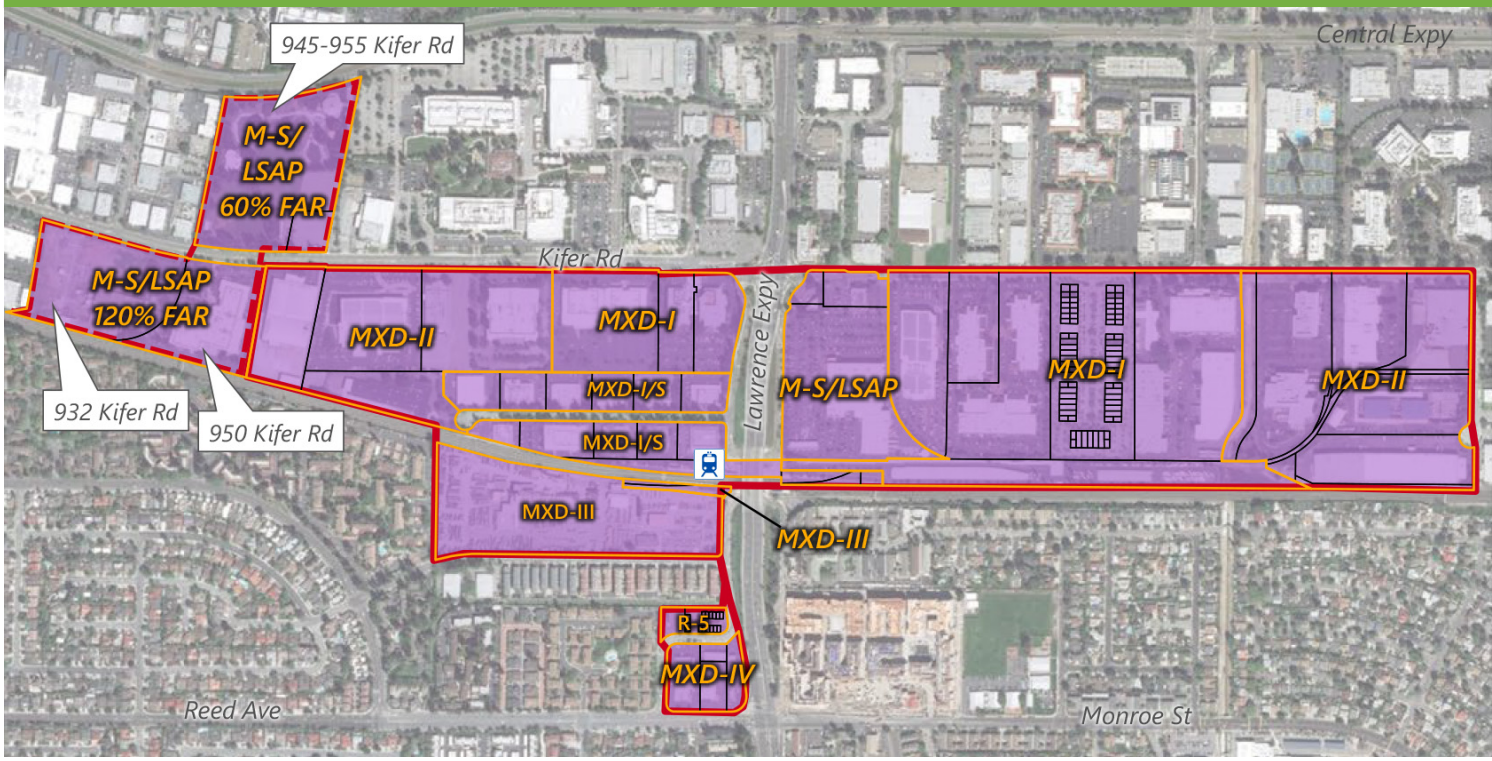
DRAFT SUBSEQUENT ENVIRONMENTAL IMPACT REPORT FOR THE

Lawrence Station Area Plan Update/Intuitive Surgical Corporate Campus Project



State Clearinghouse No. 2019012022

Prepared for

Sunnyvale

City of Sunnyvale
Community Development Department

Contact:
George Schroeder
Senior Planner

May 2021

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Appendices (included in a flashdrive on back cover)

Figures

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LIST OF ABBREVIATIONS

2017 Scoping Plan	*California's 2017 Climate Change Scoping Plan*
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ADA	Americans with Disabilities Act
ADWF	average dry weather flow
af	acre-feet
AFV	alternative fuel vehicle
APN	Assessor's Parcel Number
BAAQMD	Bay Area Air Quality Management District
BAWSCA	Bay Area Water Supply and Conservation Agency
BMP	best management practices
C&D	construction and demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
California Register	California Register of Historic Resources
CalMod	Caltrain Modernization Program
CAP	Climate Action Plan
CARB	California Air Resources Board
CARE	Community Air Risk Evaluation
CCA	Community Choice Aggregation
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CIP	capital improvement project
City CAP	City of Sunnyvale Climate Action Plan
City	City of Sunnyvale
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
CVP	Central Valley Project
CWA	Clean Water Act
cy	cubic yards

Draft SEIR	draft subsequent environmental impact report
du/ac	dwelling units per acre
DWR	Department of Water Resources
EAB	enhanced anaerobic biodegradation
ECSDC	El Camino Storm Drain Channel
EGU	electric generating unit
EIR	environmental impact report
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FGC	Fish and Game Code
GFA	gross sf of floor area
GHG	Greenhouse gas
GSI	Green Stormwater Infrastructure
GWMP	Groundwater Management Plan
GWP	global warming potential
HCP	habitat conservation plan
HOV	high-occupancy vehicle
HRI	heat rate improvement
IEPR	Integrated Energy Policy Report
ISI project	Intuitive Surgical Corporate Campus
ISL	Interim Supply Limitation
kWh	kilowatt per hour
LEED	Leadership in Energy and Environmental Design
LID	low impact design
LOS	level of service
LSAP	Lawrence Station Area Plan
LUTE	Land Use and Transportation Element
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
mph	miles per hour
MRP	Municipal Regional Stormwater Permit
MTC	Metropolitan Transportation Commission
$MTCO_2e$	metric tons of carbon dioxide equivalent

$MTCO_2e$/year	metric tons of carbon dioxide equivalent per year
$MTCO_2e$/year/SP	metric tons of carbon dioxide equivalent per year per service population
NAAQS	National Ambient air Quality Standards
NAHC	Native American Heritage Commission
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_X	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
OEHHA	Office of Environmental Health Hazard Assessment
OHP	Office of Historic Preservation
OPR	Governor's Office of Planning and Research
PCB	polychlorinated biphenyls
PDA	priority development area
PG&E	Pacific Gas and Electric
Playbook	Climate Action Playbook
PM	particulate matter
PM_{10}	respirable particulate matter
$PM_{2.5}$	fine particulate matter
PRC	Public Resources Code
psi	per square inch
PSO	Public Safety Officer
PV	photovoltaic voltaic
PWWF	peak wet weather flows
R&D	research and development
RHNA	Regional Housing Needs Assessment
ROG	reactive organic gas
RWQCB	Regional Water Quality Control Board's
RWS	Regional Water System
SAFE Rule	Safer Affordable Fuel-Efficient Vehicle Rule
SB	Senate Bill
SCVURPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SCVWD	Santa Clara Valley Water District
sf	square feet
SFBAAB	San Francisco Bay Area Air Basin
SFPUC	San Francisco Public Utilities Commission

SFRWQCB	San Francisco Bay Regional Water Quality Control Board
SGMA	Sustainable Groundwater Management Act of 2014
SIP	State Implementation Plan
SMaRT Station	Sunnyvale Materials Recovery and Transfer Station
SMC	Sunnyvale Municipal Code
SMP	site management plan
SO_2	sulfur dioxide
SRWTP	Sacramento Regional Wastewater Treatment Plant
Station	Caltrain Lawrence Station
SVCE	Silicon Valley Clean Energy
SVE	soil vapor extraction
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TCR	tribal cultural resources
TDM	Transportation Demand Management
TMU	Transit Mixed Use
URMP	Urban Runoff Management Plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
UWMPA	Urban Water Management Planning Act
VES	vapor extraction and treatment system
VMT	vehicle miles traveled
VOC	volatile organic compounds
VTA	Valley Transportation Authority
WPCP	Water Pollution Control Plant
WSA	water supply assessment
WSIP	Water System Improvement Program
ZEV	zero-emission vehicle

EXECUTIVE SUMMARY

ES.1 INTRODUCTION

This Executive Summary is provided in accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15123. It contains an overview of the proposed project analyzed in this Draft Subsequent Environmental Impact Report (SEIR), which consists of two primary components: proposed modifications to the Lawrence Station Area Plan (LSAP) and development of the Intuitive Surgical Corporate Campus (ISI project) (together, these components are referred to herein as the project). As stated in the State CEQA Guidelines Section 15123(a), "[a]n EIR shall contain a brief summary of the proposed actions and its consequences. The language of the summary should be as clear and simple as reasonably practical." State CEQA Guidelines Section 15123(b) states, "[t]he summary shall identify: 1) each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect; 2) areas of controversy known to the Lead Agency, including issues raised by agencies and the public; and 3) issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects." Accordingly, this summary includes a brief synopsis of the project and plan alternatives, environmental impacts and mitigation, areas of known controversy, and issues to be resolved during environmental review. Table ES-1 (at the end of this section) presents the summary of potential environmental impacts, their level of significance without mitigation measures, the mitigation measures, and the levels of significance following the implementation of mitigation measures.

The City of Sunnyvale certified the LSAP EIR (2016 LSAP EIR) and adopted the LSAP in December 2016. The 2016 LSAP EIR is available at https://sunnyvale.ca.gov/business/projects/lawrence.htm. Because of the proposed modifications to the adopted LSAP and inclusion of the ISI project, the City has determined that the preparation of an SEIR is the appropriate environmental review document for the project, per the requirements of State CEQA Guidelines Section 15162. For information on the type of EIR selected, refer to Section 1.2, "Type, Purpose, Scope, and Intended Uses of This Draft SEIR," of this document. A summary of the adopted LSAP is provided in Section 2.2, "LSAP Background," of this Draft SEIR.

ES.2 SUMMARY DESCRIPTION OF THE PROJECT

The project consists of two primary components: (1) modifications to the adopted LSAP (i.e., an increase in housing potential within the LSAP, expansion of the western LSAP boundary, and a Sense of Place Plan that would function as a policy document for LSAP area circulation, open space, and streetscape improvements) and (2) an office/research and development (R&D) and manufacturing development project in the western LSAP boundary expansion area for the ISI project. This Draft SEIR provides a programmatic evaluation of proposed modifications to the adopted LSAP and a project-level evaluation of the ISI project proposed for inclusion within the LSAP's western boundary expansion area.

The LSAP Update would require amendments to the adopted LSAP policy provisions and guidelines. Within the adopted LSAP Boundary, rezoning would be required to clarify locations of the different types of allowable land uses. The allowable land uses, maximum building heights, residential densities, and nonresidential floor area ratios (FARs) would also change within the LSAP boundary. Consistent with the Housing Crisis Act of 2019 (SB 330), objective design standards would also be established within the plan. No change to the existing LSAP land use designation within the adopted LSAP boundary or maximum nonresidential development capacity within the LSAP is proposed.

ES.2.1 Project Objectives

The project modifications are intended to achieve the following objectives:

LSAP Modifications (Housing Study/Boundary Expansion)

- Expand housing opportunities within the LSAP area to help address housing needs of the City.
- Provide for additional opportunities for higher intensity residential development near the Caltrain Lawrence Station that is environmentally, economically, and socially sustainable.
- Implement a Sense of Place Plan that will improve connectivity, wayfinding, and the aesthetic character of the LSAP area.
- Expand the LSAP boundary to the west for a comprehensive planning approach for the Kifer Road corridor, to accommodate future nonresidential development, and to obtain needed community benefits that are identified in the LSAP.
- Update the plan to improve the readability and consistency of the existing document, and make revisions that comply with changes in State law and City codes since the original plan adoption.
- Make Zoning Code text amendments to reflect changes in building heights, land uses, floor area ratios, densities, and other associated development standards related to increased housing potential in the LSAP area and an expanded boundary to the west.
- Revise the LSAP Development Incentives Program to reallocate incentive points and add to the list of community benefits.

ISI Project

- Create an innovative campus that unifies ISI's workforce in connected buildings to promote creativity and collaboration, and to reduce daily trips between existing ISI buildings and the new campus.
- Construct a project that accommodates ISI's existing needs in proximity to its existing employment base, and allows for its long-term continued presence in the City.
- Fulfill the LSAP goals of increasing transit ridership and promoting economic, social, and environmental sustainability through integrated design and development of a sustainable campus in proximity to the Caltrain Lawrence Station.
- Promote transit and active commute modes through thoughtful site planning coupled with a robust Transportation Demand Management (TDM) program to reduce daily vehicle trips. The TDM program will provide amenities such as employee shuttle services between ISI buildings and public transit, extensive bicycle parking, showers and lockers, free Caltrain Go Passes, rideshare matching services, flexible work schedule programs and dedicated carpool spaces.
- Provide on-site amenities to promote ISI employees' health and well-being, reduce daily vehicle trips, and create a strong sense of place.
- Create a campus design that reflects ISI's innovative technology.
- Develop the campus over time in response to ISI's needs.
- Achieve the appropriate security and privacy required for the invention and manufacture of new surgical products and technologies by limiting public access to certain areas within the new campus.

ES.3 ENVIRONMENTAL IMPACTS AND RECOMMENDED MITIGATION MEASURES

ES.3.1 Project-Specific Impacts

This SEIR has been prepared pursuant to the CEQA (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 1500, et seq.) to evaluate the physical environmental effects of the proposed project. The City of Sunnyvale is the lead agency for the project and has the principal responsibility for approving and carrying out the project and for ensuring that the requirements of CEQA have been met.

Table ES-1, presented at the end of this chapter, provides a summary of the environmental impacts for the project. The table provides the level of significance of the impact before mitigation, recommended mitigation measures, and the level of significance of the impact after implementation of the mitigation measures. The level of significance conclusions before and after implementation of mitigation measures are identified for both the 2016 LSAP EIR and the project analyzed in this SEIR.

ES.3.2 Significant and Unavoidable Impacts and Cumulative Impacts

The project would result in the following significant and unavoidable impacts under project and cumulative conditions:

Air Quality

- Impact 3.2-1: Cause Construction-Generated Criteria Air Pollutant or Precursor Emissions to Exceed BAAQMD-Recommended Thresholds

Cumulative

- Impact 4-3: Cumulative Air Quality Impacts (criteria pollutant emissions during construction)
- Impact 4-22: Contribute to Cumulative Impacts on Wastewater Services

ES.4 ALTERNATIVES TO THE PROPOSED PROJECT

The following provides brief descriptions of the alternatives evaluated in this Draft EIR:

- **Alternative 1: No Project Alternative** assumes that the existing LSAP and its boundaries remain as adopted in 2016. The ISI project site would not be incorporated into the LSAP area and would not be constructed as proposed.
- **Alternative 2: Reduced Development Alternative A** assumes a maximum development potential of 1,764 additional housing units within the LSAP, which would consist of increasing achievable densities (with incentives) at existing Mixed Use (MXD-I) and Mixed Use (MXD-II) zoned properties only from 68 to 100 dwelling units per acre (du/ac). In this alternative, the LSAP development capacity would increase from 2,323 units to 4,087 units. This alternative assumes an expansion of the LSAP area boundary to include the ISI project and construction of the project as proposed.
- **Alternative 3: Reduced Development Alternative B** assumes a maximum development potential of 1,075 additional housing units within the LSAP, which would consist of expanding the boundaries of where housing is allowed by rezoning the existing Industrial and Service (M-S/LSAP) and Office/Retail (O-R) zoned properties to allow residential uses with achievable densities of 54 du/ac with incentives. In this alternative, the LSAP

development capacity would increase from 2,323 to 3,398 units. This alternative assumes an expansion of the LSAP area boundary to include the ISI project and construction of the project as proposed.

ES.4.1 Environmentally Superior Alternative

Both Alternative 2 and Alternative 3 would provide the greatest number of reduced impacts associated with air quality, energy, greenhouse gases, transportation, and utility services. Alternative 2 would be the environmentally superior alternative as it would reduce impacts and provide the greatest extent of additional residential development potential among the alternatives.

ES.5 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

A notice of preparation (NOP) was distributed for the project on January 11, 2019, to responsible agencies, interested parties, and organizations, as well as private organizations and individuals that may have an interest in the project. A public scoping meeting was held on January 31, 2019. The purpose of the NOP and the scoping meeting was to provide notification that an EIR was being prepared for the project and to solicit input on the scope and content of the environmental document. The NOP and responses to the NOP are included in Appendix A of this Draft SEIR. Key concerns and issues that were expressed during the scoping process included the following:

- Construction and operational traffic impacts of the project in combination with other anticipated development in the area, including Santa Clara County and Cities of Santa Clara and Mountain View;
- Concerns related to energy, air quality, and greenhouse gas emissions impacts;
- Concerns related to affordable housing options and incentives;
- Concerns related to existing traffic congestion on Kifer Boulevard; and
- Concerns related to existing and post-project pedestrian safety.

These issues are each addressed in this Draft SEIR. Impacts related to these issues are either identified as less than significant or less than significant after mitigation.

State CEQA Guidelines Section 15123(b)(3) requires that an EIR identify issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the proposed project, the major issues to be resolved include decisions by the City, as the lead agency, related to:

- Whether this Draft SEIR adequately addresses the environmental impacts of the project;
- Whether the mitigation measures identified in this Draft SEIR should be adopted and/or modified;
- Whether the project's density and design are compatible with the character of the surrounding community;
- Whether there are any alternatives or project design modifications that should be considered; and
- Whether the project benefits to the City outweigh identified significant environmental impacts.

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Applicable 2016 LSAP Adopted Mitigation Measures	DSEIR Significance	Mitigation Measures	Significance after Mitigation
LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable				
Aesthetics				
Impact 3.1-1: Degrade the Existing Visual Character or Quality of Public Views or Conflict With Zoning and Regulations Governing Scenic Quality	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.1-2: Light and Glare Impacts	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Air Quality				
Impact 3.2-1: Cause Construction-Generated Criteria Air Pollutant or Precursor Emissions to Exceed BAAQMD-Recommended Thresholds	Adopted LSAP Mitigation Measure 3.5.3a Adopted LSAP Mitigation Measure 3.5.3b	SU No change in 2016 LSAP EIR determination	Mitigation Measure 3.2-1: Reduce construction-related NO_X emissions for the ISI project	SU No change in 2016 LSAP EIR determination
Impact 3.2-2: Result in a Net Increase in Long-Term Operational Criteria Air Pollutant and Precursor Emissions that Exceed BAAQMD-Recommended Thresholds	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.2-3: Result in a Short- or Long-Term Increase in Localized CO Emissions that Exceed BAAQMD-Recommended Thresholds	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.2-4: Expose Sensitive Receptors to Substantial Increases in TAC Emissions	Adopted LSAP Mitigation Measure 3.5.5 Adopted LSAP Mitigation Measure 3.5.6	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.2-5: Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination

Impacts	Applicable 2016 LSAP Adopted Mitigation Measures	DSEIR Significance	Mitigation Measures	Significance after Mitigation
LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable				
Archaeological, Historical, and Tribal Cultural Resources				
Impact 3.3-1: Archaeological Resources and Human Remains	Adopted LSAP Mitigation Measure 3.10.2	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Biological Resources				
Impact 3.4-1: Substantially Affect Special-Status Species Either Directly or Through Habitat Modifications	Adopted LSAP Mitigation Measure 3.9.2	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.4-2: Loss of Raptor and Other Common Bird Nests	Adopted LSAP Mitigation Measure 3.9.3	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.4-3: Protected Tree Removal	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Energy				
Impact 3.5-1: Wasteful, Inefficient, or Unnecessary Consumption of Energy during Project Construction or Operation	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.5-2: Conflict with or Obstruction of a State or Local Plan for Renewable Energy or Energy Efficiency	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Geology and Soils				
Impact 3.6-1: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature	Adopted LSAP Mitigation Measure 3.7.4	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination

Impacts	Applicable 2016 LSAP Adopted Mitigation Measures	DSEIR Significance	Mitigation Measures	Significance after Mitigation
LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable				
Greenhouse Gas Emissions and Climate Change				
Impact 3.7-1: Generate GHG Emissions 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 GHGs	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Hazards and Hazardous Materials				
Impact 3.8-1: Transport, Use, and Disposal of Hazardous Materials During Construction	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.8-2: Transport, Use, and Disposal of Hazardous Material During Operation	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.8-3: Exposure of School Sites to Hazardous or Acutely Hazardous Materials, Substances, or Waste within 0.25 Mile of an Existing or Proposed School	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.8-4: Location on a Hazardous Materials Site Where Contamination Could be Encountered	Adopted LSAP Mitigation Measure 3.3.3	LTS No change in 2016 LSAP EIR determination	*Mitigation Measure 3.8-1 would replace adopted LSAP Mitigation Measure 3.3.3.* **Mitigation Measure 3.8-1: Reduce Potential for Disturbance of Hazardous Contaminants** The City shall require that a Phase I ESA is prepared and submitted with any application for new development or redevelopment within the adopted LSAP boundary. The Phase I ESA shall be prepared by a qualified professional registered in California and in accordance with ASTM E1527-13 (or the most current version at the time a development application is submitted for the project). If determined necessary by the Phase I ESA, a Phase II ESA shall be conducted to determine the lateral and vertical extent of soil, groundwater, and/or soil vapor contamination, as recommended by the Phase I ESA.	LTS No change in 2016 LSAP EIR determination

