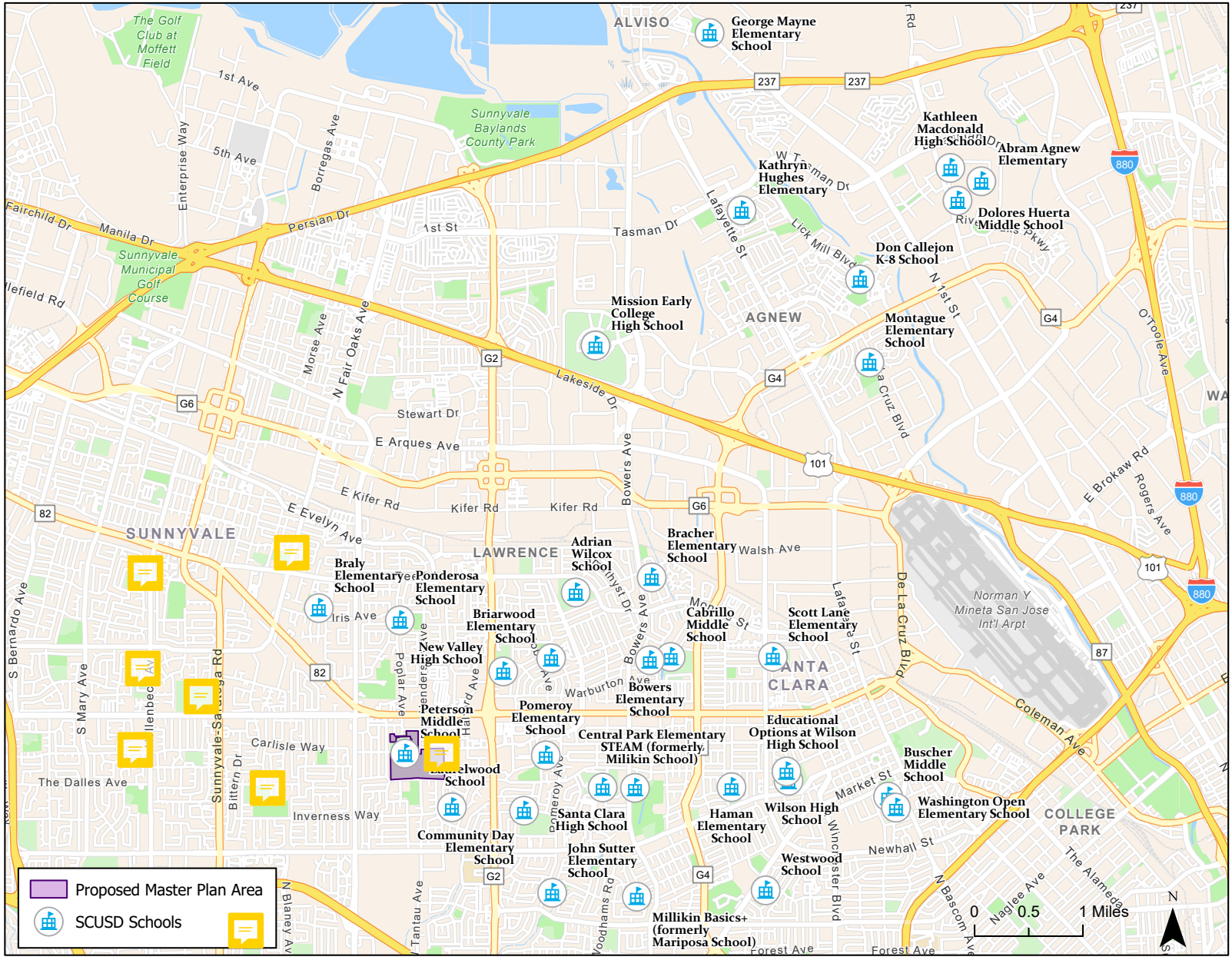
four middle, three high, one K-8, and three continuation/alternative high schools, as well as one adult education school. Residents located generally on the eastern edge of the City of Sunnyvale, and the majority of students residing in the City of Santa Clara attend SCUSD schools. Three of the District's schools are located within the City of Sunnyvale and one is in San José (see **Figure 3.15-3, SCUSD Schools**).

The Plan Area includes two schools operated by the SCUSD: Peterson Middle School and Laurelwood Elementary School. There are several other schools within one mile of the Plan Area: Ponderosa Elementary School and Pomeroy Elementary School, operated by SCUSD. Three private schools are located within the surrounding area, including the Stratford School, Basis Independent Silicon Valley Lower School, and Monticello Academy (see **Figure 3.15-4, Schools Near the Plan Area**).

In the 2020-2021 school year, Peterson Middle School enrolled 871 students in grades 6th through 8th,[10] and April 2022 Laurelwood Elementary enrolled 516 students in grades K through 5th.[11] According to the SCUSD, there is declining enrollment for Laurelwood Elementary School. Enrollment decreased from 685 students in October 2016 to 516 in 2022.

10 Marian A. Peterson Middle School. *2021 School Accountability Report Card.* Available online at: https://www.santaclarausd.org/cms/lib/CA49000000/Centricity/shared/sarcs/2020-2021/2020-2021%20School%20Accountability%20Report%20Card%20Peterson.pdf, accessed July 13, 2022.

11 Santa Clara Unified School District. Laurelwood Capacity Scenarios. May 2022. Available online at: https://www.santaclarausd.org/cms/lib/CA49000000/Centricity/Domain/95/2022.05.03%20Presentation%20-%20Laurelwood%20Capacity%20Scenarios.pdf, accessed July 13, 2022.



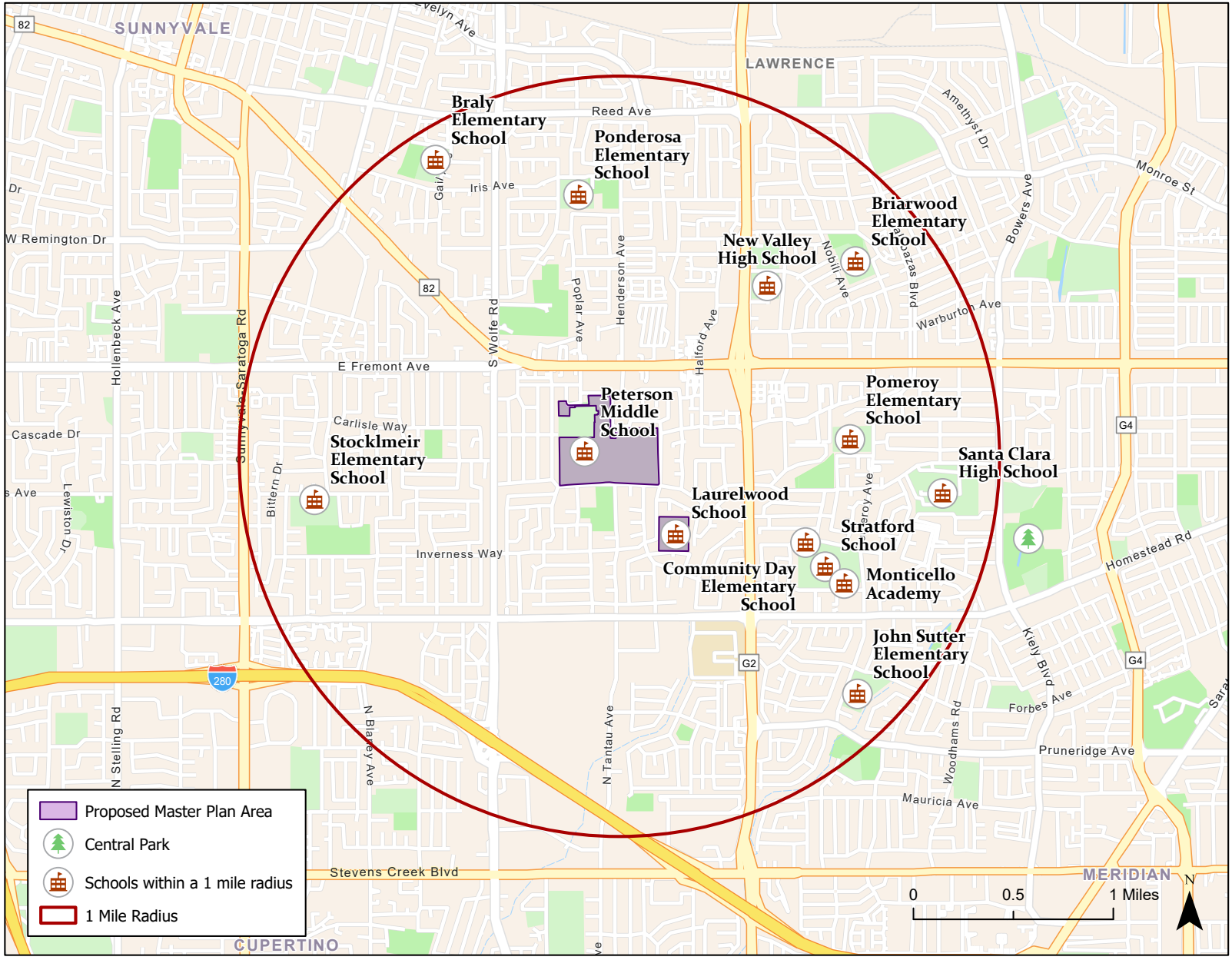
SOURCE: Esri 2022; SCUSD 2022

FIGURE **3.15-3**

SCUSD Schools

IMPACT SCIENCES

1375.001•08/22



SOURCE: Esri 2022; SCUSD 2022

FIGURE **3.15-4**

IMPACT SCIENCES

Schools Near Specific Plan Area

1375.001•08/22

3.15.3.2 Regulatory Framework

State

California Education Code

School facilities and services are subject to the rules and regulations of the California Education Code and governance of the State Board of Education (SBE). The SBE is the 11-member governing and policymaking body of the California Department of Education (CDE) that sets K–12 education policy in the areas of standards, instructional materials, assessment, and accountability. The CDE and the State Superintendent of Public Instruction are responsible for enforcing education law and regulations; and for continuing to reform and improve public elementary school, secondary school, and childcare programs, as well as adult education and some preschool programs. The CDE's mission is to provide leadership, assistance, oversight, and resources so that every Californian has access to an education that meets world-class standards. The core purpose of the CDE is to lead and support the continuous improvement of student achievement, with a specific focus on closing achievement gaps.

California Department of Education

The CDE is the government agency responsible for public education throughout the state. The department oversees funding, and student testing and achievement levels for all state schools. A sector of the CDE, the California State Board of Education is the governing and policy making sector responsible for education policies regarding standards, instructional materials, assessment, and accountability.

California Public School Facility Bonds Initiative Proposition 51, passed in 2016, is a statewide school bond measure that authorized $7 billion in general obligation bonds for the construction and modernization of public school facilities (and $2 billion for community college facilities). The initiative established the 2016 State School Facilities Fund and a 2016 California Community College Capital Outlay Bond Fund.

Leroy Greene School Facilities Act of 1998/ Senate Bill 50

The Leroy Greene School Facilities Act of 1998, or Senate Bill 50 (SB 50) (Ed. Code, §§ 17070.10-17079.30), eliminated the ability of cities and counties to require full mitigation of school impacts and replaced it with the ability for school districts to assess fees directly to offset the costs associated with increasing school capacity as a result of new development. The Act states that payment of developer fees is "deemed to be complete and full mitigation" of the impacts of new development.

Additional mechanisms available to school districts to fund school construction include community assessment districts and general obligation bonds. SCUSD has an active bond for funding necessary improvements.

Local

Measure BB

On November 6, 2018, voters in the Santa Clara Unified School District approved Measure BB authorize the issuance and sale of $720 million of general obligation bonds. Proceeds from the bond measure would be used to construct classrooms, labs, and school libraries; acquire, renovate, construct, and equip facilities to older schools; and fix deteriorating roofs, plumbing and electrical systems. On April 11, 2019, the SCUSD issued Series 2019 General Obligation Bonds totaling $360 million.

City of Sunnyvale General Plan

Relevant *General Plan* policies that directly address reducing and avoiding impacts to school include the following:

Policy CC-10.7 Encourage the use of recreational and open space facilities and services for educational activities of schools that serve Sunnyvale students first, and secondarily the schools that serve students of surrounding communities.

Policy LT-14.9 Support the provision of a full spectrum of public and quasi-public services (e.g., parks, day care, group living, recreation centers, religious institutions, schools, hospitals, large medical clinics) that are appropriately located in residential, commercial, and industrial neighborhoods and ensure they do not have a negative effect on the surrounding area.

Policy LT-14.10 Encourage multiple uses of public and quasipublic facilities (e.g., religious institutions, schools, social organizations, day care), such as community events, afterschool programs, and festivals.

Policy LT-14.15 Recognize schools, both public and private, as integral parts of the community that require special consideration to manage traffic, support residential development, and provide open space.

Policy LT-14.15c Assist public and private schools in neighborhood relations regarding land use and transportation issues.

City of Santa Clara General Plan

Relevant *General Plan* policies that directly address reducing and avoiding impacts to school include the following:

Goal 5.9.2-G1 Schools and community facilities that meet the needs of all segments of the population.

Goal 5.9.2-G2 Appropriate arts, cultural, recreational, schools and other community facilities in concert with new development.

Policy 5.9.2-P5 Coordinate with Santa Clara Unified School District, Santa Clara University and Mission College to develop mutually supportive long-range plans for school facilities.

Policy 5.9.2-P6 Coordinate with local school districts to share school district-owned facilities during non-school hours.

Policy 5.9.2-P7 Support efforts by school districts to maintain, improve and expand educational facilities and services, to meet the demands of new development.

Policy 5.9.2-P8 Cooperate with local school districts in collecting fees for development projects as required by State regulations.

Santa Clara City Code

In accordance with the City Code, public or private general educational facilities such as elementary, intermediate or high schools, junior colleges, and universities are conditional uses allowed under the quasi-public, and public park or recreation zoning district, only by first securing a use permit (Chapter 18.52).

3.15.3.3 Thresholds of Significance

The following thresholds for determining the significance of impacts related to public schools are contained in the environmental checklist form contained in Appendix G of the most recent update of the *State CEQA Guidelines*. Adoption and/or implementation of the Proposed Master Plan could result in significant impacts due to the use of school services, if any of the following would occur:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the

construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools.

3.15.3.4 Methodology

In *Goleta Union Sch. Dist. v Regents of Univ. of Cal.* (1995) 37 CA 4th 1025, the court held that school overcrowding is a social impact and does not require analysis in an EIR and mitigation, unless the overcrowding is linked to physical environmental effects (such as new school construction).

However, the law is somewhat unclear on how to analyze impacts from school facilities. The treatise, CEB, Practice under CEQA, provides the following discussion on impacts to schools:

> *State and local agencies may not deny either legislative or adjudicative approvals on the basis of a refusal to pay fees in excess of those limits. Govt C §65995.*
>
> *The statutes also significantly limit the application of CEQA to school facilities impact issues. The fees set forth in Govt C §65996 constitute the exclusive means of both "considering" and "mitigating" school facilities impacts of projects. Govt C §5996(a).*

Because the statute states that the statutory fees are the exclusive means of considering, as well as mitigating, school impacts, it limits not only the mitigation that may be required but also the scope of impact review in the EIR and the findings for school impacts. In *Chawanakee Unified Sch. Dist. v County of Madera* (2011) 196 CA 4th 1016, the court held that because the methods in the statute are the exclusive means of "considering" impacts on schools, an EIR need not describe and analyze a development's impacts on schools.[12] Consistent with this view:

- Once the statutory fee is imposed, the impact should be determined to be mitigated because of the provision that the statutory fees constitute full and complete mitigation (Government Code Section 65995(b)); and

- It should not be necessary to adopt a statement of overriding considerations for school facilities impacts when the statutory fee is assessed, because the impact is deemed as a matter of law to be adequately mitigated (Government Code Section 65995(b)).

The Chawanakee court also ruled that the reach of the statute is limited to impacts "on" schools and does not extend to impacts on the non-school physical environment, even though they may be "related" to schools in some way. The implications of this ruling are uncertain, however, because the court did not

12 Casetext. *Chawanakee Unified School District v. County of Madera*. 2011. https://casetext.com/case/chawanakee-unified-sch-dist-v-cty-of-madera/?PHONE_NUMBER_GROUP=P, accessed November 7, 2022..

consider the effect of *Govt C §65995*(b), which states that the statute provides full school facilities mitigation notwithstanding CEQA, or of *Govt C §65995*(c), which defines a school facility as "any school-related consideration relating to a school district's ability to accommodate enrollment."

Based on the above, and the uncertainty created by the *Chawanakee* decision related to impacts to non-school property, from the construction of school facilities, for purposes of this EIR, an impact on schools would occur if the Proposed Master Plan promotes growth patterns resulting in the need for and/or the provision of new or physically altered public school facilities (including charter schools), the construction of which would cause significant environmental impacts in order to maintain service ratios, response times, or other performance objectives. To the extent that the Proposed Master Plan causes impacts to classroom sizes or school service impacts that results in the construction of new facilities or alterations to existing facilities and the impact from that construction results in a potential impact to the environment, that is a CEQA impact that needs to be assessed in this EIR. Any discussion in this EIR that relates solely to the level of school services provided to the residents of the Plan Area, including any existing or future needs and deficiencies, is for informational purposes only. The ultimate determination of whether there is a significant impact related to schools is based on whether a significant impact will result from the construction of new or expanded school facilities to non-school property.

The discussion of impacts to public schools addresses impacts for the entire Plan Area. Public school service needs are dependent on the size of the service population and the geographic area served. This analysis estimates the number of students that would be generated by reasonably anticipated development with the Proposed Master Plan using Santa Clara Unified School District (SCUSD) student generation rates and assesses whether existing and planned SCUSD school facilities expected to serve the Plan Area would have sufficient available capacity to accommodate the students. If there would not be sufficient available capacity, the EIR will consider whether new school facilities will be needed and if foreseeable, whether the construction of the school facilities will result in a significant impact.

3.15.3.5 Environmental Impacts

PS-3 **Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives of the school district?**

Construction

Construction activities associated with buildout of the Proposed Master Plan would not impact SCUSD school facilities as construction activities would not directly increase the student population. Thus, no impacts to the existing educational facilities would occur.

Operation

The Plan Area is owned and operated by the SCUSD and contains two district schools: Peterson Middle School and Laurelwood Elementary School. The Proposed Master Plan includes the construction of a new Laurelwood Elementary School, a new track and field, improvements and additions to Peterson Middle School, a new environmental education center, improvements to the District Farm, and other programs. The new student capacity as a result of the Proposed Master Plan is 3,375 students, which includes the existing Laurelwood Elementary School, the future use of which has not yet been determined while the capacity of the campuses will increase slightly to accommodate potential growth, student enrollment is projected to decline over time.

SCUSD has been experiencing gradual declines in enrollment and a decreasing birth rate in the attendance boundaries for Laurelwood Elementary and the District as a whole.[13] This reduction in enrollment numbers is due to a number of factors, including the ongoing Covid pandemic during which many parents moved out of the area, as well as declines in birth rates and a reduction in the number of school aged children overall in the District. As a result, the increase in student enrollment is not projected to increase beyond existing enrollment. Nevertheless, the increased student capacity as a result of the Proposed Master Plan ensures that there is no additional need for new or physically altered school facilities in the surrounding area. Therefore, the Proposed Master Plan would not have an impact on public schools.

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13 Santa Clara Unified School District. Laurelwood Capacity Scenarios. May 2022. Available online at: https://www.santaclarausd.org/cms/lib/CA49000000/Centricity/Domain/95/2022.05.03%20Presentation%20-%20Laurelwood%20Capacity%20Scenarios.pdf, accessed July 13, 2022..

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No Impact.

3.15.3.6 Cumulative Impacts

The Proposed Master Plan would not generate increases in student enrollment, and there is sufficient capacity of Peterson Middle School and Laurelwood Elementary to accommodate growth. Additionally, the existing Laurelwood Elementary School, could be used to offset future need for schools. However, it is possible that cumulative projects in the surrounding area would increase student enrollment beyond the existing capacity, causing the need for new or expanded facilities, the construction of which could result in significant adverse impacts. These impacts could be offset by declining enrollment trends. Such impacts would be dependent on site-specific conditions that are too speculative to determine without site-specific information. The payment of school fees in compliance with the California Government Code Section 65995 is considered full mitigation for school impacts; therefore, the cumulative impact of past, present, and future development would be less than significant. Appropriate school fees would be paid for future development. SCUSD's Facility Development and Planning Department monitors growth and school capacity and determines future school needs. Depending on the location of new schools, if they are determined to be needed, construction and operational impacts (such as traffic, noise, and lighting) could occur and would be generally consistent with other allowed development analyzed in this EIR. However, impacts related to specific locations would be speculative at this time. Therefore, the Proposed Master Plan would not make a cumulatively considerable contribution to impacts related to school capacity and new school construction. Impacts would be less than significant.

3.15.4 LIBRARIES

3.15.4.1 Environmental Setting

The Sunnyvale Public Library is the only public library in the City of Sunnyvale, located at 665 W. Olive Avenue, approximately 2.7 miles from the Plan Area. This is the closest public library to the Plan Area. The Sunnyvale Public Library is 60,800 square feet and was most recently expanded in 1985. It contains

1.88 volumes per person and 0.39 square feet per person as well, for a collection size of 287,275.[14] In 2013 the library installed a lending library machine in the lobby of the Columbia Neighborhood Center at 785 Morse Avenue, approximately 3.8 miles from the Plan Area.[15]

Existing libraries in Santa Clara are the Central Park Library, the Main Library, located on Homestead Road approximately three miles from the Plan Area, the Mission Library Family Reading Center, located in the historic core of the City, and the Northside Branch Library, on Moreland Way (shown on **Figure 3.15-5, Public Libraries Serving the Plan Area**). The Central Park Library is 84,000 square feet and was reconstructed and expanded in 2004. With more than 1.4 million visitors per year, and over 3,000 people per day using the library, the facility is able to handle the existing volume of people and activities; features include: group study and large community rooms, a computer training classroom, genealogy and local history collection, and an extensive collection of materials for educational and recreational uses.[16] The Mission Library Family Reading Center, located on Lexington Street at Main Street, is a full service library facility including Read Santa Clara, and the adult and family literacy program of the Santa Clara library.

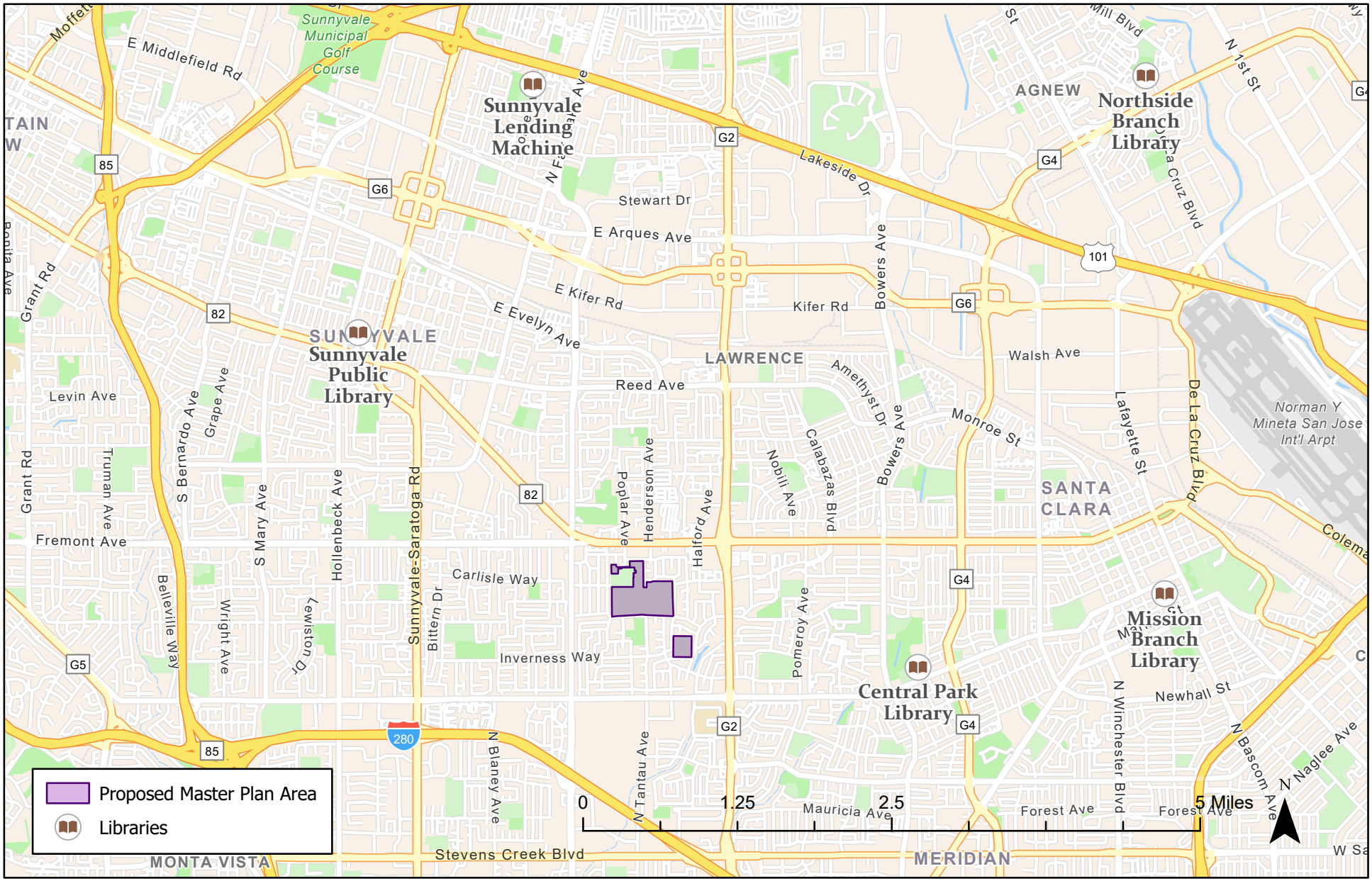
In addition to the public libraries in the surrounding area, Peterson Middle School contains a library, and the new Laurelwood Elementary School proposes constructing a library and media center. These library facilities will be used exclusively by students.

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14 Sunnyvale Public Library. Personal Correspondence.

15 Sunnyvale Public Library. What is the history of Sunnyvale Public Library? Available online at: https://sunnyvale.libanswers.com/faq/362877, accessed July 14, 2022.

16 City of Santa Clara. *General Plan.* Available online at: https://www.santaclaraca.gov/home/showpublisheddocument/13934/635729106120730000, accessed July 15, 2022.



SOURCE: Esri 2022; Santa Clara City Library, 2022

FIGURE **3.15-5**

IMPACT SCIENCES

Libraries Serving the Plan Area

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3.15.4.2 Regulatory Framework

Local

City of Sunnyvale General Plan

Relevant *General Plan* policies that directly address reducing and avoiding impacts to libraries include the following:

Policy LT-14.17a: Maintain and plan for appropriate land areas to support public facilities, such as the civic center, library, corporation yard, and water pollution control plant

City of Santa Clara General Plan

Relevant *General Plan* policies that directly address reducing and avoiding impacts to libraries include the following:

Policy 5.9.2-P1 Provide a diverse range of community, art, cultural and recreational facilities to meet the varying needs of residents in the City, including youth and seniors.

Policy 5.9.2-P2 Periodically evaluate library services and facilities in order to respond to changing community demands.

Policy 5.9.2-P3 Provide library services that are accessible and of adequate size to serve community residents, particularly for Future Focus Areas, north of the Caltrain corridor.

3.15.4.3 Thresholds of Significance

The following thresholds for determining the significance of impacts related to public library facilities are contained in the environmental checklist form contained in Appendix G of the most recent update of the *State CEQA Guidelines*. Adoption and/or implementation of the Proposed Master Plan could result in significant impacts due to the use of library services, if any of the following would occur:

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

3.15.4.4 Methodology

The following analysis focuses on determining whether the Proposed Master Plan would result in adverse physical impacts to the environment due to the expansion or construction of new library facilities. Whether additional facilities would be required is determined primarily by considering the adequacy of existing library services, impacts of the Proposed Master Plan on demand for library services, and input provided by library staff.

The need for or deficiency in adequate library facilities to serve the residents or users of the Plan Area is not in and of itself a CEQA impact, but a social or economic impact. (*City of Hayward v. B'd of Trustees* (2015) 242 Cal.App. 4th 833, 843). To the extent that the Proposed Master Plan causes a need for additional recreational or library services and facilities and that results in the construction of new facilities or additions to existing facilities and the impact from that construction results in a potential impact to the environment, that is a CEQA impact that needs to be assessed in this EIR. Additionally, the deterioration of existing libraries caused by the Proposed Master Plan is a CEQA impact that needs to be assessed in the EIR. Any discussion in this EIR that relates solely to the level of library services provided to the residents or users of the Plan Area and its surrounding community, including any existing or future needs and deficiencies, is for informational purposes only. The ultimate determination of whether there is a significant impact related to library services is based on whether a significant impact will result from the construction of new or altered library facilities as a result of the implementation of the Proposed Master Plan.

This analysis assesses whether existing and planned public libraries expected to serve the Plan Area would have sufficient available capacity to accommodate any potential additional users, or whether new facilities would need to be constructed, the construction of which would cause significant environmental impacts.

3.15.4.5 Environmental Impacts

PS-4 **Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered library facilities, need for new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?**

A significant impact would occur if the Proposed Master Plan would result in substantial employment or population growth that could generate a demand for other public facilities, including libraries, which

exceed the capacity available to serve the Proposed Master Plan area, necessitating new or physically altered public facilities, the construction of which would cause significant environmental impacts.

The Plan Area is served by two library systems: the Sunnyvale Public Library and the Santa Clara City Library. There are four libraries within the community surrounding the Plan Area. Additionally, the Plan Area itself contains one existing library as part of the Peterson Middle School campus, and the Proposed Master Plan includes the construction of a library as part of the new Laurelwood Elementary School. These school libraries would provide library services to students and alleviate pressure on the public library system. The Proposed Master Plan would cause a slight increase in student capacity, but student enrollment is projected decline over time. The new and existing school library facilities will accommodate the student population. Furthermore, there is a trend toward libraries providing increased electronic and downloadable library resources (e.g., e-books, audio books) that would reduce the need for additional physical library resources in the future. As a result, the Proposed Master Plan would have no impact.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No Impact.

3.15.4.6 Cumulative Impacts

While the Proposed Master Plan would increase student capacity, enrollment is projected to not generate population growth that would increase the use of the public libraries, it is possible that cumulative projects in the surrounding area would increase population and use of the library systems beyond existing capacity. However, the libraries identified in **Figure 3.15-5** have sufficient capacity to accommodate any future population growth. In addition, the trend toward libraries providing increased electronic and downloadable library resources (e.g., e-books, audio books) could reduce the need for additional physical library resources in the future. Therefore, the Proposed Master Plan contribution to cumulative impacts associated with libraries would not be cumulatively considerable and would be less than significant.

3.15.5 PARKS AND RECREATION

3.15.5.1 Environmental Setting

In the State of California, the primary avenue by which local jurisdictions set parkland and recreation standards and requirements for new development or obtain funds for the development of parks and recreation, is via the Quimby Act. The Quimby Act was established by the California Legislature in 1965 in response to California's increased rate of urbanization and the need to preserve open space and parkland for growing communities. Prior to subdividing a parcel of land, the developer must dedicate a portion of land and/or pay a fee for the purpose of providing park and recreational facilities to serve future residents of the property being subdivided.

The City of Sunnyvale owns and operates approximately 770 acres of park and recreational facilities, including 22 neighborhood parks (176 acres) and 9 special use facilities (264 acres). The City operates 51 tennis courts, 2 golf courses, and 3 swimming pools. The City operates 143 acres of playfields, of which 95 acres are at schools and accessible to the public through joint-use agreements with three school districts. The community can now use nearly 40 baseball and soccer fields on school grounds after school hours. The City recently completed the 1.5-mile Calabazas Creek Trail, a pedestrian and bicycle trail between US Highway 101 and State Route 237. The trail allows residents to connect to the San Francisco Bay Trail, 3.45 miles of which is also in Sunnyvale (Sunnyvale 2011). The closest park to the Plan Area is Raynor Park, an 11.9-acre park directly south of the Plan Area that contains play areas and picnic sites.

The City of Santa Clara Parks and Recreation Department (Department) provides park and recreational services in the City. The Department is responsible for maintaining and programming the various parks and recreational facilities and works cooperatively with public agencies in coordinating all recreational activities within the City. Overall, the Department maintains 40 parks and recreational facilities totaling approximately over 250-acres, including Central Park, a 52-acre community park, neighborhood parks, mini parks, public open space, recreational facilities, recreational trails, and joint use facilities throughout the City.[17] The closest neighborhood park to the Plan Area is Earl R. Carmichael Park, a 10.5-acre park at 3445 Benton Street.

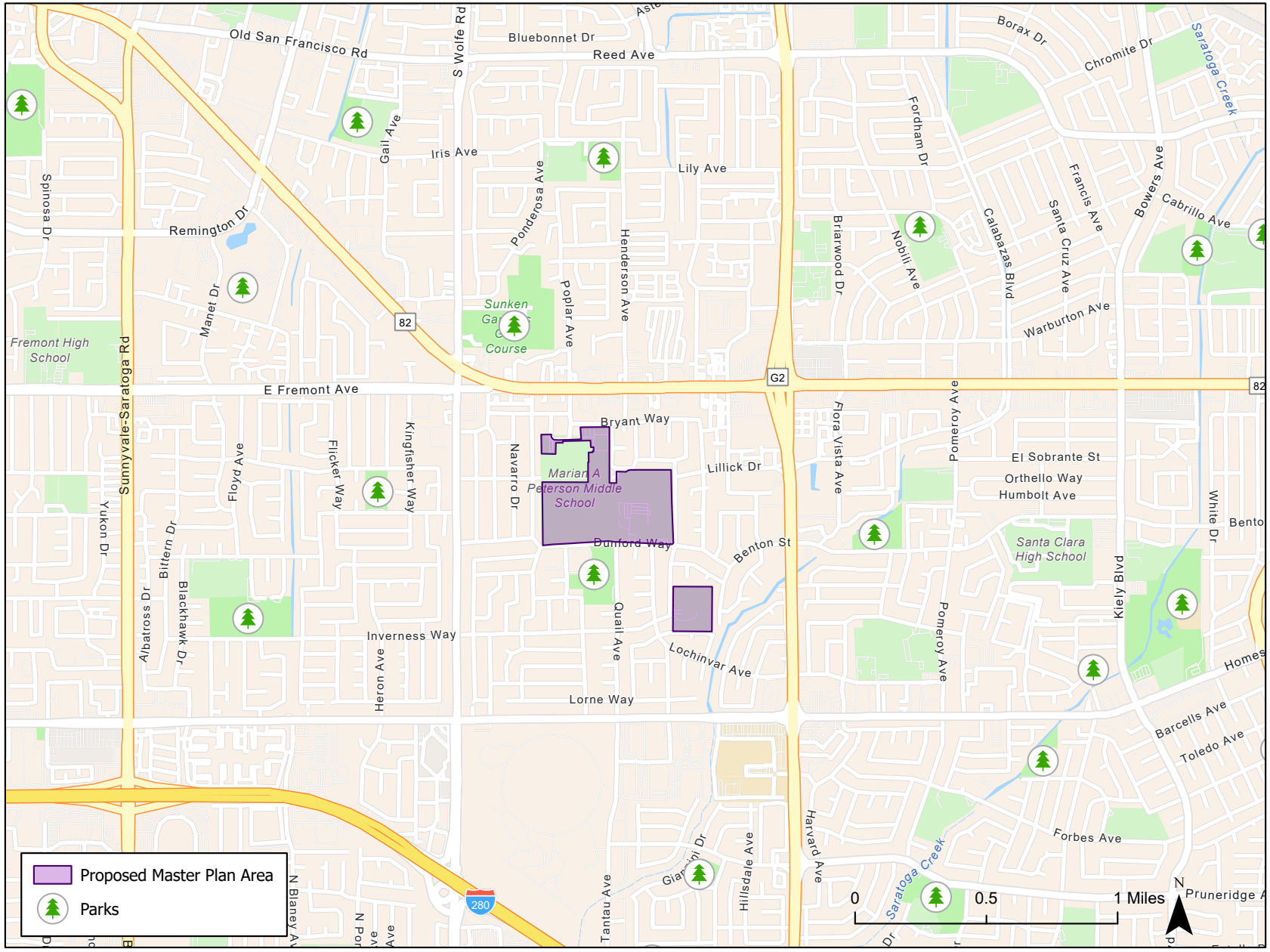
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17 City of Santa Clara. Parks and Pools. Available online at: https://missioncity.maps.arcgis.com/apps/MapTour/index.html?appid=4c84d4f8913541cebd8a8ef3fc31a326&amp accessed January 13, 2022.

The County of Santa Clara operates several regional parks in the surrounding area including Sunnyvale Bayland Park, Alviso Marina County Park, Penitencia Creek, Los Gatos Creek County Park, Stevens Creek County Park, and Rancho San Antonio County Park.

The National Recreation and Parks Association recommends five acres of parkland for every 1,000 residents. However, the Quimby Ordinance enable cities in California with standards of three acres per 1,000 residents to assess new developments an impact fee for park development.

The City of Sunnyvale has a population of approximately 152,258, meaning that the City would be required to provide 761 acres of park space per the Quimby Act. The City of Sunnyvale provides 770 acres of parkland, and therefore meets and exceeds that standard. The City of Santa Clara has a population of 127,647, meaning that the City would need to provide 638 acres of parkland to meet Quimby Act Standards. The City of Santa Clara only has 250 acres of parkland available; therefore, the City of Santa Clara is experiencing a park deficit.



SOURCE: Esri 2022

FIGURE **3.15-6**

IMPACT SCIENCES

Parks Surrounding the Plan Area

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3.15.5.2 Regulatory Framework

State

Quimby Act of 1965

The Quimby Act was established by the California State Legislature in 1965 and codified as California Government Code Section 66477. The Quimby Act allows the legislative body of a city or county, by ordinance, to require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative tract map or parcel map. Under the Quimby Act, requirements for parkland dedications are not to exceed three acres of parkland per 1,000 persons residing within a subdivision, and in-lieu fee payments shall not exceed the proportionate amount necessary to provide three acres of parkland, unless the amount of existing neighborhood and community parkland exceeds that limit.

California Public Park Preservation Act of 1971

The primary instrument for protecting and preserving parkland is the State Public Park Preservation Act of 1971 (Pub. Resources Code, §§ 5400–5409). Under the Act, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

State Open Space Standards

State planning law (Government Code Section 65560) provides a structure for the preservation of open space by requiring every city and county in the State to prepare, adopt, and submit to the Secretary of the Resources Agency a "local open-space plan for the comprehensive and long-range preservation and conservation of open space land within its jurisdiction." The following open space categories are identified for preservation:

- **Open space for public health and safety**, including, but not limited to, areas that require special management or regulation due to hazardous or special conditions.
- **Open space for the preservation of natural resources**, including, but not limited to, natural vegetation, fish and wildlife, and water resources.
- **Open space for resource management and production**, including, but not limited to, agricultural and mineral resources, forests, rangeland, and areas required for the recharge of groundwater basins.

- **Open space for outdoor recreation,** including, but not limited to, parks and recreational facilities, areas that serve as links between major recreation and open space reservations (such as trails, easements, and scenic roadways), and areas of outstanding scenic and cultural value.

- **Open space for the protection of Native American sites**, including, but not limited to, places, features, and objects of historical, cultural, or sacred significance such as Native American sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines located on public property (further defined in California Public Resources Code Sections 5097.9 and 5097.993).

Mitigation Fee Act

The California Mitigation Fee Act, Government Code sections 66000, *et seq.,* allows cities to establish fees to be imposed on development projects for the purpose of mitigating the impact of development on a city's ability to provide specified public facilities. In order to comply with the Mitigation Fee Act a City must follow the following primary requirements: (1) Make certain determinations regarding the purpose and use of a fee and establish a nexus or connection between a development project or class of project and the public improvement being financed with the fee; (2) Segregate fee revenue from the General Fund in order to avoid commingling of capital facilities fees and general funds; (3) For fees that have been in the possession of a City for five years or more and for which the dollars have not been spent or committed to a project, the City must make findings each fiscal year.

Local

City of Sunnyvale General Plan

The City's *General Plan* sets forth the goal of providing and maintaining adequate and balanced open space and recreation facilities for the community (Goal LT-8) and to have accessible and attractive public facilities (Goal CC-4).

City of Sunnyvale Municipal Code

Municipal Code Chapter 18.10, Parks and Open Space Dedication, establishes that as a condition of approval of any final subdivision map or parcel map, the subdivider must dedicate land or pay a fee in lieu thereof, or both, at the option of the City, for park or recreational purposes. As of July 1, 2014, the land requirement is 5 acres per 1,000 residents. Specific acreage requirements based on residential unit density within a subdivision vary according to the type of development.

SB 330 – Development Impact Fees

The City of Sunnyvale requires residential and mixed-use projects that include residential uses to pay a Park-In-Lieu Fee for projects that do not dedicate land for parks and open space. The developer must dedicate land, pay a fee in lieu thereof, or both. The fee in lieu of dedication money collected is to be used only for the purpose of providing park or recreational facilities to serve the population from which fees are collected. Fees can be used to purchase land, buy equipment or construct improvements in neighborhood and district parks and recreational facilities. The fee is based on the fair market value of the land that otherwise would have been required for dedication. (Ord. 2194-86 § 1).

City of Santa Clara General Plan

Relevant *General Plan* policies that directly address reducing and avoiding impacts to public facilities include the following:

Goal 5.9.1-G1 Ample facilities for physical activities that promote community health.

Goal 5.9.1-G2 Parks, trails and open space located within a ten-minute walk to residential neighborhoods and employment centers.

Policy 5.9.1-P1 Develop additional parkland in the City so that it is integrated into neighborhoods and meets the standards for size, amenities and location to serve residents and employees.

Policy 5.9.1-P3 Provide trails along creeks and other rights-of-way to link parks, open spaces, bicycle facilities and transit services with residential neighborhoods and employment centers.

Policy 5.9.1-P4 Provide connections between private and public open space through publicly accessible trails and pathways and by orienting open spaces to public streets.

Policy 5.9.1-P5 Encourage public visibility for all parks, trails and open spaces.

Policy 5.9.1-P9 Support access to local food sources by providing opportunities for community gardening and farmers' markets.

Policy 5.9.1-P10 Explore opportunities to partner with local private non-profits and public agencies, such as school districts, to provide community gardens and opportunities for community socialization in the City.

Policy 5.9.1-P11 Encourage the shared use of open space resources, such as school grounds, for neighborhood recreation to maximize public accessibility.

Policy 5.9.1-P12 Promote the preservation of open space and recreational areas on existing and closed school sites.

Policy 5.9.1-P13 Encourage public and quasi-public agencies to provide public access onto their property for trails and other appropriate recreational purposes.

Policy 5.9.1-P14 Encourage publicly accessible open space in new development.

Policy 5.9.1-P15 Provide opportunities for private maintenance of publicly accessible open space and trails.

Policy 5.9.1-P16 Encourage non-residential development to contribute toward new park facilities to serve the needs of their employees.

Policy 5.9.1-P17 Foster site design for new development so that building height and massing do not overshadow new parks and plazas.

Policy 5.9.1-P18 Promote open space and recreation facilities in large-scale developments in order to meet a portion of the demand for parks generated by new development.

Policy 5.9.1-P19 Encourage comparable parkland outside the City, near jurisdictional boundaries, that is accessible to City residents and employees, and allow it to contribute to the 2.4 acres per 1,000 population standard if controlled, or partially controlled, by the City.

Policy 5.9.1-P20 Promote the continuation of a parks per population ratio of 2.4 per 1,000 residents and explore the potential to increase the ratio to 3.0, based on the Parks and Recreation Needs Assessment (Parks Master Plan), referenced in Plan Prerequisite 5.1.1-P24.

Policy 5.9.1-P21 Explore options for incorporating an outdoor theater within one of the City's neighborhood parks.

3.15.5.3 Thresholds of Significance

The following thresholds for determining the significance of impacts related to recreational facilities are contained in the environmental checklist form contained in Appendix G of the most recent update of the *State CEQA Guidelines*. Adoption and/or implementation of the Proposed Master Plan could result in significant impacts due to the use of recreational facilities, if any of the following would occur:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered recreational facilities, need for new or physically altered recreational facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks. (This threshold is addressed within the two thresholds below.)

- 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.

- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

3.15.5.4 Methodology

The need for or deficiency in adequate park and recreation facilities to serve the users of the Proposed Master Plan or the City is not in and of itself a CEQA impact, but a social or economic impact. (*City of Hayward v. B'd of Trustees* (2015) 242 Cal.App. 4th 833, 843). To the extent that the Proposed Master Plan causes a need for additional recreational services and facilities and that results in the construction of new facilities or additions to existing facilities and the impact from that construction results in a potential impact to the environment, that is a CEQA impact that needs to be assessed in this EIR. Additionally, the deterioration of existing recreational facilities and parks caused by the Proposed Master Plan is a CEQA impact that needs to be assessed in the EIR. Any discussion in this EIR that relates solely to the level of park services provided to the residents or users of the Plan Area and its surrounding community, including any existing or future needs and deficiencies, is for informational purposes only. The ultimate determination of whether there is a significant impact related to park and recreational services is based on whether a significant impact will result from the construction of new or altered park and recreational facilities or where existing park and recreational facilities will be substantially physically deteriorated as a result of the implementation of the Proposed Master Plan.

This analysis assesses whether existing and planned public parks and recreational facilities expected to serve the Plan Area would have sufficient available capacity to accommodate potential additional users and whether new facilities would need to be constructed, the construction of which would cause significant environmental impacts; and whether the Proposed Master Plan will result in substantial physical deterioration to park and recreational facilities.

3.15.5.5 Environmental Impacts

REC-1 **Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.**

As noted in Section 3.15.5.1 Environmental Setting, the City of Sunnyvale would need to provide 761 acres of parkland to meet the standard of five acres per 1,000 residents for current residents and the City of Santa Clara would need to provide 638 acres. The City of Sunnyvale meets this standard, but the City of Santa Clara had a deficit of 388 acres.

Together, the Cities of Sunnyvale and Santa Clara maintains 1,020 acres of public parkland and a ratio of 3.6 acres per 1,000 residents. This does not include the regional parks in the area that are operated by Santa Clara County. While this ratio is below the recommended five acres per 1,000 persons, it exceeds the Quimby Act minimum. Additionally, the City of Sunnyvale on its own currently meets and exceeds the recommended ratio of five acres per 1,000 people.

The closest public park to the Plan Area is Raynor Park, just south of the Plan Area. However, in addition to the public parks in the area that are owned and operated by the Cities, the Plan Area includes several recreational facilities that are accessible for both students and the public, including the Peterson Track and Field. Recreation spaces exclusively for students are also included in the Plan for Laurelwood Elementary School, such as play areas for the TK and PK students, hard play courts for the upper and lower grades. The proposed Laurelwood field and running paths on the eastern side of the elementary school site will be available to the public after school hours.

The Proposed Master Plan would not cause an increase in population in the surrounding area, and the number of students attending Peterson Middle School and Laurelwood Elementary School is projected to decline over time. As a result, the existing park ratio would remain the same with implementation of the Proposed Master Plan. Additionally, the recreational facilities located within the educational campuses themselves would off-set any use of neighborhood or regional parks. Construction associated with implementation of the Proposed Plan also would not impact the existing parks and recreation facilities.

Therefore, the Proposed Master Plan would not increase the use of park and recreational facilities that would cause or accelerate the deterioration. No impacts would occur.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No Impact.

REC-2 **Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.**

Construction and operation of additional park and recreation facilities could impact aesthetics (including night lighting), air quality, cultural resources, geology, land use, noise, transportation, utilities, and other environmental issues.

The Proposed Master Plan would not result in the demand for new or expanded park and recreation facilities. However, as discussed above, the Proposed Master Plan includes the improvement of several existing recreational facilities, and the construction of new facilities through the construction of the new Laurelwood Elementary School and Peterson Multiuse Fields. These spaces would be used by students and would counteract the utilization of public parks in the area. While the Proposed Master Plan does include recreational facilities that would be open to the public, these would not be public parks owned and operated by the City of Sunnyvale or City of Santa Clara. The Proposed Master Plan includes a new Peterson Track and Field, new multiuse fields for Peterson, a relocation of the tennis courts, and new recreational facilities associated with the Laurelwood Elementary school. The projects included the Proposed Master Plan would either be replacing, relocating, or improving existing facilities. The number of recreational facilities would remain the same and would not expand beyond what currently exists.

The relocation or replacement of existing facilities may have the potential to physically affect the surrounding environment. The environmental effects that could result from the construction of the

proposed recreational facilities would be reduced to less than significant levels through construction-related mitigation measures identified throughout this EIR in **Section 3.2, Air Quality** and **Section 3.13, Noise and Vibration**. Therefore, the Proposed Master Plan would not result in adverse physical effects on the environment from construction or expansion of additional recreational facilities. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

3.15.5.6 Cumulative Impacts

While the Proposed Master Plan would not generate population growth and therefore creates no cumulative impact that might impact use of regional recreational facilities. In fact, implementation of the Proposed Master Plan will provide more recreational capacity and improved recreational spaces for students, staff and the residents in the area through permitted uses outside of regular school hours. Thus, implementation of the Proposed Master Plan would not result in cumulatively considerable impacts to the City's parks and recreation facilities. No mitigation is required.

3.15.6 REFERENCES

Assembly Bill No. 9. California State Legislature. September 24, 2021. Available online at: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB9, accessed on November 24, 2021.

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3.16 TRANSPORTATION

INTRODUCTION

The purpose of this section is to address the potential transportation impacts associated with the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan").

On September 27, 2013, Governor Edmund G. "Jerry" Brown signed Senate Bill (SB) 743, which went into effect in January 2014 and directed the Governor's Office of Planning and Research (OPR) to develop revisions to the California Environmental Quality Act (CEQA) Guidelines by July 1, 2014, to establish new criteria for determining the significance of transportation impacts and define alternative metrics for traffic level of service (LOS). This started a process that has changed the requirements for transportation impact analyses under CEQA. These changes include elimination of auto delay, LOS, and similar measures of vehicular capacity or traffic congestion as a basis for determining significant transportation impacts resulting from land use projects and plans in California.