Impacts	Applicable 2016 LSAP Adopted Mitigation Measures	DSEIR Significance	Mitigation Measures	Significance after Mitigation
LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable				
			The City shall not issue a building permit for a site where contamination has been identified until remediation or effective site management controls appropriate for the use of the site have been completed, consistent with applicable regulations and to the satisfaction of the City of Sunnyvale, DTSC, or San Francisco Bay RWQCB (as appropriate) before initiation of construction activities. Deed restrictions, if appropriate, shall be recorded. If temporary dewatering is required during construction or if permanent dewatering is required for subterranean features, the City shall not issue an improvement permit or building permit until documentation has been provided to the City that the San Francisco Bay RWQCB has approved the discharge to the sewer. Discharge of any groundwater removed from a construction site within the adopted LSAP and to the El Camino Storm Drain Channel, Calabazas Creek, or storm drain shall be subject to Water Pollution Control Permit requirements. If the Phase I ESA determines there are no RECs, no further action is required. However, the City shall ensure any grading or improvement plan or building permit includes a statement if hazardous materials contamination is discovered or suspected during construction activity, all work shall stop immediately until a qualified professional has determined an appropriate course of action.	
Impact 3.8-5: Interfere with Implementation of an Emergency Response Plan or Emergency Evacuation Plan	Adopted LSAP Mitigation Measure 3.3.5	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Hydrology and Water Quality				
Impact 3.9-1: Violation of Water Quality Standards or Waste Discharge Requirements Related to Construction and Operation Activities	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination

Impacts	Applicable 2016 LSAP Adopted Mitigation Measures	DSEIR Significance	Mitigation Measures	Significance after Mitigation
LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable				
Impact 3.9-2: Groundwater Recharge Impacts	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Land Use and Planning				
Impact 3.10-1: Physically Divide an Established Community	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.10-2: Conflict with Any Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Noise and Vibration				
Impact 3.11-1: Exposure of Noise-Sensitive Receptors to Excessive Construction-Generated Noise Levels	Adopted LSAP Mitigation Measure 3.6.4	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.11-2: Exposure to Construction-Generated Ground Vibration	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.11-3: Exposure to On-Site Operational Noise Sources	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.11-4: Increases in Traffic Noise	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination

Impacts	Applicable 2016 LSAP Adopted Mitigation Measures	DSEIR Significance	Mitigation Measures	Significance after Mitigation
LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable				
Population and Housing				
Impact 3.12-1: Induce Substantial Unplanned Population Growth	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Public Services and Recreation				
Impact 3.13-1: Increased Demand for Fire Protection, Police Protection, and/or Emergency Medical Services	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.13-2: Demand for Public Schools	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.13-3: Increase Demand on Parks and Recreation Facilities	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Transportation/Traffic				
Impact 3.14-1: Conflict or be Inconsistent with CEQA Guidelines Section 15064.3(b)	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.14-2: Disrupt Existing or Planned Transit Facilities or Conflict with a Program, Plan, Ordinance, or Policy Addressing Transit Facilities	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.14-3: Disrupt Existing or Planned Bicycle Facilities or Conflict with a Program, Plan, Ordinance, or Policy Addressing Bicycle Facilities	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination

Impacts	Applicable 2016 LSAP Adopted Mitigation Measures	DSEIR Significance	Mitigation Measures	Significance after Mitigation
LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable				
Impact 3.14-4: Disrupt Existing or Planned Pedestrian Facilities or Conflict with a Program, Plan, Ordinance, or Policy Addressing Pedestrian Facilities	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.14-5: Substantially Increase Hazards Because of a Geometric Design Feature or Incompatible Uses	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.14-6: Result in Inadequate Emergency Access	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.14-7: Result in a Temporary but Prolonged Construction-related Impact to Transportation Facilities	None. 2016 LSAP EIR determined impact was LTS.	PS	**Mitigation Measure 3.14-7: Prepare and Implement a Temporary Traffic Control Plan for the ISI Project** Before construction or issuance of building permits, the developer or the construction contractor for the ISI project shall prepare a temporary traffic control plan (TTC) to the satisfaction of the City of Sunnyvale Division of Transportation and Traffic and subject to review by all affected agencies. The TTC shall include all information required on the City of Sunnyvale TTC Checklist and conform to the TTC Guidelines of the City of Sunnyvale. At a minimum, the plan shall include the following elements: ▶ provide vicinity map including all streets within the work zone properly labeled with names, posted speed limits and north arrow; ▶ provide existing roadway lane and bike lane configuration and sidewalks where applicable including dimensions; ▶ description of proposed work zone; ▶ description of detours and/or lane closures (pedestrians, bicyclists, vehicular); ▶ description of no parking zone or parking restrictions; ▶ provide appropriate tapers and lengths, signs, and spacing;	LTS

Impacts	Applicable 2016 LSAP Adopted Mitigation Measures	DSEIR Significance	Mitigation Measures	Significance after Mitigation
LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable				
			▶ provide appropriate channelization devices and spacing; ▶ description of buffers; ▶ provide work hours/work days; ▶ dimensions of above elements and requirements per latest CA—MUTCD Part 6 and City of Sunnyvale's SOP for bike lane closures; ▶ provide proposed speed limit changes if applicable; ▶ description of bus stops, signalized and non-signalized intersection impacted by the work; ▶ show plan to address pedestrians, bicycle and ADA requirement throughout the work zone per CA-MUTCD Part 6 and City of Sunnyvale's SOP for Bike lane closures; ▶ indicate if phasing or staging is requested and duration of each; ▶ description of trucks, including number and size of trucks per day, expected arrival/departure times, truck circulation patterns; ▶ provide all staging areas on the project site; and ▶ ensure that the contractor has obtained and read the City of Sunnyvale's TTC Guidelines and City of Sunnyvale's SOP for bike lane closures; and ▶ ensure traffic impacts are localized and temporary.	
Utilities and Service Systems				
Impact 3.15-1: Increased Demand for Water Supply	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.15-2: Extension or Construction of New Water Supply Infrastructure	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination

Impacts	Applicable 2016 LSAP Adopted Mitigation Measures	DSEIR Significance	Mitigation Measures	Significance after Mitigation
LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable				
Impact 3.15-3: Exceedance of Waste Discharge Requirements	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.15-4: Impacts to Wastewater Conveyance and Treatment Capacity	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.15-5: Impacts to Stormwater Facilities	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.15-6: Increased Solid Waste Disposal	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination
Impact 3.15-7: Increased Demand for Electricity and Natural Gas Infrastructure	None. 2016 LSAP EIR determined impact was LTS.	LTS No change in 2016 LSAP EIR determination	None required	LTS No change in 2016 LSAP EIR determination

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1 INTRODUCTION

This draft subsequent environmental impact report (Draft SEIR) evaluates the environmental impacts of the proposed Lawrence Station Area Plan (LSAP) modifications (LSAP Update) and the proposed Intuitive Surgical Corporate Campus (ISI project), herein referred to as the project. This Draft SEIR has been prepared under the direction of City of Sunnyvale (City) in accordance with the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines. This chapter of the Draft SEIR provides information on the following:

- project requiring environmental analysis (synopsis);
- type, purpose, scope, and intended uses of the Draft SEIR;
- effects found not to be significant;
- agency roles and responsibilities;
- public review process; and
- standard terminology.

1.1 PROJECT REQUIRING ENVIRONMENTAL ANALYSIS

The project consists of two primary components: (1) modifications to the adopted LSAP (i.e., an increase in housing potential within the LSAP, expansion of the western LSAP boundary, and the proposed Lawrence Station Sense of Place Plan that would function as a policy document for LSAP area circulation, open space, and streetscape improvements) and (2) project-specific approval of an office/research and development (R&D) and manufacturing development project in the western LSAP boundary expansion area for the ISI project. For further information on the proposed project, see Chapter 2, "Project Description."

1.2 TYPE, PURPOSE, SCOPE, AND INTENDED USES OF THIS DRAFT SEIR

Pursuant to State CEQA Guidelines Section 15162, an SEIR should be prepared if an EIR has been certified for a project, but one or more of the following conditions are met:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

   A. The project will have one or more significant effects not discussed in the previous EIR or negative declaration.

   B. Significant effects previously examined will be substantially more severe than shown in the previous EIR;

   C. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

D. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The City certified the LSAP EIR ("2016 LSAP EIR") and adopted the LSAP in December 2016. A summary of the adopted LSAP is provided in Section 2.2, "LSAP Background," of this Draft SEIR. Due to the proposed modifications to the adopted LSAP and inclusion of the ISI project, the City has determined that the preparation of a SEIR is the appropriate environmental review document for the project, per the requirements of State CEQA Guidelines Section 15162.

As discussed in Chapter 3 of this Draft SEIR, the proposed LSAP Update and ISI project could result in potentially new significant impacts or an increase in the severity of previously identified significant impacts related to Aesthetics; Air Quality; Cultural and Tribal Cultural Resources; Biological Resources; Energy; Geology and Soils; Greenhouse Gas Emissions; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use and Planning; Noise and Vibration; Population, Employment, and Housing; Public Services and Recreation; Transportation; and Utilities and Service Systems. These issues are the focus of this SEIR.

An EIR is a public informational document used in the planning and decision-making process. An EIR assesses the environmental effects related to the planning, construction, and operation of a project and indicates ways to reduce or avoid significant environmental impacts. An EIR also discloses significant environmental impacts that cannot be avoided; any growth-inducing impacts of a project; effects found not to be significant; and significant cumulative impacts of past, present, and reasonably foreseeable future projects in combination with the impacts of the project.

Mitigation has been recommended where feasible to reduce or avoid the project's significant impacts. Mitigation measures from the 2016 LSAP EIR that are adopted and apply to LSAP Update and ISI project are identified. As an informational document for decision makers, a Draft SEIR is not intended to recommend either approval or denial of a project. CEQA requires the decision makers to balance the benefits of a project against its unavoidable environmental impacts. If environmental impacts are identified as significant and unavoidable (i.e., no feasible mitigation is available to reduce the impact to a less-than-significant level), the City may still approve the project if it believes that social, economic, or other benefits outweigh the unavoidable impacts. The City would then be required to make findings and state, in writing, the specific reasons for approving the project, based on information in the Draft SEIR and other information in the administrative record. In accordance with Section 15093 of the State CEQA Guidelines, the document containing such reasons is called a "statement of overriding considerations."

1.3 EFFECTS FOUND NOT TO BE SIGNIFICANT

CEQA allows a lead agency to limit the detail of discussion of environmental effects that are not potentially significant (PRC Section 21100, State CEQA Guidelines Section 15128). Based on a review of comments received on the notice of preparation (NOP) and at the scoping meeting (Appendix A) as well as additional research and analysis of relevant project data during preparation of this Draft SEIR, it was determined, for reasons described below, that the project would not result in significant environmental impacts to agriculture, forestry, mineral resources, or wildfire. Accordingly, these resources are not addressed further in this Draft SEIR.

1.3.1 Agriculture and Forestry Resources

The LSAP Update and ISI project are located within the City of Sunnyvale, an urbanized area within the area south of the San Francisco Bay known as the South Bay. The LSAP area and ISI project site are fully developed and no agricultural, forestry, or timber resources exist on or adjacent to the project area. In addition, the project area is currently zoned for industrial, commercial, and residential purposes. Therefore, the project would not convert farmland, conflict with any zoning for agricultural uses or forest land, result in loss or conversion of forest land or involve other changes in the environment that would result in conversion of farmland or forest land. There would be no impact to agriculture or forestry resources.

1.3.2 Mineral Resources

There are no active mines, no known areas with mineral resource deposits, or mineral or aggregate resources areas of statewide importance located in Sunnyvale (City of Sunnyvale 2016). Therefore, no impact to mineral resources would occur.

1.3.3 Wildfire

While all of California is subject to some degree of wildfire hazard, the project site is surrounded by urban uses and, therefore, less prone to wildfire.

"Local responsibility areas," which are under the jurisdiction of local entities (e.g., cities, counties), are required to identify very high fire hazard severity zones. The project site is within a local responsibility area and CAL FIRE identifies the project site as an incorporated area and a non–very high fire hazard severity zone (CAL FIRE 2017). The Sunnyvale Department of Public Safety is responsible for providing fire protection services to the project site and the closest Sunnyvale Fire Bureau stations are Station #2, located at 795 E. Arques Avenue (approximately 0.5 mile west of the plan area at N. Wolfe Road) and Station #4, located at 966 South Wolfe Road, approximately 0.5 mile southwest of the plan area. The Santa Clara Department has a station just north of Kifer Road at 3011 Corvin Drive, approximately 725 feet north of the project area.

New construction is subject to the City Municipal Code and the California Fire Code, which includes safety measures to minimize the threat of fire. Thus, the project would have no impact related to wildlife risk and this issue is not discussed further in this EIR.

1.4 AGENCY ROLES AND RESPONSIBILITIES

1.4.1 Lead Agency

The City of Sunnyvale is the lead agency responsible for approving and carrying out the project and for ensuring that the requirements of CEQA have been met. After the SEIR public-review process is complete, the City will determine whether to certify the SEIR (see State CEQA Guidelines Section 15090) and approve the project.

1.4.2 Trustee and Responsible Agencies

A trustee agency is a State agency that has jurisdiction by law over natural resources that are held in trust for the people of the State of California.

Responsible agencies are public agencies, other than the lead agency, that have discretionary-approval responsibility for reviewing, carrying out, or approving elements of a project. Responsible agencies should participate in the lead agency's CEQA process, review the lead agency's CEQA document, and use the document when making a decision on project elements. Agencies that may have responsibility for, or jurisdiction over, the implementation of elements of the project include the following:

STATE AGENCIES

- San Francisco Bay Region Regional Water Quality Control Board (Region 2)

REGIONAL AND LOCAL AGENCIES

- Bay Area Air Quality Management District

1.5 PUBLIC REVIEW PROCESS

In accordance with CEQA regulations, a NOP was distributed on January 11, 2019, to responsible agencies, interested parties and organizations, private organizations, and individuals that could have interest in the project. The NOP is on file at the City's One-Stop Permit Center at 456 W. Olive Avenue Sunnyvale, CA 94086.

The purpose of the NOP was to provide notification that an SEIR for the project was being prepared and to solicit input on the scope and content of the document. The NOP and comments to the NOP are included in Appendix A of this Draft SEIR.

1.5.1 Public Review of This Draft SEIR

This Draft SEIR is being circulated for public review and comment for a period of **45 days**. During this period, comments from the general public as well as organizations and agencies on environmental issues may be submitted to the lead agency. Please send all comments to:

George Schroeder, Senior Planner
City of Sunnyvale, Community Development Department
456 W. Olive Avenue
Sunnyvale, CA 94086
Phone: (408) 730-7443
GSchroeder@sunnyvale.ca.gov

Agencies that will need to use the SEIR when considering permits or other approvals for the project should provide the name of a contact person, phone number, and email address. Comments provided by email should include the name and physical address of the commenter.

A copy of this Draft SEIR has been posted on the City's Lawrence Station Area Plan website: https://sunnyvale.ca.gov/business/projects/lawrence.htm.

Hard copies of this Draft SEIR are also available for review at the City of Sunnyvale Library (665 W Olive Ave, Sunnyvale, CA 94086), the City of Sunnyvale One-Stop Permit Center (456 W. Olive Ave. Sunnyvale, CA 94086), and the City of Sunnyvale Community Center (550 Remington Drive, Sunnyvale, CA 94087). Please note that due to the Shelter in Place Order for Santa Clara County, limited in-person services are in effect at City facilities.

A Planning Commission virtual telepresence public hearing will be held on the Draft SEIR on Monday, June 28th, at 7:00 p.m. Meeting details, including how to view and join the virtual meeting, will be available on the meeting's agenda 72 hours before the meeting on the City's Legislative Public Meeting Webpage at: https://sunnyvaleca.legistar.com/calendar.aspx.

Upon completion of the public review and comment period, a final SEIR will be prepared that will include comments on the Draft SEIR received during the public-review period, responses to those comments, and any revisions to the Draft SEIR made in response to public comments. The Draft SEIR and Final SEIR will comprise the SEIR for the project.

Before adopting the project, the lead agency, is required to certify that the SEIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the SEIR, and that the SEIR reflects the independent judgment of the lead agency.

1.6 STANDARD TERMINOLOGY

This Draft SEIR uses the following standard terminology:

"ISI project" means the proposed Intuitive Surgical Inc. office/research and development (R&D) and manufacturing development project in the western LSAP boundary expansion area.

"Less-than-significant impact" means no substantial adverse change in the physical environment (no mitigation is needed).

"LSAP Update" means the modifications to the adopted LSAP to increase the housing potential within the LSAP, expansion of the western LSAP boundary, and the proposed Lawrence Station Sense of Place Plan.

"No impact" means no change from existing conditions (no mitigation is needed).

"Project area" means the combined sites that include the LSAP Update and ISI project.

"Potentially significant impact" means an impact that might cause a substantial adverse change in the environment (mitigation is recommended because potentially significant impacts are treated as significant).

"Significant impact" means an impact that would cause a substantial adverse change in the physical environment (mitigation is recommended).

"Significant and unavoidable impact" means an impact that would cause a substantial adverse change in the physical environment and that cannot be avoided, even with the implementation of all feasible mitigation.

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2 PROJECT DESCRIPTION

This chapter presents a detailed description of the proposed modifications to the Lawrence Station Area Plan (LSAP) (LSAP Update) and the proposed Intuitive Surgical Corporate Campus (ISI project), herein collectively referred to as the project. The project consists of two primary components: (1) modifications to the adopted LSAP (i.e., an increase in housing potential within the LSAP, expansion of the western LSAP boundary, and the proposed Lawrence Station Sense of Place Plan that would function as a policy document for LSAP area circulation, open space, and streetscape improvements) and (2) an office/research and development (R&D) and manufacturing development project in the western LSAP boundary expansion area for the ISI project. This chapter describes project location, setting, and background; City of Sunnyvale (City) and ISI objectives; project elements; and anticipated public approvals. This Draft SEIR provides a programmatic evaluation of proposed modifications to the adopted LSAP and a project-level evaluation of the ISI project proposed for inclusion within the LSAP's western boundary expansion area.

2.1 PROJECT LOCATION AND SETTING

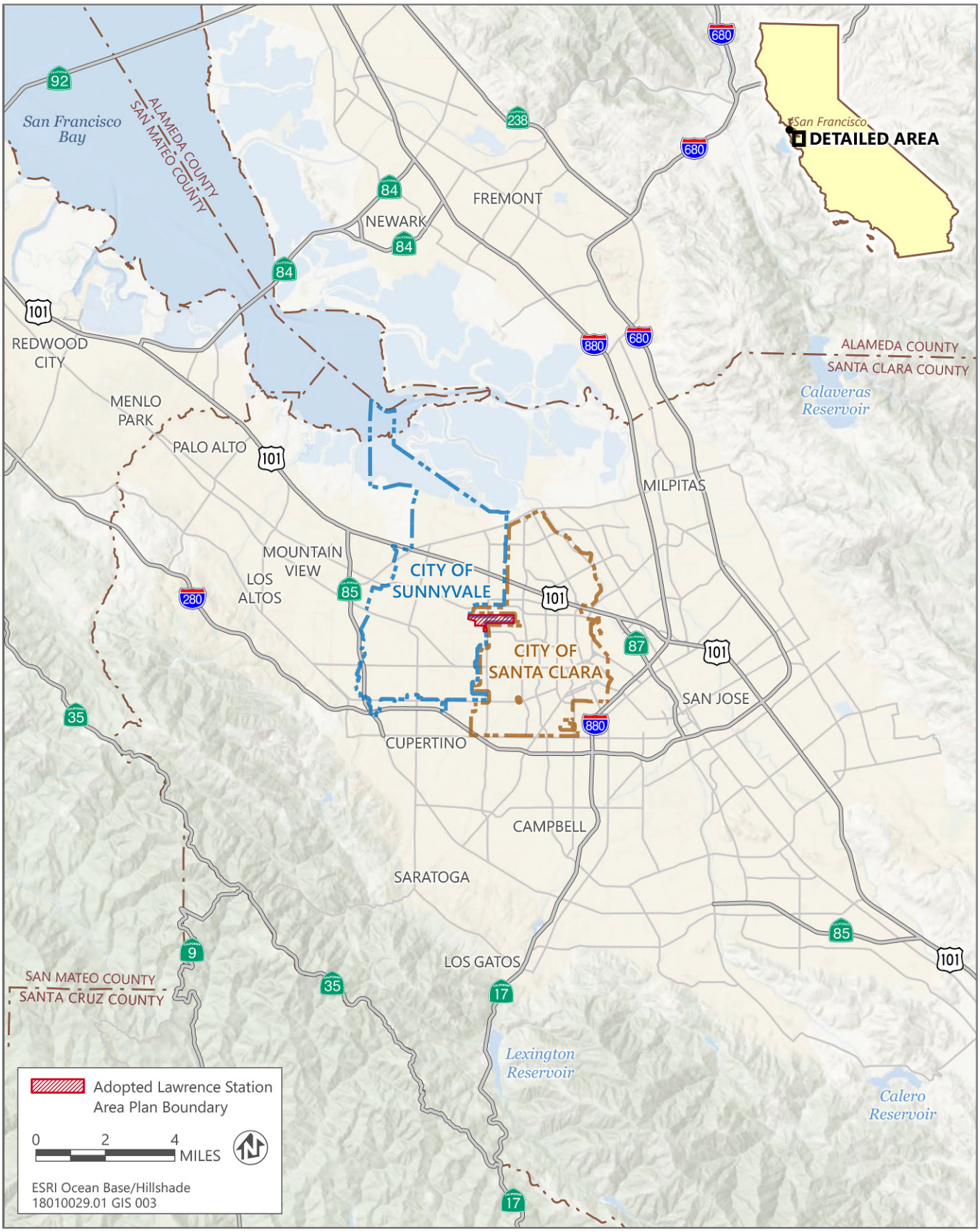
The City's LSAP is located in the east-central part of the City of Sunnyvale in Santa Clara County, adjacent to the City of Santa Clara (Figures 2-1 and 2-2). The Caltrain Lawrence Station (Station) is located at 137 San Zeno Way, directly below the Lawrence Expressway overpass. U.S. 101 to the north and Interstate 280 to the south provide regional access to the plan area, and a network of major streets provides local access (i.e., Kifer Road, E. Evelyn Avenue, and Reed Avenue/Monroe Street).

2.1.1 LSAP Adopted Plan Area

On December 6, 2016, the City of Sunnyvale adopted the LSAP and certified the 2016 LSAP EIR. The LSAP area consists of approximately 199 acres (without roads) of already urbanized lands within the City and was part of a larger 629-acre original study area that was generally defined by a one-half-mile radius circle centered on the Station and included portions of the City of Santa Clara, to ensure coordination of circulation systems and land uses between the two cities. The LSAP described in this document is limited to the jurisdictional area of the City of Sunnyvale. Although the half-mile radius around the Station includes properties within the City of Santa Clara and existing residential properties south of the tracks in the City of Sunnyvale, there are no changes proposed to these properties because they were not part of the adopted LSAP boundaries. Additionally, no changes are proposed to the City of Santa Clara's own Lawrence Station Area Plan (also adopted in 2016). There are only changes proposed to certain City of Sunnyvale LSAP zoning districts described in the following sections.

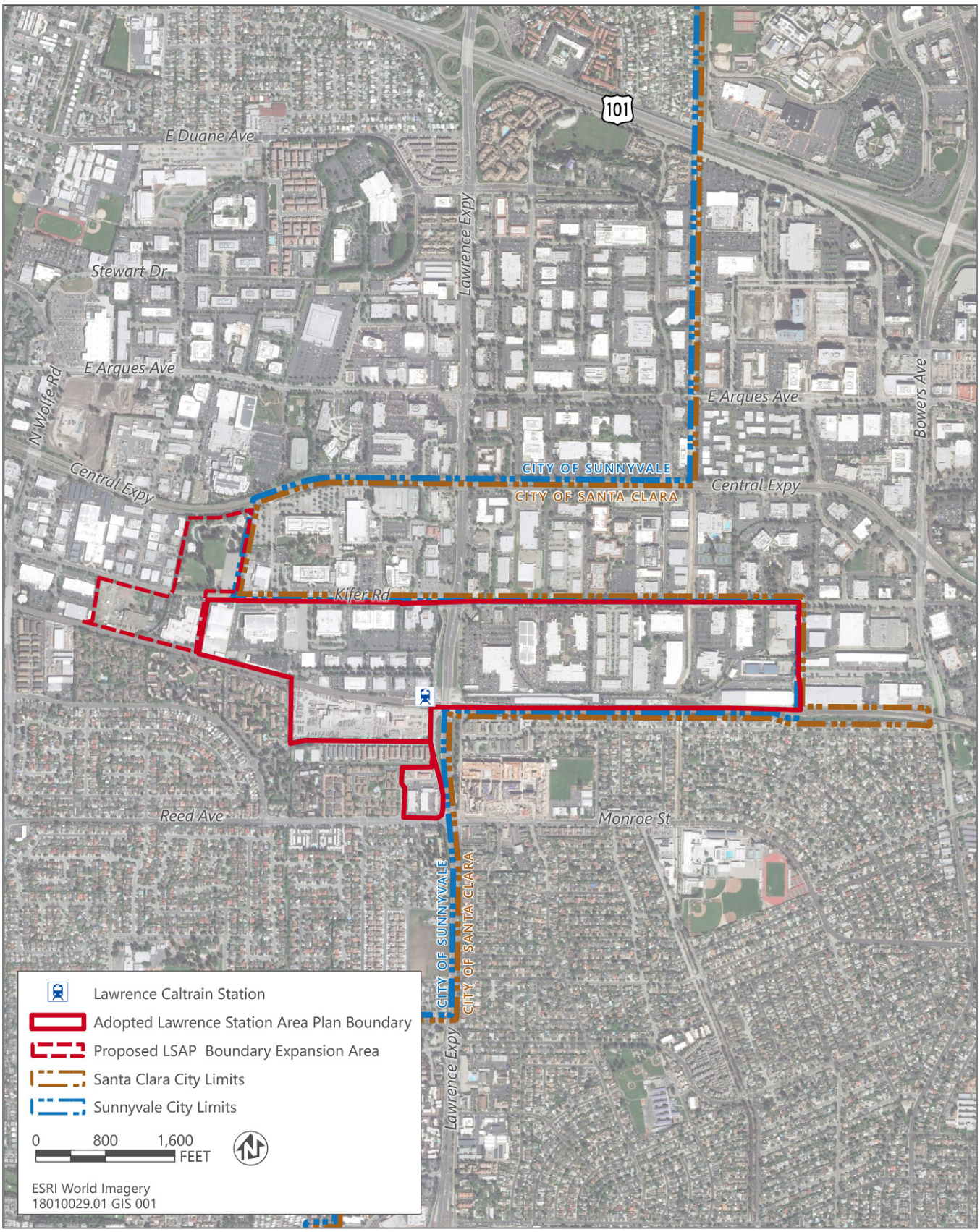
Lawrence Expressway bisects the plan area north to south, while the Caltrain right-of-way bisects the area east to west. The plan area north of the tracks is bounded by Kifer Road and the City of Santa Clara border to the north, Uranium Drive and the City of Santa Clara border to the east, and 960 Kifer Road (Assessor's Parcel Number [APN] 205-49-008) to the west. This area is dominated by industrial and commercial uses on large parcels. Many of these date from the early years of Silicon Valley growth and consist of one-story structures. Several development projects are under construction in this area (see Section 2.1.3 below for a description). East of Lawrence Expressway, newer development includes office and R&D uses.

The plan area south of the tracks is located west of Lawrence Expressway, north of Reed Avenue, and includes the former Calstone/Peninsula Building Materials (PBM) project site at 1155-1175 Aster Avenue (APNs 213-01-034, -033, -032; see Section 2.4 below for a brief description of this project), a townhouse development on Buttercup Terrace (APNs 213-73-001 to -016), a commercial property at 1159 Willow Avenue (APN 213-01-023) and four commercial properties at the northeast corner of Willow Avenue and Reed Avenue (APNs 213-01-001, -002, -003, and -004).



Source: data downloaded from Santa Clara County in 2017

Figure 2-1 Regional Map



Source: City of Sunnyvale 2019

Figure 2-2 Lawrence Station Area Plan Boundaries

The plan area contains few distinguishing natural physical characteristics and is generally flat, with elevation relief provided only by the overpass of Lawrence Expressway at the Caltrain tracks. Calabazas Creek, which flows south-to-north to the San Francisco Bay, is located in a concrete channel along the eastern edge of the plan area and contains little to no vegetation within its approximately 65-foot right-of-way. The El Camino Storm Drain Channel traverses through the residential neighborhoods south of the Station and along the south edge of the rail tracks before draining into Calabazas Creek. This channel, although mostly concrete, has stretches of grass and earthen banks along its 40- to 45-foot right-of-way. There are no public parks or open space and very little natural vegetation in the plan area. However, the streets and gardens of the existing residential areas and some of the nonresidential areas contain mature planted street trees and ornamental plantings, including a stand of redwoods and cedar trees along Sonora Court one block north of the Station. There are also two approved private parks with public access at the Greystar development at 1120-1130 Kifer Road and Calstone/PBM project at 1155-1175 Aster Avenue.

2.1.2 Proposed LSAP Boundary Expansion Area/ISI Project

Proposed plan modifications would include expansion of the adopted plan area boundary to include three sites (containing four parcels) located just west/ northwest of the adopted LSAP boundary (Figure 2-2). Located in a light industrial area, ISI acquired these sites with the intent to expand and unify its operations adjacent to ISI's existing headquarters in Sunnyvale. The proposed LSAP boundary expansion area (also referred to as the ISI Site) contains four parcels (932, 945, 950, and 955 Kifer Road) on 32.4 acres located north and south of Kifer Road. To distinguish between the two areas bisected by Kifer Road, the proposed LSAP boundary expansion area/ ISI Site is also referred to as North Site and South Site for purposes of this SEIR.

NORTH SITE

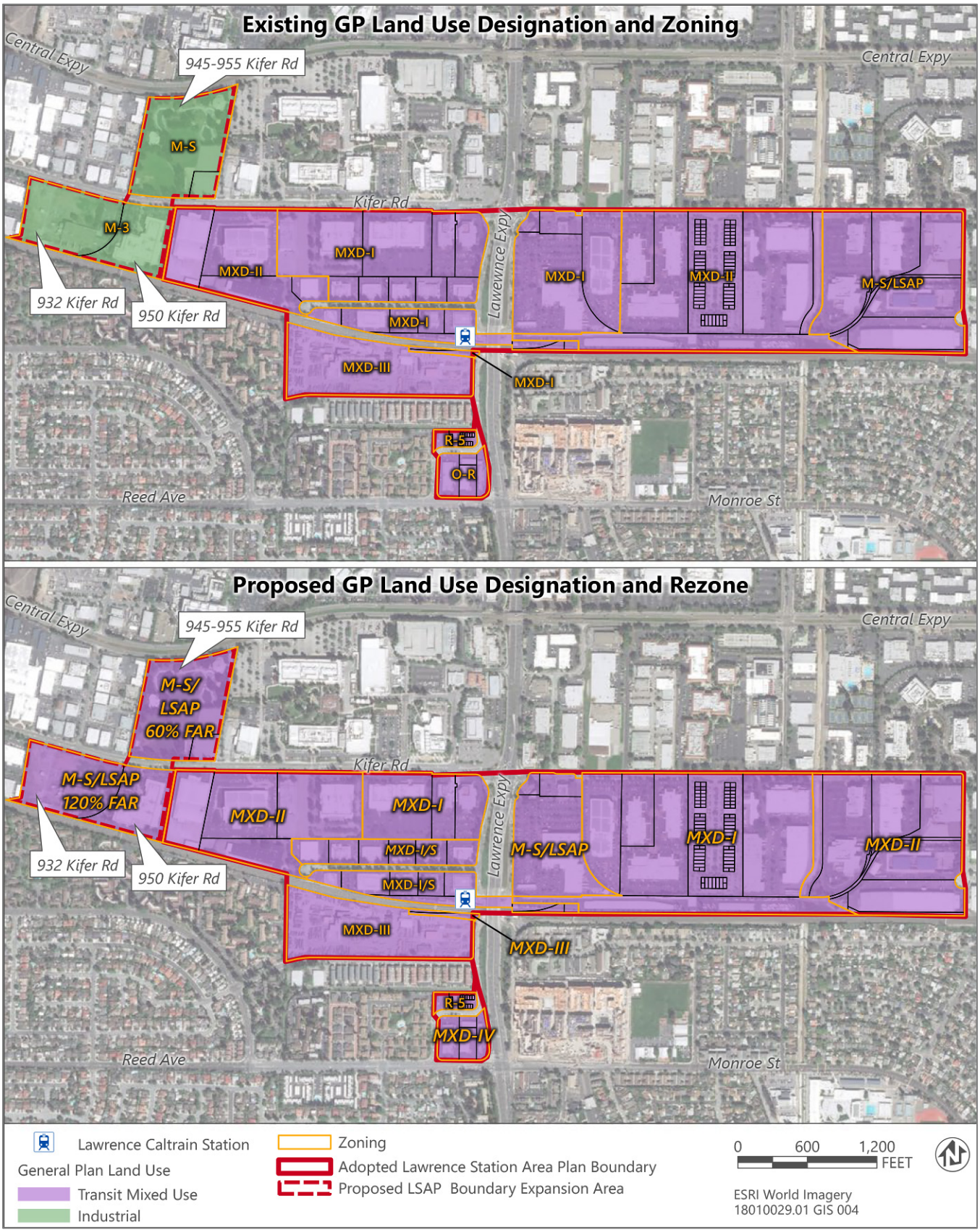
The North Site is bound by Kifer Road to the south, the City's boundary with City of Santa Clara and a commercial shipping and receiving facility to the east, various small commercial and light industrial buildings to the west, and Central Expressway to the north. The northern portion of the ISI Site (North Site) is 15.6 acres (945 and 955 Kifer Road) and is identified as APN 205-40-002 (945 Kifer Road) and 205-40-001 (955 Kifer Road). The North Site contains a private sports and recreation complex, a gymnasium, a baseball field, a soccer field, an amphitheater, a volleyball court, a children's play area, a tented barbeque area, an empty concrete manmade lake, portable bathroom and shower trailers, a parking area, a groundwater monitoring well, and landscaped areas with mature trees. The recreational facilities and parking lot are currently utilized by ISI employees.

SOUTH SITE

The South Site is bound by Caltrain tracks to the south, a commercial building to the east, two commercial buildings to the west, and Kifer Road to the north. The South Site is made up of two parcels totaling 16.8 acres and is identified as APN 205-49-005 (932 Kifer Road) and 205-49-012 (950 Kifer Road). Current uses on the South Site within the 932 Kifer Road parcel consist of two office/warehouse buildings (the smaller building is vacant and unused), parking lots, three outbuildings and equipment associated with previous site remediation activities, seven groundwater monitoring wells, remnants of former railroad spurs, vegetated areas, and mature trees. Within the 950 Kifer Road parcel on the South Site, current uses consist of an occupied ISI customer service center, a basketball court, picnic tables, landscaping with mature trees, and paved parking areas.

2.1.3 Existing Land Use Designations

Existing land use designations and zoning in the proposed LSAP boundary expansion area/ISI Site are shown in Figure 2-3. Table 2-1 provides a summary of existing land uses and associated land use designations and zoning in the adopted plan area and boundary expansion area/ISI Site.



Source: provided by the City of Sunnyvale in 2020

Figure 2-3 Existing and Proposed Land Use Designations and Zoning

Table 2-1 Existing Land Use Designations - LSAP Plan Area and LSAP Boundary Expansion Area/ISI Site

Existing Zoning District	Acres	Existing LSAP Land Use Classification
Residential		
R-5 - High Density Residential	1.2	High Density Residential
Mixed-Use		
MXD-I – Flexible Mixed-Use I	57.9	Mixed-Use Transit Core/Mixed-Use Transit Supporting North
MXD-II – Flexible Mixed-Use II	65.8	Mixed-Use Transit Supporting North
MXD-III – Flexible Mixed-Use III	16.9	Mixed-Use Transit Supporting South
Office/R&D/Industrial/Retail		
M-S/LSAP – Industrial and Service with an LSAP Combining District	33.7	Office/R&D
O-R - Office/Retail	3.1	Office/Retail
Other		
Drainage channels/Calabazas Creek, various zoning	4	N/A
Railroads/Utility, various zoning	15.9	N/A
Total Without Roads	**198.5**	
LSAP Boundary Expansion Area (ISI Site)		
M-3 – General Industrial	16.8 *(932/950 Kifer Rd.)*	N/A
M-S –Industrial and Service	15.6 *(945-955 Kifer Rd.)*	N/A
Total Without Roads	**32.4**	

Sources: City of Sunnyvale 2016, 2019

Since the LSAP was approved in December 2016, the following projects have been approved or were recently completed:

- Greystar Development (1120-1130 Kifer Road): Redevelopment of a 7.99-acre property that includes demolition of 100,843 square feet (sf) of office/R&D and construction of 7,400 sf of retail and 520 apartment units (recently completed).
- Calstone/PBM Project (1155-1175 Aster Avenue): Redevelopment of a 16.82-acre property that consists of 741 units (apartments, condos, and townhomes), 1,500 sf of commercial space (ground floor of apartments), and 2.3 acres of open space (Planning Commission approved).
- Intuitive Surgical Inc. Project (1050 Kifer Road): Redevelopment of a 21.7-acre property that consists of two new four-story office/R&D buildings (392,465 net sf), a parking structure, and retention of an existing one-story building and a multi-use trail (Phase I recently completed: one new office/R&D building of 307,550 gross sf, a parking structure, and a multi-use trail).
- Extra Space Properties (106 Lawrence Station Road): Construction of a 54,000-sf storage building at an existing self-storage site (recently completed).

Table 2-2 identifies remaining development capacity for office/R&D development and residential units within the LSAP since adoption of the plan.

Table 2-2 Remaining New Development Buildout Under Adopted LSAP

Land Use Type	Approved LSAP Buildout	Approved and/ or Constructed Development Since LSAP Adoption	Remaining New Development Potential Under Adopted LSAP
Residential (net new units)	2,323	1,261	1,062
Office/R&D (net new sf)	1,200,000	392,465 (and 100,843 sf demolished)	908,378

Source: Sunnyvale 2019

2.2 LSAP BACKGROUND

In December 2016, the City Council adopted the LSAP and its associated General Plan Amendment and Rezoning. The City prepared an EIR (State Clearinghouse No. 2013082030) for the LSAP. The City of Santa Clara's City Council also adopted their LSAP and EIR in late 2016, along with associated General Plan and Zoning Ordinance Amendments. The Santa Clara LSAP is bounded by Kifer Road to the south, Lawrence Expressway to the west, Central Expressway to the north, and Calabazas Creek to the east.

The intent of the LSAP is to increase ridership at the Lawrence Caltrain Station and promote a mix of uses at the station through the development of a diverse neighborhood of employment, residential, retail, other support services and open space. With a plan horizon of 2040, the adopted plan includes goals, policies and guidelines to guide public and private investment in the area.

Unlike traditional zoning, which typically establishes single-use districts with fixed densities, the LSAP allows a flexible mix of uses at a range of densities. As such, the number of residential units and amount of non-residential space could vary considerably. To account for this variability, the development potential for the 2016 LSAP was estimated for three scenarios: minimum density, maximum density with incentives, and estimated likely development. All three scenarios include estimates for existing residential, industrial/R&D, and retail uses in the plan area that would not change. For purposes of the environmental analysis presented in the 2016 LSAP EIR, the City determined the Estimated Likely Development scenario to be the appropriate scenario to evaluate as it represents an estimate of reasonable future transportation and infrastructure needs of the LSAP without planning for excessive development (and associated excessive infrastructure costs). This scenario is considered the development capacity for the LSAP area under the adopted LSAP.

To ensure that long-term development does not exceed the carrying capacity of infrastructure systems and the environment, a development cap for office/R&D and residential units was established under the adopted LSAP (see Table 2-2). Once these caps are reached, further environmental analysis is required for subsequent development proposals before additional development can proceed. Table 2-2 (above) identifies remaining development capacity under the adopted LSAP.

In April 2017, the City Council adopted an update to the City's Land Use and Transportation Element (LUTE) of its General Plan. The LUTE incorporated the planned land uses under the LSAP. The LUTE designates land uses in the LSAP as Transit Mixed Use (TMU). The LSAP boundary expansion area/ISI Site includes three sites (containing four parcels) currently designated as Industrial (IND).

At time of the LSAP adoption, the Council directed staff to return with a plan to study additional housing opportunities within the LSAP area. There are no planned increases to office/R&D development potential. The City Council subsequently selected a preferred land use alternative on June 26, 2018, which studies an increase in the residential density allowance for both MXD-I (Flexible Mixed-Use I) and MXD-II (Flexible Mixed-Use II) zoned areas, and expands the area where housing may be considered to the M-S/LSAP (Industrial and Service, LSAP Combining District) and O-R (Office/Retail) zoning districts.

On August 14, 2018, the City Council authorized a study to include properties owned by ISI at 932, 950, and 945-955 Kifer Road in the LSAP boundaries, and directed staff to include these amendments in the LSAP Housing Study. This

would expand the existing LSAP boundary to the west, on either side of Kifer Road in the City of Sunnyvale. The City Council also directed staff to study a pedestrian/bicycle route from the subject properties to the Station and analyze methods to retain trees and open space within the 945-955 Kifer Road property.

2.3 PROJECT OBJECTIVES

The project modifications are intended to achieve the following:

LSAP Modifications (Housing Study/Boundary Expansion)

- Expand housing opportunities within the LSAP area to help address housing needs of the City.
- Provide for additional opportunities for higher intensity residential development near the Caltrain Lawrence Station that is environmentally, economically, and socially sustainable.
- Implement a Sense of Place Plan that will improve connectivity, wayfinding, and the aesthetic character of the LSAP area.
- Expand the LSAP boundary to the west for a comprehensive planning approach for the Kifer Road corridor; to accommodate future nonresidential development; and obtain needed community benefits that are identified in the LSAP.
- Update the plan to improve the readability and consistency of the existing document, and make revisions that comply with changes in State law and City codes since the original plan adoption.
- Make Zoning Code text amendments to reflect changes in building heights, land uses, floor area ratios, densities, and other associated development standards associated with increased housing potential in the LSAP and an expanded boundary to the west.
- Revise the LSAP Development Incentives Program to reallocate incentive points and add to the list of community benefits.

ISI Redevelopment Project

- Create an innovative campus that unifies ISI's workforce in connected buildings to promote creativity and collaboration, and to reduce daily trips between existing ISI buildings and the new campus.
- Construct a project that accommodates ISI's existing needs in proximity to its existing employment base, and allows for its long-term continued presence in the City.
- Fulfill the LSAP goals of increasing transit ridership and promoting economic, social, and environmental sustainability through integrated design and development of a sustainable campus in proximity to the Station.
- Promote transit and active commute modes through thoughtful site planning coupled with a robust Transportation Demand Management (TDM) program to reduce daily vehicle trips. The TDM program will provide amenities such as employee shuttle services between ISI buildings and public transit, extensive bicycle parking, showers and lockers, free Caltrain Go Passes, rideshare matching services, flexible work schedule programs and dedicated carpool spaces.
- Provide onsite amenities to promote ISI employee's health and well-being, reduce daily vehicle trips, and create a strong sense of place.
- Create a campus design that reflects ISI's innovative technology.
- Develop the campus over time in response to ISI's needs.
- Achieve the appropriate security and privacy required for the invention and manufacture of new surgical products and technologies by limiting public access to certain areas within the new campus.

2.4 PROJECT FEATURES

The proposed project consists of two primary components: (1) modifications to the adopted LSAP (i.e., an increase in housing potential within the LSAP, expansion of the western LSAP boundary, and a Sense of Place Plan that would function as a policy document for LSAP area circulation, open space, and streetscape improvements) and (2) an office/R&D redevelopment project proposed in the western LSAP boundary expansion area for the proposed ISI corporate campus (ISI project). Refer to Appendix B1 of this Draft SEIR for the Public Draft of Proposed Amendments to the LSAP and refer to Appendix B2 for the Draft Lawrence Station Sense of Place Plan.

The LSAP Update would require amendments to the adopted LSAP policy provisions and guidelines. As shown in Figure 2-3, changes to the General Plan land use designation and rezoning of the LSAP boundary expansion area are proposed. Within the adopted LSAP Boundary, rezoning would be required to clarify locations of the different types of allowable land uses. The allowable land uses, maximum building heights, residential densities, and nonresidential floor area ratios (FARs) would also change within the LSAP boundary. Consistent with the Housing Crisis Act of 2019 (SB 330), objective design standards would also be established within the plan. No change to the existing LSAP land use designation within the adopted LSAP Boundary is proposed. Table 2-3 identifies development buildout under the approved LSAP, proposed LSAP Update, and total LSAP development buildout that would occur with implementation of the LSAP Update. No change to the maximum nonresidential development capacity within the LSAP is proposed.