On January 20, 2016, the Governor's Office of Planning and Research (OPR) released the Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA, which was an update to Updating Transportation Impacts Analysis in the CEQA Guidelines, Preliminary Discussion Draft of Updates to the CEQA Guidelines Implementing Senate Bill 743, which had been released on August 6, 2014. Of particular relevance was the updated text of State CEQA Guidelines Section 15064.3, which as discussed further below establishes vehicle miles traveled (VMT) as the most appropriate measure of transportation impacts. VMT is an area-wide performance measure which helps compare the overall performance of a project or project alternatives. VMT analysis shifts the focus towards impacts caused by the distance traveled by vehicles rather than the localized congestion created by vehicles. Comparative scenarios of VMT are used to demonstrate the effect of land use or transportation projects by calculating total auto VMT divided by population and/or employment to determine the "efficiency" of the transportation system in moving persons with the fewest VMT. Even when new projects result in additional VMT, due to growth, population and employment, they could result in lower VMT efficiency as the numerator (VMT) would be relatively lower than the denominator (persons). This would occur if persons drove shorter distances, carpooled more, or switched trips to non-auto modes such as walking, biking and transit.

The CEQA Guidelines became effective on July 1, 2020. As such, automobile delay as measured by LOS or similar metrics is no longer to be considered a significant environmental impact. Further, Section 21099(a)(2) of the Public Resources Code states "Upon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any." Therefore, as LOS is no longer an environmental impact under CEQA.

The contents of this section represent a summary of a Memorandum regarding Focused VMT Analysis (VMT Memo) for the Proposed Master Plan, prepared by Hexagon Transportation Consultants Inc., (Hexagon, July 14, 2022). In accordance with SB 743 and the State CEQA Guidelines, the VMT Memo identified the changes in vehicles miles travelled (VMT) associated with the Proposed Master Plan. The VMT Memo is provided in ***Appendix 3.16-1, Focused VMT Analysis,*** *in this Draft EIR.*

Note also that no physical changes to the existing Laurelwood Elementary School site are included in the Proposed Master Plan.

3.16.1 ENIRONMENTAL SETTING

Current Conditions

This section describes the existing conditions within the Plan Area in terms of roadways, transit, pedestrian and bicycle circulation, and site access.

Transportation and Circulation

Transit

The cities of Sunnyvale and Santa Clara are served by two public transit systems: the Santa Clara Valley Transportation Authority (both light rail and buses) and the Caltrain commuter rail. The closest Caltrain stop to the Plan Area is the Lawrence Station, approximately 2.0 miles north of the Plan Area. The Plan Area is also served by several buses, including the Rapid 522 and 22, which run along El Camino Real. The closest stop is located at El Camino and Poplar, 0.2 miles from the Plan Area. The site is also served by the 53, which runs between the Sunnyvale Transit Center and the Santa Clara Transit Center, and the 56, which runs north-south along Sunnyvale Saratoga Road.

Pedestrian Circulation

Primary pedestrian access to the Peterson Middle School is at the main entrance on the southern side of Rosalia Avenue, along the northern boundary of the Plan Area. Pedestrian access to the Patrick Henry Campus, is at the main entrance along Dunford Way at the southern boundary of the Plan Area. Access to the site is also permitted along Teal Drive. The Laurelwood Elementary campus is accessible to pedestrians at the main entrance along Teal Drive at the western edge of the Elementary School site. There is also a pedestrian path that leads from Kensington Avenue to the main entrance on Teal Drive. There are several crosswalks in the area, including seven that cross Dunford Way, two cross Rosalia Avenue, and one crosses Teal Drive. These crosswalks increase pedestrian safety and accessibility to the Plan Area.

Bicycle Circulation

The streets surrounding the Plan Area are easily accessible by bicycle. Dunford Way includes a sharrow bike route with pavement markings that indicate that the road is used by both cyclists and vehicles. The markings are intended to improve cycling safety. The Silicon Valley Bicycle Coalition has designated Dunford Way as moderate, which means that it has low traffic volumes, moderate to low traffic speeds, wide travel area for bicycles, and curbside parking.[1] This bike route connects to more established bike lanes in the area, such as along Wolfe Road, four blocks west of the Plan Area. The low density of the surrounding residential area is conducive to creating safe bicycle routes to school due to the low traffic volumes and speeds.

Vehicular Circulation

The roadways surrounding the Plan Area are all local two-way roads. The main entrance to the Peterson Middle School campus is Rosalia Avenue, which curves in front of the entrance of Peterson Middle School and leads into Poplar Avenue. The vehicular entrance to the Patrick Henry Campus is on Dunford Way between Teal Drive and Norman Drive. Laurelwood Elementary School is accessible through a curb cut on Teal Drive. To access the SCUSD Farm, there is a curb cut along Dunford Way. There are no other current vehicular access points in the Plan Area.

3.16.2 REGULATORY FRAMEWORK

3.16.2.1 Federal

Americans with Disabilities Act (ADA) of 1990

Titles I, II, III, and V of the ADA have been codified in Title 42 of the United States Code, beginning at Section 12101. Title III prohibits discrimination based on disability in "places of public accommodation" (businesses and non-profit agencies that serve the public) and "commercial facilities" (other businesses). The regulation includes Appendix A through Part 36 (Standards for Accessible Design), establishing minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility. Examples of key guidelines include detectable warnings for pedestrians entering traffic where there is no curb, a clear zone of 48 inches for the pedestrian travel way, and a vibration-free zone for pedestrians.

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1 Silicon Valley Bicycle Coalition. Santa Clara Valley Bikeways Map. Available online at: https://www.vta.org/sites/default/files/2020-06/2020%20Bike%20Map_web_0.pdf, accessed July 11, 2022.

3.16.2.2 State and Regional

Senate Bill 743

Senate Bill 743 (SB 743) was enacted in 2013 and became effective in July 2014. It requires OPR and the Natural Resources Agency to amend the *State CEQA Guidelines* through developing criteria for determining the way transportation impacts are measured in California for new development projects, making sure they are built in a way that allows Californians more options to drive less (Pub. Res. Code § 21099(b).). Starting on July 1, 2020, agencies analyzing the transportation impacts of new projects must now look at a metric known as vehicle miles traveled (VMT) instead of LOS. VMT measures how much actual auto travel (additional miles driven) a proposed project would create on California roads. If the project adds excessive car travel onto our roads, the project may cause a significant transportation impact. This change is intended to help the State achieve climate commitments, preserve the environment, improve health and safety and boost the economy by prioritizing co-located jobs, services, and housing. It will also reduce the time spent in cars to get places and provide more choices for how people travel, which will help to promote business, provide access to opportunity, and improve the quality of life across California.

Senate Bill 375

Senate Bill 375 (SB 375) requires metropolitan planning organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its greenhouse gas (GHG) reduction targets through integrated land use, housing and transportation planning. Specifically, the SCS must identify a transportation network that is integrated with the forecasted development pattern for the plan area and will reduce GHG emissions from automobiles and light trucks in accordance with targets set by the California Air Resources Board. The targets for SCAG are a 9 percent reduction in per capita transportation by 2020 and 16 percent by 2035.

California Vehicle Code (CVC)

The CVC provides requirements for ensuring emergency vehicle access regardless of traffic conditions. Sections 21806(a)(1), 21806(a)(2), and 21806(c) define how motorists and pedestrians are required to yield the right-of-way to emergency vehicles.

3.16.2.4 Local and Regional

The new Laurelwood Elementary School would be located within the City of Sunnyvale. The City of Sunnyvale Transportation Analysis Guidelines for Vehicle Miles Traveled and Local Transportation Analysis recognize the benefits of local serving uses. It states:

> *"… when evaluating a potential development that is neither residential nor office (employment), land uses such as retail generate vehicular trips to support residential neighborhoods and/or office developments. Therefore, if a project does not specifically fall into the residential, office or retail category, assessing the land use for its ability to reduce VMT by convenient location will help define the appropriate classification for VMT analysis. In other words, if a land use can be classified as an errand or daily activity, it may be classified as retail for the purpose of VMT analysis."*

3.16.3 THRESOLDS OF SIGNIFICANCE

The following thresholds for determining the significance of impacts related to transportation are contained in the environmental checklist form contained in Appendix G of the most recent update of the *State CEQA Guidelines*. Adoption and/or implementation of the Proposed Master Plan could result in significant impacts, if any of the following would occur:

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
- Conflict or be inconsistent with *State CEQA Guidelines* section 15064.3, subdivision (b).
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.

3.16.4 METHODOLOGY

State guidelines allow for screening of projects that are local serving. According to OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA, for land use plans "…agencies should analyze VMT outcomes of land use plans across the full area over which the plan may substantively affect travel patterns…VMT should be counted in full rather than split between origin and destination. A general plan, area plan, or community plan may have a significant impact on transportation if proposed new residential, office or retail land uses would in aggregate exceed the respective thresholds…." OPR guidelines also recognize the right of lead agencies to define local serving uses:

> *"Because lead agencies will best understand their own communities and the likely travel behaviors of future project users, they are likely in the best position to decide when a project will likely be local-serving."*

The new Laurelwood Elementary School would be located within the City of Sunnyvale. The City of Sunnyvale Transportation Analysis Guidelines for Vehicle Miles Traveled and Local Transportation Analysis recognize the benefits of local serving uses. It states:

> *"… when evaluating a potential development that is neither residential nor office (employment), land uses such as retail generate vehicular trips to support residential neighborhoods and/or office developments. Therefore, if a project does not specifically fall into the residential, office or retail category, assessing the land use for its ability to reduce VMT by convenient location will help define the appropriate classification for VMT analysis. In other words, if a land use can be classified as an errand or daily activity, it may be classified as retail for the purpose of VMT analysis."*

3.16.5 ENVIRONMENTAL IMPACTS

Impact TRA-1 Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

The proposed Laurelwood Elementary School would be local serving, supportive of residential uses, and daily activity. In addition, the City of Sunnyvale guidelines state that schools that are "…shown to primarily serve the immediate community can be considered local serving uses, and therefore can be potentially screened out from further VMT analysis." The guidelines also specifically reference that "Schools not regulated by a Public School District" may not qualify for a VMT exemption if they are expected to attract from a broader area, implying that schools regulated by the District are exempt. Laurelwood Elementary School, upon relocation, would continue to serve the students from the surrounding neighborhoods, and would not attract students from a broader area.

Aside from public schools being a local-serving use, the proposed relocation would be in the same neighborhood as the existing school. The distance between the existing site and proposed site is approximately 700 feet. Both locations would share access from Teal Drive. Most of the existing trips headed to and from the existing Laurelwood Elementary School would therefore use the same neighborhood streets to access the relocated school. At the existing Laurelwood Elementary School, upon exit from the existing student loading area on Teal Drive, most loading traffic is currently routed northbound on Teal Drive towards the proposed relocation site. Thus, the proposed relocation project would not significantly alter travel patterns outside of the immediate vicinity of the school sites.

Last, there are existing uses on the relocation site (at Dunford Way/Teal Drive), which would be replaced by the relocated Laurelwood Elementary School. The existing site was originally occupied by Patrick Henry Intermediate School and then subsequently occupied by other institutional, and school uses (such as the Appleseed Montessori School). Thus, even if the District did not choose to relocate Laurelwood Elementary School to this site, the District would retain the right to re-occupy the Dunford Way/Teal Drive site with other school or institutional-related uses. Reoccupation of the Dunford Way/Teal Drive site could generate substantial traffic on the surrounding streets, potentially without requiring CEQA clearance.

With all these factors taken into consideration, it can be concluded that the proposed relocation of Laurelwood Elementary School would not result in adverse impacts to VMT. This conclusion is based on evidence that (1) OPR guidelines allow for VMT exemptions for local-serving uses and acknowledge that lead agencies have the authority to define which uses are local-serving; (2) City of Sunnyvale VMT guidelines imply that public schools are local-serving; (3) the proposed school relocation would continue to serve the surrounding neighborhoods and would not draw student traffic from a broader area; and (4) the relocated school would be only 700 feet away from the existing school.

Therefore, implementation of the Proposed Master Plan would not significantly alter travel patterns within the Plan Area circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact TRA-2 Conflict or be inconsistent with *CEQA Guidelines* section 15064.3(b).

Senate Bill (SB) 743 has changed the primary metric for identifying transportation impacts under the California Environmental Quality Act (CEQA). Whereas the metric had been vehicle level of service (LOS), it's now daily vehicle miles traveled (VMT). Because the project is public school-specific, the Santa

Clara Unified School District (SCUSD), as the lead agency for this CEQA document, is responsible for approving its own analysis. However, the District has not adopted VMT guidelines. Accordingly, the State Office of Planning and Research (OPR) VMT guidelines were used for this analysis, with supporting evidence provided from the City of Sunnyvale VMT guidelines. This analysis includes VMT screening analyses for the Proposed Master Plan uses.

Under existing conditions, Peterson Middle School has a maximum capacity of 1,221 students, Laurelwood Elementary has a maximum capacity of 754 students, and the existing District Farm Center accommodates up to 250 students. In addition, the Patrick Henry Intermediate School was located onsite, and was closed in the 1980s, but these buildings and grounds were leased to or occupied simultaneously by various tenants including: Appleseed Montessori (650 students); Silicon Valley Academy (300 students); New Concept Chinese School (60 students); Mount Bell (25 students); and SCUSD District Resource Center (60 adults). Sunnyvale Alliance Soccer also rented the fields and the Patrick Henry site. These uses were recently vacated in preparation for the proposed Master Plan project. Thus, the maximum student capacity of the baseline uses in and around the site was approximately 3,319 students.

Under the Proposed Master Plan, the maximum student capacity of the planned uses would be as follows: Peterson Middle school (1,221 students); Laurelwood Elementary (850 students); District Farm and Environmental Education Center (250 students); and Alternative High School (300 students). Thus, the maximum student capacity of the proposed new facilities in and around the site would be approximately 2,621 students, or approximately 745 fewer students than the baseline uses.[2] As a result, the total number of vehicular trips entering and departing the project vicinity on a daily basis would decline as a result of the proposed changes.

State guidelines allow for screening of projects that are local serving. According to OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA, for local-serving retail projects "…lead agencies generally may presume such development creates a less-than-significant transportation impact." This finding is based on the observation that, "By adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT." OPR guidelines also recognize the right of lead agencies to define local-serving uses:

> *"Because lead agencies will best understand their own communities and the likely travel behaviors of future project users, they are likely in the best position to decide when a project will likely be local-serving."*

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2 This excludes the capacity of the existing Laurelwood Elementary School since the future use of the existing Laurelwood site has not been determined at this time. For the purposes of this process, the existing Laurelwood site will be used for District administrative uses including storage.

The Master Plan would be located within the City of Sunnyvale. The City of Sunnyvale Transportation Analysis Guidelines for Vehicle Miles Traveled and Local Transportation Analysis recognize the benefits of local serving uses. It states:

> *"… when evaluating a potential development that is neither residential nor office (employment), land uses such as retail generate vehicular trips to support residential neighborhoods and/or office developments. Therefore, if a project does not specifically fall into the residential, office or retail category, assessing the land use for its ability to reduce VMT by convenient location will help define the appropriate classification for VMT analysis. In other words, if a land use can be classified as an errand or daily activity, it may be classified as retail for the purpose of VMT analysis."*

All of the Master Plan uses would be local serving, supportive of residential uses, and a daily activity. In addition, City of Sunnyvale guidelines state that schools that are "…shown to primarily serve the immediate community can be considered local serving uses, and therefore can be potentially screened out from further VMT analysis." The guidelines also specifically reference that "Schools not regulated by a Public School District" may not qualify for a VMT exemption if they are expected to attract trips from a broader area, implying that schools regulated by a public school district are exempt.

Aside from public schools being a local-serving use, the vast majority of the project uses would remain in the same neighborhood as the existing schools. The distance between the existing Laurelwood Elementary site and its Proposed Master Plan location is approximately 700 feet. Both locations would share access to Teal Drive. Most of the existing trips headed to and from the existing Laurelwood Elementary School would therefore use the same neighborhood streets to access the relocated school. At the existing Laurelwood Elementary School, upon exit from the existing student loading area on Teal Drive, most loading traffic is currently routed northbound on Teal Drive towards the proposed relocation site. Thus, the Proposed Master Plan would not significantly alter travel patterns outside of the immediate vicinity of the school sites, and as indicated in the discussion regarding existing and proposed student capacity, overall traffic in the neighborhood would be expected to decline.

Therefore, implementation of the Proposed Master Plan would adequately reduce VMT and therefore impacts would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact TRA-3 Substantially increase hazards due to geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

The Proposed Master Plan would utilize the existing network of regional and local roadways that serve the Plan Area. There are no changes proposed to the design or configuration of roadways surrounding the Project site. Implementation of the Proposed Master Plan would not change the existing uses of the Plan Area and would not introduce any incompatible uses. Therefore, implementation of the Proposed Master Plan would result in no impacts.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No Impact.

Impact TRA-4 Result in inadequate emergency access.

The Proposed Master Plan is not anticipated to interfere with an emergency response plan or evacuation plan. Construction activities would not result in temporary partial obstruction of adjacent roadways and the District would comply with applicable regulations relating to access. Further, the Proposed Master Plan would be implemented in consultation with the City of Sunnyvale Department of Public Safety (includes Fire and Police) and the City of Sunnyvale Department of Public Works, to insure adequate emergency access with operation of the Proposed Master Plan.

Each of the standards will be applied to the Proposed Master Plan's development and the implementation would not result in inadequate emergency access, resulting in a less than significant impact.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

3.16.6 CUMULATIVE IMPACTS

Short-term effects are evaluated through project-level VMT analysis. Long-term, or cumulative impacts are evaluated through a project's consistency with Plan Bay Area 2050 (Plan Bay Area), which is the Bay Area's regional long-range plan adopted by Metropolitan Transportation Commission and the Association of Bay Area Governments (ABAG).

As described in **Impact TRA-2,** there will be no increase in VMT and because the Proposed Master Plan addresses the improvement of existing educational facilities, which are part of the baseline for Plan Bay Area, there will a less than significant cumulative impact on VMT and the transportation system.

3.16.7 REFERENCES

California Office of Planning and Research. Technical Advisory on Evaluating Transportation Impacts in CEQA. 2018. Available online at: https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf, accessed July 27, 2022.

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3.17 UTILITIES AND SERVICE SYSTEMS

INTRODUCTION

This section analyzes the environmental effects related to utilities and service systems associated with implementation of the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan"). It discusses water and wastewater infrastructure as well as solid waste facilities. Issues related to water quality, drainage and infiltration patterns, and flood hazards are discussed in ***Section 3.10, Hydrology and Water Quality****.*

Note also that no physical changes to the existing Laurelwood Elementary School site are included in the Proposed Master Plan.

3.17.1 ENVIRONMENTAL SETTING

3.17.1.1 Water Supply

The City of Sunnyvale's water supply is provided by the City of Sunnyvale Public Works Department Utility. The City of Sunnyvale has three different sources of drinking water supply: treated surface water from the San Francisco Regional Water System managed by the San Francisco Public Utilities Commission (SFPUC), treated surface water from the Santa Clara Valley Water District (Valley Water), and local groundwater. There are also some Sunnyvale customers who receive water from the California Water Service Company (Cal Water).[1] The City purchases water from SFPUC to serve the northern part of the City, and treated surface water from Valley Water for the southern portion of the City, where the Proposed Master Plan is located. Valley Water's surface water is mainly imported from the South Bay Aqueduct, Dyer Reservoir, Lake Del Valle, and San Luis Reservoir, which all draw water from the Sacramento - San Joaquin Delta (Delta) watershed. Valley Water's local water sources include Anderson and Calero Reservoirs. The City owns, operates, and maintains six wells that supplement imported water during peak demand.

The City of Santa Clara's water supply is provided by the City of Santa Clara Water Utility. Sources available to the City include an extensive local underground aquifer and imported water supplies delivered by two wholesale water agencies: Valley Water and the San Francisco Hetch Hetchy system. The Water System consists of approximately 335 miles of water mains, 26 wells and 7 storage tanks with approximately 28.8 million gallons of water capacity. The 26 wells tap the underground aquifers and

1 City of Sunnyvale. *City of Sunnyvale Water Quality Report.* 2021. Available online at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/382/637908180017770000#:~:text=The%20City%20of%20Sunnyvale%20has,Water)%2C%20and%20local%20groundwater. Accessed July 18, 2022.

make up about 62% of the City's potable water supply. A water recharge program administered by Valley Water from local reservoirs and imported water enhances the dependability of the underground aquifer. The remaining water is supplied by water imported from the two wholesale water agencies. For certain approved non-potable uses, recycled water from the San Jose/Santa Clara Regional Wastewater Facility's South Bay Recycled Water facility is used. This is highly treated water delivered through separate pipelines. This source makes up about 16% of the water sales in the City of Santa Clara. Recycled water offsets the use of potable sources in drought-prone California and is a reliable source for conservation of potable sources.

Valley Water was formed in 1929 and operates and maintains ten reservoirs and dams, dozens of groundwater recharge basins. It has 150 miles of pipelines, three treatment plants, an advanced recycled water purification plant, and three pump stations.[2] The service area includes all of Santa Clara County, covering 1,300 miles and a population of approximately 1.9 million.[3] The largest source of water is imported from outside the county.

In 2020 the average water supply was projected at 352,000 acre-feet per year (AFY), while the demand was projected at 358,000.[4] As of July 2022, continued drought conditions across California are resulting in low water allocations. Current rainfall is 59 percent of the average to date.[5] Additionally, population growth and climate change have exacerbated the discrepancy between supply and demand. The State Water Project is at five percent of the contract amount, and Valley Water has been allocated with emergency public health and safety water supplies.

Table 3.17-1, Santa Clara Valley Water District Water Demand and Supply, shows the projected water demand and supplies of the Valley Water through 2040. **Table 3.17-2, Santa Clara Valley Water District Water Supplies During a Wet Year,** shows the available supplies in a very wet year, an average year, and a very dry year. **Table 3.17-3, Santa Clara Water District Baseline Water Supplies During and Extended Drought,** shows the projected water supply with Year 2040 demands.

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2 Valley Water. Water Supply Planning. Available online at: https://www.valleywater.org/your-water/water-supply-planning. Accessed July 18, 2022.

3 Valley Water. *Water Supply Master Plan 2040*. 2019. Available online at: https://www.valleywater.org/sites/default/files/Water%20Supply%20Master%20Plan%202040_11.01.2019_v2.pdf. Accessed July 18, 2022.

4 Valley Water. *Water Supply Master Plan 2040*. 2019. Available online at: https://www.valleywater.org/sites/default/files/Water%20Supply%20Master%20Plan%202040_11.01.2019_v2.pdf. Accessed July 18, 2022.

5 Valley Water. Monthly Water Tracker. July 2022. Available online at: https://www.valleywater.org/your-water/water-supply-planning/monthly-water-tracker. Accessed July 18, 2022.

Table 3.17-1
Santa Clara Valley Water District Baseline Water Demand and Supply (Acre-Feet)

	2020	2025	2030	2035	2040
Natural Groundwater Recharge	61,000	61,000	61,000	61,000	61,000
Local Surface Water	53,000	54,000	73,000	80,000	83,000
Reuse Water	21,000	27,000	30,000	31,000	33,000
San Francisco Public Utilities Commission	55,000	57,000	57,000	58,000	58,000
Delta Conveyed	162,000	164,000	131,000	132,000	132,000
Average Supply	**352,000**	**363,000**	**352,000**	**362,000**	**367,000**
Demand	**358,000**	**367,000**	**372,000**	**384,000**	**399,000**

AFY= Acre-feet per year
Source: Santa Clara Valley Water. 2019. Water Supply Master Plan. Available at: https://www.valleywater.org/sites/default/files/Water%20Supply%20Master%20Plan%202040_11.01.2019_v2.pdf, accessed July 18, 2022.

Table 3.17-2
Santa Clara Valley Water District Water Supplies During a Wet Year (Acre-Feet)

	Wet Year (1983)	Long Term Average	Critical Year (1977)
Natural Groundwater Recharge	97,000	61,000	47,000
Local Surface Water	327,000	107,000	6,000
Reuse Water	33,000	33,000	33,000
San Francisco Public Utilities Commission	61,000	58,000	59,000
Delta Conveyed	233,000	133,000	73,000
Total Supply	**751,000**	**392,000**	**218,000**

AFY= Acre-feet per year
Source: Santa Clara Valley Water. 2019. Water Supply Master Plan. Available at: https://www.valleywater.org/sites/default/files/Water%20Supply%20Master%20Plan%202040_11.01.2019_v2.pdf

Table 3.17-3
Santa Clara Valley Water District Water Supplies During an Extended Drought (Acre-Feet)

	Drought Year 1	Drought Year 2	Drought Year 3	Drought Year 4	Drought Year 5	Drought Year 6
Natural Groundwater Recharge	54,000	48,000	47,000	48,000	54,000	57,000
Local Surface Water	62,000	26,000	27,000	21,000	50,000	61,000
Reuse Water	33,000	33,000	33,000	33,000	33,000	33,000
San Francisco Public Utilities Commission	60,000	30,000	56,000	43,000	35,000	43,000
Delta Conveyed	89,000	79,000	129,000	87,000	79,000	82,000
Reserves	101,000	151,000	33,000	55,000	0	12,000
Total Supply	**399,000**	**398,000**	**325,000**	**287,000**	**250,000**	**287,000**
Shortfall	**0,000**	**1,000**	**74,000**	**112,000**	**149,000**	**112,000**

AFY= Acre-feet per year
Source: Santa Clara Valley Water. 2019. Water Supply Master Plan. Available at: https://www.valleywater.org/sites/default/files/Water%20Supply%20Master%20Plan%202040_11.01.2019_v2.pdf, accessed July 18, 2022.