Table 2-3 Approved and Proposed Maximum New Development Buildout Under LSAP

Land Use Type	Approved LSAP Buildout	Additional Development Potential Under the Proposed LSAP Update	Total Development Potential with Implementation of LSAP Update
Residential (net new units)	2,323	3,612	5,935
Office/R&D (net new sf)	1,200,000	No Change	1,200,000

Source: City of Sunnyvale 2019

2.4.1 LSAP Modifications

INCREASE ALLOWABLE HOUSING POTENTIAL WITHIN LSAP

Residential development capacity under the 2016 adopted LSAP allowed for a maximum of 2,323 net new dwelling units under the plan's Estimated Likely Development Scenario. As shown in Table 2-2, a total of 1,261 out of the 2,323 net new housing units have been approved by the City since the LSAP adoption; therefore, a balance of 1,062 net new housing units currently remains for buildout within the adopted LSAP area. The proposed LSAP Update would substantially increase the allowed housing capacity of the LSAP area. Because of changes in state law, the LSAP would no longer impose a maximum housing cap for the plan area. Instead, the LSAP will establish base maximum residential densities. By using local incentives and the state Density Bonus Law, the proposed plan would potentially add an additional 3,612 net new units to the plan area, which is the result of increasing housing opportunities in areas where housing is already permitted and expanding areas where housing may be considered. The adopted LSAP maximum of 2,323 net new dwelling units plus the additional 3,612 net new units that could be created as a result of the LSAP Update has the potential to add a total of 5,935 net new dwelling units.

The adopted LSAP currently permits housing in the MXD-I, MXD-II, MXD-III, and R-5 zoning districts. Except for the R-5 zoning district, each zoning district has a base density that can be increased if the applicant takes advantage of development incentives through the City's community benefits program. Under the adopted LSAP, development projects can achieve a density of up to 68 dwelling units per acre (du/ac) in the MXD-I and MXD-II zoning districts and 54 du/ac in the MXD-III zoning district. The density for projects in the R-5 zoning district is determined by lot area on a sliding scale, as specified in Table 19.30.040 in the Municipal Code—generally, one unit for every 950 sf of lot area.

With the LSAP Update, residential development would still be allowed in the MXD-I, MXD-II, MXD-III, and R-5 zoning districts. The project would expand where new housing may be considered to all sites currently zoned as M-S/LSAP

(which would be rezoned to MXD-II) and to all sites currently zoned as O-R (which would be rezoned to MXD-IV, a new zoning district). Another new zoning district, MXD-I/S, would be established for properties on Sonora Court (currently zoned MXD-I) and would continue to permit residential uses. There are three contiguous sites where residential uses are currently permitted but where it would no longer be permitted under the LSAP Update: 150 Lawrence Station Road (occupied by Costco), 1202 Kifer Road, and 1210 Kifer Road. These sites would all be rezoned from MXD-I to M-S/LSAP to reflect the City's interest in retaining nonresidential development with retail onsite. Refer to the "Rezoning of Parcels within the Adopted LSAP Boundary" section below, for a discussion of properties that would be rezoned.

Table 2-4 shows proposed housing potential changes in the LSAP zoning districts where housing may be considered. Figure 2-3 shows proposed changes to zoning district boundaries within the LSAP area.

Table 2-4 Proposed Changes to Housing Potential in LSAP Zoning Districts

Adopted LSAP Zoning District	LSAP Update Zoning Changes	Retain or New Allowance for Residential	Potential Increase in Housing Units with LSAP Update
MXD-I	▶ Rezone MXD-I properties on Sonora Court to MXD-I/S ▶ Rezone MXD-I properties at 150 Lawrence Station Road (Costco site), 1202 Kifer Road, and 1210 Kifer Road to M-S/LSAP ▶ Rezone a linear MXD-I property south of the Caltrain Station to MXD-III	Retain except for the properties at 150 Lawrence Station Road, 1202 Kifer Road, and 1210 Kifer Road, which would be rezoned to prohibit residential development	+ 803 units
MXD-II	Rezone the MXD-II property at 1133-1135 Sonora Court to MXD-I/S	Retain	+ 961 units
MXD-III	No change	Retain	No change
O-R	Rezone entire area to MXD-IV	New allowance for residential	+ 166 units
M-S/LSAP	Rezone entire area to MXD-II	New allowance for residential	+ 1,682 units
R-5	No change	Retain	No change
		Additional units	3,612
		Adopted LSAP buildout units	2,323
		Proposed buildout units	5,935

Under the LSAP Update, new base maximum densities ranging from 28 to 54 du/ac would be established for each zoning district. However, applicants still may achieve densities above these base maximum densities through the local community benefits program (known as the LSAP Incentive Program), State Density Bonus Law, or both. Depending on the total number of incentive points a project achieves through provision of community benefits, an applicant may achieve densities ranging from 45 to 80 du/ac depending on the zoning district. Additionally, if a project proposes to include affordable units under the State Density Bonus Law, the bonus percentage that must be provided under state law is added to the maximum density obtained with incentive points for the particular project or to the base maximum density if the project applicant does not propose to use incentive points through the LSAP Incentive Program. Refer to the "Changes to Development Standards of LSAP Zoning Districts" section below, for the base maximum densities in each zoning district and the total available incentive points allowed. The additional densities achieved through the State Density Bonus Law are not listed because of the voluntary nature of the program and varying percentages by participating projects.

LSAP BOUNDARY EXPANSION

The proposed expansion of the western LSAP boundary was requested by ISI for inclusion of three sites, consisting of four parcels (932, 950, and 945-955 Kifer Road) totaling approximately 32.4 acres (1,410,945 sf). Inclusion of these sites within the LSAP boundary would allow ISI to expand business operations adjacent to their headquarters in Sunnyvale that would be located near the Caltrain Lawrence Station.

As part of the LSAP Update, the LSAP boundary would be expanded to include the ISI Site and ISI would redevelop the ISI Site for a total of approximately 1,211,000 gross sf of office/R&D development, including amenity space. ISI would demolish approximately 172,706 s f of existing industrial development (of which approximately 105,000 sf is currently being used) on the ISI parcels, resulting in approximately 1,038,294 sf of net new Office/R&D area. For the purposes of tabulation towards the LSAP development capacity, the net new sf is 1,106,000, because vacant area is not credited.

Under the adopted LSAP, a total of 1.2 million gross sf of net new office/R&D development is allowable within the plan area. Since the City adopted the LSAP, 392,465 net new sf of office/R&D development has been approved and is under construction. Demolition of existing office/R&D buildings associated with other LSAP development projects and the undeveloped potential (between existing square footage and 35 percent FAR) on the ISI parcels return square footage within the allowable office/R&D development capacity of the adopted LSAP. With implementation of the proposed LSAP boundary expansion and associated ISI project, a remaining balance of 123,503 sf net new office/R&D development would be available under the LSAP (Table 2-5). Therefore, an increase to the overall LSAP office/R&D development capacity would not be required.

Table 2-5 Remaining Office/R&D New Development Capacity Under LSAP Update

Office/R&D development capacity available under adopted LSAP (net new sf)	1,200,000
Office/R&D development approved under adopted LSAP (net new sf)	-392,465
Office/R&D demolition associated with approved LSAP development projects	+100,843
Addition of undeveloped potential sf (up to 35% FAR) of the ISI Site	+321,125
Net new office/R&D proposed on ISI Site	-1,106,000
Remaining office/R&D development capacity with implementation of LSAP Update and ISI project (net new sf)	**123,503**

Source: data provided by City of Sunnyvale in 2020

As shown in Figure 2-3, the proposed expansion area is currently designated as Industrial (IND) in the City's General Plan. Within the expansion area, the parcel located north of Kifer Road (herein referred to as North Site) is zoned M-S (Industrial and Service) and the two parcels south of Kifer Road (herein referred to as South Site) are zoned M-3 (General Industrial). Combined, the proposed expansion area has an allowable development potential of 494,000 sf (assuming a base FAR of 35 percent). With implementation of the LSAP Update, a General Plan amendment would be required to change the land use designation of the expansion area from IND to TMU, an LSAP designation of Office/R&D would be assigned to the Project site, and rezoning of the sites to an LSAP-specific zoning designation would occur.

PROPOSED LAWRENCE STATION SENSE OF PLACE PLAN

The project includes the creation of the Lawrence Station Sense of Place Plan with the purpose of creating design standards and guidelines for enhanced transit, pedestrian, bicycle, and automobile circulation specific to the LSAP.

The Sense of Place Plan would require new development in the area to implement public street improvements, including a loop road, rail crossings (if determined by the City to be feasible), sidewalks, curb ramps, the addition and removal of on-street parking, new roadways, intersection improvements, buffered bicycle lanes, Class I multi-used paved trails, bus stop improvements along Kifer Road, lighting, wayfinding signage, and other public amenities. The circulation improvements are also consistent with the City's Active Transportation Plan. The conceptual plan for the LSAP Sense of Place Plan is provided in Figure 2-4. Required private improvements may include public access pedestrian/bicycle pathway and roadway connections through private property, installation of wayfinding signage,

and pedestrian and bicycle streetscape enhancements. Improvements would be accomplished through a combination of developer requirements, Sense of Place fees, and grant funds.

The proposed Lawrence Station Sense of Place Plan would have a limited effect on most environmental resource areas. The primary issue would be the effects on transportation, as discussed in Section 3.14 of this Draft SEIR. Secondary effects would be mainly associated with construction of the improvements which would be a temporary condition. The improvements would be constructed in conjunction with proposed development projects or through a City capital improvement project (CIP) and would not result in any noise, air quality, or water quality impacts not already addressed by those developments or CIP. Therefore, this EIR only addresses the specific effects of the Sense of Place Plan on transportation. The Lawrence Station Sense of Place Plan would require adoption by the City.

LAND USE DESIGNATION CHANGES

As mentioned in Section 2.2, the General Plan designates land uses in the LSAP as Transit Mixed Use (TMU). The TMU designation also applies to properties within the City's Downtown Specific Plan, which is within a half mile of the Caltrain Station. There would be no changes to the existing TMU designation for parcels within the LSAP. The inclusion of the ISI site in the LSAP boundary would require a General Plan Amendment to amend the land use designation for those four parcels from Industrial to TMU. This change would make these parcels consistent with the rest of the LSAP.

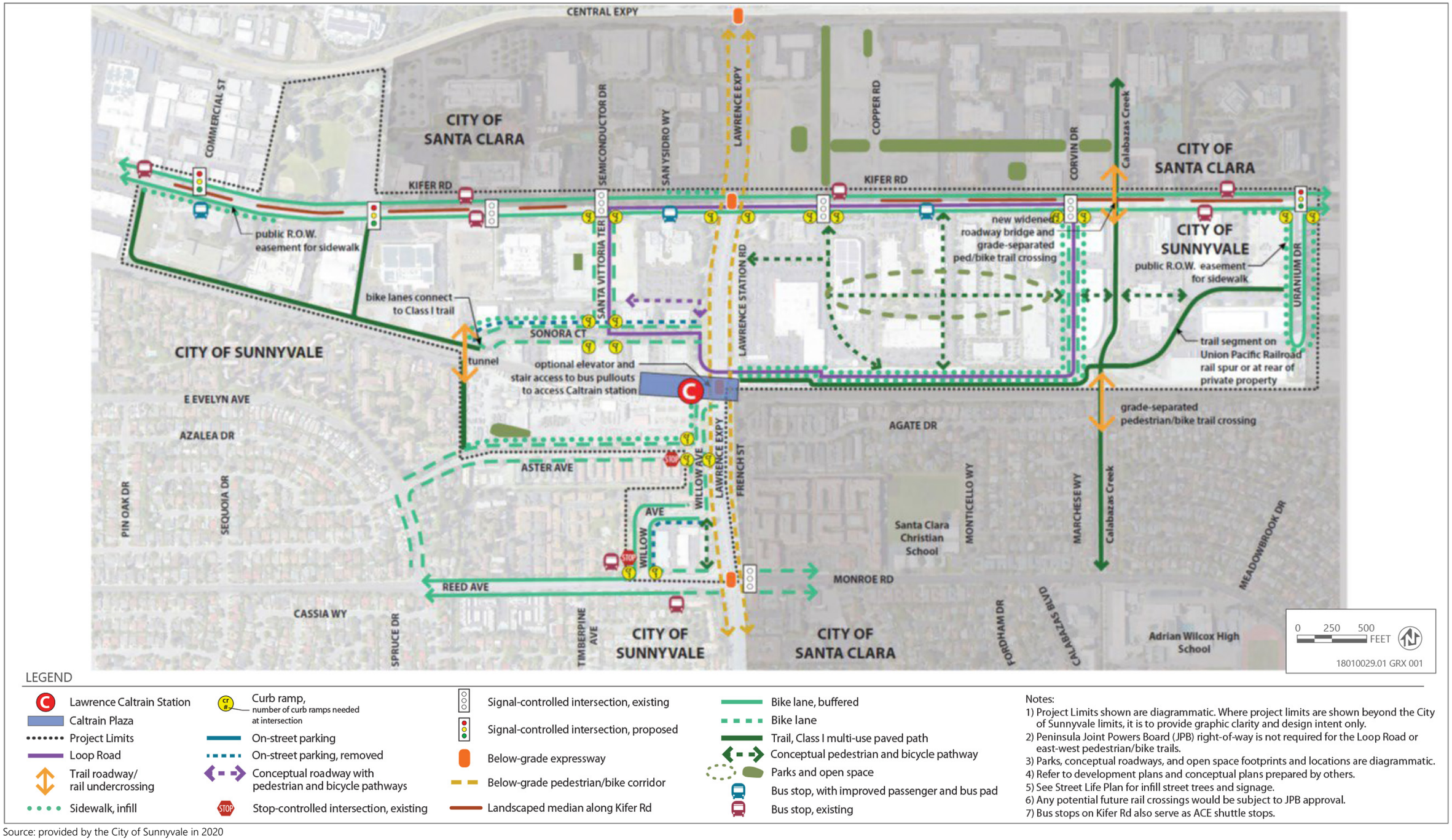
REZONING

LSAP Boundary Expansion Area/ISI Site Parcels

There is currently an M-S/LSAP zoning designation that applies to industrial parcels east of Calabazas Creek. This zoning designation is reserved for industrial uses such as offices, research and development, limited manufacturing, hotels and motels, restaurants, financial uses, retail sales and services, and professional services. Residential uses are prohibited. This zoning designation is pertinent to the ISI site because nonresidential uses consistent with this district are proposed and residential uses are not allowed because of an existing covenant for environmental restrictions on the South Site. The M-S/LSAP designation would be modified to include a maximum FAR qualifier, similar to other industrial intensification sites in the City, such as the industrial campus at Wolfe Road and Central Expressway, zoned M-S 100 percent FAR. To support the proposed FAR of the ISI project and retain existing open space on the North Site, rezoning to M-S/LSAP 60 percent is proposed for the North Site and rezoning to M-S/LSAP 120 percent is proposed for the South Site. Table 2-6 shows the proposed zoning changes for each parcel.

Table 2-6 Proposed Zoning Changes for the LSAP Boundary Expansion Area/ISI Site

Address	APN	Acreage	Existing Zoning	Proposed Zoning
945 Kifer Rd (North Site)	205-40-002	14.41	M-S	M-S/LSAP 60%
955 Kifer Rd (North Site)	205-40-001	1.17	M-S	M-S/LSAP 60%
932 Kifer Rd (South Site)	205-49-017	9.86	M-3	M-S/LSAP 120%
950 Kifer Rd (South Site)	205-49-018	6.91	M-3	M-S/LSAP 120%



Source: provided by the City of Sunnyvale in 2020

Figure 2-4 Lawrence Station Sense of Place Plan

Rezoning of Parcels Within the Adopted LSAP Boundary

Table 2-7 identifies all developed parcels within the adopted LSAP, including parcels proposed for rezoning. The parcels are generally listed from west to east, north of the railroad tracks, then north to south, and south of the tracks.

Table 2-7 Existing and Proposed Zoning Within the Adopted LSAP

Address	APN	Acreage	Existing Zoning	Proposed Zoning
960 Kifer Rd	205-49-008	4.93	MXD-II	No change
1016-1090 Kifer Rd; 1127 Sonora Ct	205-50-047	21.74	MXD-I/II	MXD-II
1120 Kifer Rd	205-50-045	4.44	MXD-I	No change
1130 Kifer Rd	205-50-046	3.55	MXD-I	No change
1150 Kifer Rd	205-50-034	2.62	MXD-I	No change
1170 Kifer Rd	205-50-035	3.2	MXD-I	No change
151 San Zeno Wy/1175 Sonora Ct	205-50-019	1.31	MXD-I	MXD-I/S
1171 Sonora Ct	205-50-024	1.30	MXD-I	MXD-I/S
1159 Sonora Ct	205-50-025	1.14	MXD-I	MXD-I/S
1151 Sonora Ct	205-50-022	1.28	MXD-I	MXD-I/S
1145 Sonora Ct	205-50-026	1.25	MXD-I	MXD-I/S
1133-1135 Sonora Ct	205-50-028	1.47	MXD-II	MXD-I/S
1146-1148 Sonora Ct	205-50-017	0.75	MXD-I	MXD-I/S
1154-1156 Sonora Ct	205-50-016	1.89	MXD-I	MXD-I/S
1162 Sonora Ct	205-50-015	1.18	MXD-I	MXD-I/S
1170 Sonora Ct	205-50-014	1.09	MXD-I	MXD-I/S
1174-1180 Sonora Ct	205-50-013	1.26	MXD-I	MXD-I/S
1202 Kifer Rd	216-27-018	0.50	MXD-I	M-S/LSAP
1210 Kifer Rd	216-27-053	1.60	MXD-I	M-S/LSAP
150 Lawrence Station Rd (Costco)	216-27-052	12.88	MXD-I	M-S/LSAP
106 Lawrence Station Rd	216-27-059	7.37	MXD-II	MXD-I
1242-1250 Kifer Rd	216-27-067	6.83	MXD-I	No change
1256 Kifer Rd	216-27-042	4.19	MXD-II	MXD-I
1266-1272 Kifer Rd	216-27-043	9.79	MXD-II	MXD-I
1286-1298 Kifer Rd	216-55-005 to 216-55-077	11.51	MXD-II	MXD-I
1310-1380 Kifer Rd	216-27-037	14.58	MXD-II	MXD-I
1382 Kifer Rd	216-27-069	6.34	M-S/LSAP	MXD-II
1388 Kifer Rd	216-27-068	3.56	M-S/LSAP	MXD-II
1450-1452 Kifer Rd	216-27-044	5.38	M-S/LSAP	MXD-II
1484 Kifer Rd	216-27-023	4.77	M-S/LSAP	MXD-II
123 Uranium Dr	216-27-045	5.75	M-S/LSAP	MXD-II
111 Uranium Dr	216-27-047	5.79	M-S/LSAP	MXD-II
1155-1175 Aster Ave	213-01-034	16.25	MXD-III	No change
No address	213-01-033	0.49	MXD-I	MXD-III
No address	213-01-032	0.18	MXD-I	MXD-III

Address	APN	Acreage	Existing Zoning	Proposed Zoning
1171-1193 Buttercup Ter	213-73-001 to 213-73-016	0.75	R-5	No change
1159 Willow Ave	213-01-023	0.48	R-5	No change
1155 Reed Ave	213-01-003	1.54	O-R	MXD-IV
1164 Willow Ave	213-01-004	0.34	O-R	MXD-IV
1165 Reed Ave	213-01-002	0.96	O-R	MXD-IV
1170 Willow Ave	213-01-001	0.24	O-R	MXD-IV

The western end, north of the tracks, would be rezoned to M-S/LSAP 60 percent FAR and M-S/LSAP 120 percent to be consistent with proposed development of the ISI site, and to reflect the intent for nonresidential development in this area. Adjacent to the ISI site on the east are two properties with MXD-II zoning: one that would retain that designation and one that would be rezoned from MXD-I to MXD-II. Properties on Sonora Court would be rezoned from MXD-I and MXD-II to MXD-I/S. The MXD-I/S zoning is unique to properties on Sonora Court, which have smaller parcel sizes and the closest direct access to Lawrence Station north of the tracks. The central portion north of the tracks, primarily on Kifer Road, would remain MXD-I except for three properties at the southeast corner of Kifer Road and Lawrence Expressway/Lawrence Station Road that would be rezoned from MXD-I to M-S/LSAP, which is an existing zoning designation for nonresidential uses and would ensure that retail and service uses remain in the area. The eastern portion on Kifer Road between M-S/LSAP and Calabazas Creek would be rezoned from MXD-II to MXD-I. The zoning east of Calabazas Creek would change from M-S/LSAP to MXD-II to allow residential uses in addition to nonresidential uses. The MXD-II designation would differ from MXD-I with a lower base maximum density, given that MXD-II properties are further away from Lawrence Station.

South of the tracks, the MXD-III zoning for the Calstone/PBM Project Site would remain the same, with the exception of making the two MXD-I sliver parcels along the tracks consistent with the majority of the site. The two existing R-5 sites along Willow Avenue would retain the same zoning. The existing O-R-zoned parcels would change to MXD-IV, a new zoning designation, because residential would be introduced to this area. The MXD-IV designation would be used to specify lower densities than north of the tracks, encourage retail development in a mixed-use format, and address compatibility with adjacent medium and low density residential uses.

Rail Parcels

Table 2-8 identifies railroad parcels within the adopted LSAP that are not anticipated to be developed. The proposed railroad parcel rezoning in the area east of Calabazas Creek is made to be consistent with rezoning the entire area to MXD-II.

Table 2-8 Existing and Proposed Zoning of Railroad Parcels Within the Adopted LSAP

APN	Acreage	Existing Zoning	Proposed Zoning
216-27-033	0.70	M-S/LSAP	MXD-II
216-27-035	0.99	M-S/LSAP	MXD-II
216-27-048	0.37	M-S/LSAP	MXD-II
216-27-058	0.23	MXD-I	No change
216-27-056	0.54	MXD-I	No change
216-27-057	0.32	MXD-I	No change
205-50-043, 205-50-038, 205-50-039, 205-50-040	12.23	MXD-I	No change
205-50-032	2.56	MXD-I	No change

PROPOSED AMENDMENTS TO THE CITY OF SUNNYVALE'S GENERAL PLAN, LSAP, AND ZONING CODE

The proposed project would require amendments to the City's General Plan, LSAP, and Zoning Code (Chapter 19.35) to implement proposed amendments to the adopted LSAP. A summary of the proposed amendments to these documents is provided below, and the proposed LSAP amendment is provided in Appendix B1.

City of Sunnyvale General Plan Amendments

The City's General Plan would be amended to update the residential buildout for the LSAP and land use/density descriptions, revise the Land Use Map to show the Transit Mixed Use designation for the LSAP boundary expansion area, include text edits to be consistent with the proposed LSAP amendment, and include references to the LSAP Sense of Place Plan.

Lawrence Station Area Plan Amendments

The adopted LSAP would be amended to reflect proposed updates as summarized below:

- Integrate the text edits in final 2016 adopted redline version with the graphics and formatting of the 2015 public draft and make cleanup edits throughout.
- Increase the residential units at buildout of the LSAP.
- Amend the LSAP Incentives and Development Cap Administrative Regulations.
- Include objective design standards.
- Incorporate and reference the LSAP Sense of Place Plan.
- Establish an LSAP Sense of Place fee. Fee credit may be given for construction of improvements from development projects.
- Amend the LSAP land use designations of parcels where zoning changes are occurring.
- Updates to certain figures to be consistent with the LSAP boundary expansion, Sense of Place Plan, and changes in State law and City policies and direction since original adoption.
- Include goals and policies for the LSAP boundary expansion area and amend other existing goals and policies to be consistent with land use and density amendments.
- Update the utilities chapter based on the infrastructure analysis for the project.
- Update the circulation chapter based on the transportation impact analysis for the project and Sense of Place Plan.
- Integrate findings from the current market and fiscal analysis.
- Establishment of a sewer impact fee for the LSAP area. The following sewer facility upgrades would be implemented to support buildout of the LSAP: upsizing of the existing 10-inch vitrified clay pipe (VCP) sewer main in San Zeno Way to a 12-inch PVC sewer main; upsizing of the existing 10-inch VCP sewer main at the intersection of Willow Avenue and Aster Avenue to an 18-inch PVC sewer main; and upsizing of the existing 27-inch VCP sewer main in Lawrence Expressway to a 30-inch PVC sewer main. As shown in Figure 2-5, the sewer upgrades would occur in existing road right-of-way within the LSAP (Figure 2-5). Fee credit may be given for construction of improvements from subsequent development projects.
- Establish a cost recovery fee for the plan amendments.

City of Sunnyvale Zoning Code Amendments

The project would require rezoning of many parcels within the LSAP to reflect the proposed housing amendments and ensure the provision of existing nonresidential uses. There would be new zoning designations established for certain areas to clarify site-specific land use and buildout expectations. Additionally, the ISI site would be rezoned to an LSAP-specific zoning designation. Amendments to the City's Zoning Code would be necessary as part of the LSAP Update and would include the removal and addition of LSAP zoning districts, modifications to some existing LSAP zoning districts, and various text amendments for changes in development standards associated with the proposed project. These proposed changes are described in more detail below.

Revisions and Additions to LSAP Zoning Districts

The LSAP Update would result in the removal of one adopted LSAP zoning district (O-R) and the addition of four new LSAP zoning districts (MXD-I/SMXD-IV, M-S/LSAP 60%, and M-S/LSAP 120%). The new LSAP zoning districts proposed are summarized below.

Flexible Mixed-Use I/Sonora Court District (MXD-I/S)

The Flexible Mixed-Use I/Sonora Court District designation applies only to properties on Sonora Court, which is a cul-de-sac one block north of the railroad tracks, and just northwest of Lawrence Station. Parcels on Sonora Court are significantly smaller than others north of the tracks, averaging 1.2 acres. Office, R&D, retail, and residential uses are allowed and may be configured as mixed-use or single-use buildings. Because of Sonora Court's direct proximity to the station and smaller parcel sizes, residential uses can be built to the highest base maximum densities when compared to the rest of the LSAP zoning districts.

Flexible Mixed-Use IV (MXD-IV)

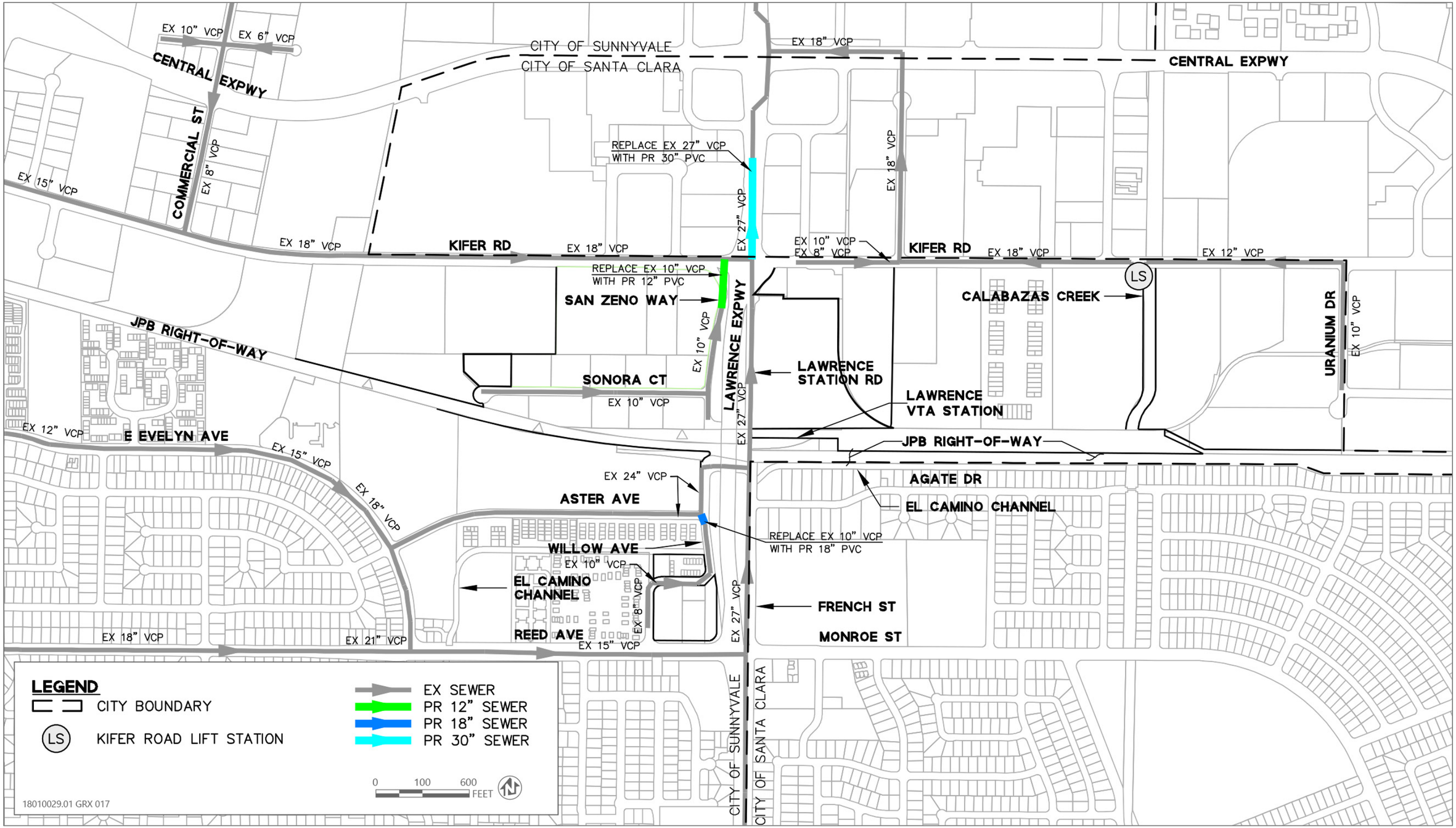
The Flexible Mixed-Use IV designation is limited to one small area south of the station near the intersection of Lawrence Expressway and Reed and Willow Avenues. These parcels are near existing residential neighborhoods and are immediately adjacent to the expressway. The area is a convenient location for local-serving retail services, residential, and office/ R&D uses. Because of the existing retail services onsite relied on by local residents and the site's strategic location at a major intersection, redevelopment of the site requires provision of retail services. Redevelopment may include ground floor retail with residential or office/R&D above, or in a horizontal format with separate buildings. Redevelopment plans must consider the County's plans for the Lawrence Expressway grade separation, which may require dedication of land on the parcel nearest the expressway.

LSAP Industrial and Service 60% (M-S/LSAP 60%)

The LSAP Industrial and Service 60% designation is for only one site on the north side of Kifer Road on the western boundary near Commercial Street (ISI North Site). The historic use of this site was for a private open space area for major companies in the area. The maximum FAR is lower than many other areas of the LSAP in order to preserve a majority of the existing open space and mature trees onsite. Only industrial, smaller-scale retail and service, office, and R&D uses are allowed in this designation, per the use table in the M-S zoning district. Residential is prohibited.

LSAP Industrial and Service 120% (M-S/LSAP 120%)

The LSAP Industrial and Service 120% designation applies to two sites located south/southwest of the M-S/LSAP 60% site (ISI South Site). The sites are on the south side of Kifer Road on the western boundary near Commercial Street. The historic use of one of the sites was chemical storage, and as such environmental remediation has been ongoing for years. For this reason and others, residential uses are prohibited. Similar to M-S/LSAP 60% zoning, only industrial, smaller-scale retail and service, office, and R&D uses are allowed per the use table in the M-S zoning district.



Source: Image produced by BFK Engineers in 2020

Figure 2-5 Recommended Sanitary Sewer Pipe Sizing

Changes to Development Standards of LSAP Zoning Districts

The LSAP Update would result in changes to development standards (i.e., maximum building heights, land uses, and/or floor area ratios) to adopted and proposed LSAP zoning districts. The changes are reflected in Table 2-9.

Table 2-9 New LSAP Zoning Districts and Applicable Development Standards

District	Name	Use	Residential Density (du/acre)		Nonresidential FAR		Maximum Residential/ Nonresidential Height (feet)
			Base Maximum Density[1, 2]	Total Available Incentive Points	Base Maximum (nonretail)/ Minimum (retail)	Maximum (with incentives)[3]	
MXD-I	Flexible Mixed-Use I	Residential (du/acre)	45	35	N/A	N/A	100[4]
		Office/R&D/ Industrial (FAR)	N/A	N/A	35%	150%	
MXD-I/S (new)	Flexible Mixed-Use I/ Sonora Court	Residential (du/acre)	54	26	N/A	N/A	100[4]
		Office/R&D/Industrial (FAR)	N/A	N/A	35%	150%	
MXD-II	Flexible Mixed-Use II	Residential (du/acre)	36	32	N/A	N/A	100[4]
		Office/R&D/ Industrial (FAR)	N/A	N/A	35%	150%	
MXD-III	Flexible Mixed-Use III	Residential	28	17	N/A	N/A	55
		Office/R&D/ Industrial (FAR)	N/A	N/A	35%	100%	
MXD-IV (new)	Flexible Mixed-Use IV	Residential (du/acre)	28	17	N/A	N/A	55
		Office/R&D/Industrial (FAR)	N/A	N/A	35%	50%	
		Retail (FAR)	N/A	N/A	25%	None	
R-5	High Density Residential and Office	Residential (du/acre)	Based on lot area. See SMC Table 19.30.040	N/A	Per Special Development Permit (SDP)	Per SDP	55
M-S/ LSAP	LSAP Industrial and Service	Office/R&D/ Industrial	N/A	N/A	35%	150%	85[5]
		Retail (FAR)	N/A	N/A	25%	None	
M-S/ LSAP 60% (new)	LSAP Industrial and Service 60%	Industrial/Office/ R&D (FAR)	N/A	N/A	35%	60%	85[5]
M-S/ LSAP 120% (new)	LSAP Industrial and Service 120%	Industrial/Office/ R&D (FAR)	N/A	N/A	35%	120%	85[5]

[1] Draft LSAP Policy D-P4 requires new residential development in the LSAP area to build to at least 85 percent of the zoning district's base maximum zoning density.

[2] Additional densities may be achieved above the base maximum density or density obtained through the LSAP Incentives Program by providing affordable housing consistent with the State Density Bonus Law.

[3] A development agreement is required for additional FAR above the base maximum through the LSAP Incentives Program. Development agreements are not required for projects consistent with the additional FAR allowed through participation in the City's Green Building Program.

[4] Height increase of 15 feet above existing allowance.

[5] Height increase of 10 feet above existing allowance.

Other minor updates to the Lawrence Station Area Plan chapter of the City's Zoning Code (Chapter 19.35) would include establishment of a standard for minimum distance between buildings within the LSAP (20 feet between main buildings), instead of the Citywide standard in Section 19.48.030 of the Zoning Code; the addition and deletion of LSAP zoning districts (as described above) from the permitted, conditionally permitted, and prohibited use table; and modifications to the setback table and landscape and open space standards table to reflect the new and modified zoning districts.

Other chapters of the Zoning Code would also be updated to be address the changes in LSAP zoning designations including Zoning Districts (Chapter 19.16), Telecommunications Facilities (Chapter 19.54), and Alternative Energy Systems (Chapter 19.56). Chapter 19.56 would be amended to exempt LSAP properties from the solar shading analysis, which is the same exemption for properties in the Downtown Specific Plan.

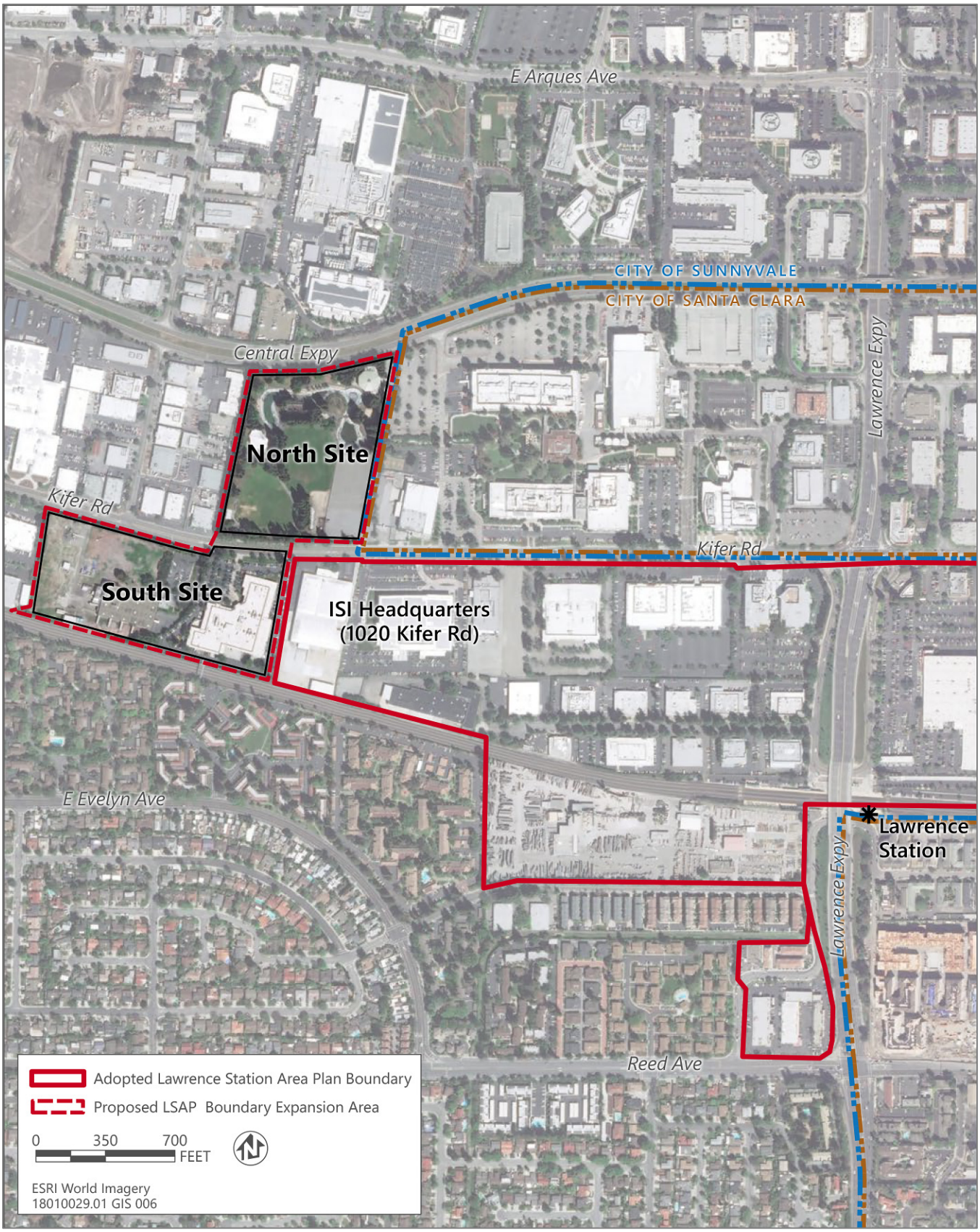
2.4.2 ISI Project

Subsequent to adoption of the proposed LSAP Update, redevelopment of 32.4-acres located within the proposed LSAP boundary expansion area (also referred to as the ISI Site) is proposed for construction of a corporate campus and state of the art manufacturing and R&D facility (ISI project). As described above, ISI acquired these sites with the intent to expand and unify its operations adjacent to ISI's existing headquarters in the City. An aerial view of the existing ISI site is provided in Figure 2-6. The ISI project would consist of demolishing 172,706 sf of existing onsite office/R&D buildings (105,000 sf of occupied area), associated structures, and infrastructure for redevelopment of the site as a unified corporate campus owned and operated by ISI. The campus would include approximately 1.211 million gross sf of floor area (GFA) (and approximately 1.038 million gross sf of net new floor area, including existing vacant floor area) of office/R&D development and manufacturing uses, serve up to 3,500 employees, and allow ISI to integrate manufacturing, engineering and corporate offices within two proposed buildings, supported by a new private pedestrian bridge connecting the North and South Site, open space, recreation areas, a multipurpose amenity building, a central utility plant, dining venues, bicycle parking areas, surface parking lots for visitors, and parking garages for employees. Refer to Figure 2-7 for the ISI project site plan, Figure 2-8a for a rendering of the north building and private pedestrian bridge, Figure 2-8b for renderings of the south site building, and Figure 2-8c for renderings of the South Site parking garage. The ISI project component is described in detail below and is analyzed at a project-level in this SEIR.

INCREASE IN TOTAL FAR ALLOWANCE

The ISI project proposes a higher total FAR allowance than the 35 percent FAR allowed on the ISI site by the existing zoning. The adopted LSAP allows a range of nonresidential FARs from 35 to 150 percent, depending on zoning district and incorporation of zoning incentives. Currently, the LSAP considers a maximum FAR allowance of 150 percent for office/R&D area in certain zoning districts. The proposed ISI project's FAR would be consistent with the maximum possible FAR in the proposed LSAP Update, with 60 percent FAR on the North Site and 120 percent FAR on the South Site for a total project FAR of approximately 77 percent. To include the ISI Site in the LSAP and support the proposed FAR of the proposed project, rezoning to an LSAP designation would be required. Given that nonresidential uses are envisioned for these sites, rezoning to M-S/LSAP 60 percent FAR is proposed for the North Site and rezoning to M-S/LSAP 120 percent FAR is proposed for the South Site. Residential uses are not permitted in either zoning district. Some features of the ISI project (i.e., above grade parking garage, central utility plant, detached multipurpose amenity building, and existing amenity structures) are not counted towards the LSAP development capacity, as they would be amenity and service spaces to the development.

A description of the proposed General Plan Amendment, LSAP land use designation, and rezoning for the ISI Site is provided above (see the "LSAP Boundary Expansion" section above).



Source: City of Sunnyvale 2019

Figure 2-6 LSAP Boundary Expansion Area/ ISI Site

LANDSCAPED AMENITIES, OPEN SPACE, AND SENSE OF PLACE IMPROVEMENTS

As shown in Figure 2-7, the ISI project includes the planting of trees and shrubs throughout the ISI Site. All landscape plant materials and irrigation would comply with City Municipal Code Chapter 19.37 (Landscaping, Irrigation, and Useable Open Space). The landscape design would utilize plant material of low and medium water needs and irrigation zones by plant type and use of smart controllers would be utilized to minimize water use. Sustainable planning techniques such as pervious paving, bio-filtration, and stormwater management would be integrated into the site.

A tree mitigation plan is included as an element of the ISI project to address the removal of protected (i.e., a single trunk 38 inches in circumference and larger or a multi-trunk tree where the circumferences of the multi-trunks added together equal at least 113 inches) redwoods and other trees scattered throughout the ISI site. Consistent with the requirements of City Municipal Code Section 19.94, the ISI project would retain more than 85 percent (581 of 679) of the protected onsite trees on the North Site (Figure 2-9a) and 3 percent of protected onsite trees (11 of 383) on the South Site (Figure 2-9b). In accordance with the City Municipal Code Chapter 19.94 and tree replacement standards, 663 trees would be planted within the ISI Site. Most of the existing stands of protected trees along the perimeter of the North Site would be retained in place and would screen views of the new development from the surrounding areas. Landscaping at the ISI Site would include three different planting typologies: redwood forest, foothill woodland, and grassland meadow.

As described above, the North Site would provide open space with active and passive private recreation areas for employees that consist of new outdoor sports fields and courts, private trails and walkways, an outdoor dining area, a refurbished shade structure and outdoor amphitheater, and landscaping. The existing dry manmade concrete pond area will be demolished, and the area will be utilized for landscape and recreation areas as well as a portion of the proposed underground parking area. The South Site would include a publicly accessible pedestrian-bicycle path (described below), private pedestrian and bicycle pathways, a private outdoor dining area, and landscaping.