Table 3.17-1 through **Table 3.17-3** shows that there is insufficient supply to cover current and future demands in the Santa Clara Valley. While it is Valley Water's strategy to store excess supplies during wet years, there is currently inadequate reserves to satisfy demand, and the discrepancy will only increase over time. Demand is projected to far outpace supply by 2040, particularly in years of drought. The state is currently facing an historic level of dryness that has lasted three years, and 2022 had the driest winter over the past 100 years.[6] In addition, water reserves are insufficient to meet the needs in an extended drought. Reserves would be more available in Drought Year 4 because water use reductions in Drought Year 3 would allow groundwater conditions to improve. However, reserves would be depleted by Drought Year 5. Drastic reductions in demand are needed. As a result of severe drought, the Valley Water Board of Directors have called for a 15 percent reduction in water use.[7] Valley Water has implemented several water conservation programs to meet this target. Valley Water is increasing the amount of recycled and purified water to help meet demands, and it is also exploring the possibility of desalination.

3.17.1.2 Wastewater

The City of Sunnyvale owns and operates the Donald M. Sommers Water Pollution Control Plant (WPCP) located at 1444 Borregas Avenue in Sunnyvale. The WPCP treats wastewater from residential,

6 State of California. California Drought Action. Available online at: https://drought.ca.gov/. Accessed July 18, 2022.

7 Valley Water. Monthly Water Tracker. July 2022. Available online at: https://www.valleywater.org/your-water/water-supply-planning/monthly-water-tracker. Accessed July 18, 2022.

commercial, and industrial sources in Sunnyvale, the Rancho Rinconada portion of Cupertino, and Moffett Federal Airfield. Treated wastewater is discharged to the southern San Francisco Bay via the Guadalupe Slough. Five major trunk networks terminate at the WPCP, referred to as the Lawrence, Borregas, Lockheed, Moffett, and Cannery trunks. The Plant is a three-step (tertiary) treatment facility that removes pollutants from wastewater to make it clean enough to safely discharge into San Francisco Bay or recycle for non-potable uses. The Plant produces and delivers about 0.8 million gallons of recycled water per day for more than 100 customers, or 300 million gallons of recycled water per year. The Plant also produces over 2,500 dry tons of biosolids, which are used as fertilizer, and biogas, which is utilized as operational energy.[8]

The City of Sunnyvale operates a sanitary sewer system that serves a residential population of approximately 155,567 (daytime population approximately 230,000) in a 23 square mile service area. The sewer system consists of about 295 miles of gravity sewers (approximately 6,985 line segments), approximately 10,648 feet of force main, 7,133 manholes, and 5 pump stations. The sewers range in size from 4-inch to 48-inch diameter.[9]

Sewer services in the City of Santa Clara is provided by the Sewer Utility. Wastewater in Santa Clara is conveyed to the San Jose/Santa Clara Regional Wastewater Facility (RWF).[10] The City's wastewater collection system includes approximately 270 miles of sewer pipelines ranging from 4 to 48 inches in diameter, and six sewage pump stations. The RWF has the capacity to treat 167 million gallons a day of liquid waste.[11] Built in 1956, the RWF serves 1.4 million residents and over 17,000 businesses in eight cities and four sanitation districts.[12] The wastewater is treated in three stages: primary treatment, activated sludge secondary treatment, and advanced tertiary treatment, comprised of nitrification, filtration and chlorine disinfection. This highly treated water is then discharged to the south San Francisco Bay and a portion delivered to the South Bay Water Recycling (SBWR) Project. That portion

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8 City of Sunnyvale. Water Pollution Control Plant. Available online at: https://www.sunnyvale.ca.gov/homes-streets-and-property/water-and-sewer/sewer/water-pollution-control-plant. Accessed July 18, 2022.

9 City of Sunnyvale. *2020 Sewer System Management Plan.* 2020. Available online at: www.sunnyvale.ca.gov/home/showpublisheddocument/384/637889141304270000. Accessed July 18, 2022.

10 City of Santa Clara. Sewer Utility. Available online at: https://www.santaclaraca.gov/our-city/departments-g-z/water-sewer-utilities/sewer-utility. Accessed July 18, 2022.

11 City of San Jose. San Jose – Santa Clara Regional Wastewater Facility. Available online at: https://www.sanjoseca.gov/your-government/environment/water-utilities/regional-wastewater-facility. Accessed July 18, 2022.

12 City of San Jose. San Jose – Santa Clara Regional Wastewater Facility. Available online at: https://www.sanjoseca.gov/your-government/environment/water-utilities/regional-wastewater-facility. Accessed July 18, 2022.

delivered to SBWR is then prepared for distribution as recycled water for landscaping and dual plumbing projects.[13]

3.17.1.3 Solid Waste

The City of Sunnyvale contracts with Specialty Solid Waste and Recycling to provide solid waste collection services to residents and businesses in the city. Collected waste is transported to the Sunnyvale Materials Recovery and Transfer Station (SMaRT Station), where it is sorted to remove recyclable materials from mixed waste and prepare them and source-separated recyclables and compostable materials for shipment to markets.[14] Source-separated yard trimmings and MRF-derived organics are also prepared for shipment to composting markets. In 2018-2019, SMaRT Station processed 113,363 tons of municipal solid waste from the City of Sunnyvale.[15] The unrecycled portion of the waste stream is transferred to the Kirby Canyon Landfill in San Jose. The City of Sunnyvale has an agreement for solid waste disposal with Waste Management of California that currently directs the city's waste to the Kirby Canyon Landfill. In 2018-2019, 81,511 tons of municipal solid waste from Sunnyvale was disposed at the Kirby Canyon Landfill.[16] The landfill encompasses a 743-acre sites and is permitted to accept 2,600 tons of material per day. Based on current rates, it is estimated that Kirby Canyon will be in operation until 2059 and beyond.[17]

Solid waste collection in the City of Santa Clara is provided by Mission Trail Waste System through a contract with the City. Mission Trail Waste Systems also has a contract to implement the Clean Green portion of the City's recycling plan by collecting yard waste. Santa Clara has an arrangement with the owners of the Newby Island Landfill, located in San Jose, to provide disposal capacity for the City of Santa Clara through 2024. Recycling services are provided through Stevens Creek Disposal and Recycling.[18]

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13 City of Santa Clara. Sewer Utility. Available online at: https://www.santaclaraca.gov/our-city/departments-g-z/water-sewer-utilities/sewer-utility. Accessed July 18, 2022.

14 City of Sunnyvale. SMaRT Station Recycling Center. Available online at: https://www.sunnyvale.ca.gov/homes-streets-and-property/recycling-and-garbage/smart-station-recycling-center. Accessed July 18, 2022.

15 SMaRT Partners — Mountain View, Palo Alto and Sunnyvale. SMaRT Station® Annual Report 2018-2019. Available online at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/2996/637822784553930000. Accessed July 18, 2022.

16 WM. Kirby Canyon Landfill. Available online at: https://kirbycanyon.wm.com/about-us/index.jsp#:~:text=Capacity%3A,tons%20of%20material%20per%20day. Accessed July 18, 2022.

17 WM. Kirby Canyon Landfill. Available online at: https://kirbycanyon.wm.com/about-us/index.jsp#:~:text=Capacity%3A,tons%20of%20material%20per%20day. Accessed July 18, 2022.

18 City of Santa Clara. *2010-2035 General Plan Integrated Final EIR.* 2011. Available online at: https://www.santaclaraca.gov/home/showpublisheddocument/12900/635713044859030000. Accessed July 18, 2022.

3.17.1.4 Electrical Service

Electrical service to the City of Sunnyvale is provided by the Pacific Gas and Electric Company (PG&E). In Santa Clara, the City owns and operates the municipal electric utility Silicon Valley Power (SVP). In 2020, a total of approximately 16,435 gigawatt hours (GWh) of electricity was consumed in Santa Clara County.[19] Electricity in Santa Clara County in 2020 was consumed primarily by the non-residential sector (73 percent). The residential sector consumed approximately 4,392 gigawatt hours (GWh).

3.17.1.5 Natural Gas

PG&E provides natural gas services within both the City of Sunnyvale and the City of Santa Clara. California's gas supply comes from California (onshore and offshore), Southwestern U.S., the Rocky Mountains, and Canada.[20] In 2020, Santa Clara County consumed approximately 418.68 Millions of Therms (MMThm). Residential uses accounted for 245.13 MMThm, or 58.5 percent of total consumption. Non-residential uses consumed approximately 173.56 MMThm.[21] In 2020, Santa Clara County used approximately 3.4 percent of the state's total consumption of natural gas.[22]

3.17.2 REGULATORY FRAMEWORK

Federal, State, and local regulations applicable to utilities and service systems are presented below. This setting addresses issue areas relevant to utilities and service systems, including water supply, wastewater, and solid waste.

3.17.2.1 Federal

Clean Water Act of 1972, as amended (CWA)

The law was originally enacted as the Federal Water Pollution Control Act (FWPCA; Public Law 92–500) in 1948 but took on its modern form when completely rewritten in 1972 in an act entitled the Federal Water Pollution Control Act Amendments of 1972, now commonly known as the Clean Water Act. Major

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19 California Energy Commission. Energy Consumption Data Management System. *Electricity Consumption by County*. Available online at: http://ecdms.energy.ca.gov/elecbycounty.aspx. Accessed July 28, 2022.

20 California Gas and Electric Utilities. *2020 California Gas Report*. Available online at: https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf. Accessed July 28, 2022.

21 California Energy Commission. Natural Gas Consumption by County. Available online at: http://ecdms.energy.ca.gov/gasbycounty.aspx. Accessed July 28, 2022.

22 California Energy Commission. Natural Gas Consumption by County. Available online at: http://ecdms.energy.ca.gov/gasbycounty.aspx. Accessed July 28, 2022.

changes have subsequently been introduced via amendatory legislation including the Clean Water Act of 1977 and the Water Quality Act of 1987.

The Clean Water Act (CWA) is the primary federal law in the United States governing water pollution. Its objective 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. It is one of the United States' first and most influential modern environmental laws. As with many other major U.S. federal environmental statutes, it is administered by the U.S. Environmental Protection Agency (U.S. EPA), in coordination with state governments. Its implementing regulations are codified at 40 C.F.R. Subchapters D, N, and O (Parts 100-140, 401-471, and 501-503).

Section 303(d)

Section 303(d) of the Federal CWA requires the SWRCB to list impaired water bodies and determine TMDLs of pollutants or other stressors that are contributing excessively to these impaired waters.

Section 401 – Water Quality Certification

Section 401 establishes the basic structure for regulating discharges of pollutants into the waters of the U.S. and regulating quality standards for surface waters. Under the CWA, the U.S. EPA has implemented pollution control programs such as setting wastewater standards for industries and surface waters.

Section 402

Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit process. In California, NPDES permitting authority is delegated to, and administered by the nine RWQCBs. Pursuant to Section 402, a discharge of any pollutant from a point source into navigable waters, are prohibited unless an NPDES permit is obtained. Point sources are discrete conveyances such as pipes or manmade ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

Section 402(p) establishes that storm water permits are required for discharges from a municipal separate storm sewer system (MS4) serving a population of 100,000 or more. U.S. EPA defines an MS4 as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) owned or operated by a State (40 CFR 122.26(b)(8)).

Section 404 – Discharge of Dredge or Fill Material

Section 404 of the federal CWA is administered and enforced by the U.S. Army Corps of Engineers (USACE). Section 404 of the CWA establishes a program to regulate the discharge of dredged and fill material into waters of the United States, including wetlands. USACE administers the day-to-day program, including the determination of eligibility of project for use of Categorical Exclusions and Nationwide Permits, and review and consideration of individual permit decisions and jurisdictional determinations. USACE also develops policy and guidance; and enforces Section 404 provisions.

3.17.2.2 State

Water Supply

Urban Water Management Planning Act

California State Assembly Bill 797 (California Water Code Section 10610, et seq.), adopted in 1983, requires every urban water supplier providing water for municipal purposes to more than 3,000 customers or more than 3,000 acre-feet of water on an annual basis to prepare an Urban Water Management Plan (UWMP). The intent of the UWMP is to assist water supply agencies in water resource planning given their existing and anticipated future demands. UWMPs must be updated every five years, in years ending in zero and five.

Senate Bills 610 and 221

SB 221 (Kuehl) amended the Subdivision Map Act, and SB 610 (Costa) amended Part 2.10 of the California Water Code regarding water supply availability. These amendments took effect on January 1, 2002, and require generally that water retail providers demonstrate that sufficient and reliable sources are available in order for local agencies to evaluate large-scale developments, and complete the environmental review process.

SB 610 requires cities and counties that determine a project is subject to the California Environmental Quality Act (CEQA) to identify any public water system that may supply water for the project, and to require those public water systems to prepare a specified water supply assessment to be included in any environmental document prepared for the project. The assessment includes an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project and water received in prior years, pursuant to those entitlements, rights, and contracts. If the assessment concludes that water supplies are or will be insufficient, the public water system shall also submit plans for acquiring additional water supplies.

SB 221 requires written verification from the applicable public water system that sufficient water supply is available for a subdivision of property of more than 500 dwelling units prior to approval of a tentative or parcel map.

Assembly Bill (AB) 1668 and Senate Bill (SB) 606

Passed on May 31, 2018, AB 1668 and SB 606 establish guidelines for efficient water use and a framework for the implementation and oversight of the new standards, which must be in place by 2022. The two bills strengthen the state's water resiliency in the face of future droughts with provisions that include: Establishing water use objectives and long-term standards for efficient water use that apply to urban retail water suppliers, comprised of indoor residential water use, outdoor residential water use, commercial, industrial and institutional (CII) irrigation with dedicated meters, water loss, and other unique local uses; Providing incentives for water suppliers to recycle water; Identifying small water suppliers and rural communities that may be at risk of drought and water shortage vulnerability and provide recommendations for drought planning; Requiring both urban and agricultural water suppliers to set annual water budgets and prepare for drought.

Wastewater

California Code of Regulations Title 22

The California Code of Regulations Title 22, Division 4, Chapter 3, Sections 60301 through 60355 are used to regulate recycled wastewater and are administered jointly by the CDPH and the RWQCBs. Title 22 contains effluent requirements for four levels of wastewater treatment, from undisinfected secondary recycled water to disinfected tertiary recycled water. Higher levels of treatment have higher effluent standards, allowing for a greater number of uses under Title 22, including irrigation of freeway landscaping, pasture for milk animals, parks and playgrounds, and vineyards and orchards for disinfected tertiary recycled water.

Salt concentrations (such as chloride, nitrogen, sodium, etc.) in the effluent are regulated based on the Water Quality Control Plan (Basin Plan) for the Los Angeles Region, which also considers local groundwater quality. Recycled water quality goals for salts and other constituents would vary depending on the intended irrigation recipients. The RWQCB will develop waste discharge requirements based on the Basin Plan, designed to protect beneficial uses of the State waters. The RWQCB Basin Plan contains an antidegradation policy so that existing quality shall be maintained.[23]

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23 California Water Boards, Plans and Policies - Antidegradation, 2022. Available online at: https://www.waterboards.ca.gov/plans_policies/antidegradation.html, accessed on May 3, 2022.

Solid Waste

Assembly Bill 939 and Senate Bill 1016

The California Integrated Waste Management Act of 1989, or Assembly Bill 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans, and mandated that local jurisdictions divert at least 50 percent of all solid waste generated (from 1990 levels), beginning January 1, 2000, and divert at least 75 percent by 2010. Projects that would have an adverse effect on waste diversion goals are required to include waste diversion mitigation measures to assist in reducing these impacts to less-than-significant levels. With the passage of Senate Bill 1016 (the Per Capita Disposal Measurement System) in 2006, only per capita disposal rates are measured to determine if a jurisdiction's efforts are meeting the intent of Assembly Bill 939. Therefore, the 50 percent diversion requirement should be measured in terms of per-capita disposal expressed as pounds per person per day.

Assembly Bill 341 and Senate Bill 1383

The purpose of AB 341 of 2011 (Chapter 476, Statutes of 2011) is to reduce greenhouse gas (GHG) emissions by diverting commercial solid waste to recycling efforts and to expand the opportunity for additional recycling services and recycling manufacturing facilities in California. In addition to Mandatory Commercial Recycling, AB 341 sets a statewide goal for 75 percent disposal reduction by the year 2020.

SB 1383 of 2016 (Chapter 395, Statutes of 2016) established the following goals: a 50 percent reduction in the level of the statewide disposal of organic waste from 2014 levels by 2020, and a 75-percent reduction in the level of the statewide disposal of organic waste from 2014 levels by 2025. This bill also authorized CalRecycle to adopt regulations, to take effect on or after January 1, 2022, to achieve these targets.

Assembly Bill 1826

AB 1826 of 2014 (Chapter 727, Statutes of 2014) requires businesses that generate a specified amount of organic waste per week to arrange for recycling services for that waste, and for jurisdictions to implement a recycling program to divert organic waste from businesses subject to the law, as well as report to CalRecycle on their progress in implementing an organic waste recycling program. As of January 1, 2017, businesses that generate four cubic yards or more of organic waste per week shall arrange for organic waste recycling services.

3.17.2.3 Regional and Local

Santa Clara Valley Water District Water Supply Master Plan 2040

A reliable supply of clean water is necessary for the social, economic, and environmental well-being of Santa Clara County. The Water Supply Master Plan (Master Plan) explains Valley Water's strategy for providing a reliable and sustainable water supply in a cost-effective manner. The Master Plan informs investment decisions by describing the type and level of water supply investments Valley Water is planning to make through 2040. The Master Plan discusses the adopted water supply 'level of service' goal, Valley Water's water supply strategy to meet that goal, portfolio of water supply projects, and lays out the framework for the annual monitoring and assessment plan.

Santa Clara County Integrated Waste Management Plan

The Santa Clara County IWMP was approved by the CIWMB in 1996. Since that time, it has undergone two 5-year reviews. The jurisdictions in the Santa Clara County IWMP include Campbell, Cupertino, Gilroy, Morgan Hill, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, Sunnyvale and the Unincorporated Areas of Santa Clara County. Each jurisdiction in the county has a diversion requirement of 50 percent for 2000 and each year thereafter.

City of Sunnyvale General Plan

The Environmental Management chapter of the *City of Sunnyvale General Plan* contains the following policies related to utilities and service systems:

Policy EM-1.1 Manage water supply to meet demands for potable water through the effective use of water supply agreements.

Policy EM-1.2 Maximize recycled water use for all approved purposes both within and in areas adjacent to the City, where feasible

Policy EM-1.3 Provide enough redundancy in the water supply system so that minimum potable water demand and fire suppression requirements can be met under both normal and emergency circumstances.

Policy EM-2.1 Lower overall water demand through the effective use of water conservation programs in the residential, commercial, industrial and landscaping arena

Policy EM-3.1 Maintain a preventive maintenance program that provides for reliability of potable and recycled water system

Policy EM-3.2 Maintain a proactive Long Range Infrastructure Plan that identifies schedules and funds and implements needed system upgrades and replacements before facilities exceed their effective useful lives.

Policy EM-3.3 Maintain an up-to-date emergency water operations plan.

Policy EM-4.1 Maintain and update a comprehensive water quality-monitoring program that meets or exceeds all state and federal requirements, while also meeting specific City and residents' needs

Policy EM-4.2 Maintain an aggressive inspection and preventive maintenance program that ensures that backflow from potentially contaminated water services is prevented.

Policy EM-4.3 Provide appropriate security and protection of water facilities.

Policy EM-4.4 Maintain and update an action plan that responds to and protects water supplies from contamination.

Policy EM-5.1 Water Pollution Control Plant improvements should be designed, constructed and maintained and the quantity of industrial wastes should be controlled so that the plant does not have to be expanded in excess of its capacity of 29.5 MGD.

Policy EM-5.2 Ensure that wastes discharged to the wastewater collection system can be treated by existing treatment processes of the Water Pollution Control Plant.

Policy EM-6.1 Inspect critical points in the wastewater management system annually to ensure that the proper level of maintenance is being provided and that the flow in sewers does not exceed design capacity.

Policy EM-7.1 Monitor Water Pollution Control Plant operations and maintenance to meet regulatory standards.

Policy EM-7.2 Coordinate operating procedures with the City energy policy to optimize an alternative energy program so that minimum use and reliance are placed on outside energy sources.

Policy EM-7.3 Actively participate in the watershed management approach to solving water quality issues of the Santa Clara Basin Watershed and the South Bay.

City of Sunnyvale Climate Action Plan

The Sunnyvale Climate Action Plan (CAP), adopted in 2014, contains the following measures and action items for reducing water consumption: Measure WC-2 Reduce indoor and outdoor potable water use in residences, businesses, and industry. Action WC-2.1 Require new development to reduce potable indoor water consumption by 30% (Tier 1 CalGreen) and outdoor landscaping water use by 40%. Action WC-2.3 Require new open space and street trees to be drought-tolerant. Action WC-2.4 Implement the City's Urban Water Management Plan to facilitate a 20% reduction in per capita water use by 2020. In addition, under Action Item WC-2.2, development standards would be revised to ensure the use of graywater, recycled water, and rainwater catchment systems is allowed in all zoning districts. The CAP also includes action items that would help promote the use of recycled water by improving the quality of recycled water (WC-1.1), promote the use of "purple pipe" infrastructure in new construction or major renovation projects (WC-1.2 and WC-1.3), and create flexible provisions that would encourage residents and businesses to collect rainwater for irrigation purposes (WC-1.4).

City of Sunnyvale 2020 Sewer System Management Plan

The Sunnyvale Sewer System Management Plan was prepared by the City of Sunnyvale in response to the State Water Resources Control Board (SWRCB) issuing a Statewide Waste Discharge Requirements for sanitary sewer systems, which include requirements for development of an SSMP. The SSMP contains a compendium of the policies, procedures, and activities describing the planning, management, operation, and maintenance of the City's sanitary sewer system. The SSMP follows the General Waste Discharge Requirements for Wastewater Collection Agencies (GWDR).

City of Santa Clara General Plan

Policies in the *Santa Clara General Plan* have been adopted to avoid or mitigate utilities and service system impacts from development projects. Relevant policies related to utilities and service system are presented below:

Policy 5.1.1-P3 Prior to the implementation of Phase III of the *General Plan*, undertake a comprehensive assessment of water, sanitary sewer conveyance, wastewater treatment, solid waste disposal, storm drain, natural gas, and energy demand and facilities in order to ensure adequate capacity and funding to implement the necessary improvements to support development in the next phase.

Policy 5.1.1-P21 Prior to 2023, identify and secure adequate solid waste disposal facilities to serve development in Phase III.

Policy 5.10.1-P6 Require adequate wastewater treatment and sewer conveyance capacity for all new development.

Policy 5.3.1-P9 Require that new development provide adequate public services and facilities, infrastructure, and amenities to serve the new employment or residential growth.

Policy 5.3.1-P11 Encourage new developments proposed within a reasonable distance of an existing or proposed recycled water distribution system to utilize recycled water for landscape irrigation, industrial processes, cooling and other appropriate uses to reduce water use consistent with the CAP.

Policy 5.3.1-P27 Encourage screening of above-ground utility equipment to minimize visual impacts.

Policy 5.3.1-P28 Encourage undergrounding of new utility lines and utility equipment throughout the City.

Policy 5.10.5-P20 Maintain, upgrade and replace storm drains throughout the City to reduce potential flooding.

Policy 5.10.5-P21 Require that storm drain infrastructure is adequate to serve all new development and is in place prior to occupancy.

City of Santa Clara Sewer System Management Plan

The City of Santa Clara has prepared a Sewer System Management Plan (SSMP) to comply with the San Francisco Bay Regional Water Quality Control Board (RWQCB) and the State Water Resource Control Board General Order 2006-0003-DWQ. This SSMP is intended to provide planning, description of resources and direction for staff to maintain the City's sanitary sewer collection and conveyance system such that all sewer flows delivered to the City's system are conveyed safely to the publicly owned wastewater treatment plant. The SSMP aims to minimize the number and severity of sanitary sewer overflows (SSOs) and to help mitigate the impact of SSOs on the environment. The SSMP supports and supplements the City's existing operations and maintenance program and goals. The SSMP also contribute to the proper management of the collection system by memorializing these activities.

3.17.3 THRESHOLDS OF SIGNIFICANCE

The following thresholds for determining the significance of impacts related to utilities and service systems are contained in the environmental checklist form contained in Appendix G of the most recent update of the *State CEQA Guidelines*. Adoption and/or implementation of the Proposed Master Plan could result in significant impacts regarding utilities and services systems if any of the following would occur:

- 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.
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.
- 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.
- 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.
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

3.17.4 METHODOLOGY

The analysis in this section focuses on the potential environmental effects of any relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities. If the Proposed Master Plan would not require the relocation or construction of such facilities, it follows that there would not be a significant environmental impact. The analysis would also evaluate the Proposed Master Plan's potential to exceed available water supplies, wastewater capacity, and the generation of solid waste in excess of capacity or applicable solid waste reduction goals.

3.17.5 ENVIRONMENTAL IMPACTS

Impact USS-1 **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.**

Water Supply

The Plan Area receives water supplies from the City of Sunnyvale Public Works Department, and the City of Santa Clara Water Utility, which both provide water pumped from municipal water wells and treated surface water from Valley Water. Implementation of the Proposed Master Plan would slightly increase student capacity, but enrollment is projected to stay the same and decline over time. The Proposed Master Plan would not trigger increased population or density within or surrounding the Plan Area. As a result, demand for water would remain the same as existing conditions. Due to current drought conditions, there is not enough supply to meet current demand. However, the Proposed Master Plan would not exacerbate water supply issues. Additionally, the Proposed Master Plan would be subject to State and local regulations to reduce water consumption. The Proposed Master Plan would not require or result in the construction of new water treatment facilities or expansion of existing facilities. Impacts would be less than significant.