With implementation if the LSAP Update, the ISI Project would be required to fulfill certain requirements of the proposed Lawrence Station Sense of Place Plan. As part of the ISI project, ISI may construct the following improvements:

- A new landscaped 10-foot-wide median on Kifer Road that includes left turn pockets for existing and proposed driveways;
- Frontage improvements along Kifer Road, including new sidewalks, street trees, street lighting consistent with the City's LSAP lighting standards, and restriping on Kifer Road to accommodate 5-foot bike lanes and 1.5-foot striped buffer.
- A new east-west publicly accessible pedestrian-bicycle shared-use path adjacent to the Caltrain right-of-way and South Site. The path would include directional signage to the Station.
- Installation of gateway signage would be included within the new Kifer Road median or on the ISI Site.
- Improvements to a bus located in front of the South Site, including design consistent with Valley Transportation Authority (VTA) and Americans with Disabilities Act (ADA) standards.

Source: provided by Foster + Partners in 2020

Figure 2-7 Proposed ISI Site Plan

Source: Image provided by Foster+Partners in 2020

North Building - Illustrative Rendered Street View from Kifer Road

Source: Image provided by Foster+Partners in 2020

Bridge - Illustrative Rendered Street View from Kifer Road

Figure 2-8a North Building and Private Pedestrian Bridge Renderings

Source: Image provided by Foster+Partners in 2020

South Building - Illustrative Rendered Street View - Kifer Road

Source: Image provided by Foster+Partners in 2020

South Building - Illustrative Rendered Street View - Kifer Road Frontal

Figure 2-8b South Building Renderings

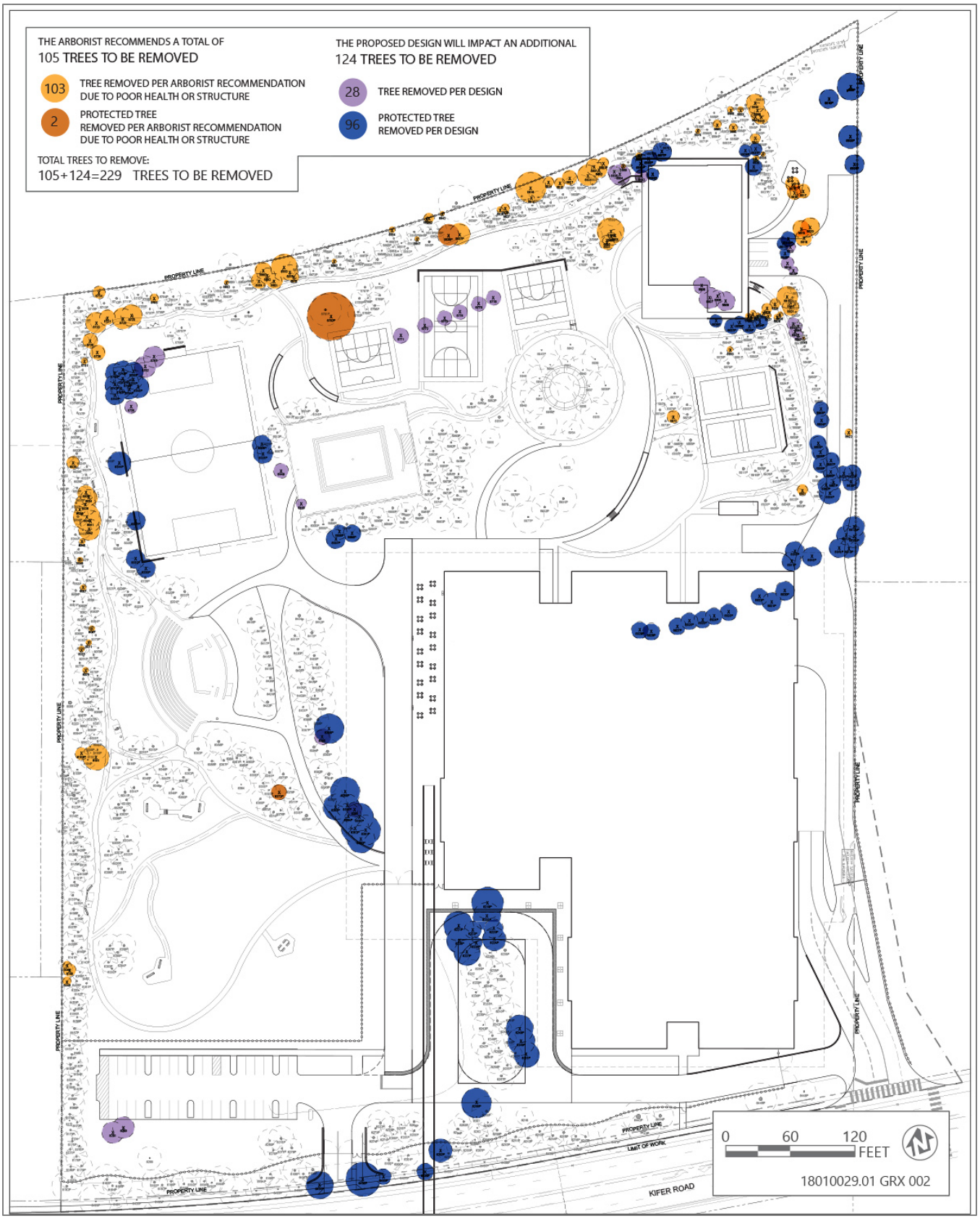
Source: Image provided by Foster+Partners in 2020

Parking Garage - Illustrative Rendered Street View from Kifer Road

Source: Image provided by Foster+Partners in 2020

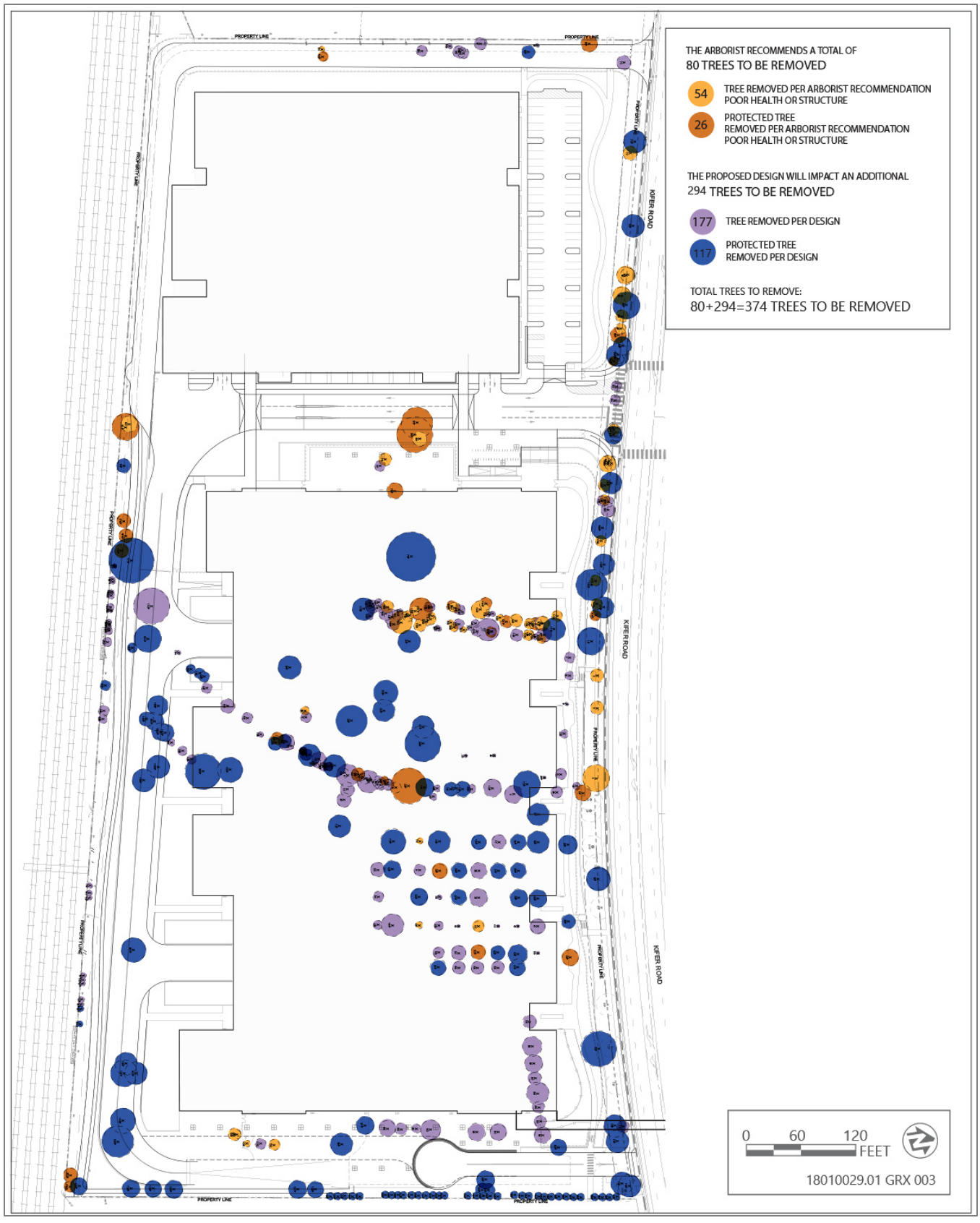
Parking Garage - Illustrative Rendered Street View from the Caltrain Right-of-Way

Figure 2-8c South Site Parking Garage Renderings



Source: provided by Brightview in 2020

Figure 2-9a Proposed Tree Mitigation Plan—North Site



Source: provided by Brightview in 2020

Figure 2-9b Proposed Tree Mitigation Plan—South Site

INFRASTRUCTURE

Roadways and Circulation

The circulation plan for the ISI project includes multiple options for vehicular, bicycle, and pedestrian access (Figures 2-10a and 2-10b). From Kifer Road just south of the North Site, roadway access would be provided with an employee driveway at the southeast corner of the North Site and a visitor driveway located near the north building entrance and visitor parking area. Mohawk Laboratories (the previous South Site owner), in coordination with the applicant (ISI), would be responsible for any necessary remediation along the portion of bicycle and pedestrian pathways dedicated for public use.

Overpass Pedestrian Bridge Over Kifer Road

A new private overpass pedestrian bridge over Kifer Road would connect the North and South Site to create a unified and secure campus. The bridge would also help to reduce ISI-related pedestrian crossing activities along a segment of Kifer Road where an additional signalized intersection is not practical. The bridge would be partially covered and would retain a 20-foot clearance for vehicles along Kifer Road. The covered portions of the bridge would have a maximum height of 30 feet and an easement would be required from the City of Sunnyvale. The pedestrian bridge plan and elevations are illustrated in Figure 2-11.

Utilities and Services

As shown in Figures 2-12a and 2-12b, the ISI project would connect to existing water, wastewater, and drainage infrastructure facilities located on and adjacent to the ISI site along Kifer Road and Central Expressway. The City would provide water supply, wastewater, and solid waste services to the project. Although not required, ISI is considering the use of recycled water for portions of landscaping irrigation at the ISI Site. This would require extending the recycled water main from Wolfe Road and the infrastructure design of the extension of recycled water service to the ISI Site has not yet been determined and is not analyzed as part of this project. If the applicant proposes recycled water use at a later date, it would be analyzed under a separate CEQA review to the extent required by law.

Natural gas services would be provided by Pacific Gas and Electric Company (PG&E) and electricity would be provided by Silicon Valley Clean Energy (SVCE) and/or Pacific Gas and Electric Company (PG&E) by existing electrical and gas infrastructure on Kifer Road. Other dry utilities for the site include tying into telecommunications lines on Kifer Road. For wet utilities, fire water, potable water, sanitary sewer, and storm drain lines will be added and connect to existing mains within Kifer Road. Offsite improvements to the utilities would include upgrading (6) six existing fire hydrants barrels along the north sidewalk of Kifer Road and potentially upgrading existing street lighting along Kifer Road pending photometric analysis results.

No improvements to offsite utilities or proposed as part of the ISI project.

Stormwater Management Plan

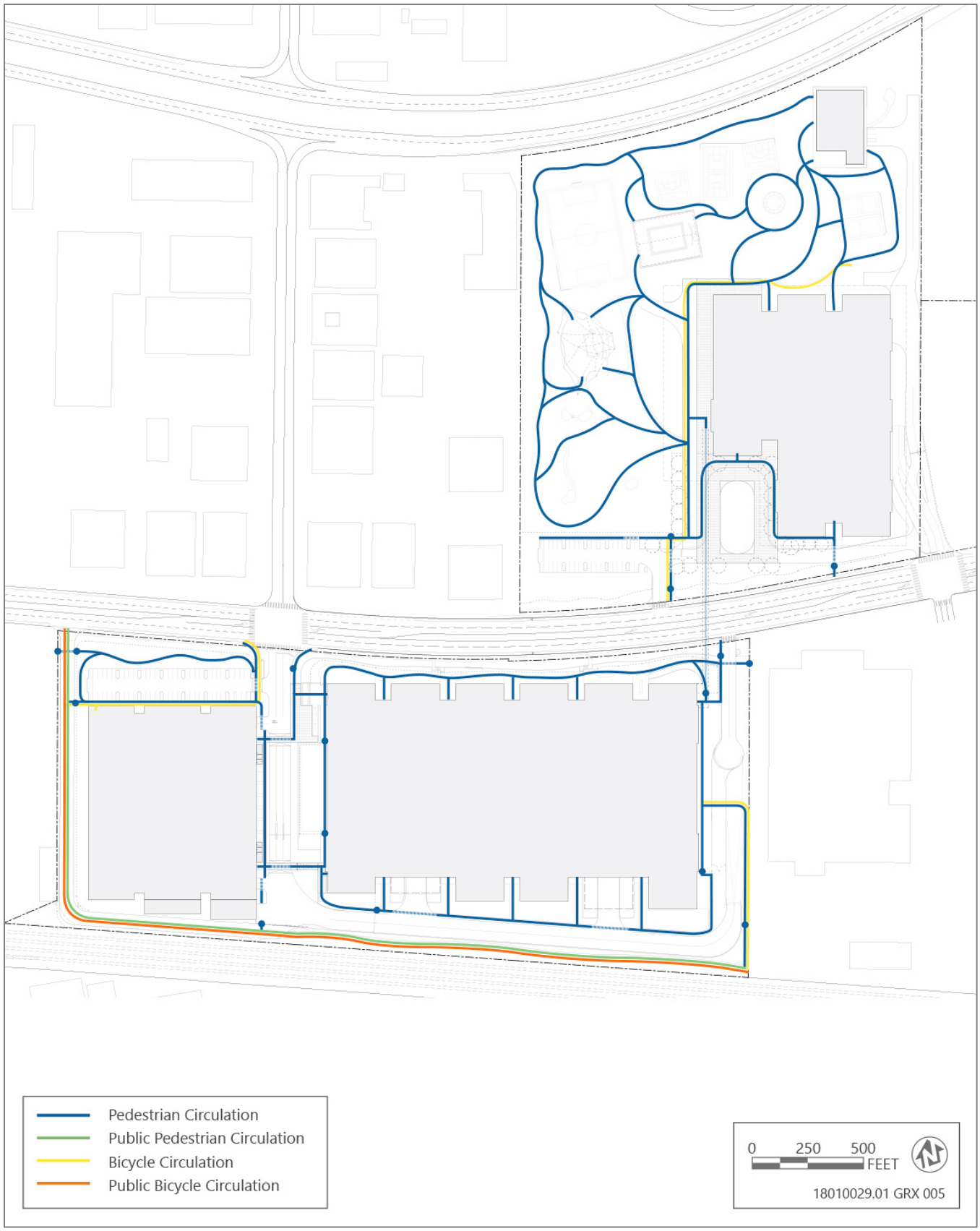
To comply with Provision C3 of the Municipal Regional Stormwater Permit (MRP), the ISI sites will utilize biofiltration planters and rain gardens to treat stormwater from impervious surfaces which primarily include roof, roadways, and surface parking runoff. The biofiltration areas are sized to treat the "first flush" of rain, and overflow drains convey excess runoff to the City stormwater system on Kifer Road. The ISI site will maintain the same drainage runoff as the existing condition and would not contribute additional runoff to adjacent sites.

Security Features

Currently, the majority of the North Site and a portion of the South Site (932 Kifer Road) is completely fenced with chain link or other metal fencing ranging from 6 to 8 feet in height. As part of the project, existing fencing would be removed and replaced with an 8-foot-tall, black-painted steel security fence composed of vertical pickets that would be extended to fully surround the North and South Site. In addition, each vehicular driveway and pedestrian/bicycle pathway into the North and South Site would include a security gate and 8-foot-tall vertical metal post security fence. A security guard station would be located near the vehicular driveway of each site entrance.

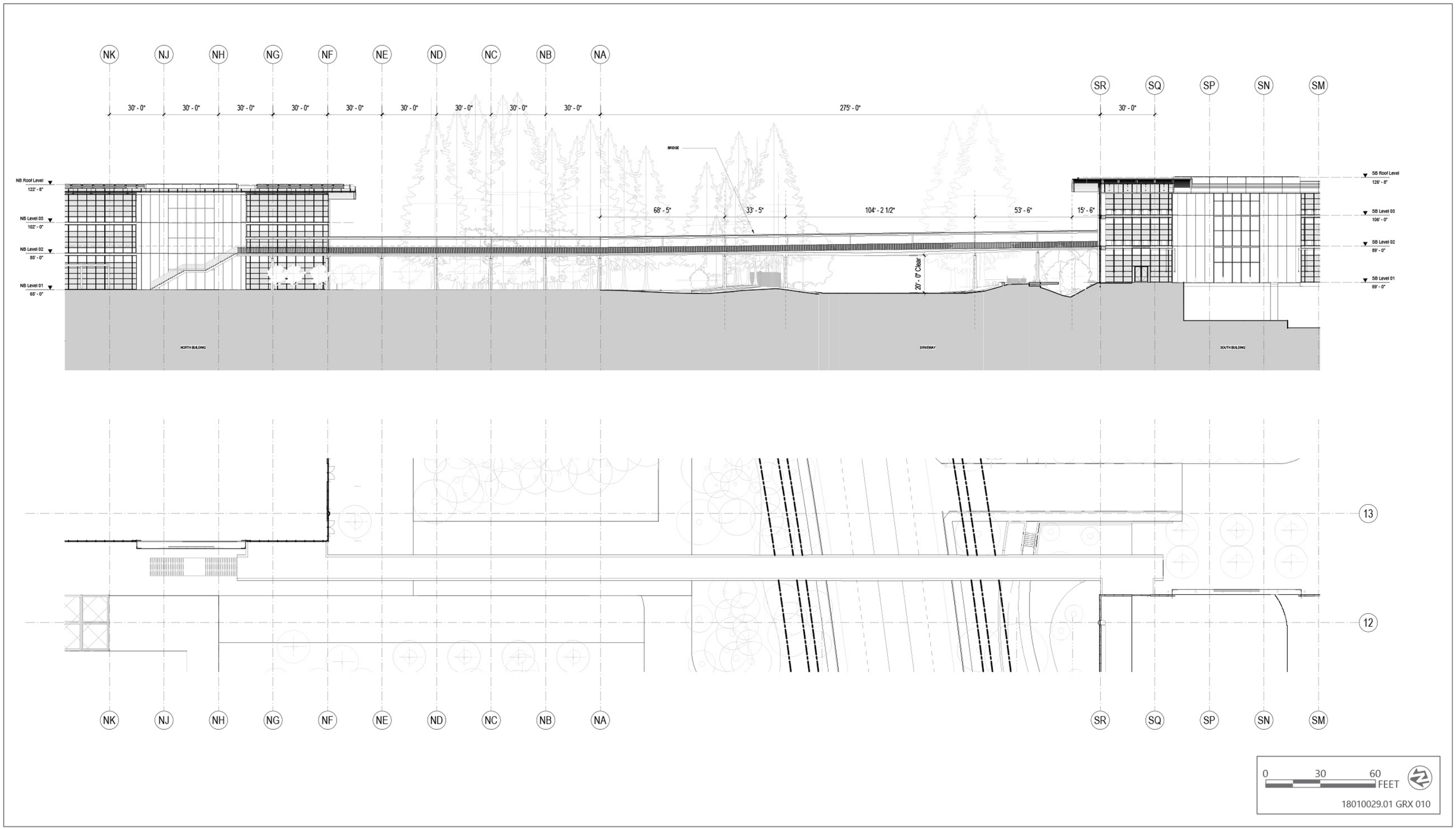
Source: provided by Foster + Partners in 2020

Figure 2-10a Proposed Vehicular Ingress/Egress - ISI Site



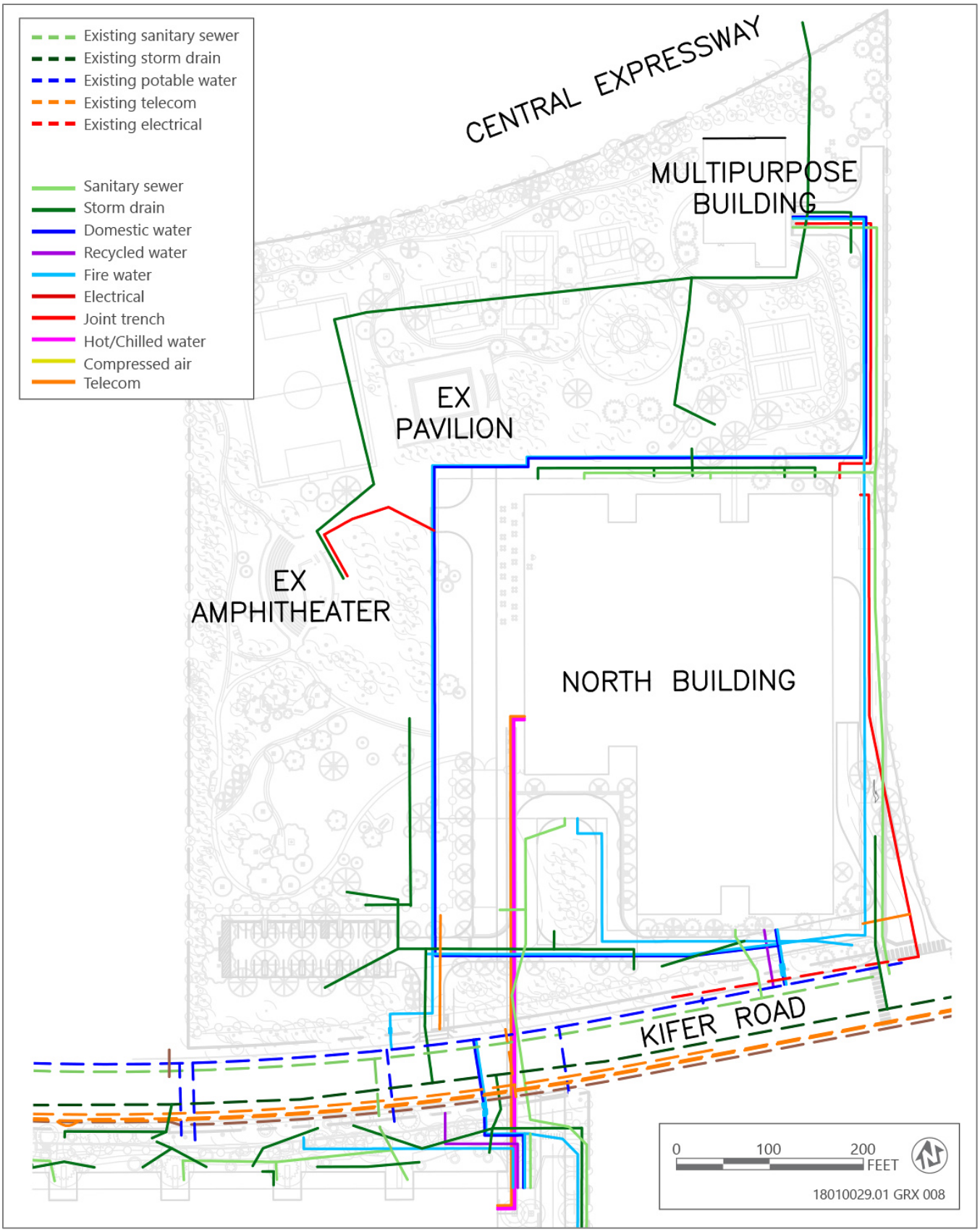
Source: provided by Foster + Partners in 2020