Wastewater

The Plan Area is served by the Donald M. Sommers Water Pollution Control Plant (WPCP), and the San Jose/Santa Clara Regional Wastewater Facility (RWF). Wastewater in the Plan Area would be collected by the City's local system of sewer lines and conveyed through regional trunk lines. Both facilities provide a three-step (tertiary) treatment facility that removes pollutants from wastewater that is then discharged to the south San Francisco Bay or delivered to a water recycling plant. Site-specific sewer lines and supporting infrastructure would be designed and engineered for each of the project level developments to accommodate wastewater flows. Therefore, the City's local sewer lines would be expanded or improved on an as-needed basis during implementation of the Proposed Master Plan and no major alterations to wastewater system is anticipated to be necessary. As described above, implementation of the Proposed Master Plan would not increase population or density within or surrounding the Plan Area. The number of students enrolled at Peterson Middle School and Laurelwood Elementary is projected to remain the same and decline over time. Implementation of the Proposed Master Plan would not result in a significant increase in enrollment. The existing wastewater treatment capacity are therefore anticipated to be sufficient to accommodate the Proposed Master Plan. With adherence to applicable regulations,

implementation of the Proposed Master Plan would have adequate wastewater conveyance systems and impacts related to wastewater conveyance would be less than significant.

Electric Power

Electricity services in the Plan Area is provided by Silicon Valley Power (SVP) and the Pacific Gas and Electric Company (PG&E). Implementation of the Proposed Master Plan may require site-specific modification to some existing electrical distribution systems. This service would be provided in accordance with the rules and regulations of SVP and PG&E on file with and approved by California Public Utilities Commission (CPUC). It is not anticipated that existing transmission lines would need to be modified as a result of the development under the Proposed Master Plan. Potential impacts would be less than significant.

Natural Gas

Natural gas service in the Plan Area is provided by PG&E which is regulated by the CPUC. Construction associated with the Proposed Master Plan would occur within the footprint of the existing school facilities. The existing Peterson Middle School and Patrick Henry Campus contain existing utility infrastructure, and therefore construction of new natural gas pipelines or expansion of existing pipelines would not be required. Impacts would be less than significant.

Telecommunications Facilities

As discussed above, construction associated with the Proposed Master Plan would occur within the footprint of the existing school facilities. The existing Peterson Middle School and Patrick Henry Campus contain existing telephone and cable lines, which are typically co-located with existing energy lines. It is not anticipated that new infrastructure will be required. If upgraded telephone or cable lines are needed, utility plans would be submitted concurrent with the final plans for the Proposed Maser Plan. Given the urbanized nature of the Plan Area, construction of any telecommunications infrastructure would result in less than significant environmental impacts.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact USS-2 **Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.**

Valley Water's Water Supply Master Plan assesses the reliability of identified water supplies during normal, and dry water years. As shown under **Table 3.17-3, Santa Clara Valley Water District Baseline Water Supplies during and Extended Drought,** there is an existing water supply shortfall after Drought Year 1. Current reserves are insufficient during an extended drought. The state is currently in the third year of a severe drought. Without drastic reductions in water usage, land subsidence and undesirable groundwater conditions will occur. However, this is an existing condition that would not be exacerbated by the Proposed Master Plan. Implementation of the Proposed Master Plan would not increase population or density within or surrounding the Plan Area. The number of students attending Peterson Middle School and Laurelwood Elementary is projected to remain the same and decline over time. Implementation of the Proposed Master Plan would not result in a significant increase in enrollment. As a result, demand for water would remain the same. Valley Water is also implementing several projects (Delta Conveyance Project, Additional Conservation and Stormwater Projects and Programs, Potable Reuse Program, Pacheco Reservoir Expansion, Transfer-Bethany Pipeline, and South County Recharge) that will work to meet water supply goals. Additionally, the Proposed Master Plan would be subject to State and local regulations to reduce water consumption. Impacts would be *less than significant*.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact USS-3 **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.**

As noted under **Impact USS-1**, the Plan Area is served by the Donald M. Sommers Water Pollution Control Plant (WPCP), and the San Jose/Santa Clara Regional Wastewater Facility (RWF) which provides both primary, secondary, and tertiary treatment for a total of approximately 111 million gallons of wastewater per day (MGD). WPCP has a permitted capacity of 29.5 MGD, and RWF has a permitted capacity of 167 MDG, totaling 196.5 MGD. The existing wastewater treatment is operating under capacity. As discussed above, the Proposed Master Plan would not increase population or density within or surrounding the Plan Area. The number of students attending Peterson Middle School and Laurelwood Elementary is projected to remain the same and decline over time. Implementation of the Proposed Master Plan would not result in a significant increase in enrollment. As a result, the generation of wastewater would also remain the same. With adherence to applicable regulations and *General Plan* policies, implementation of the Proposed Master Plan would have adequate wastewater conveyance systems and impacts would be *less than significant*.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact USS-4 **Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.**

Solid waste generated in the Plan Area would be transported to either the Sunnyvale Materials Recovery and Transfer Station, Kirby Canyon Landfill located in Sunnyvale, or Newby Island Landfill, located in San Jose. Kirby Canyon can accept 2,600 tons of waste per day and is expected to operate to 2059, or beyond. Newby Island's capacity was increased to 57.5 million cubic yards in 2015 and is anticipated to

be in operation until 2041. As discussed above, the Proposed Master Plan would not increase population or density within or surrounding the Plan Area. The number of students attending Peterson Middle School and Laurelwood Elementary is projected to remain the same and decline over time. Implementation of the Proposed Master Plan would not result in a significant increase in enrollment. As a result, the generation of solid waste would also remain the same and would not exceed available capacity. With adherence to applicable regulations and *General Plan* policies, implementation of the Proposed Master Plan would have adequate solid waste infrastructure and impacts would be ***less than significant***.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

Impact USS-5 **Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.**

The cities of Sunnyvale and Santa Clara are required by Assembly Bill 939 to divert 75 percent of solid waste from landfills. Implementation of the Proposed Master Plan would be required to demonstrate compliance with all applicable regulations including Assembly Bill 939. The Proposed Master Plan would not interfere with any federal, state, or local management and reduction statutes and regulations related to solid waste. Impacts would be ***less than significant***.

Level of Significance Before Mitigation

Less than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than Significant Impact.

3.17.6 CUMULATIVE ANALYSIS

As described in **Section 3.17.1.1, Water Supply**, the Santa Clara Valley region will need to reduce demand for water significantly, as well as implement long-term projects aimed at increasing supply in order to provide enough water during current and projected future conditions. While the Proposed Master Plan itself would not create additional demand for water, cumulative projects in the area have the potential to increase population, and subsequently increase water demand. The Water Supply Master Plan includes several projects (Delta Conveyance Project, Additional Conservation and Stormwater Projects and Programs, Potable Reuse Program, Pacheco Reservoir Expansion, Transfer-Bethany Pipeline, and South County Recharge), that are anticipated to increase water supply reliability. As such, while it is expected that drought conditions will become the new normal, efforts to reduce demand and projects to increase supply will mean that development projects in the surrounding area would not be cumulatively considerable and impacts would be less than significant.

As noted above, wastewater is collected through a sewer system that is serviced by the City of Sunnyvale and the City of Santa Clara. Wastewater collected in the City of Sunnyvale is conveyed to Donald M. Sommers Water Pollution Control Plant (WPCP) located at 1444 Borregas Avenue in Sunnyvale. Wastewater collected in the City of Santa Clara is conveyed to San Jose/Santa Clara Regional Wastewater Facility (RWF) in San Jose. Both provide tertiary treatment that is either recycled or discharged into the San Francisco Bay. Both treatment plants have a combined capacity of 196.5 million gallons of wastewater per day (MGD), while they only process approximately 111 MGD. With respect to future growth in the WPCP and RWF service areas and associated increases in wastewater treatment demands, continued implementation of system improvements that follow the guidance of the City of Sunnyvale 2020 Sewer System Management Plan and the City of Santa Clara Sewer System Management Plan would ensure sufficient conveyance and treatment capacity to meet cumulative needs. Funding for such increases is available through a combination of connection fees paid by developers, service districts, and general fund monies. Compliance with these requirements would reduce cumulative impacts to wastewater treatment and collection systems to a less than significant level and the Proposed Master Plan's contribution to wastewater service impacts would not be cumulatively considerable.

While implementation of the Proposed Master Plan would not generate additional solid waste beyond existing conditions, planned and pending development surrounding the Plan Area could increase solid waste generation. As discussed under **Impact USS-4**, area landfills have capacity to accommodate

additional solid waste for the next couple of decades. Cumulatively, other areas which utilize the same landfills as the Proposed Master Plan would likely also continue to experience growth and associated increases in solid waste generation. State mandated solid waste diversion rates (for recycling) would continue to minimize the quantity of waste directed to area landfills, and compliance with *General Plan* would maintain or improve upon existing solid waste diversion rates. The Kirby Canyon Landfill and the Newby Island Landfill will remain open to 2059 and 2041, respectively with sufficient disposal capacity to accommodate existing service territory.

The Santa Clara County Integrated Waste Management Plan includes strategies for meeting disposal capacity at both landfills, including increased waste diversion and potential expansion of landfill capacity. Solid waste disposal facilities and management approach would continue to adjust as needed to provide adequate disposal capacity throughout the county. Thus, cumulative impacts to solid waste facilities would be less than significant and the Proposed Master Plan's contribution to solid waste impacts would not be cumulatively considerable.

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3.18 WILDFIRE

INTRODUCTION

This section describes existing wildfire conditions within Plan Area, identifies the regulatory framework with respect to laws and regulations that affect wildfire, and analyzes the potential impacts of the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan"). In addition, this EIR provides mitigation measures to be considered by lead agencies for subsequent, site-specific environmental review to reduce identified impacts as appropriate and feasible.

Note also that no physical changes to the existing Laurelwood Elementary School site are included in the Proposed Master Plan.

3.18.1 ENVIRONMENTAL SETTING

3.18.1.1 Definitions

Definitions of terms used in the regulatory framework, characterization of baseline conditions, and impact analysis for wildfire are provided below:

CAL FIRE: California Department of Forestry and Fire Protection (abbreviated Cal Fire and styled CAL FIRE). CAL FIRE is the State of California's fire protection agency responsible for protection and stewardship of over 31 million acres of the state's privately-owned wildlands. CAL FIRE is an "all-risk" department, meaning its teams may respond to a car crash, medical incident, hazardous material spill, or natural disaster, not just fires. CAL FIRE is also responsible for managing 71,000 acres of Demonstration State Forests, overseeing enforcement of state forest management regulations, and operating training and certification course trainings.[1]

Clearance: Space cleared of vegetation as required by law, regulation, easement, etc. for the purpose of preventing fires.

Containment/Control: A fire is contained when it is completely surrounded by a boundary but is still burning and has the potential to jump a boundary line. The boundary may be a "fire line" which is a strip of area where the vegetation has been removed to deny the fire fuel, or a river, a freeway or some other barrier which is expected to stop the fire. Hose lines from fire engines may also contribute to a fire being

1 California Department of Forestry and Fire Protection. *About Us*. Available online at https://www.fire.ca.gov/about-us/. Accessed July 7, 2022.

surrounded and contained. A fire is controlled when there is no further threat of it jumping a containment line. While crews continue to do mop-up work within the fire lines, the fire fight is over.

Contract Counties: Contract counties are counties where the local county fire department is contracted by CAL FIRE to protect a State Responsibility Area (SRA). Section 4133 of the Public Resources Code and Section 55607 of the Government Code permit the CAL FIRE Director to contract with counties for protection of SRAs. In California, six counties provide fire-prevention services in SRAs under contract with the state. These counties are Marin, Kern, Santa Barbara, Ventura, Los Angeles, and Orange.

Damage Assessment: Amount of economic loss, including cost of fire suppression.

Defensible Space: An area either natural or manmade where material capable of causing a fire to spread unchecked has been treated, cleared, reduced or changed in order to act as barrier between the advancing wildfire and the loss to life, property, or resources. This concept is vital for firefighter safety and provides the single significant element of protection of individual property owners. California law requires homeowners to maintain 100 feet of defensible space around homes and structures.

Easement: A right to cross or otherwise use someone else's property for a specified purpose.

Fire Hazard: Dangerous accumulation of flammable fuels in wildland areas, usually referring to vegetation or the flammable materials that may be ignited by various fire risks or cause fires to increase in intensity or rate of spread.

Fire Hazard Zoning: A planning and regulatory activity (typically conducted by a local agency such as a city or county) which provides criteria for what kinds, how many and under what conditions development or other activities should be regulated in areas of various hazard classification.

Fire Season: In California fire season generally lasts for six to eight months, from summer to early fall. In recent years, fire season has extended into December.

Greenbelts: A facility or land use designed for a use other than fire protection, which will slow or resist the spread of a wildfire. Includes parking lots, irrigated or landscaped areas, golf courses, parks, playgrounds and maintained vineyards, orchards or annual crops that do not cure in the field.

Interface/ Wildland Interface: The meeting point of wildland and structures. At this interface, structures and vegetation are sufficiently close that a wildland fire could spread to a structure or a structure fire ignites vegetation.

Intermix/ Wildland Intermix: Interspersing of developed land with wildland, where there are no easily discernible boundaries between the two systems. In this setting, there may be homes or other structures intermixed with wildland fuels, as opposed to a distinct area of wildland fuel adjacent to a developed area.

Local Responsibility Area (LRA): Areas where wildland fire protection is the responsibility of the local government. Local responsibility area fire protection is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to local governments.

Prescribed Burning: Controlled application of fire to wildland fuels, in either their natural or modified state, under conditions of weather, fuel moisture, soil moisture, etc., as to allow the fire to be confined to a predetermined area and at the same time to produce results to meet planned objectives of land management.

State Responsibility Area (SRA): SRAs are areas in which the primary financial responsibility for preventing and suppressing fires is that of the state and is defined based on land ownership, population density and land use.[2] These include lands covered wholly or in part by timber, brush, undergrowth or grass, whether of commercial value or not; lands which protect the soil from erosion, retard run-off of water or accelerated percolation; lands used principally for range or forage purposes; lands not owned by the Federal government; and lands not incorporated. By Board regulations, unless specific circumstances dictate otherwise, lands are removed from SRA when housing densities average more than 3 units per acre over an area of 250 acres. CAL FIRE has SRA responsibility for the protection of more than 31 million acres of California´s privately-owned wildlands.[3]

Wildland: Refers to unoccupied lands

Wildland Urban Interface: Refers to the geographical point where flammable vegetation meets man- made structures.

3.18.1.2 Existing Conditions

A wildfire is defined as a non-structural fire in undeveloped area with the potential to spread to an urban area. While wildfires are common across California, a variety of factors can affect the likelihood of a fire occurring and the severity of the burn. Unsurprisingly, locations with hot, dry, and windy conditions face

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2 California Department of Tax and Fee Administration. *Fire Prevention Fee*. 2017. Available online at: https://www.cdtfa.ca.gov/taxes-and-fees/fire-prev-fee.htm. Accessed July 7, 2022.

3 CAL FIRE. *Informational Report for State Responsibility Area Fire Prevention Fee: Fiscal Year 2016-2017*. Available online at: https://www.fire.ca.gov/media/8146/report-for-sra-fire-prevention-fee-fy16-17.pdf. Accessed July 7, 2022.

a greater fire hazard than wetter and cooler locations, and communities near wildland areas are more endangered than those in cities and towns. Vegetation, topography, roadways, and management methods also contribute to an area's potential for fire hazards. Steep hillsides and varied topography may also increase the risk of wildland fires, and could affect natural resources, as well as life and property. Most fires in California occur during late summer and early fall, but recently the fire season is starting earlier and lasting longer in the year, affecting areas longer, and resulting in more extreme events due to climate change.

CalFire publishes Fire Hazard Severity Zone Maps for the entire State of California, which include fire hazard measurements, as well as the areas that are under State Responsibility Areas (SRA) lands or Local Responsibility Area (LRA) lands, for each county in the State. These maps place areas of the state into different fire hazard severity zones (FHSZ) based on a hazard scoring system using subjective criteria for fuels, fire history, terrain influences, housing density, and occurrence of severe fire weather where urban fire could result in catastrophic losses. As part of this mapping system, land where CAL FIRE is responsible for wildland fire protection and generally located in unincorporated areas is classified as a SRA. In addition to establishing local or state responsibility for wildfire protection in a specific area, CAL FIRE designates areas as very high fire hazard severity (VHFHSZ) zones or non-VHFHS zones.[4]

As part of a nationwide climate change trend, California has been experiencing exceedingly hotter years on record every year.[5] The heat, coupled with years of drought and an increase of forest pests and disease linked to climate change, has created perfect fire conditions that allowed for some of the most destructive and deadliest fires in the state's history. Wind direction and intensity, particularly for fires close to populated areas pose not only safety issues, but also air quality related health issues.

Fire Hazard Severity Zones

Wildland fire protection in California is the responsibility of either the local, state, or federal government. Public Resources Code Section 4201-5 (Chapter 806, Statues of 1982) requires CAL FIRE to evaluate fire hazard severity and map FHSZ for all SRA.[6] FHSZs are based on factors such as fuel, slope, and weather and are designated as moderate, high, and very high. Zone classification is based on a combination of how

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4 CAL FIRE. 2007. *Fire Hazard Severity Zones in SRA*. Available online at: https://osfm.fire.ca.gov/media/6636/fhszs_map.pdf. Accessed January 5, 2022.

5 NASA Earth Observatory, *California Heatwave Fits a Trend*, September 6, 2020. Available online at: https://earthobservatory.nasa.gov/images/147256/californiaheatwavefitsatrend. Accessed on March 22, 2022. *See also* Los Angeles Times, *California records its hottest summer ever as climate change roils cities,* September 9, 2021. Available online at: https://www.latimes.com/california/story/2021-09-09/california-records-hottest-summer-amid-heat-wave-flex-alert. Accessed on March 22, 2022.

6 California Legislative Information. 1982. *Article 9. Fire Hazards Severity Zones [4201-4204].*

a fire will behave and the probability of flames and embers threatening buildings. By identifying areas with the potential for more severe wildfire hazards, FHSZ maps allow for proper planning, prevention, and mitigation that reduce wildfire damages. CAL FIRE also produces Fire Hazard Severity Zone maps for the areas of California where local governments have financial responsibility for wildland fire protection, known as Local Responsibility Area or LRA. Per law, only lands zoned as Very High Fire Hazard Severity are identified within local responsibility areas.[7]

After the Oakland Hills Fire of 1991, the "Bates Bill" (Senate Bill 337) was passed in 1992, calling on CAL FIRE to make recommendations to local jurisdictions where VHFHSZs exist. The bill provides direction for local jurisdictions to mitigate fire spread and reduce the intensity of uncontrolled blazes.

Fire hazard severity zone levels range from Moderate to Very High. Fire hazard severity zones are designated in three types of areas based on what level of government is financially responsible for preventing and suppressing wildfires:

- **Federal Responsibility Areas (FRAs):** The federal government is financially responsible for wildfire suppression. No FRAs are located within or surrounding the Plan Area.

- **State Responsibility Areas (SRAs):** The state is financially responsible for wildfire suppression. No FRAs are located within or surrounding the Plan Area.

- **Local Responsibility Areas (LRAs):** Cities or the County are financially responsible for wildfire suppression. The Plan Area and the entirety of the Cities of Sunnyvale and Santa Clara are mapped as LRAs.

Though wildland fires are a natural part of the ecological processes, in the past, it was presumed that all wildland fires should be extinguished promptly. This caused "protected" vegetation to grow denser, weakening vegetation in a struggle for living space and increasing destruction by pests and disease; and in turn, added fuel for future fire. In addition, the absence of fire can alter or disrupt the cycle of natural plant succession and the associated habitats that form. Recognizing this, land management agencies are now committed to finding ways, such as prescribed burning, to reintroduce fire into natural ecosystems. In addition, California has extended droughts, which increase dead and dying vegetation, dry fuel per acre volumes, and many days of low humidity. Furthermore, the majority of wildfires in the region are human caused by factors including but not limited to campfires and building fires. This remains true even before accounting for the crisis of anthropogenic climate change, which exacerbates wildfires. Wildfire increases the potential for runoff and erosion, as fire removes ecological stabilizers such as vegetation and healthy

7 CAL FIRE. FHSZ Viewer. Available online at https://egis.fire.ca.gov/FHSZ/. Accessed on July 7, 2022.

soil. In coastal regions and other areas with steep slopes, scorched land left after a wildfire is particularly susceptible to debris flow and other hazards. The Cities of Santa Clara and Sunnyvale have been mapped as LRAs.[8] The majority of VHFHSZs are located where wildlands meet urbanized areas, at the foothills of the mountain ranges to the east, west, and south of the Plan Area.

Climate Change

In the last decade, California has experienced nine of the state's ten most destructive fires in its history.[9] Ten out of the top ten fires have been the largest in California history.[10] Between 2017 and 2018, the State spent over $1.5 billion on fire suppression, far more than any previous 2-year period. Wildfire suppression was significantly higher in 2021 than in other years, at $600 per acre.[11] Therefore, in order to prepare for additional wildfire safety, Governor Newsom requested a record $2 billion fire-safety budget for the 2021/2022 fiscal year. Some of this money would go into fire prevention measures such as cutting new firebreaks, thinning overgrown forests, and removing dead and dying trees that may become tinder for massive blazes.[12] Over the past five decades, summertime forest fires have increased in size by roughly 800 percent. Though no single wildfire can be attributed solely to climate change, evidence shows that the increase in average temperatures statewide is creating conditions more prone to wildfires.[13] Meteorological data shows that the two-year period from September 2019 through August 2021 ranks as the third-warmest on record in California, with temperatures that were roughly 2.9° (1.6°C) degrees warmer than average.[14] In 2020, wildfires in California burned 4.3 million acres and emitted 112 million metric tons of carbon dioxide, similar to the greenhouse gas emissions of 24.2 million passenger cars driving

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8 Ibid.

9 CalFire, *Top 20 Most Destructive California Wildfires*. Available online at: https://www.fire.ca.gov/media/t1rdhizr/top20_destruction.pdf. Accessed on July 7, 2022.

10 CalFire, *Top 20 Largest California Wildfires*. Available online at: https://www.fire.ca.gov/media/4jandlhh/top20_acres.pdf. Accessed on July 7, 2022.

11 National Interagency Fire Center and The Guardian, *What the numbers tells us about a catastrophic year of wildfires*, December 25, 2021. Available online at: https://www.theguardian.com/us-news/2021/dec/25/what-the-numbers-tells-us-about-a-catastrophic-year-of-wildfires. Accessed on July 7, 2022.

12 Reuters, *California Governor Highlights Record $2 Billion Wildfire Preparedness Budget,* May 24, 2021. Available online at: https://www.reuters.com/world/us/california-governor-highlights-record-2-billion-wildfire-preparedness-budget-2021-05-25/. Accessed on July 7, 2022.

13 Earth's Future, *Observed impacts of anthropogenic climate change on wildfire in California*. Earth's Future, 7, 892– 910. 2019. Available online at: https://doi.org/10.1029/2019EF001210. Accessed July 7, 2022.

14 NASA, *What's Behind California's Surge of Large Fires?*, September 13, 2021. Available online at: https://earthobservatory.nasa.gov/images/148908/whats-behind-californias-surge-of-large-fires. Accessed July 7, 2022.

in a single year.[15] This is a marked increase from the approximately 68 million tons of carbon dioxide that was released in 2018, which accounted for 15 percent of the State's annual emissions.[16] Studies suggest that greenhouse gas emissions from wildfires create a positive feedback loop, wherein the emissions warm the planet further, leading to more wildfires and more emissions.

3.18.2 REGULATORY FRAMEWORK

3.18.2.1 Federal

Disaster Mitigation Act (DMA) of 2000

DMA 2000 (Public Law 106-390) provides the legal basis for Federal Emergency Management Agency (FEMA) mitigation planning requirements for state, local and tribal governments as a condition of mitigation grant assistance. DMA 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act by repealing the previous mitigation planning provisions and replacing them with a new set of requirements that emphasize the need for state,local, and tribal entities to closely coordinate mitigation planning and implementation efforts. The requirement for a state mitigation plan is continued as a condition of disaster assistance, adding incentives for increased coordination and integration of mitigation activities at the state level through the establishment of requirements for two different levels of state plans. DMA 2000 also established a new requirement for local mitigation plans and authorized up to seven (7) percent of Hazard Mitigation GrantProgram (HMGP) funds available to a state for development of state, local, and tribal mitigation plans.[17]

Federal Response Plan

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and (3) supplements other federal

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15 Bloomberg Law. *California's 2020 Wildfire Emissions Akin to 24 Million Cars,* January 5, 2021. Available online at: https://news.bloomberglaw.com/environment-and-energy/californias-2020-wildfire-emissions-akin-to-24-million-cars, accessed on July 7, 2022. *See also,* California Air Resources Board, *Greenhouse Gas Emissions of Contemporary Wildfire, Prescribed Fire, and Forest Management Activities.* December 2020. Available online at: https://aboutblaw.com/UU1. Accessed on July 7, 2022.

16 U.S. Department of Interior, *Press Release, November 30, 2018.* Available online at: https://www.doi.gov/pressreleases/new-analysis-shows-2018-california-wildfires-emitted-much-carbon-dioxide-entire-years. Accessed on July 7, 2022.

17 FEMA. *Disaster Mitigation Act of 2000*. Available online at: https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning/regulations-guidance. Accessed July 7, 2022.

emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a Presidential declaration of a major disaster or emergency.[18]

Federal Emergency Management Agency Regulation

The primary mission of FEMA is to reduce the loss of life and property and protect the nation from all hazards, including natural disasters, acts of terrorism, and other human-made disasters, by leading and supporting the nation in a risk-based, comprehensive emergency management system of preparedness, protection, response, recovery, and mitigation.[19] The Plan is under the jurisdiction of FEMA Region 9, which covers Arizona, California, Hawaii, Nevada, Guam, American Samoa, Commonwealth of Northern Mariana Islands, Republic of Marshall Islands, Federated State of Micronesia, and more than 150 sovereign tribal entities. In California, FEMA Region 9 specifically plans for hazards such asmajor earthquakes and wildfires.[20]

National Fire Plan

The Department of the Interior's National Fire Plan is intended to ensure an appropriate federal response to severe wildland fires, reduce fire impacts to rural communities, and ensure sufficient firefighting capacity in the future.[21] The Rural Fire Assistance program is funded to enhance the fire protection capabilities of rural fire districts and safe and effective fire suppression in the wildland/urban interface. The program promotes close coordination among local, state, tribal, and federal firefighting resources by conducting training, equipment purchase, and prevention activities on a cost-shared basis.[22]

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18 *Federal Response Plan, April 1999*. Available online at: http://www1.mwcog.org/security/security/otherplans/fed_response_sum.pdf. Accessed July 7, 2022.

19 Government Publishing Office. *Title 44: Emergency Management and Assistance*. Available online at: https://www.ecfr.gov/current/title-44/part-201. Accessed July 7, 2022.

20 FEMA. *FEMA Region IX: Arizona, California, Hawaii, Nevada. & the Pacific Islands.* Available online at: https://www.fema.gov/fema-region-ix-arizona-california-hawaii-nevada-pacific-islands. Accessed July 7, 2022.

21 *Wildland Fire Management: The National Fire Plan*. Available online at: https://www.forestsandrangelands.gov/documents/resources/reports/2007/nfp2007_budget_justification.pdf. Accessed July 7, 2022.

22 Federal Grants Wire. *National Fire Plan – Rural Fire Assistance*. Available online at: https://www.federalgrantswire.com/national-fire-plan--rural-fire-assistance.html#.Ysd8UHbMKUk. Accessed July 7, 2022.

3.18.2.2 State

Senate Bill 99

In November 2018, the Camp Fire devastated the town of Paradise, California, killing 86 people and destroying nearly 19,000 structures. One reason the Camp Fire was so deadly was the lack of adequate evacuation routes to simultaneously allow residents to leave and first responders to enter. Although modern developments require adequate ingress and egress routes, many existing developments, such as those in Paradise, predate these requirements. SB 99, signed into law on August 30, 2019, requires cities to identify in the safety element of their general plans any residential developments in any wildfire hazard areas that do not have at least two emergency evacuation routes.[23]

Senate Bill 901 (SB 901)

After record-breaking drought in California from 2011 to 2017, perfect wildfire conditions allowed faulty PG&E utility lines to spark devastating fires that would scorch over 4,000 square miles of land across the state. In response to the deadly season, the California Legislature developed Senate Bill 901 (Utility Wildfire Management Plans) as the "centerpiece measure" in its attempt to rectify damages from the 2017 wildfires and prevent future wildfire disasters. SB 901 mandates all electric utilities to prepare and submit wildfire mitigation plans that describe the utilities' plan to prevent, combat, and respond to wildfires affecting their service territories. The California Public Utilities Commission (CPUC) will review and refine the plans before implementing and enforcing them. In the short-term, SB 901 allows PG&E to lean on its customers in paying for billions of dollars in fire-related damages. It also provides over $1 billion for vegetation management over five years.[24]

Assembly Bill 1054 (AB 1054)

AB 1054 was signed into law by Governor Gavin Newsom on July 12, 2019, creating a $21 billion fund to help California's investor-owned utilities cover liabilities caused by wildfires. Under the legislation, the state's investor-owned utilities will put a combined $5 billion toward improvements in their electrical grids to access the fund. Ratepayers will also contribute $10.5 billion by way of a 15-year extension of an existing rate increase. The bill also imposes several conditions on utilities, including $5 billion in safety investments and utility participation in a new annual safety certification process overseen by CPUC.[25]

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23 California Legislative Information. 2019. *Senate Bill No. 99.*

24 California Public Utilities Commission (CPUC). *Utility Wildfire Mitigation Plans*. Available online at: https://www.cpuc.ca.gov/industries-and-topics/wildfires/utility-wildfire-mitigation-plans. Accessed July 7, 2022.

25 California Legislative Information. 2019. *Assembly Bill No. 1054.*

The legislation was passed in the wake of the Camp Fire, California's deadliest and most destructive wildfire in history. Pacific Gas & Electric (PG&E) Corp's equipment failure was responsible for the blaze. PG&E sought bankruptcy protection after the Camp Fire so it could reorganize its finances to pay $30 billion in liabilities from multiple wildfires.[26]

Senate Bill 1079 (SB 1079)

SB 1079 (Forest Resources: Fire Prevention Grant Fees) builds from existing laws establishing grants to private entities, Native American tribes, and public agencies to assist in the implementation and administration of projects and programs relating to improving forest health and reducing GHG emissions. SB 1079 authorizes CAL FIRE to make advance payments to grantees (such as fire safe councils, Native American tribe, or special district), which receive funds from the healthy forest and local fire-prevention grant programs.[27]

Senate Bill 1241 (SB 1241)

In 2012, SB 1241 added Section 66474.02 to Title 7 Division 2 of the California Government Code, commonly known as the Subdivision Map Act. The statute prohibits subdivision of parcels designated very high fire hazard, or that are in a SRA, unless certain findings are made prior to approval of the tentative map. The statute requires that a city or county planning commission make three new findings regarding fire hazard safety before approving a subdivision proposal. The three findings are, in brief: (1) the design and location of the subdivision and its lots are consistent with defensible space regulations found in PRC Section 4290-91, (2) structural fire protection services will be available for the subdivision through a publicly funded entity, and (3) ingress and egress road standards for fire equipment are met per any applicable local ordinance and PRC Section 4290.The Occupational Safety and Health Act (29 Code of Federal Regulations [CFR] Parts 70 to 2400), which is implemented by the Federal Occupational Safety and Health Administration (OSHA), contains provisions with respect to hazardous materials handling. Federal OSHA requirements, as set forth in 29 CFR Section 1910 et seq., are designed to promote worker safety, worker training, and a worker's right–to-know. In California, OSHA has delegated the authority to administer OSHA regulations to the State of California.[28]

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26 Washington Post. *PG&E power lines to blame for California's deadliest wildfire ever, officials say*. Available online at: https://www.washingtonpost.com/nation/2019/05/15/camp-fire-caused-by-electrical-lines-owned-operated-by-pge-authorities-say/. Accessed July 7, 2022.

27 California Legislative Information. 2018. *Senate Bill No. 1079*.

28 California Legislative Information. 2012. *Senate Bill No. 1241*.

Assembly Bill 301

Assembly Bill 301 was enacted to amend Section 4213.1, and to add Section 4213.2 to the Public Resources Code elated to fire prevention. Section 4213.1 requires CAL FIRE to notify a property owner that the property's terms of sale could include a portion of the Fire Prevention Fee. Section 4213.2 allows a property owner to negotiate a portion of the fee as one of the terms of sale.[29]

Assembly Bill 38 (California Emergency Services Act)

On July 1, 2021, this bill went into effect, requiring the Natural Resources Agency, in consultation with the State Fire Marshal and the Forest Management Task Force, to review the regional capacity of each county that contains a very high fire hazard severity zone to improve forest health, fire resilience, and safety, as specified. Sellers of real property located in a high or very high fire hazard severity zone are required to provide specified documentation to the buyer that the real property is in compliance with the wildfire protection measures or a local vegetation management ordinance or enter into an agreement with the buyer pursuant to which the buyer will obtain documentation of compliance.[30]

Assembly Bill 2551

Approved in 2018, Assembly Bill 2551 Forestry and Fire Prevention: Joint Prescribed Burning Operation (AB 2551) authorizes CAL FIRE to collaborate with private landowners on controlled burns to reduce wildfire fuel. Mismanagement of the forests can lead to a build-up of forest underbrush that serves as a perfect fuel for wildfires. By allowing small, non-industrial landowners to choose to individually implement various fire prevention programs, such as prescribed burns, AB 2551 promotes good, local forest management in the state.[31]

State California Department of Forestry and Fire Protection

CAL FIRE protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. CAL FIRE's firefighters, fire engines, and aircraft respond to an average of more than 5,600 wildland fires each year. The Office of the State Fire Marshal supports CAL FIRE's mission by focusing on fire prevention. It provides support through a wide variety of fire safety responsibilities including regulating buildings in which people live, congregate, or are confined; controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction

29 California Legislative Information. 2015. *Assembly Bill No. 301.*

30 California Legislative Information. 2008. *Assembly Bill No. 38*.

31 California Legislative Information. 2018. *Assembly Bill No. 2551*.

by fire; providing statewide direction for fire prevention in wildland areas; regulating hazardous liquid pipelines; reviewing regulations and building standards; and providing training and education in fire protection methods and responsibilities.[32]

State Fire Regulations

Fire regulations for California are established in Sections 13000 et seq. of the California Health and Services Code and include regulations for structural standards (similar to those identified in the California Building Code); fire protection and public notification systems; fire protection devices such as extinguishers and smoke alarms; standards for high-rise structures and childcare facilities; and fire suppression training. The State Fire Marshal is responsible for enforcement of these established regulations and building standards for all state-owned buildings, state-occupied buildings, and state institutions within California.[33]

California Governor's Office of Emergency Services (OES)

Cal OES is the Emergency Management authority for the State of California. The California Governor's Office of Emergency Services (Cal OES) began as the State War Council in 1943. With an increasing emphasis on emergency management, it officially became OES in 1970. On July 1, 2013, Governor Edmund G. Brown Jr.'s Reorganization Plan #2 eliminated the California Emergency Management Agency (Cal EMA); restored its powers, purposes, and responsibilities to Cal OES; and also merged it with the Office of Public Safety Communications. Cal OES' mission statement is the following: "Protect lives and property, build capabilities, and support our communities for a resilient California." OES goals include:[34]

- **Goal 1:** Anticipate and enhance prevention and detection capabilities to protect our State from all hazards and threats.
- **Goal 2:** Strengthen California's ability to plan, prepare for, and provide resources to mitigate the impacts of disasters, emergencies, crimes, and terrorist events.
- **Goal 3:** Effectively respond to and recover from both human-caused and natural disasters.

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32 CAL FIRE Office of the State Fire Marshal. 2022. *About the Office of State Fire Marshal*. Available online at: https://osfm.fire.ca.gov/about-us/. Accessed July 7, 2022.

33 California Legislative Information. *Division 12. Fires and Fire Protection*.

34 Governor's Office of Emergency Services. *Strategic Plan.* Available online at: https://www.caloes.ca.gov/cal-oes-divisions/about-cal-oes/strategic-plan. Accessed July 7, 2022.

- **Goal 4:** Enhance the administration and delivery of all state and federal funding and maintain fiscal and program integrity.
- **Goal 5:** Develop a united and innovative workforce that is trained, experienced, knowledgeable, and ready to adapt and respond.
- **Goal 6:** Strengthen capabilities in public safety

California Public Resources Code

Fire Hazard Severity Zones – Public Resources Code Sections 4201–4204 Public Resources Code (PRC) Sections 4201–4204 and Government Code Sections 51175–89 direct CAL FIRE to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. FHSZ define the application of various mitigation strategies to reduce risk associated with wildland fires.[35]

California Fire Code

Part 9 of the 2019 California Building Standards Code (CBC) (Cal. Code Regs., Title 24) covers the California Fire Code (2019, Title 24, Part 9). The purpose of the California Fire Code is to establish the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures, and premises.

The Fire Code also establishes requirements intended to provide safety for and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protectionsystems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

Effective January 1, 2021, Fire Code Section 510 of the California Fire Code, created new compliance requirements for new buildings in school and community college districts. The code ensures that all new buildings, meeting at least one of its certain conditions, must be built to comply with Emergency Responder Radio Coverage Systems (ERRCS) to not interfere with firefighter communication during a fire.

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35 California Legislative Information. 1982. *ARTICLE 9. Fire Hazard Severity Zone [4201-4204].*

Fire and Life Safety Plan Review

Government Code Section 14963, enacted in 1992, states that "The duties and functions formerly conducted by the State Fire Marshal that relate to construction, school, plan checking, and construction inspection are hereby transferred to the Office of the State Architect." All public schools and State Essentials Services Buildings are under the jurisdiction of the Division of the State Architect (DSA) to ensure plans, specifications and construction comply with the building code.

California Fire Plan

The Fire Plan is a cooperative effort between the State Board of Forestry and Fire Protection and the California Department of Forestry and Fire Protection. By placing the emphasis on what needs to be done long before a fire starts, the Fire Plan looks to reduce firefighting costs and property losses, increase firefighter safety, and to contribute to ecosystem health. The current plan was adopted in 2018, which reflects CAL FIRE's goals of 1) fire prevention and suppression activities to protect lives, property, and ecosystem services, and 2) natural resource management to maintain the state's forests as a resilient carbon sink to meet California's climate change goals and to serve as important habitat for adaptation and mitigation.[36]

California Disaster Assistance Act (CDAA)

The California Disaster Assistance Act (CDAA; CCR Title 19, Chapter 6) authorizes the Director of the California Governor's Office of Emergency Services (Cal OES) to administer a disaster assistance program that provides financial assistance from the state for costs incurred by local governments as a result of a disaster event. Funding for the repair, restoration, or replacement of public real property damaged or destroyed by a disaster is made available when the Director concurs with a local emergency proclamation requesting state disaster assistance.[37]

Governor's Office of Planning and Research (OPR)

The Governor's Office of Planning and Research serves the Governor and their Cabinet as staff for long-range planning and research and constitutes the comprehensive state planning agency (Government Code Section 65040). OPR is empowered to draft *CEQA Guidelines* for adoption by the Secretary of

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36 CAL FIRE. *Strategic Fire Plan for California.* Available online at: https://www.fire.ca.gov/about-us/strategic-plan/. Accessed July 7, 2022.

37 Governor's Office of Emergency Services. 2022. *California Disaster Assistance Act (CDAA).* Available online at: https://www.caloes.ca.gov/cal-oes-divisions/recovery/public-assistance/california-disaster-assistance-act. Accessed July 7, 2022.

Natural Resources in collaboration with the Natural Resources Agency. In January 2018, OPR transmitted its proposal for comprehensive updates to the *CEQA Guidelines* to the Natural Resources Agency, who finalized the updates in late 2018. The updated Guidelines became effective on December 28, 2018.

California Public Utilities Commission Fire Safety Rulemaking

In December 2017, CPUC issued Decision (D.) 17-12-024 adopting regulations to enhance fire safety in the High Fire Threat District (HFTD) and subsequently adopted CPUC's final fire threat map. This map, together with CAL FIRE's Tier 1 High Hazard Zones comprise the HFTD Map where stricter fire-safety regulations apply. These regulations include requiring utilities to prioritize safety hazards, maintain more stringent wire-to-wire clearances in certain areas, and prepare a fire prevention plan annually if they have overhead facilities in the HFTD. Further, electric utilities may disconnect service to customers who refuse to provide access to their property for the removal of trees that pose an immediate threat for contacting a power line.[38]

3.18.2.3 Local

Santa Clara County Community Wildfire Protection Plan

In 2016, local and state agencies came together to create a countywide Community Wildfire Protection Plan to further mitigate wildfire risk in Santa Clara County. The plan serves to protect life, property, and the environment by enabling local agencies to prioritize the placement and maintenance of shaded fuel breaks, fuel reduction programs, and public education campaigns.[39] The City of Sunnyvale and City of Santa Clara fire departments work in a mutual aid framework within the County's regulation on a more local level.

City of Sunnyvale General Plan

Relevant *General Plan* policies that directly address reducing and avoiding wildfire and impacts to fire services include the following:

Goal SN-1 Ensure that natural and human-caused hazards are recognized and considered in decisions affecting the community and that land uses reflect acceptable levels of risk based on identified hazards and occupancy.

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38 California Public Utilities Commission, Press Release December 14, 2017. *CPUC Adopts New Fire-Safety Regulations.* Available online at: http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M201/K352/201352402.PDF. Accessed July 7, 2022.

39 Santa Clara County Fire Department. *Santa Clara County Community Wildfire Protection Plan*. Available online at: https://www.sccfd.org/santa-clara-county-community-wildfire-protection-plan. Accessed July 7, 2022.

Policy SN-1.1 Evaluate and consider existing and potential hazards in developing land use policies. Make land use decisions based on an awareness of the hazards and potential hazards for the specific parcel of land

Goal SN-3 Ensure a safe and secure environment for people and property in the community by providing effective public safety response and prevention and education services

Policy SN-3.1 Provide rapid and timely response to all emergencies

Goal SN-5 Provide a fire service response system that will control the spread of fire in buildings and other properties and maintain minimal casualties and property loss from fire and other related emergencies.

Policy SN-5.1 Assure that equipment and facilities are provided and maintained to meet reasonable standards of safety, dependability and compatibility with fire service operations

Policy SN-5.2 Provide training that is adequate for required duties.

City of Santa Clara General Plan 2010-2035

Relevant *General Plan* policies that directly address reducing and avoiding wildfire and impacts to fire services include the following:

Policy 5.9.3-P2 Provide police and fire services that respond to community goals for a safe and secure environment for people and property.

Policy 5.9.3-P4 Maintain a City-wide average three-minute response time for fire emergency service calls.

Policy 5.9.3-P5 Maintain emergency traffic preemption controls for traffic signals.

Policy 5.9.3-P6 Maintain the fire and hazardous materials mutual aid agreements with surrounding jurisdictions.

3.18.3 THRESHOLDS OF SIGNIFICANCE

For the purposes of this EIR, SCUSD has determined that adoption and/or implementation of the Proposed Master Plan would result in significant impacts to the Plan Area's wildfire risk, if any of the following could occur:

- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires.
- If located in or near state responsibility areas of lands classified as very high fire hazard severity zones, the Plan would:
- Substantially impair an adopted emergency response plan or emergency evacuation plan (this criterion is addressed in **Section 4.16, Transportation, Traffic, and Safety**);
- Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or
- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

3.18.4 METHODOLOGY

The methodology for determining the significance of the Proposed Master Plan's impacts to wildfire response and related hazards and infrastructure compares the existing conditions to future conditions. This analysis considers the Plan's impacts on wildfire hazards, provides mitigation measures, where necessary, and addresses the environmental effects related to wildfire hazards. The potential for impacts related to wildfire was assessed by evaluating the location. The Proposed Master Plan Area in relation to surrounding land uses and fire hazard severity zones.

Determination of Significance

The significance of impacts was determined by applying the significance criteria above to compare current regional wildfire and transportation conditions to expected future conditions with the Plan. Other considerations such as the existing drought, climate change, and other environmental factors could exacerbate wildfire risks to areas surrounding future development projects. Existing emergency plans,

policies, bills, and measures could off-set and mitigate wildfire risks; however, the statewide trend indicates that such natural disasters will worsen with time.

3.18.5 ENVIRONMENTAL IMPACTS

Impact WF-1 **Would the proposed Project substantially impair an adopted emergency response plan or emergency evacuation plan.**

Wildfires can cause significant damage to people and property because they can spread quickly across large areas. Implementation of the Proposed Master Plan could pose a significant risk of loss, injury, or death if it impedes emergency evacuation routes. The Proposed Master Plan may interfere with Santa Clara County and the cities of Sunnyvale and Santa Clara's emergency response or evacuation plans due to temporary construction activities within rights-of-way, primarily by temporary construction barricades or other obstructions that could impede emergency access, or increased intensity during operation that could result in additional traffic within roadways. However, the Proposed Master Plan would comply with existing regulations and would ensure that implementation of the Plan would not impair or physically interfere with adopted emergency response plans or emergency evacuation plans. Additionally, the SCUSD has an Emergency Operations Plan that provides a comprehensive crisis plan in the event of an emergency such as a wildfire. Each school within the District also has their own Comprehensive School Safety Plans and Safety Committee. Fire drills are run each year and district administrators coordinate closely with city emergency management officials and law enforcement representatives to monitor and update school site-specific plans on an annual basis.[40,41] Therefore, impacts related to emergency response plans and emergency evacuation plans would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation measures are required.

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40 Santa Clara Unified School District. Emergency Preparedness. Available online at: https://www.santaclarausd.org/Page/2298. Accessed July 28, 2022.

41 Santa Clara Unified School District. School and District Safety. Available online at: https://www.santaclarausd.org/Page/2296. Accessed July 28, 2022.

Significance After Mitigation

Less Than Significant Impact.

Impact WF-2 **If located in or near state responsibility areas of lands classified as very high fire hazard severity zones, the project would:**

Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

The Proposed Master Plan Area is located in a densely populated urban area that is relatively flat and surrounded by single-family homes. There are no slopes or geography that would cause high prevailing winds. The Plan Area is not located in or near a very high fire hazard severity zone (VHFHSZ), as identified by Cal Fire.[42] The nearest VHFHSZ is located southwest of the Plan Area at the foothills of the Santa Cruz Mountains, approximately four miles from the Plan Area. The Proposed Master Plan will be required to comply with existing State and local fire-related regulations and incorporate fire protection features. Therefore, there would be no impacts from VHFHSZ.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No Impact.

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42 CALFIRE, *Fire Hazard Severity Zones*. Available online at: https://egis.fire.ca.gov/FHSZ/. Accessed July 7, 2022.

Impact WF-3 **Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risks or that may result in temporary or ongoing impacts to the environment.**

The Proposed Master Plan is not located in or near a very high fire hazard severity zone. The Proposed Master Plan Area is located in a densely populated urban area surrounded by existing single-family homes served by existing infrastructure. The Proposed Master Plan would primarily utilize existing infrastructure. The proposed improvements to Peterson Middle School would not require additional infrastructure. No new additional roads, fuel breaks, powerlines, water sources, or other utilities would be required that may exacerbate fire risks. Thus, impacts would be less than significant.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Less than Significant Impact.

Impact WF-4 **Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope stability, or drainage changes.**

The Plan Area is not located in or near a very high fire hazard severity zone (VHFHSZ), as identified by Cal Fire.[43] The nearest VHFHSZ is located southwest of the Plan Area at the foothills of the Santa Cruz mountains and there is not a high risk for wildfire damage within the Plan Area. Additionally, the Plan Area is relatively flat and does not contain any significant riparian habitat. Therefore, the Proposed Master Plan would not expose people or structures to significant risks, including downslope or downstream

43 CALFIRE, *Fire Hazard Severity Zones*. Available online at: https://egis.fire.ca.gov/FHSZ/. Accessed July 7, 2022.

flooding or landslides, as a result of runoff, post-fire slope stability, or drainage changes. No impact would occur.

Level of Significance Before Mitigation

No Impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No Impact.

3.18.6 CUMULATIVE IMPACTS

Development of transportation or housing projects in wildfire-prone areas would cause an increase in population exposed to wildfire risk and exacerbate exposure of those populations to pollutant concentrations from wildfires, particularly populations living downwind of the fire. However, the Proposed Plan is located in an urbanized flat area with many vehicular access points. As such, the Proposed Master Plan would not result in significant impacts with respect to wildfire. Given that the Proposed Master Plan would not increase risks to wildfire within and surrounding the Plan Area, it would not add to impacts outside the region. The wildfire risk from the Proposed Master Plan would not contribute to cumulative impacts in the surrounding community and region.

3.18.7 REFERENCES

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4.0 ALTERNATIVES

INTRODUCTION

This section of the program environmental impact report (EIR) provides a comparative analysis of the merits of alternatives to the Proposed Master Plan pursuant to Section 15124.6 of the 2022 California Environmental Quality Act (CEQA) Statutes and Guidelines, as amended. According to the guidelines, an EIR shall describe a range of reasonable alternatives to the project or to its location, which would feasibly attain most of the basic objectives of the project but avoid or substantially lessen any of the significant effects. The EIR shall evaluate the comparative merits of the alternatives. It need not consider every conceivable alternative to a project; rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation.

4.1 CONSIDERATIONS

The range of alternatives in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to make a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any significant effects of the project (Section 15124.6(f)). Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the project's basic objectives. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making. When addressing feasibility, the *State CEQA Guidelines* state that "among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)." The *State CEQA Guidelines* also state that the alternative discussion need not be presented in the same level of detail as the assessment of the Proposed Master Plan.

Therefore, several factors need to be considered in determining the range of alternatives to be analyzed in an EIR and the level of detail that analysis should provide. These factors include (1) the nature of the significant impacts of the Proposed Master Plan, (2) the ability of alternatives to avoid or substantially lessen impacts associated with the project, (3) the ability of the alternatives to meet most of the basic objectives of the project, and (4) the feasibility of the alternatives.