Figure 2-10b Proposed Bicycle and Pedestrian Circulation Plan-ISI Site



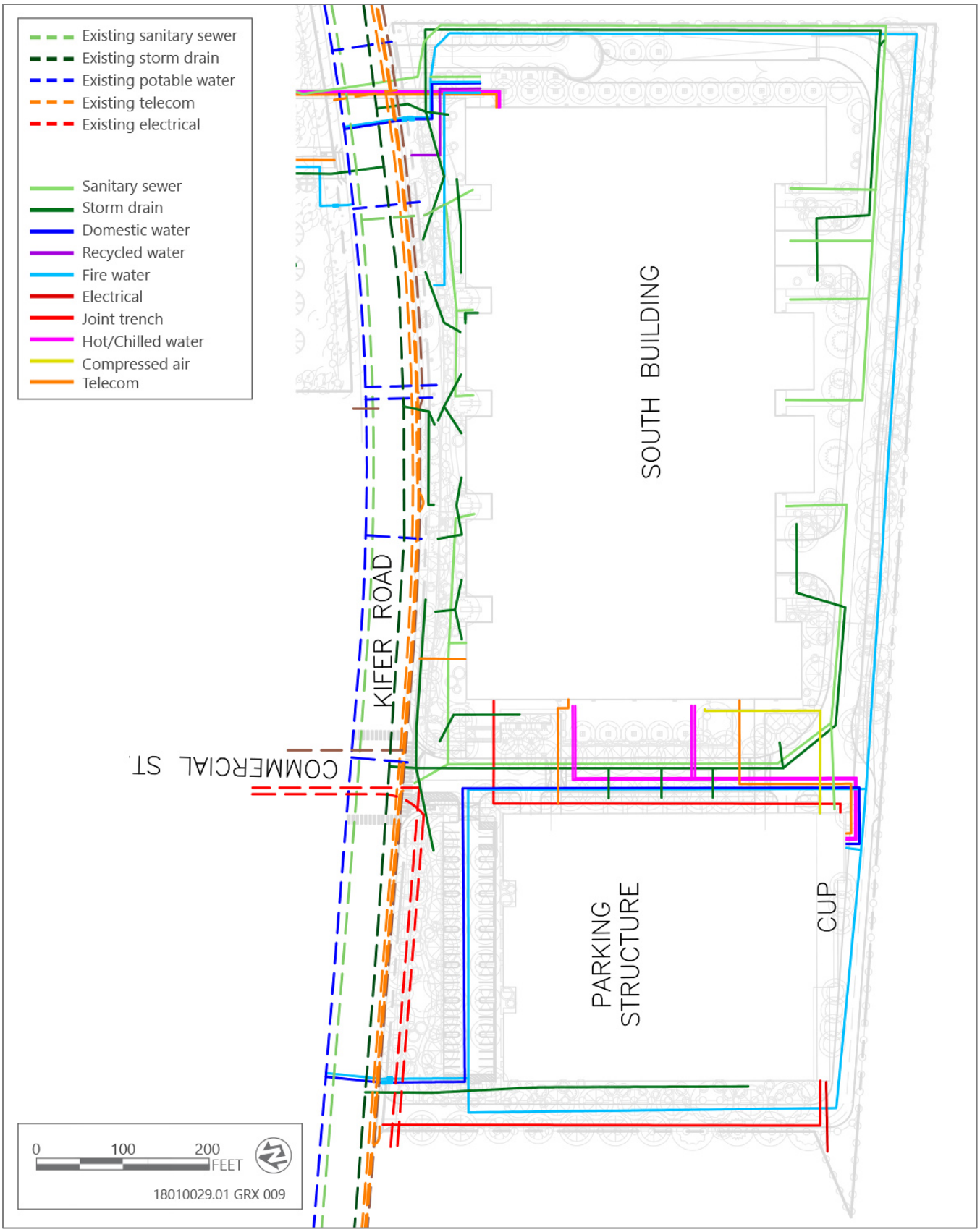
Source: provided by Foster + Partners in 2020

Figure 2-11 Proposed Pedestrian Bridge Plan and Elevation–ISI Site



Source: provided by Arup in 2020

Figure 2-12a Proposed Utilities Plan—North Site



Source: provided by Arup in 2020

Figure 2-12b Proposed Utilities Plan—South Site

PROJECT ENERGY CONSERVATION FEATURES

The ISI project is an infill project near public transit that would assist in reducing City-wide vehicle miles traveled, provide onsite amenities for employees, and private open space with recreational opportunities to further reduce the extent of employee travel.

The applicant would seek Leadership in Energy and Environmental Design (LEED) Gold Certification for building design and construction. In addition to meeting adopted state and local energy standards, codes and policies, and green building programs, the following energy efficiency and sustainability features have been identified by the applicant as feasible and included in the ISI project.

1. Construction
   - Idling restrictions (no longer than 5 minutes) for construction equipment
   - Use of Tier IV construction equipment or equivalent
   - Implement program to incentivize construction workers to carpool, use electric vehicles, or use public transit
   - Diversion of construction and demolition waste from landfill
2. Indoor Environmental Quality
   - Low-VOC building materials
   - Implement air quality management plan to reduce indoor air pollutants
   - Indoor allergen filters (i.e., MERV 13 filters)
3. Transportation
   - EV charging stations, consistent with City and Building Code requirements
   - Bicycle connectivity to parks and Sunnyvale trail system
   - Rideshare pickup/ drop off areas
   - Covered onsite bike storage for all bicycle types and common area for shared bike tool station and air for inflating tires
   - 50 percent shading of all parking lot surface areas
4. Energy
   - No use of natural gas for operations.
   - ENERGY STAR appliances
   - LED Light fixtures
   - Use of energy efficient light bulbs and selected zones for daylight controllers
   - On-site renewable energy production (PVs)
   - Low-E windows
   - High-efficiency A/C with environmentally preferable refrigerants
5. Water Efficiency and Conservation (CALGreen Divisions 4.3 and 5.3)
   - Potable water use maintained below allocation baseline
   - High-efficiency toilets and fixtures, and water sub-metering
   - High efficiency irrigation, smart controllers/satellite data
   - Minimize water use with continuous temporary water distribution maintenance

6. Design and Recycled Materials
    - Permeable paving at hardscape areas
    - Recycled construction materials
    - Waste/Recycling repurposing programs
    - Preservation and relocation of existing redwoods
    - Use of building materials with Environmental Product Declarations and material ingredients disclosures

Section 3.5, "Energy," of this Draft SEIR provides further details on anticipated energy use associated with project construction, operation, and transportation.

OUTDOOR LIGHTING

Outdoor lighting for the ISI Project would be installed in conformance with City codes and ordinances, applicable safety and illumination requirements produced by the Illuminating Engineering Society of North America and the Recommended Practice design guides, City's Bird-Safe Design Guidelines, and California Title 24 requirements. Exterior lighting would be installed within the ISI site and in the public right-of-way adjacent to the site as appropriate for public safety. Limited landscape, safety and security lighting with appropriate shielded lighting would also be provided along the pedestrian bridge, internal trails, and sidewalks. Full cut-off recreation lighting is provided at the designated sports areas for football, basketball and volleyball in the North Site for recreational level of play, and will have a low-level safety setting for when sports areas are not in use.

CONSTRUCTION

Construction activities associated with the ISI project would include demolition activities, excavation and relocation of soil on the site, backfilling and compaction of soils, construction of infrastructure improvements (water supply, wastewater, drainage facilities, electrical and natural gas, bicycle and pedestrian pathways, roadways, and driveway improvements), operation of a temporary concrete batch plant, and construction of the corporate campus. Construction activities would also include implementation of requirements under the existing site management plan (SMP) for the 932 Kifer Road parcel in coordination with the San Francisco Bay Regional Water Quality Control Board for the ongoing monitoring of existing onsite groundwater and soil contamination. The SMP provides procedures to manage soil, soil vapor, and groundwater during project construction. The reader is referred to Section 3.8, "Hazards and Hazardous Materials," for further details regarding the SMP.

Construction equipment would vary day-to-day depending on the project phase and the activities occurring, but would involve operation of demolition equipment (i.e., rotational hydraulic shears and silenced rock-breakers attached to excavators, high reach demolition excavators, and loaders), graders, dozers, excavators, scrapers, other tractors, cranes, forklifts, generator sets, curb equipment, pavers, paving equipment, rollers, welders, and air compressors. No pile-driving is proposed. Temporary shoring systems for installation of auger cast piles (i.e. concrete piles drilled with a continuous flight auger to the specified depth) are proposed.

Construction workers would typically access the ISI site via existing site entrances at Kifer Road. A construction management plan will be required by the City and City staff would determine construction truck routes. The overall site development is anticipated to result in the export of approximately 570,000 cubic yards (cy) of soil and the import of approximately 50,000 cy of new concrete and 1,550 cy of new asphalt.

Construction staging for materials and equipment would occur within the ISI Site.

DEMOLITION

The ISI project would require demolition of existing onsite buildings and structures totaling approximately 170,128 sf of building materials. Other materials from demolition activities would include 313,449 cy of asphalt and 84,165 cy of concrete associated with parking lots, driveways, and sidewalks; 46,958 cy of from demolition of the manmade concrete pond, utility lines/structures, and landscaping on the site. Concrete and asphalt is anticipated to be crushed and used on site as construction materials for the project. All other materials would be transported off site to transfer stations and landfill facilities.

CONSTRUCTION SEQUENCING AND SCHEDULE

Construction phasing, duration, and anticipated start and end dates for development of the ISI project are shown in Table 2-10. During construction of each phase, a water truck would be operated and maintained at the project site to water the site at least twice daily. Activities under each construction phase would occur between 7:00 a.m. and 6:00 p.m., on Monday through Friday, and 8:00 a.m. to 5:00 p.m. Saturdays. No work would occur on Sundays or on national holidays when City offices are closed. No restrictions on construction seasons are anticipated.

Table 2-10 Construction Schedule for ISI Project

Construction Phase	Duration (workdays)	Anticipated Start Date	Anticipated End Date
NORTH SITE			
Demolition	20	10/15/2021	11/10/2021
Site Preparation	20	10/15/2021	11/10/2021
Grading	90	7/9/2023	11/17/2023
Trenching	227	10/15/2021	9/2022
Building Construction	635	11/15/2021	6/1/2024
Paving	128	1/16/2024	7/16/2024
Architectural Coating	254	4/16/2023	4/21/2024
Final Occupancy	-		8/25/2024
SOUTH SITE			
Demolition	30	10/15/2021	11/27/2021
Site Preparation	30	10/15/2021	11/27/2021
Grading	100	10/9/2023	12/27/2023
Trenching	147	10/16/2021	5/23/2022
Building Construction	649	12/1/2021	7/10/2024
Paving	128	3/1/2024	9/1/2024
Architectural Coating	167	11/11/2023	7/7/2024
Final Occupancy			10/1/2024
BRIDGE			
Bridge Construction	285	8/1/2022	9/16/2023
Architectural Coating	90	9/16/2023	12/16/2023
Final Occupancy	—		10/1/2024

Source: data provided by ISI in 2021

2.5 ANTICIPATED PERMITS AND APPROVALS

City actions would include the following:

- Adoption of an LSAP Amendment and General Plan Amendment and payment of the associated cost recovery fee
- Adoption of an ordinance to rezone the boundary expansion area and properties within the current adopted LSAP boundary and corresponding Zoning Map amendment
- Zoning Code text amendments to reflect the LSAP Amendment and General Plan Amendment
- Adoption of the LSAP Sense of Place Plan and payment of the associated sense of place fee
- Approval of a Special Development Permit for the ISI Site and architectural (i.e. design) review, removal of protected trees, and consideration of deviations from development standards as provided for under the City's Municipal Code (*ISI project only*)
- Amendments to the LSAP Incentives and Development Cap Administrative Regulations
- Establishment of a sewer facility fee program for improvements within the LSAP
- Approval of a Parcel Map, Easements and Improvement Plans for the ISI Site (*ISI project only*)
- Approval of a development agreement (*ISI project only*)
- Issuance of demolition permits for removal of existing buildings and parking lots and building permits for construction of ISI's project *(ISI project only*).
- Water discharge permits for construction dewatering. (*ISI project only*)

Other anticipated permits, approvals, and actions associated with the project include the following:

- Bay Area Air Quality Management District—authority to construct and permit to operate for any stationary sources (e.g., generators and fume hoods) of air contaminant emissions (*ISI project only*);
- San Francisco Regional Water Quality Control Board –Site Management Plan amendment and/or Remedial Action Plan for soil management, well abandonment and relocation approval and permits and/or approval of a Vapor Intrusion Mitigation System and/or NPDES wastewater permit for construction dewatering (*ISI project only*); and
- Santa Clara Valley Water District – well drilling permit(s) (*ISI project only*).

3 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

SCOPE OF ENVIRONMENTAL ANALYSIS

Pursuant to CEQA and the State CEQA Guidelines, a lead agency shall focus the EIR's discussion on significant environmental effects and may limit discussion on other effects to brief explanations about why they are not significant (PRC Section 21002.1, State CEQA Guidelines Section 15128). Potentially significant impacts were identified based on review of comments received as part of the public scoping process (see Appendix A) and additional research and analysis of relevant project data during preparation of this Draft SEIR.

The City has determined that the project (i.e., LSAP Update and ISI project) has the potential to result in new and/or substantially more severe significant environmental impacts (pursuant to the State CEQA Guidelines [Section 15162]) on the following resources, which are addressed in detail in this Draft SEIR:

- Aesthetics
- Air Quality
- Cultural and Tribal Cultural Resources
- Biological Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions and Climate Change
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Population, Employment, and Housing
- Public Services and Recreation
- Transportation and Circulation
- Utilities and Service Systems

As described in Section 1.3, Effects Found Not to Be Significant, of this Draft SEIR, it was determined the project would result in no impact to agriculture, forestry, mineral resources, or wildfire. Accordingly, these resources are not addressed further in this Draft SEIR.

Chapter 3 of this Draft SEIR also summarizes previous analyses and the previously adopted mitigation measures from the certified 2016 EIR prepared for the LSAP. In certain instances, new mitigation measures are proposed to replace previously adopted and implemented mitigation, because of changes in applicable regulations (including CEQA) and standards of review. The 2016 LSAP EIR is available at: https://sunnyvale.ca.gov/business/projects/lawrence.htm.

FORMAT OF THE ENVIRONMENTAL ANALYSIS

Each section begins with descriptions of the regulatory and environmental settings as they pertain to a particular issue, references setting from the LSAP 2016 EIR that remains applicable, and updates settings where appropriate. The environmental setting provides a point of reference for assessing the environmental impacts of the LSAP Update, ISI project, and alternatives (Chapter 5). The setting description in each section is followed by an impacts and mitigation discussion. The impacts and mitigation portion of each section includes impact statements, which are prefaced by a number in bold-faced type. An explanation of each impact and analysis of its significance follow each impact statement. All mitigation measures pertinent to each individual impact follow directly after the impact statement. The degree to which the identified mitigation measure(s) would reduce the impact is also described. Each impact discussion also includes a summary of the relevant impact analysis and conclusion provided in the LSAP 2016 EIR and determines whether the project would result in a new significant effect or more severe impact than what was identified in the 2016 LSAP EIR pursuant to State CEQA Guidelines Section 15162.

Regulatory Setting

This section of each chapter references the federal, State, and local regulations described in the 2016 LSAP EIR that remain applicable to the project and updates regulations, as needed, that would apply to the proposed project and that could reduce or eliminate potentially significant impacts. This section also informs the reader of the applicable LSAP policies and standards.

Environmental Setting

According to Section 15125 of the State CEQA Guidelines, an EIR must include a description of the existing physical environmental conditions in the vicinity of the project to provide the "baseline condition" against which project-related impacts are compared. The baseline condition is typically the physical condition that exists when the Notice of Preparation (NOP) is published. The NOP for the proposed project was published on January 11, 2019. Therefore, this SEIR assesses the impacts of the project in comparison to conditions that exist in the project area. This includes the planned development potential and standards set forth in the adopted LSAP. Setting described in the LSAP 2016 EIR that remains applicable is referenced and any updates to environmental setting are described.

Impacts and Mitigation Measures

This section analyzes environmental impacts of the LSAP Update at a programmatic level and environmental impacts of the ISI project at a project-specific level. For both project components, mitigation measures are recommended to reduce potentially significant or significant impacts. Each impact discussion also includes a summary of the relevant impact analysis and conclusion provided in the LSAP 2016 EIR and determines whether the project would result in a new significant effect or more severe impact than what was identified in the 2016 LSAP EIR pursuant to State CEQA Guidelines 15162. Information included in this section is described in more detail below.

METHODOLOGY

This subsection identifies the methodology used to analyze potential environmental impacts.

THRESHOLDS OF SIGNIFICANCE

The CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant" (State CEQA Guidelines Section 15382). Definitions of significance vary with the physical conditions affected and the setting in which the change occurs. The State CEQA Guidelines set forth physical impacts that trigger the requirement to make "mandatory findings of significance" (State CEQA Guidelines, Section 15065). The thresholds of significance are based on the checklist presented in Appendix G of the most recently adopted State CEQA Guidelines (December 28, 2018), best available data, applicable regulatory standards, and local practice/standards. The level of each impact is determined by analyzing the effects of LSAP Update and ISI project to the defined baseline conditions and comparing it to the applicable significance threshold.

ISSUES NOT DISCUSSED FURTHER

This section identifies any topic in the technical issue area that will not be affected by the proposed project.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The project impact and mitigation measure section analyzes the environmental impacts of the project. This subsection describes the potential environmental impacts of the proposed project and, based upon the thresholds of significance, concludes whether the environmental impacts would be considered significant, potentially significant, or less than significant. Each impact is summarized in an impact statement, followed by a more detailed discussion of the potential impacts and the significance of each impact before mitigation. A summary of the relevant adopted 2016 LSAP EIR impact, impact conclusion, and any mitigation measure(s), are included and the 2016 impact and impact conclusion are compared to the impact of the proposed project,

The impact number consists of the section of the SEIR in which that impact is identified followed by a dash to indicate the number of the impact in that section. For example, Impact 3.1-1 is the first impact identified in Section 3.1.

The impact discussion includes a description of applicable regulations and concludes with a statement regarding whether the impact would be less than significant or significant before mitigation. If the impact is significant, adopted mitigation or new mitigation is provided and the finding of significance after mitigation is identified.

The analysis of environmental impacts considers both the construction and operational phases associated with implementation of the proposed project. As required by Section 15126.2(a) of the CEQA Guidelines, direct, indirect, short-term, long-term, onsite, and/or offsite impacts are addressed, as appropriate, for the environmental issue area being analyzed. The Draft SEIR uses the following terms to describe the level of significance of impacts identified: less than significant, potentially significant, significant, and significant and unavoidable.

It is important to note that environmental impact analyses under CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents, unless the proposed project might cause or risk exacerbating environmental hazards or conditions that already exist (CCR Section 15126.2[a]). In those specific instances, it is the 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 (*California Building Industry Association v. Bay Area Air Quality Management District* [2015] 62 Cal. 4th 369).

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3.1 AESTHETICS

This section analyzes and evaluates the new potential impacts of the LSAP Update and the ISI project on the visual environment. This section provides a description of existing visual conditions, meaning the physical features that make up the visible landscape, near the LSAP and ISI project sites and an assessment of changes to those conditions that would occur from project implementation. The effects of the project on the visual environment are generally defined in terms of the project's physical characteristics and potential visibility, the extent to which the project's presence would change the perceived visual character and quality of the environment, and the expected level of sensitivity that the viewing public may have where the project would alter existing views. The "Methodology" section below provides further detail on the approach used in this evaluation.

The 2016 EIR included Section 3.12, "Visual Resources and Aesthetics," which evaluated the potential effects of the LSAP on visual resources and aesthetics. The 2016 EIR concluded that there would be less than significant impacts to visual resources and aesthetics (Impacts 3.12.1–3.12.3) and no mitigation would be required.

No comments regarding aesthetics were received in response to the NOP.

3.1.1 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws related to aesthetics, light, and glare are applicable to the project.