The selection and discussion of alternatives is intended to foster meaningful public participation and informed decision making. An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative. The *State CEQA Guidelines* also require

the analysis of a no project alternative, and the identification of the environmentally superior alternative. Where the environmentally superior alternative is the no project alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."[1]

In addition, the *State CEQA Guidelines* require an EIR to identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination.[2]

Accordingly, several alternatives that might avoid or substantially lessen project impacts were considered. Two alternatives were selected for further analysis, as detailed below.

4.2 PROJECT OBJECTIVES

The alternatives to the Proposed Master Plan selected for analysis in this EIR were developed to avoid or substantially lessen one or more of the significant environmental impacts associated with the project, while still attaining most of the basic objectives of the project. The following are objectives for the Proposed Master Plan:

- Establish a process for collecting the valuable input from the community including District staff, School site staff, parents, neighbors, students and consultants.
- Assess, define, and prioritize current and future facility needs at each site.
- Provide a plan for the expenditure of Measure BB funds (Laurelwood School and Peterson Fields) and develop a roadmap for future funded projects.
- Develop cost estimates and plans needed to acquire future funding for the identified facility priorities.
- Provide project phasing plans to ensure the highest facility priorities are addressed first.
- Establish a "living" document that will be regularly updated with progress made so it can continue to reflect "current" conditions, providing an accurate picture of remaining needs.
- Align the future development of the campuses with the stated Core Values in SCUSD's Vision 2035:
  - Students First

1 *State CEQA Guidelines* Section 15126.6(e)(2)

2 *State CEQA Guidelines* Section 15126.6(c)

- Excellence Through Continuous Improvement
- Integrity and Ethical Stewardship
- Connected Families and Collaborative Community
- Equity and Social Justice
- Empathy and Respect

4.3 SELECTION OF ALTERNATIVES FOR ANALYSIS

According to the *State CEQA Guidelines*, the discussion of alternatives should focus on alternatives to a project or its location that can feasibly avoid or substantially lessen the significant effects of the project. The *State CEQA Guidelines* indicate that the range of alternatives included in this discussion should be sufficient to allow decision makers a reasoned choice. The alternative discussion should provide decision makers with an understanding of the merits and disadvantages of these alternatives.

Section 3.0, Environmental Impact Analysis, concludes that project implementation would result in significant and unavoidable environmental impacts. These impacts include:

Noise: Implementation of the Proposed Master Plan would result in temporary increases in ambient noise in the Plan Area on an intermittent basis during construction and, as such, would expose nearby sensitive receptors both in and adjacent to the Plan Area to increased noise levels as a result of construction activity (**Impact NOI-1**).

The Santa Clara Unified School District has developed and considered the following alternatives to the project.

Alternative 1 – No Project

Section 15126(2)(4) of the *State CEQA Guidelines* requires evaluation of the No Project Alternative. As described in the *State CEQA Guidelines*, the purpose of describing and analyzing the No Project Alternative is to allow decision makers to compare the impacts of approving the project with the impacts of not approving the project. However, "no project" does not necessarily mean that development will be prohibited. The No Project Alternative includes "what would be reasonably expected to occur in the

foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services."[3]

For purposes of this EIR, the No Project Alternative (Alternative 1) assumes that the Proposed Master Plan would not be executed. Peterson Middle School would operate as-is, and Laurelwood Elementary School would remain in its existing location. No physical or programmatic improvements to the Peterson Middle School Campus, or the Patrick Henry Campus would be implemented.

Alternative 2 – Reduced Scope

The Reduced Scope Alternative (Alternative 2) assumes that the Proposed Master Plan would be adopted with a reduced student enrollment at Laurelwood Elementary. It proposes to build the Laurelwood Elementary campus with a capacity for 650 students, rather than the 850 students in the Proposed Master Plan. The new Laurelwood School would be one story, rather that two. The Reduced Scope Alternative also excludes currently non-funded improvements, such as the District Farm improvements, Alternative High School, the improvements to Peterson Middle School, the Environmental Center, tennis courts, and other improvements such as pedestrian pathways and new bleachers.

4.4 ANALYSIS METHODOLOGY

Each of the alternatives selected for analysis is evaluated in sufficient detail to determine whether its overall environmental impacts would be less, similar, or greater in comparison to the impacts of the Proposed Master Plan. The impact analyses sections for the Proposed Master Plan set forth in **Chapter 3.0** of this EIR include mitigation measures that reduce the environmental impacts associated with buildout of the Proposed Master Plan. The analysis assumes that equally effective mitigation measures would apply to the alternatives.

The analysis under each Alternative includes the following:

- An evaluation of the environmental impacts anticipated to occur for each environmental issue analyzed in **Chapter 3.0** of this EIR and a determination as to the significance of those impacts. This discussion also includes an analysis of whether the Alternatives would avoid or substantially lessen any of the significant environmental impacts associated with implementation of the Proposed Master Plan. Where the impacts of the alternative and the Proposed Master Plan were roughly equivalent the comparative impact is said to be similar.

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3 *State CEQA Guidelines* § 15126.6[e][2]

- A summary of the comparative impacts across all of the environmental issues.

4.5 COMPARATIVE IMPACT ANALYSIS

Alternative 1 – No Project

Aesthetics

Under the No Project Alternative, no development would occur. The Peterson Middle School, Patrick Henry Campus, and Laurelwood Elementary School would continue to operate under existing conditions. The one-story Patrick Henry Campus building would remain, and the existing Laurelwood Elementary School would stay in its current location. No construction would occur, eliminating any potential visual impacts from construction. The proposed Environmental Center, parking lot, and driveway would not be constructed, reducing the amount of paved surfaces, thereby reducing potential glare. As a result, Alternative 1 would result in fewer visual impacts than the Proposed Master Plan. Under Alternative 1, no impacts to visual resources would occur.

Agricultural Resources

Under the No Project Alternative, no development would occur. The District Farm would continue to operate under existing conditions. No changes to the Farm would take place. As a result, Alternative 1 would not result in impacts to agricultural services. However, the improvements to the Farm included in the Proposed Master Plan, such as the Farm amenity building, would not be built. Therefore, while impacts would remain less than significant, impacts would be incrementally greater than the Proposed Master Plan.

Air Quality

The No Project Alternative would result in less development compared to the Proposed Master Plan. As no construction would occur, no emissions would be generated during construction, and would not exceed significance thresholds. Construction-related impacts would be less than significant. The No Project Alternative would generate the same number of operational emissions compared to the Proposed Master Plan because the same amount of students would attend Peterson Middle School and Laurelwood Elementary School. Alternative 1 would also not conflict with the Air Quality Management Plan (AQMP). Construction and operation impacts would be less than the Proposed Master Plan, and less than significant.

Biological Resources

The Cities of Sunnyvale and Santa Clara are urbanized and generally lack wildlife corridors and habitat that would support special status plant or animal species. Under the No Project Alternative, buildout of

the Plan Area would not occur. **Mitigation Measure MM BIO-1** would not be required. As a result, the No Project Alternative would be less than significant, and the impacts would be less than the Proposed Master Plan.

Cultural Resources including Tribal Cultural Resources

Under the No Project Alternative, no development would occur. No specific historical resources have been identified within the Plan Area. Development, specifically grading, would have the potential to unearth archaeological, paleontological and/or tribal cultural resources. As no development would be permitted, no impacts to cultural resources would occur. **Mitigation Measures MM CUL-1** and **MM CUL-2** would not be required. Therefore, no impacts to cultural resources under Alternative 1 would occur, and impacts would be less than the Proposed Master Plan.

Energy

Implementation of the No Project Alternative would not result in energy consumption (including electricity, natural gas, and petroleum-fuel) beyond current demand. However, the No Project Alternative would not include a new Laurelwood Elementary School, which is designed with sustainability features and will target Net-Zero Energy performance. While it is expected that energy impacts associated with the No Project Alternative would be less than significant, this alternative would not include the energy reduction measures included in the Proposed Master Plan. As a result, it is likely that the existing Laurelwood Elementary School will consume more energy than the new school in the Proposed Master Plan. Additionally, it would not include the construction of pedestrian paths that make it safer for pedestrians to access campus, potentially leading to increased vehicle use. Thus, the No Project Alternative energy impacts would be comparatively greater than impacts associated with buildout of the Proposed Master Plan.

Geology and Soils

The No Project Alternative would result in similar impacts associated with risk as a result of surface fault rupture, ground-shaking liquefaction, landslides, and other risks associated with seismic events. The entire region is subject to the same seismic risk. No construction would occur under the No Project Alternative, and therefore, no impacts to soil erosion and loss of topsoil would occur as a result of project construction. No changes to the already compacted school site, and therefore no impacts related to unstable soil, expansive soil, and septic systems would occur. No excavation would occur, and therefore no impact to paleontological resources would occur. Impacts to Geology and Soils would be less than significant, and less than the Proposed Master Plan.

Greenhouses Gases

As no construction would occur, implementation of the No Project Alternative would generate fewer greenhouse gas (GHG) emissions compared to the Proposed Master Plan. No GHG emissions during construction would emitted, and the existing Peterson Middle School, Laurelwood Elementary School, and Patrick Henry Campus would operate under existing conditions. No change to operational emissions would occur. As a result, no impact to GHG would occur, and impacts would be less than the Proposed Master Plan.

Hazards and Hazardous Materials

No construction would occur under the No Project Alternative. As such, impacts under the No Project Alternative related to the routine transport, use, or disposal of hazardous materials, the accidental release of hazardous materials during construction would be reduced. Alternative 1 would not interfere with any adopted emergency response plan or evacuation plan, nor would It expose people or structures to a significant wildfire risk, as there are no fire hazard areas within the Plan Area. The Plan Area would operate under existing conditions and would be compatible with local, state, and federal regulations regarding hazardous materials. Impacts related to hazards and hazardous materials under the No Project Alternative would be less than significant and less than the Proposed Master Plan.

Hydrology and Water Quality

Under the No Project Alternative, no development would occur. The amount of impervious surface within the Plan Area would remain the same. As such no impacts would occur relating to groundwater, drainage, and runoff impacts. Construction activities that may contribute to reduced water quality through increased erosion and runoff of construction materials would not occur. Alternative 1 would not increase the rate or amount of stormwater runoff. As a result, potential flooding impacts remain the same. Thus, no impacts under Alternative 1 related to hydrology and water quality would occur, and impacts would be less than the Proposed Master Plan.

Land Use

Under the No Project Alternative, no development would occur. Similar to the Proposed Master Plan, the land use of the Plan Area would not change and would remain in accordance with the *General Plan* land use designations. Implementation of Alternative 1 would not physically divide an established community, conflict with applicable federal or state agency policies and regulations, or conflict with local plans, policies, and regulations. Although buildout of the No Project Alternative would not physically divide a community, the proposed pedestrian and bicycle pathways that connect the Plan Area to the rest of the

community would not be realized under this alternative. Under the No Project Alternative, the area's connectivity would remain the same. Thus, impacts related to land use under the No Project Alternative would be less than significant, but slightly greater than the Proposed Master Plan.

Mineral Resources

The No Project Alternative would result in the same impacts to mineral resources as the Proposed Master Plan. There are no active mines, nor known areas with mineral resource deposits in the area. It is unlikely that mineral resources will be discovered and utilized in the future. Similar to the Proposed Master Plan, no impacts to mineral resources would occur under Alternative 1.

Noise

Under the No Project Alternative, no development would occur. No construction would take place that would use heavy-duty equipment, and therefore the overall noise impact generated by temporary construction noise under Alternative 1 would be less than that of the Proposed Master Plan. The Plan Area would operate under existing conditions, and therefore no impacts to operational noise would occur. Therefore, no impacts related to noise under the No Project Alternative would occur, and impacts would be less than the Proposed Master Plan.

Population, Housing and Employment

Under the No Project Alternative, no development would occur. Similar to the Proposed Master Plan, it would not involve the construction of housing facilities, and would serve the same number of students. No existing residential uses in the surrounding area would be impacted, and thus, the displacement of residents and/or existing residential units would not occur. Similar to the Proposed Master Plan, no population growth in the Plan Area or within the surrounding area would be triggered by Alternative 1, either directly or indirectly. Impacts related to population and housing would be less than significant, similar to the Proposed Master Plan.

Public Services

Fire

Under the No Project Alternative, no development would occur. The existing Peterson Middle School, Patrick Henry Campus, and Laurelwood Elementary School would be compatible with all applicable County and City fire code and ordinance requirements for access, water mains, fire flows, and hydrants. Additionally, the *General Plan* includes policies and actions to ensure adequate resources are available to respond to health, fire, and police emergencies, and there is coordination among public safety agencies to

ensure adequate fire protection is provided to the Cities of Sunnyvale and Santa Clara, and fire department staffing, response times, or service levels. Similar to the Proposed Master Plan, Alternative 1 would result in less than significant impacts to fire services.

Police

Under the No Project Alternative, no development would occur that would trigger population growth and any increase in demand for police protection services. The existing Peterson Middle School, Patrick Henry Campus, and Laurelwood Elementary School would be compatible with the *General Plan*, which includes policies and actions to ensure that adequate police protection is available to serve existing and future development and population. The *General Plan* also supports proactive approaches to address public safety through collaboration with the community and other agencies and through environmental design. Similar to the Proposed Master Plan, Alternative 1 would result in less than significant impacts to police services.

Education

Under the No Project Alternative, no development occur that would trigger population growth that cause the need for additional schools. The existing Peterson Middle School and Laurelwood Elementary School would continue to operate with current number of students. Furthermore, SCUSD enrollment has decreased, and births in the area have been declining since 2008. SCUSD projects that declines in enrollment will continue. The No Project Alternative would be compatible with the *General Plan* policies and actions, and all applicable state and federal regulations to ensure adequate educational facilities are provided. As a result, similar to the Proposed Master Plan, Alternative 1 would result in less than significant impacts to schools.

Library Services

Under the No Project Alternative, no development occur that would trigger population growth that cause the need for additional library services. However, unlike the Proposed Master Plan, the No Project alternative does not include the development of a new library and innovation center as part of the new Laurelwood Elementary campus. Therefore, while impacts to library services that would occur under the No Project Alternative would be less than significant, impacts would be incrementally greater than the Proposed Master Plan.

Parks and Recreation

While the City of Santa Clara is experiencing a park deficit of 388 acres of parkland, the City of Sunnyvale exceeds the Quimby Act minimum of five acres per 1,000 persons. Together, the cities of Sunnyvale and

Santa Clara maintain 1,020 acres of public parkland and a ratio of 3.6 acres per 1,000 residents. Under the No Project Alternative, no development would occur, and the Peterson Middle School Campus, Patrick Henry Campus, and Laurelwood Elementary Campus would all operate under existing conditions. Students would continue to have access to the existing Peterson Track and Field, tennis courts, and play areas. However, the upgrades that are proposed as part of the Proposed Master Plan would not be implemented. Therefore, the No Project Alternative would have a less than significant impact to parks or recreational services, but greater than the Proposed Master Plan.

Transportation

Under the No Project Alternative, no development would occur. Construction would not cause any transportation impacts, and no population growth would be triggered that may lead to increased vehicle miles traveled (VMT) and hours in congestion. However, the Plan Area circulation improvements that are included in the Proposed Master Plan, such as the reorientation of driveways and parking lots, and the addition of several pedestrian pathways would not be implemented. As a result, while there would not be an increase in cars accessing the Plan Area, there would not be any improvements to the circulation. Impacts would be greater than the Proposed Master Plan, but less than significant.

Utilities and Services

Water Supply

Under the No Project Alternative, no development would occur, and the Peterson Middle School Campus, Patrick Henry Campus, and Laurelwood Elementary Campus would all operate under existing conditions. The number of students enrolled would remain the same, and the amount of water demand would also remain the same. Therefore, implementation of the No Project Alternative would not result in water supply and infrastructure impacts. Impacts would be less than significant and similar to the Proposed Master Plan.

Wastewater

Under the No Project Alternative, no development would occur, and the Peterson Middle School Campus, Patrick Henry Campus, and Laurelwood Elementary Campus would all operate under existing conditions. The number of students enrolled would remain the same, and the amount of wastewater generation would also remain the same. Additionally, the wastewater treatment facilities that serve the Plan Area have sufficient capacity for future growth in the surrounding area. Therefore, implementation of the No Project Alternative would not result in wastewater impacts. Impacts would be less than significant and similar to the Proposed Master Plan.

Solid Waste

Under the No Project Alternative, no development would occur, and the Peterson Middle School Campus, Patrick Henry Campus, and Laurelwood Elementary Campus would all operate under existing conditions. The number of students enrolled would remain the same, and the amount of solid waste generation would also remain the same. Additionally, the landfills that serve the Plan Area have sufficient capacity for future growth in the surrounding area. Therefore, implementation of the No Project Alternative would not result in solid waste impacts. Impacts would be less than significant and similar to the Proposed Master Plan.

Electricity

Under the No Project Alternative, no development would occur, and the Peterson Middle School Campus, Patrick Henry Campus, and Laurelwood Elementary Campus would all operate under existing conditions. The number of students enrolled would remain the same, and the amount of electricity consumed would also remain the same. However, the No Project Alternative would not include the Net-Zero strategies included in the Proposed Master Plan that would reduce energy consumption. Therefore, while implementation of the No Project Alternative would not result in increased electricity usage, impacts would be incrementally greater than the Proposed Master Plan. Impacts would remain less than significant.

Natural Gas

Under the No Project Alternative, no development would occur, and the Peterson Middle School Campus, Patrick Henry Campus, and Laurelwood Elementary Campus would all operate under existing conditions. The number of students enrolled would remain the same, and the amount of natural gas consumed would also remain the same. However, the No Project Alternative would not include the Net-Zero strategies included in the Proposed Master Plan that would reduce energy consumption. Therefore, while implementation of the No Project Alternative would not result in increased natural gas usage, impacts would be incrementally greater than the Proposed Master Plan. Impacts would remain less than significant.

Wildfire

Under the No Project Alternative, no construction would occur that could result in temporary construction activities impeding emergency response or evacuation plans. Alternative 1 would be subject to the same SCUSD Emergency Operations Plan and Comprehensive School Safety Plans. The Plan Area is not located in or near a very high fire hazard severity zone (VHFHSZ), as identified by Cal Fire. As a result, the impacts related to wildfire would be incrementally less than the Proposed Master Plan and would remain less than significant.

Relationship to the Proposed Master Plan Goals

As demonstrated in **Table 4.0-1, Alternative 1 Relationship to the Proposed Master Plan Goals,** Alternative 1 would not achieve the project objectives.

Table 4.0-1
Alternative 1 Relationship to the Proposed Master Plan Goals

Project Objective	Relationship to the Objective
Goal #1: Establish a process for collecting the valuable input from the community including District staff, School site staff, parents, neighbors, students and consultants.	Under Alternative 1, community input would not be collected, as there would be no project to gather input on. This objective would not be met.
Goal #2: Assess, define, and prioritize current and future facility needs at each site.	Alternative 1 would not prioritize and address current and future facility needs. This objective would not be met.
Goal #3: Provide a plan for the expenditure of Measure BB funds (Laurelwood School and Peterson Fields) and develop a roadmap for future funded projects.	Under Alternative 1, Measure BB funds would not be utilized for their intended purpose. A roadmap would not be created for future funded projects. This objective would not be met.
Goal #4: Develop cost estimates and plans needed to acquire future funding for the identified facility priorities.	Under Alternative 1, cost estimates would not be developed, nor plans to acquire future funding for facility priorities. This objective would not be met.
Goal #5: Provide project phasing plans to ensure the highest facility priorities are addressed first.	Under Alternative 1, no project phasing plans would be provided. This objective would not be met.
Goal #6: Establish a "living" document that will be regularly updated with progress made so it can continue to reflect "current" conditions, providing an accurate picture of remaining needs	Alternative 1 would not produce a living document to reflect current conditions, or a picture of remaining needs. This objective would not be met.
Goal #7: Align the future development of the campuses with the stated Core Values in SCUSD's Vision 2035.	Alternative 1 would not include any development that aligns with the SCUSD Core Values. This objective would not be met.

The environmental effects of the No Project Alternative are included in **Table 4.0-3, Comparison of Alternatives to the Project,** below.

Alternative 2 – Reduced Scope

Aesthetics

Under the Reduced Scope Alternative, the Proposed Master Plan would only include the new track and field, the pedestrian pathway from Dunford Way to Peterson Middle School, the New Laurelwood Elementary School, and an erection of a temporary storage area in the northeastern corner of the Plan Area. The Laurelwood Elementary School's capacity would reduce from 850 students to 650 students and the building height would be one story instead of two. As less construction would occur, there would be less opportunities to visual resources from construction. The proposed Environmental Center, parking lot, and driveway would not be constructed, reducing the amount of paved surfaces, thereby reducing potential

glare. As a result, Alternative 2 would result in fewer visual impacts than the Proposed Master Plan. Visual impacts under Alternative 2 would be less than significant.

Agricultural Resources

Under the Reduced Scope Alternative, improvements to the District Farm, such as the construction of the Farm amenity building, would be excluded from the project. The District Farm would continue to operate under existing conditions. As a result, while impacts to agricultural resources under Alternative 2 would less than significant impacts, the lack of improvements would result in impacts that are incrementally greater than the Proposed Master Plan.

Air Quality

The amount of construction under Alternative 2 would be less compared to the project. Therefore, Alternative 2 would result in fewer construction emissions. Similar to the project, construction of emissions under Alternative 2 would not exceed the BAAQMD thresholds. Construction of Alternative 2 would generate short-term emissions of criteria air pollutants. However, these emissions would be temporary. Operational emissions would be similar to operations under the Proposed Master Plan and would not exceed BAAQMD thresholds. All emissions of toxic air contaminants and odors from heavy-duty equipment would be temporary. As construction would be less under Alternative 2, impacts would be less than the Proposed Master Plan and would remain less than significant.

Biological Resources

The Cities of Sunnyvale and Santa Clara are urbanized and generally lack wildlife corridors and habitat that would support special status plant or animal species. Although one sensitive species has been identified in the area, it is unlikely that they will be present within the Plan Area. Under the Reduced Scope Alternative, buildout of the Plan Area would be less. Given that less construction would take place, the number of potential impacts to biological resources from construction would decrease. **Mitigation Measure MM BIO-1** would be required. As a result, the Reduced Scope Alternative would be less than significant, and but the impacts would be slightly greater than the Proposed Master Plan.

Cultural Resources including Tribal Cultural Resources

Under the Reduced Scope Alternative, the amount of construction and disturbed area would be less than the Proposed Master Plan. No specific historical resources have been identified within the Plan Area. Development, specifically grading, would have the potential to unearth archaeological and/or paleontological resources. However, as the total amount of proposed development would be reduced, the

associated ground disturbance would also be reduced. Additionally, **Mitigation Measure MM CUL-1** and **MM CUL-2** would be implemented. As such, impacts under the Reduced Scope Alternative would be less than significant and would be reduced compared to the Proposed Master Plan.

Energy

Implementation of the Reduced Scope Alternative would result in energy consumption (including electricity, natural gas, and petroleum-fuel), but would not result in the wasteful or inefficient use of energy. Alternative 2 would reduce student enrollment from 850 students to 650 students, and therefore energy consumption could be slightly reduced. Similar to the Proposed Master Plan, development under Alternative 2 would be constructed in accordance with Title 24 requirements and therefore would include energy efficiency measures. The new Laurelwood Elementary School would be built with Net-Zero energy reduction measures. Many of the proposed pedestrian paths that would promote alternative modes to school and reduce VMT would not be implemented. However, overall energy impacts would be reduced compared to the Proposed Master Plan, and less than significant.

Geology and Soils

The Reduced Scope Alternative would result in similar impacts associated with risk as a result of surface fault rupture, ground-shaking liquefaction, landslides, and other risks associated with seismic events. The entire region is subject to the same seismic risk. Less construction would occur under the Reduced Scope Alternative, and therefore, less impacts to soil erosion and loss of topsoil would occur as a result of project construction. The Plan Area is already compacted, and therefore no impacts related to unstable soil, expansive soil, and septic systems would occur. Less excavation would occur under Alternative 2, and therefore any potential impact to paleontological resources would also decrease. Impacts to Geology and Soils would be less than significant, and less than to the Proposed Master Plan.

Greenhouses Gases

Implementation of the Reduced Scope Alternative would result in less construction overall compared to the Proposed Master Plan. Similar to the project, Alternative 2 would not exceed the SCAQMD significance thresholds during construction and operation. Similar to the Proposed Master Plan, the Reduced Scope Alternative land uses would be consistent with AB 32, SB 32, and SB 375, and development would be required to abide by regulations adopted by the California Air Resources Board (CARB) to ensure GHG emissions are reduced to 1990 levels by 2030. The recommended goals and policies included in the *General Plan* would apply. Impacts would be less than significant, and less than the Proposed Master Plan.

Hazards and Hazardous Materials

The amount of construction under the Reduced Scope Alternative would be reduced, and therefore impacts related to the routine transport, use, or disposal of hazardous materials, the accidental release of hazardous materials during construction would also be reduced. The Plan Area is not located on a hazardous material site and is not located within a fire hazard zone. Development under the Reduced Scope Plan would be required to comply with the applicable state and federal regulations. Impacts related to hazards and hazardous materials under the Reduced Scope Alternative would be less than significant and less than the Proposed Master Plan.

Hydrology and Water Quality

Under the Reduced Scope Alternative, the amount of development would be reduced compared to the Proposed Master Plan. Alternative 2 would reduce the amount of impervious surface within the Plan Area compared to the Proposed Master Plan. As such, water quality impacts would be less than the Proposed Master Plan and would be less than significant. Groundwater recharge areas would be minimally impacted by the Reduced Scope Alternative. Implementation of the Reduced Scope Alternative would not increase the rate and/or amount of stormwater runoff in comparison to existing conditions. As a result, potential flooding impacts would be less than significant and would be similar to the project.

Similar to the Proposed Master Plan, construction activities under Alternative 2 could result in potentially significant impacts to water quality and could exceed the surrounding waterways total maximum daily loads (TMDLs). Construction activities would be subject to existing regulatory requirements, including compliance with the State General Construction Activity Storm Water Permit and the provisions in the MS4 Permit addressing control of construction phase water impacts. In addition, individual development projects would be required to submit a SWPPP, if applicable, and provide appropriate on-site mitigation measures. Given that less construction would occur under Alternative 2 to hydrology and water quality would be less than the Proposed Master Plan and be less than significant.

Land Use

Less development would occur under the Reduced Scope Alternative. Similar to the Proposed Master Plan, the land use of the Plan Area would not change and would remain in accordance with the General Plan land use designations. Implementation of Alternative 2 would not physically divide an established community, conflict with applicable federal or state agency policies and regulations, or conflict with local plans, policies, and regulations. Although buildout of the Reduced Alternative would not physically divide a community, many of the proposed pedestrian and bicycle pathways that connect the Plan Area to the rest of the community would not be realized under this alternative. Under the Reduced Growth Alternative,

the area's connectivity would remain mostly the same. Thus, impacts related to land use under the Reduced Alternative would be less than significant, but slightly greater than the Proposed Master Plan.

Mineral Resources

The Reduced Scope Alternative would result in the same impacts to mineral resources as the Proposed Master Plan. There are no active mines, nor known areas with mineral resource deposits in the area. It is unlikely that mineral resources will be discovered and utilized in the future. Similar to the Proposed Master Plan, no impacts to mineral resources would occur under Alternative 2.

Noise

Grading and construction activities associated with the Reduced Scope Alternative could intermittently and temporarily generate noise levels above ambient background levels including noise levels above those permissible by the noise ordinance and other applicable standards. Generally, construction-related noise impacts would be short-term and localized in nature and would occur in accordance with the Sunnyvale Municipal Code. **Mitigation Measures MM NOI-1** and **MM NOI-2,** would continue to apply, but impacts would remain significant and unavoidable. Similar to the Proposed Master Plan, Alternative 2 would not result in increased traffic volume, resulting in additional operational noise. Alternative 2 would result in a reduction in the amount of construction compared to the Proposed Master Plan, resulting in a reduction in both construction and operational noise. Therefore, impacts related to noise under the No Project Alternative would be less than the Proposed Master Plan but would remain significant and unavoidable.

Population, Housing and Employment

The Reduced Scope Alternative would reduce the amount of construction in the Plan. However, similar to the Proposed Master Plan, it would not involve the construction of housing facilities, and reduce the student enrollment from 850 students to 650 students. No existing residential uses in the surrounding area would be impacted, and thus, the displacement of residents and/or existing residential units would not occur. Similar to the Proposed Master Plan, no population growth in the Plan Area or within the surrounding area would be triggered by Alternative 2, either directly or indirectly. Impacts related to population and housing would be less than significant, similar to the Proposed Master Plan.

Public Services

Fire

The Reduced Scope Alternative would not cause additional demands on existing fire service. The proposed student enrollment at Laurelwood Elementary would reduce from 850 students to 650 students. The

existing Peterson Middle School, and new Laurelwood Elementary School would be compatible with all applicable County and City fire code and ordinance requirements for access, water mains, fire flows, and hydrants. Additionally, the *General Plan* includes policies and actions to ensure adequate resources are available to respond to health, fire, and police emergencies, and there is coordination among public safety agencies to ensure adequate fire protection is provided to the cities of Sunnyvale and Santa Clara, and fire department staffing, response times, or service levels. Given the reduced scope and student enrollment, Alternative 2 would result in fewer impacts to fire services compared to the Proposed Master Plan. Impacts would remain less than significant.

Police

Under the Reduced Scope Alternative, the proposed student enrollment at Laurelwood Elementary would reduce from 850 students to 650 students. As such, demand for police protection services would also decrease. The *General Plan* includes policies and actions to ensure that adequate police protection is available to serve existing and future development and population. The *General Plan* also supports proactive approaches to address public safety through collaboration with the community and other agencies and through environmental design. Given the reduced scope and student enrollment, Alternative 2 would result in fewer impacts to police services compared to the Proposed Master Plan. Impacts would remain less than significant.

Education

Under the Reduced Scope Alternative, no housing would be constructed that would trigger population growth that cause the need for additional schools. Further, student enrollment at Laurelwood Elementary would be reduced from 850 students to 650 students. Overall, SCUSD enrollment has faced a steady decline, and births in the area have been declining since 2008. SCUSD projects that declines in enrollment will continue. The Reduced Scope Alternative would be compatible with *General Plan* policies and actions, and all applicable state and federal regulations. Given the reduced scope and student enrollment, Alternative 2 would result in fewer impacts to schools compared to the Proposed Master Plan. Impacts would remain less than significant.

Library Services

Under the Reduced Scope Alternative, no housing would be constructed that would trigger population growth that cause the need for additional library facilities. The new Laurelwood Elementary School would include a new library and innovation center as part of the campus. Existing students are expected to utilize the libraries within the school campus. The number of students utilizing the proposed library would

decrease from 850 students to 650 students. As a result, no impact to library services would occur, and impacts would be less than the Proposed Master Plan.

Recreation

Under the Reduced Scope Alternative, the new Peterson Track and Field would be constructed, along with play areas included in the Laurelwood Elementary Campus. Students would continue to have access to the existing tennis courts, and other open space. No housing would be constructed that would trigger population growth that cause the need for additional parks or recreational facilities. Therefore, the Reduced Scope Alternative would have a less than significant impact to parks or recreational services, similar to the Proposed Master Plan.

Traffic and Circulation

Under the Reduced Scope Alternative, the amount of construction would be reduced compared to the Proposed Master Plan. As a result, traffic impacts that may result from construction would also be reduced. Alternative 2 would not trigger population growth that may lead to increased VMT and congestion. Some of the circulation improvements, particularly in regards to the orientation of the Laurelwood Elementary parking lots driveways, would be implemented. However, many of the pedestrian pathways, and improvements to the Peterson Middle School would not be implemented, reducing the amount of circulation improvements. Overall, due to less construction, impacts would be less than the Proposed Master Plan, and less than significant.

Utilities and Services

Water Supply

The Reduced Scope Alternative would reduce the amount of proposed development. The new Peterson Track and Field and Laurelwood Elementary School would be constructed, as well an enhanced pathway and temporary maintenance area. No other changes would occur. The number of students enrolled would be reduced from 850 to 650 students. Therefore, the amount of water demand would also be reduced. As a result, water demand impacts under Alternative 2 would be less than significant and would be reduced compared to the project.

Wastewater

The Reduced Scope Alternative would reduce the amount of proposed development. The number of students enrolled would be reduced from 850 to 650 students. Therefore, the amount of wastewater

produced would also be reduced. Therefore, implementation of the Reduced Scope Alternative would result in less than significant impacts and would be reduced compared to the Proposed Master Plan.

Solid Waste

Implementation of the Reduced Scope Alternative would decrease the amount of proposed development. Construction activities associated with buildout of the Reduced Scope Alternative would generate construction-related solid waste including wood, paper, metal, plastic, cardboard, and green wastes. The Reduced Scope Alternative would result in a reduction in construction-related solid waste impacts. Additionally, the number of students enrolled would be reduced from 850 to 650 students. Therefore, the amount of solid waste produced would also be reduced. Therefore, implementation of the Reduced Scope Alternative would reduce the amount of solid waste generated compared to the Proposed Master Plan, and impacts would be less than significant.

Electricity

Implementation of the Reduced Scope Alternative would decrease the amount of proposed development. The number of students enrolled would be reduced from 850 to 650 students. Therefore, the amount of electricity consumed would also be reduced. Additionally, the new Laurelwood campus will include several Net-Zero strategies to reduce the amount of grid electricity consumed, including maximizing the roof's solar orientation, solar energy harvesting, using skylights, clerestory and transom windows to balance natural daylight and increase thermal comfort inside the learning environments. All of these strategies will reduce the amount of electricity consumed. As a result, Alternative 2 would have a less than significant impact on electricity resources and would be reduced compared to the Proposed Master Plan.

Natural Gas

Implementation of the Reduced Scope Alternative would decrease the amount of proposed development. The number of students enrolled would be reduced from 850 to 650 students. Therefore, the amount of electricity consumed would also be reduced. Additionally, as discussed above, Alternative 2 will implement Net-Zero strategies included in the Proposed Master Plan that would reduce reliance on natural gas, thereby reducing consumption. As a result, Alternative 2 would have a less than significant impact on natural gas resources and would be reduced compared to the Proposed Master Plan.

Wildfire

Under the Reduced Scope Alternative, less construction would occur, resulting in less temporary construction activities that could impede emergency response or evacuation plans. Alternative 2 would be

subject to the same SCUSD Emergency Operations Plan and Comprehensive School Safety Plans. The Plan Area is not located in or near a very high fire hazard severity zone (VHFHSZ), as identified by Cal Fire. As a result, the impacts related to wildfire would be incrementally less than the Proposed Master Plan and would remain less than significant.

Relationship to the Project Objectives

The project's objectives are included in **Table 4.0-2, Alternative 2 Relationship to the Project Objectives.** As shown in **Table 4.0-2,** Alternative 2 would achieve most of the project objectives, however a few objectives would be met to a lesser extent than the project because Alternative 2 would not address all future and current district needs.

Table 4.0-2
Alternative 2 Relationship to the Proposed Master Plan Goals

Project Objective	Relationship to the Objective
Goal #1: Establish a process for collecting the valuable input from the community including District staff, School site staff, parents, neighbors, students and consultants.	Under Alternative 2, community input would still be collected to influence design and programing. This objective would be met.
Goal #2: Assess, define, and prioritize current and future facility needs at each site.	Alternative 2 would prioritize and address some of the current facility needs, but not all, and it would not address future needs. This objective would be met, but to a lesser extent.
Goal #3: Provide a plan for the expenditure of Measure BB funds (Laurelwood School and Peterson Fields) and develop a roadmap for future funded projects.	Under Alternative 2, Measure BB funds would be utilized for their intended purpose. However, a roadmap would not be created for future funded projects. This objective would be met, but to a lesser extent.
Goal #4: Develop cost estimates and plans needed to acquire future funding for the identified facility priorities.	Under Alternative 2, future facility priorities would not be included, and therefore, cost estimates would not be developed, nor plans to acquire future funding for those facility priorities. This objective would not be met.
Goal #5: Provide project phasing plans to ensure the highest facility priorities are addressed first.	Under Alternative 2, Peterson Track and Field, and the new Laurelwood Elementary School would be constructed. No future phases are proposed. This objective would not be met.
Goal #6: Establish a "living" document that will be regularly updated with progress made so it can continue to reflect "current" conditions, providing an accurate picture of remaining needs	Alternative 2 would produce a living document to reflect current conditions and a picture of remaining needs. This objective would be met.
Goal #7: Align the future development of the campuses with the stated Core Values in SCUSD's Vision 2035.	Under Alternative 2, the new Peterson Track and Field and the new Laurelwood Elementary School would align with the SCUSD Core Values. This objective would be met.

4.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Section 15126.6 of the *State CEQA Guidelines* requires that an "environmentally superior" alternative be selected among the alternatives that are evaluated in an EIR. In general, the environmentally superior

alternative is the alternative that would be expected to generate the fewest adverse impacts. If the No Project Alternative is identified as environmentally superior, then another environmentally superior alternative shall be identified among the other alternatives.

Table 4.0-3, Comparison of Alternatives to the Project, summarizes the impact of each alternative and whether impacts would be similar, less, or greater when compared to the project. The No Project Alternative (Alternative 1) would reduce most impacts compared to the Proposed Master Plan by eliminating all proposed construction associated with the Proposed Master Plan. However, Alternative 1 would not meet any of the Proposed Master Plan's objectives.

The Reduced Scope Alternative (Alternative 2) would similarly reduce impacts compared to the Proposed Master Plan, as overall construction would be reduced. Impact areas determined to be less than significant and reduced compared to the plan are aesthetics, air quality, cultural resources and tribal resources, energy, geology and soils, greenhouse gasses, hazards and hazardous materials, hydrology and water quality, public services and recreation, transportation, utilities, and wildfire impacts.

This would occur by reducing the amount of construction, as well as the number of enrolled students at Laurelwood Elementary from 850 to 650. Although the Reduced Scope Alternative would not eliminate the significant impact associated with buildout of the project (e.g., operational air quality), Alternative 2 is identified as the environmentally superior alternative because it would incrementally reduce the project related impacts and result in the least impacts to public services and finite resources of the alternatives analyzed.

In addition, Alternative 2 would fulfill most of the Proposed Master Plan's objectives, although in some cases to a lesser extent than compared to the project.

4.7 COMPARISON OF ALTERNATIVES

Table 4.0-3 summarizes the effects of the alternatives.

Table 4.0-3
Comparison of Alternatives to the Project

Environmental Issue Area	Project	No Project	Alternative 2
Aesthetics	Less than significant	Less, no impact	Less, less than significant
Agricultural Resources	No Impact	Greater, less than significant	Incrementally greater, less than significant
Air Quality	Less than significant	Incrementally less, less than significant	Incrementally less, less than significant

Environmental Issue Area	Project	No Project	Alternative 2
Biological Resources	Less than significant with **Mitigation Measures BIO-1**	Less, less than significant	Incrementally greater, less than significant with **Mitigation Measures BIO-1**
Cultural Resources including Tribal Cultural Resources	Less than significant with **Mitigation Measures CUL-1** through **CUL-3**	Less, no impact	Incrementally less, less than significant with **Mitigation Measures CUL-1** through **CUL-3**
Energy	Less than significant	Greater, less than significant	Less, less than significant
Geology and Soils	Less than significant	Less, less than significant	Less, less than significant
Greenhouse Gases	Less than significant	Less, no impact	Incrementally less, less than significant
Hazards and Hazardous Materials	Less than significant	Less, less than significant	Incrementally less, less than significant
Hydrology and Water Quality	Less than significant	Less, no impact	Incrementally less, less than significant
Land Use	Less than significant	Incrementally greater, less than significant	Incrementally greater, less than significant
Mineral Resources	No Impact	Similar, No Impact	Similar, No Impact
Noise	Significant and unavoidable, even with **Mitigation Measure NOI-1** and **NOI-2.**	Less, less than significant	Incrementally less, significant and unavoidable, even with **Mitigation Measure NOI-1** and **NOI-2.**
Population, Housing, and Employment	Less than significant	Similar, less than significant	Similar, less than significant
Fire Protection	Less than significant	Similar, less than significant	Incrementally less, less than significant
Police Protection	Less than significant	Similar, less than significant	Incrementally less, less than significant
Education	Less than significant	Similar, less than significant	Incrementally less, less than significant
Library Services	No Impact	Incrementally greater, less than significant	Incrementally less, no impact
Recreation	No Impact	Incrementally greater, less than significant	Incrementally less, less than significant
Transportation	Less than significant	Greater, less than significant	Incrementally less, less than significant
Water Supply	Less than significant	Similar, less than significant	Incrementally less, less than significant.
Wastewater	Less than significant	Similar, less than significant	Incrementally less, less than significant
Solid Waste	Less than significant	Similar, less than significant	Incrementally less, less than significant
Electricity	Less than significant	Incrementally greater, less than significant	Incrementally less, less than significant

Environmental Issue Area	Project	No Project	Alternative 2
Natural Gas	Less than significant	Incrementally greater, less than significant	Incrementally less, less than significant
Wildfire	No Impact	Incrementally less, less than significant	Incrementally less, less than significant

5.0 OTHER CEQA CONSIDERATIONS

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all phases of a project must be considered when evaluating its impact on the environment. As part of this analysis, in addition to the impact analysis done in ***Chapter 3.0*** *and the alternative analysis in* ***Chapter 4.0****, the EIR must also analyze and identify (1) significant irreversible environmental effects that would result from implementation of the Proposed Peterson Middle School and the New Laurelwood Elementary School Master Plan ("Proposed Master Plan"), (2) growth-inducing impacts of the Proposed Master Plan, and (3) any secondary impacts from the proposed mitigation measures identified in* ***Chapter 3.0****. These impacts are analyzed in this Chapter.*

5.1 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL EFFECTS

Section 21100(b)(2)(B) of *State CEQA Guidelines* and Section 15126.2(c) of the *State CEQA Guidelines* require that an EIR include a detailed statement setting forth "[a]ny significant effect on the environment that would be irreversible if the project is implemented" (Public Resources Code § 21100(b(2)(B). "Significant irreversible environmental changes" include the use of nonrenewable natural resources during the initial and continued phases of the project, should this use result in the unavailability of these resources in the future. Primary impacts and, particularly, secondary impacts generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with projects. Irretrievable commitments of these resources are required to be evaluated in an EIR to ensure that such consumption is justified (*State CEQA Guidelines* §15126.2(c)).

Implementation of the Proposed Master Plan would cause irreversible environmental changes consisting of the following:

Project construction and operation resulting from the implementation of the Proposed Master Plan would result in the consumption of natural resources; including water, electricity, natural gas, and fossil fuels. Implementation of the Proposed Master Plan would involve construction and operation that would use fossil fuels and other natural materials, such as wood and metals. Construction and operation of the proposed school facilities and renovations would also emit pollution into the air, from construction machines and vehicles, and from vehicles traveling to and from each school facility during operation. These projects would also consume fossil fuels (petroleum and natural gas), and electricity generated by fossil fuels and other non-renewable resources during operation. As described throughout this EIR (see **Section 3.6, Energy; Section 3.10, Hydrology and Water Quality;** and **Section 3.18, Utilities and Service Systems**), the Proposed Master Plan would be required to comply with federal, state, and local requirements, such as Title 24 requirements and the use of such resources would not be unusual as compared to other construction projects and would not substantially affect the availability of such resources. Therefore,

implementation of the Proposed Master Plan would involve irreversible environmental changes to existing natural resources, such as the commitment of energy and water resources as a result of the operation and maintenance of the proposed school facilities. However, the Proposed Master Plan would not involve wasteful or unjustifiable use of energy or other resources, and energy conservation efforts would also occur with new construction.

5.2 GROWTH INDUCEMENT

State CEQA Guidelines Section 15126.2(d) requires that an environmental impact report (EIR) evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by *State CEQA Guidelines* Section 15126.2 (d) as follows:

> *the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth…Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also…the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.*

There are two types of growth-inducing impacts a project may have: direct and indirect. To assess the potential for growth-inducing impacts, the project features that may encourage and facilitate activities that individually or cumulatively may affect the environment must be evaluated.

Direct growth-inducing impacts occur when the development of a project imposes new burdens on a community that directly induces population growth or the construction of additional developments in the same area of the proposed project, thereby triggering related growth associated impacts. Included in this analysis are projects that would remove physical obstacles to population growth (such as a new road into an undeveloped area or a wastewater treatment plant that could allow more construction in the service area). Construction of these types of infrastructure projects cannot be considered isolated from the development they trigger. In contrast, projects that physically remove obstacles to growth, projects that indirectly induce growth, are those that may provide a catalyst for future unrelated development in an area (such as a new residential community that requires additional commercial uses to support residents).

A project can have a direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for instance, is involved in the construction of new housing. A project would have indirect growth inducement potential if it establishes substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional

housing and services to support the new employment demand. Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. For example, a project providing increased water supply in an area where water service historically limited growth could be considered growth inducing.

The *State CEQA Guidelines* explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Typically, the growth-inducing potential would be considered significant if it stimulates human population growth or a population concentration above what is assumed in local and regional land use plans, or in projections made by regional planning authorities. Significant growth potential could also occur if the project provides infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies.

As discussed below, this analysis evaluates whether the Proposed Master Plan would directly or indirectly induce economic, population, or housing growth in the surrounding environment.

Direct and Indirect Growth-Inducing Impacts

The Proposed Master Plan would include the construction of a new elementary school, a 300-seat Alternative High School, renovation of existing educational and recreational facilities on the Peterson Campus. The Project also includes relocating students from the existing Laurelwood Elementary School facility to the new elementary school. The future use of the Laurelwood Elementary School site is not known at this time and will be subject to future environmental review under CEQA.

The Proposed Master Plan would not directly include the construction or development of housing facilities. Further, Santa Clara USD has decreased in regular education enrollment from 14,806 in October 2017 to 13,589 in October 2021. Future projections (2030) for students within the Laurelwood attendance boundary are between 490 and 556.[1] Current enrollment at Laurelwood is 545 students. The future projections include currently planned residential developments, which will be accommodated by the Proposed Master Plan. Therefore, the Proposed Master Plan will not directly or indirectly cause population growth.

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1 Santa Clara Unified School District. *New Laurelwood Elementary School Capacity*. 2022. Available online at: https://go.boarddocs.com/ca/santaclarausd/Board.nsf/files/CCMT5L75B23E/$file/2022.03.24%20New%20Laurelwood%20Elementary%20School%20Capacity%20-%20Presentation%20PDF.pdf, accessed July 19, 2022.

As described in **Section 3.14, Population and Housing**, the City of Santa Clara has an estimated population of 130,127 and the City of Sunnyvale has an estimated population of 156,234 in 2022.[2] Given that the Proposed Master Plan would not induce population or housing growth, the cities of Santa Clara and Sunnyvale are projected to grow according to ABAG's Plan Bay Area 2050. These projections are derived from a combination of sources and considers factors such as birth rates; migration rates; historical trends; household size; market and economic projections; existing and planned land uses; and consistency with relevant adopted local, regional, and state land use policies and growth strategies.

Additionally, the Proposed Master Plan would be consistent with the cities' General Plans, particularly the City of Sunnyvale's Goal CC-4 to provide public facilities which are accessible, attractive and add to the enjoyment of the physical environment, and the City of Santa Clara's Goal 5.9.2-G1 to provide schools and community facilities that meet the needs of all segments of the population, and Goal 5.9.2-G2 to include appropriate arts, cultural, recreational, schools and other community facilities in concert with new development.

Construction of projects that would occur as a result of the Proposed Master Plan would include a need for construction labor during short time periods. Due to the employment patterns of construction workers in the Bay Area, and the market for construction labor, construction workers are not likely, to any significant degree, to relocate their households because of the job opportunities presented by the Proposed Master Plan. The construction industry differs from most other industry sectors in several important ways that are relevant to potential impacts on housing:

- There is no regular place of work. Construction workers commute to job sites that change many times in the course of a year. These often-lengthy daily commutes are made possible by the off-peak starting and ending times of the typical construction work day.
- Many construction workers are highly specialized (e.g., crane operators, steel workers, and masons), and move from job site to job site as dictated by the demand for their skills.
- The work requirements of most construction projects are also highly specialized, and workers are employed on a job site only as long as their skills are needed to complete a particular phase of the construction process.

Therefore, the construction activities associated with the implementation of the Proposed Master Plan would not induce indirect growth.

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2 California Department of Finance Demographic Estimates, https://dof.ca.gov/wp-content/uploads/Forecasting/Demographics/Documents/E-1_2022_InternetVersion.xlsx Accessed July 15, 2022.

5.3 POTENTIAL SECONDARY EFFECTS

State CEQA Guidelines Section 15126.4(a)(1)(D) states that, "[i]f a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measures shall be discussed but, in less detail, than the significant effects of the project as proposed." In accordance with the *State CEQA Guidelines*, the following provides a discussion of the potential impacts that could occur from implementation of the proposed mitigation measures.

Biological Resources

Mitigation Measure MM BIO-1 would reduce potential impacts to protected nesting birds, including the burrowing owl. **MM BIO-1** requires development projects to follow set protocol if an active bird nest is discovered during a pre-construction bird nest survey or is discovered inadvertently during earthwork or construction-related activities to ensure that sensitive species and/or habitats are not adversely affected. This mitigation measure is a procedural action that would not result in physical changes in the environment that could result in secondary impacts.

Cultural and Tribal Resources

Mitigation Measures MM CUL-1 and **MM CUL-2** would reduce the Proposed Master Plan's potential impacts to buried pre-historic artifacts and unknown tribal cultural resources to a less than significant impact by requiring work to be halted in the event archaeological or tribal resources are encountered during ground-disturbing activities. These measures are procedural and would not result in additional secondary impacts.

Noise and Vibration

Implementation of **MM NOI-1** and **MM NOI-2** would reduce the Proposed Master Plan's construction noise and vibration impacts on sensitive receptors to the maximum extent feasible. **Mitigation Measures MM NOI-1** and **MM NOI-2** involve requirements and restrictions regarding specific construction equipment to minimize temporary construction impacts. These measures would not result in additional secondary impacts as the use of these devices and techniques would be temporary and limited to the construction phase.

5.4 REFERENCES

California Department of Finance. Demographic Estimates, https://dof.ca.gov/wp-content/uploads/Forecasting/Demographics/Documents/E-1_2022_InternetVersion.xlsx, Accessed July 15, 2022.

Santa Clara Unified School District. *New Laurelwood Elementary School Capacity*. 2022. Available online at: https://go.boarddocs.com/ca/santaclarausd/Board.nsf/files/CCMT5L75B23E/$file/2022.03.24%20New%20Laurelwood%20Elementary%20School%20Capacity%20-%20Presentation%20PDF.pdf, accessed July 19, 2022.

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