STATE

California Scenic Highway Program

The California State Scenic Highway program originated in 1963 and was created by the California Legislature to preserve and protect scenic highway corridors from development and changes that would affect the aesthetic value of the land adjacent to highways. A highway may be designated "scenic" depending on how much of the natural landscape travelers can see, the scenic quality of the landscape, and the extent to which development intrudes on travelers' enjoyment of the view (Caltrans 2008). There are no eligible or officially designated State or county scenic highways within the project area or nearby (Caltrans 2019). Interstate 280 (the Junipero Serra Freeway) located approximately 6 miles south of the project and is an eligible State scenic highway, but at this time is not officially designated. The roadway does not provide views of the project and thus would not be impacted by project development.

Nighttime Sky – Title 24 Outdoor Lighting Standards

The Nighttime Sky- Tittle 24 Outdoor Lighting Standards were created in 2005 by the California Energy Commission (CEC) to regulate energy efficiency of all outdoor lighting for residential and nonresidential development. The standards reduce the adverse effects of outdoor lighting and improve overall quality by providing guidance for lighting characteristics such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off. Different standards are applicable for the three "lighting zones" classifications, which are determined by population figures from the 2000 Census. Lighting zones are classified as LZ1 (dark), LZ2 (rural), or LZ3(urban) (CEC 2019). Sunnyvale is classified as LZ3.

Senate Bill 743

The California Legislature adopted a CEQA streamlining bill, Senate Bill (SB) 743, for residential, mixed-use residential, or employment center projects on infill sites within transit priority areas (PRC Section 21099[d]). Under SB 743, a TPA is defined as "an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted

pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." Under SB 743, an infill site is defined as "a lot located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses." Per SB 743, a project's aesthetic impacts are not considered significant impacts on the environment if they meet the criteria. As a qualifying project, SB 743 provides that the project's aesthetic impacts shall not be considered significant on the environment (PRC Section 21099[d][1]). Some of the subsequent development under the LSAP may meet these criteria and qualify for CEQA streamlining benefits provided by SB 743. The ISI project would meet the definition of an employment center project, as defined under SB 743 (i.e., a project located on property zoned for commercial uses with a floor area ratio of no less than 0.75 and is located within a transit priority area.

LOCAL

City of Sunnyvale General Plan

The General Plan is a comprehensive and long-range plan for the physical development of the City. The following are General Plan policies and actions that are applicable to the project for aesthetics and community character.

Land Use and Transportation Element

- **Policy LT-2.1c:** Require appropriate buffers, edges and transition areas between dissimilar neighborhoods and land uses.
- **Policy LT-2.2b:** Encourage development of diversified building forms and intensities.
- **Policy LT-4.2b:** Utilize adopted City design guidelines to achieve architecture and scale for renovation and new development in Sunnyvale's neighborhoods.
- **Policy LT-4.3a:** Review development proposals for compatibility within neighborhoods.
- **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.
  - **LT-2.3d:** Require tree replacement for any project that results in tree removal, or in cases of constrained space, require payment of an in-lieu fee. Fee revenues shall support urban forestry programs.
- **Policy LT-4.1:** Preserve and enhance an attractive community, with a positive image, a sense of place, landscaping, and a human scale.
- **Policy LT-4.2:** Encourage nodes of interest and activity, public open spaces, well-planned development, mixed-use projects, signature commercial uses, and buildings and other desirable uses, locations, and physical attractions.
  - **LT-4.2a:** Promote the development of signature buildings and monuments that provide visual landmarks and create a more distinctive and positive impression of Sunnyvale within the greater Bay Area.
  - **LT-4.2c:** Allow for innovative architectural design.
- **Policy LT-4.3:** Enforce design review guidelines and zoning standards that ensure the mass and scale of new structures are compatible with adjacent structures, and also recognize the City's vision of the future for transition areas such as neighborhood Village Centers and El Camino Real nodes.
  - **LT-4.3c:** Enforce local design guidelines that ensure buildings and monuments respect the character, scale, and context of the surrounding area.
  - **LT-4.3d:** Ensure that new construction and renovation contribute to the quality and overall image of the community.
  - **LT-4.3e:** Use the development review and permitting processes to promote high-quality architecture and site design.

- **Policy LT-4.4:** Avoid monotony and maintain visual interest in newly developing neighborhoods, and promote appropriate architectural diversity and variety. Encourage appropriate variations in lot sizes, setbacks, orientation of homes, and other site features.
- **Policy LT-5.1:** Strengthen the image that the community is composed of cohesive residential neighborhoods, each with its own individual character and Village Center; allow change and reinvestment that reinforces positive neighborhood concepts and standards such as walkability, positive architectural character, site design, and proximity to supporting uses.
- **Policy LT-5.2:** Preserve and enhance the character of Sunnyvale's residential neighborhoods by promoting land use patterns and transportation opportunities that support a neighborhood concept as a place to live, work, shop, entertain, and enjoy public services, open space, and community near one's home and without significant travel.
- **Policy LT-5.3:** Require new development, renovation, and redevelopment to be compatible and well-integrated with existing residential neighborhoods.
- **Policy LT-6.1:** Improve and preserve the character and cohesiveness of existing residential neighborhoods.
  - **LT-6.1f:** Look for opportunities to reclaim unneeded and underperforming paved areas (public and private) that could be converted to neighborhood-enhancing features such as additional tree coverage, gathering areas, pocket parks, or community gardens.

Community Character Chapter

- **Policy CC-1.3:** Ensure that new development is compatible with the character of special districts and residential neighborhoods.
- **Policy CC-1.4:** Support measures which enhance the identify of special districts and residential neighborhoods to create more variety in the physical development.
- **Policy CC-2.1:** Maintain and provide attractive landscaping in the public right-of-way to identify the different types of roadways and districts, make motorists more comfortable, and improve the enjoyment of residential neighborhoods.
- **Policy CC-3.1:** Place a priority on quality architecture and site design which will enhance the image of Sunnyvale and create a vital and attractive environment for businesses, residents, and visitors, and be reasonably balanced with the need for economic development to assure Sunnyvale's economic prosperity.
- **Policy CC-3.2:** Ensure site design is compatible with the natural and surrounding built environment.
- **Policy CC-4.2:** Maintain beautiful and comfortable outdoor public places which provide a shared sense of ownership and belonging for Sunnyvale residents, business owners, and visitors.

Housing Element

- **Policy F.1:** Continue efforts to balance the need for additional housing with other community values, including preserving the character of established neighborhoods, high quality design, and promoting a sense of identity in each neighborhood.
- **Policy HE-6.1**: Continue efforts to balance the need for additional housing with other community values, including preserving the character of established neighborhoods, high quality design, and promoting a sense of identity in each neighborhood.

Lawrence Station Area Plan

The LSAP was adopted in 2016 and provides plan area specific policies, guidelines, and regulations for land uses in the LSAP area. The LSAP Section 6 (Urban Design) establishes urban design, lighting, glare, building material, and shadow guidelines that apply to the entire plan area as well as specific guidelines for the following subareas:

- Transit Core,
- Peninsula,

- West,
- East,
- Calabazas Creek,
- Office/R&D East,
- Southern Residential, and
- Lawrence/Reed/Willow.

Sunnyvale Municipal Code

Chapter 19.35, Lawrence Station Area Specific Plan District
Chapter 19.35 of the Sunnyvale Municipal Code establishes zoning districts, allowed uses, and development standards that apply specifically to the LSAP area.

Chapter 19.56, Alternative Energy Systems
City Municipal Code Section 19.56.020 specifies that no building permit shall be issued for any construction that would interfere with solar access (i.e., create shadow conditions greater than 10 percent of the total roof area for more than 10 percent of the year) to the rooftop of any structure or to any preexisting active solar collector on nearby property between the hours of 9:00 a.m. to 3:00 p.m.

City Green Building Program
The City Green Building Program is a whole systems approach to the design, construction, and operation of buildings. This approach employs materials and methods that promote natural resource conservation, energy efficiency, and indoor air quality. To comply with the Green Building Program a building must identify and meet minimum standards for the particular type of projects and scope of work and verify green buildings measures (Green Point Rater/LEED AP and USGBC Certification). Incentives are offered for projects that exceed the minimum Green Building standards and are offered to encourage project applicants and developers to provide additional green building features (City of Sunnyvale 2019).

3.1.2 Environmental Setting

LSAP AREA

The environmental setting relative to aesthetics is provided on pages 3.12-1 through 3.12-3 of the 2016 LSAP DEIR and is relevant to understanding the effects of the proposed LSAP Update. As indicated in Section 3.12 of the 2016 LSAP DEIR, the LSAP is dominated by industrial and commercial uses on large parcels. Many of these date from the early years of Silicon Valley growth and consist of one-story structures. Several development projects are under construction or were recently completed in the plan area consisting of residential and office uses. The plan area contains few distinguishing natural physical characteristics and is generally flat, with elevation relief provided only by the overpass of Lawrence Expressway at the Caltrain tracks. Calabazas Creek, which flows south-to-north to the San Francisco Bay, is located in a concrete channel along the eastern edge of the plan area and contains little to no vegetation within its approximately 65-foot right-of-way.

The LSAP area and ISI site are located within the larger urbanized area of the City and are surrounded by existing residential, commercial, and industrial development and related uses. Visual character noticeably differs between the north and south sides of the Caltrain tracks. The area to the south of the tracks is characterized by suburban neighborhoods that were developed as large tracts post World War II. Neighborhoods contain mainly single-family detached dwellings and multi-family buildings of three stories or less along tree-lined streets. The southernmost portion of the plan area is solely residential neighborhoods with older single-story structures, with larger two-story structures located in the western portion of the plan area. At the time this EIR was written, several residential and

commercial construction and redevelopment projects of a similar scope were approved, under construction, or were recently completed. The LSAP area and the ISI project site are not located within a designated scenic vista or in the vicinity of any officially designated State or county scenic highway.

ISI SITE

The ISI North Site contains a private sports and recreation complex, a gymnasium, a baseball field, a soccer field, an amphitheater, a volleyball court, a children's play area, a tented barbeque area, an empty concrete manmade lake, portable bathroom and shower trailers, a parking area, a groundwater monitoring well, and landscaped areas with mature trees. The recreational facilities and parking lot are currently utilized by ISI employees located on site.

Current uses on the ISI South Site within the 932 Kifer Road parcel consist of two office/warehouse buildings (the smaller building is vacant and unused), parking lots, three outbuildings and equipment associated with previous site remediation activities, seven groundwater monitoring wells, remnants of former railroad spurs, vegetated areas, and mature trees. Within the 950 Kifer Road parcel on the South Site, current uses consist of an occupied ISI customer service center with 285 employees, a basketball court, picnic tables, landscaping with mature trees, and paved parking areas.

PROJECT VIEWSHEDS

Public views of the LSAP area are provided primarily from the surrounding major roadways (e.g., Lawrence Expressway and Kifer Road) and Caltrain. The main views from the roadways and the train consist of large commercial and industrial buildings with associated parking lots and landscaping.

Public views of the ISI North Site are provided from Kifer Road and the Central Expressway. View of the North Site are partially obscured by existing tree stands along the site perimeter. Public views of the South Site are provided from Kifer Road and Caltrain. Views are partially obscured by existing shrubbery and bushes.

LIGHT AND GLARE CONDITIONS

Existing sources of light and glare are uniformly present in the project vicinity. Nighttime lighting and glare are concentrated within more densely developed retail and roadway areas and to a lesser extent attributed to residential, office, and industrial uses. Existing sources of light include streetlights along project roadways; lights in parking lots, along walkways, and on the exteriors of buildings; lights associated with the rail system; and interior lights in buildings. Lawrence Expressway bisects the plan area north to south, while the Caltrain right-of-way bisects the area east to west. Nighttime lighting from urban sources is significant enough to preclude views of stars and other astronomical features and result in spillover to adjacent properties. Reflective light (glare) occurs when natural and artificial light reflect off various reflective surfaces, such as those used in building construction. Glass, metal, and polished exterior roofing materials can all result in localized occurrences of daytime and nighttime glare from natural and artificial light sources. Existing sources of light and glare are uniformly present in the project vicinity. Existing sources of light include streetlights along project roadways; lights in parking lots, along walkways, and on the exteriors of buildings; lights associated with the rail system; and interior lights in buildings. No reports of excessive daytime or nighttime glare have been reported in the project area or vicinity.

SHADOWS

Existing buildings in the project area generate localized shadow effects. The angle of the sun, and hence the character of shadows, varies depending on the time of year and the time of day; however, in the Northern Hemisphere, the sun always arcs across the southern portion of the sky. During the winter, the sun is lower in the southern sky, casting longer shadows compared to other times of year. During the summer months, the sun is higher in the southern sky, resulting in shorter shadows. During the summer, the sun can be almost directly overhead at midday, resulting in almost no shadow being cast. During all seasons, as the sun rises in the east in the morning,

shadows are cast to the west; at mid-day, the sun is at its highest point and shadows are their shortest, and cast to the north; and as the sun sets in the west in the afternoon/evening, shadows are cast to the east.

3.1.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

This section analyzes aesthetic impacts (visual character, light and glare, and shadow) that may occur from the proposed amendments to the adopted LSAP and associated changes to Chapter 19.35 of the Sunnyvale Municipal Code, proposed Lawrence Station Sense of Place Plan. The impact analysis also evaluates project-specific aesthetic impacts from the proposed ISI project. The visual resource analysis is based on field surveys, existing planning documents, the visual impact analysis provided in the LSAP EIR, reviews of the proposed site plan and building massing in relation to the character of the surrounding area. The analysis focused on whether the project would result in alteration of the visual characteristics of the area and/or view, the scale or degree of which appears as a substantial obvious and disharmonious modification of the overall visual character of the surrounding area that was not previously considered in the LSAP EIR. Per SB 743, a project's aesthetic impacts are not considered significant impacts on the environment if they meet the criteria, as described above. Some developments resulting from the project, including the ISI project, would likely meet this criteria. As a qualifying project, the aesthetic impacts of the project would not be considered significant impacts even if the conclusion based on the characteristics of the project had been significant (PRC Section 21099[d][1]). However, analysis of aesthetics is provided for the project in its entirety below.

THRESHOLDS OF SIGNIFICANCE

An impact on aesthetics, light, and glare is considered significant if implementation of the LSAP update and ISI project would do any of the following:

- 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;
- in urbanized areas, would conflict with applicable zoning and other regulations governing scenic quality; and/or
- create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

ISSUES NOT DISCUSSED FURTHER

A scenic vista is considered a view of an area that has remarkable scenery or a natural or cultural resource that is indigenous to the area. The project site is in a developed urban setting and is not located in the vicinity of any officially designated State or county scenic highway and does not contain remarkable scenery or views of natural areas that would be considered a scenic vista. Therefore, impacts on scenic vistas and State scenic highways are not investigated further.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.1-1: Degrade the Existing Visual Character or Quality of Public Views or Conflict With Zoning and Regulations Governing Scenic Quality

The 2016 LSAP EIR concluded that subsequent development under the LSAP, guided by the policies and guidelines of the City's General Plan, Zoning Code, Citywide Design Guidelines, and LSAP, would not substantially degrade the visual character or scenic quality of the plan area or its surroundings. Similar to the adopted LSAP, the LSAP Update and ISI project would expand urban uses in the project area that would alter the existing visual character of the area as well as require amendments to the LSAP, Zoning Code, and General Plan. Development would be required to comply with City and LSAP-specific urban design requirements that address community character, including the proposed Lawrence Station Sense of Place Plan. Thus, implementation of the LSAP Update and ISI project would not result in a new significant effect on visual character or quality of public views and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The impact would be **less than significant**.

Impact 3.12.1 of the 2016 LSAP EIR evaluated whether buildout of the LSAP would impact visual character and quality of the plan area. The EIR determined that subsequent development under the LSAP would be required to comply with existing Sunnyvale General Plan policies, zoning regulations, standard development conditions, Citywide Design Guidelines, and LSAP policies and guidelines that would minimize potential effects on the visual environment that could be subjectively perceived as adverse or negative. Each private development project application would be reviewed by the City to ensure consistency and compliance with the siting and design concepts set forth in the policies, the zoning regulations, and the LSAP. Therefore, the EIR concluded implementation of the LSAP would not substantially degrade the visual character or quality of the plan area or its surroundings. The impact would be less than significant.

LSAP Update

The proposed LSAP modifications would increase allowable housing potential within the LSAP and expand the western LSAP boundary. As described in Chapter 2, "Project Description," the proposed LSAP Update would establish new base maximum residential densities in each LSAP zoning district that allows housing. The project would expand the area where new housing may be considered to all sites currently zoned as M-S/LSAP (which would be rezoned to MXD-II) and to all sites currently zoned as O-R (which would be rezoned to MXD-IV, a new zoning district). By using local incentives and the State Density Bonus Law, project densities may increase above the base maximum density allowed. There are three contiguous sites where residential uses are currently permitted but would no longer be permitted under the LSAP Update: 150 Lawrence Station Road (occupied by Costco), 1202 Kifer Road, and 1210 Kifer Road. These sites would all be rezoned from MXD-I to M-S/LSAP to reflect the City's interest in retaining nonresidential development with retail onsite.

Implementation of the LSAP modifications would accommodate increased residential density within the plan area. This increased development potential would still be subject to design requirements that address community character consistent with the City's vision identified in the LSAP and General Plan including LSAP policies, urban design guidelines, applicable City design standards, and Chapter 19.35 of the Sunnyvale Municipal Code. Because of the increased density and heights in the area, Chapter 19.56 of the Zoning Code would be amended to exempt properties in the LSAP from completing solar analyses, similar to what is currently allowed in for properties in the Downtown Specific Plan. The LSAP Update would also include the adoption of the proposed Lawrence Station Sense of Place Plan that would provide streetscape enhancements, parks, and open space to improve the community character and visual quality of the area. Thus, the proposed LSAP Update would not result in any new or greater visual character or quality impacts beyond what was identified in the 2016 LSAP EIR. This impact would remain **less than significant**.

ISI Project

Design features of the ISI project are generally consistent with LSAP policies and urban design guidelines, other applicable City design standards, and Chapter 19.35 of the Sunnyvale Municipal Code that address community

character consistent with the City's vision identified in the LSAP and General Plan. As shown in Figures 2-7 through 2-9b of this Draft SEIR, the ISI project includes the planting of trees and shrubs throughout the ISI Site and along the boundaries of the site that would partially obscure public views of buildings. The ISI project would also include frontage improvements along Kifer Road, consistent with the Lawrence Station Sense of Place Plan, that would improve the community character and visual quality of the area. The ISI Solar Study identifies shadow effects of the buildings would generally be limited to the ISI project site and would not conflict with the solar access requirements under City Municipal Code Section 19.56.020. The code section would not apply after the LSAP Update is adopted. Visual impacts would differ between the North Site and South Site and are assessed separately below.

Proposed development on the North Site would replace an existing approximately 33-foot-tall building with an approximately 65-foot-tall three-story building and construct an overpass pedestrian bridge, surface parking lots, and various site amenities (see Figures 2-7 and 2-8a in Chapter 2, "Project Description"). Consistent with the requirements of City Municipal Code Section 19.94.120, the ISI project would retain 85 percent (581 of 679) of the protected trees on the North Site and mitigate the removed trees (see Figure 2-9a in Chapter 2, "Project Description"). Project development would increase total building area located onsite, however the overall visual character would be consistent with surrounding development. The largest change in visual character would occur due to the proposed pedestrian access bridge connecting the North Site and South Site over Kifer Road. As shown in Figure 2-8a, the height, design, and scale of the pedestrian bridge would be similar to that of the surrounding buildings and of the proposed ISI facilities to minimize visual impacts.

Proposed building development on the South Site would be approximately 58 to 65 feet tall, consisting of a three-story building and five-level parking structure, which would replace an existing commercial building and other smaller structures ranging from 32 to 43 feet in height. Consistent with the requirements of City Municipal Code Section 19.94.120, the ISI project would retain 3 percent of all protected onsite trees (11 of 383) on the South Site and mitigate the removed trees. Project implementation would change the existing visual character from commercial and industrial to solely commercial. Views of the new facility would be partially obscured by landscaping and trees planted along the perimeter of the project site (see Figures 2-8b, 2-8c, and 2-9b in Chapter 2, "Project Description"). Over time, views would become less apparent as trees grow in height and increase foliage cover. Project development would be consistent with surrounding commercial and industrial development located nearby and in the surrounding area.

The North Site would include open space with a variety of passive and active recreation opportunities including new outdoor sports fields and courts, private trails and walkways, an outdoor dining area, a refurbished shade structure and outdoor amphitheater, and landscaping (see Figure 2-7 in Chapter 2, "Project Description"). The South Site would also include a publicly accessible pedestrian-bicycle path adjacent to the Caltrain right-of-way. Implementation of the ISI project would improve the visual experience for pedestrians and cyclists and the overall visual and aesthetic character of the project site consistent with the proposed Lawrence Station Sense of Place Plan. Thus, the ISI project would not result in any new or greater visual character or quality impacts beyond what was identified in the 2016 LSAP EIR. The impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.1-2: Light and Glare Impacts

The 2016 LSAP EIR determined that subsequent projects developed under the LSAP could result in an increase of nighttime lighting and glare and concluded that required compliance with LSAP's areawide design guidelines, Section 19.42.050 of the Sunnyvale Municipal Code, and other City regulations pertaining to light and glare would minimize potential impacts. The LSAP Update and ISI project would expand urban uses in the project area that would include the potential for light and glare impacts. Development would be required to comply with City and LSAP-specific lighting and glare requirements to minimize the potential impacts. Therefore, potential impacts related to light and glare would be reduced to **less than significant**.

Impact 3.12.2 of the 2016 LSAP EIR evaluated whether buildout of the LSAP could result in an increase of nighttime lighting and glare impact visual character and quality of the plan area. The EIR determined that subsequent development under the LSAP would be required to comply with existing Sunnyvale General Plan policies, zoning regulations, standard development conditions, Citywide Design Guidelines, and LSAP policies and guidelines that would minimize potential effects on the visual environment that could be subjectively perceived as adverse or negative. Each private development project application would be reviewed by the City to ensure consistency and compliance with the siting and design concepts set forth in the policies, the zoning regulations, and the LSAP. Therefore, the EIR concluded implementation of the LSAP would not substantially degrade the visual character or quality of the plan area or its surroundings. The impact would be less than significant.

LSAP Update

The 2016 LSAP EIR concluded that subsequent development under the LSAP and its policies, guidelines and standards would not create significant nighttime lighting and glare impacts (City of Sunnyvale 2016:p 3.12-15). The proposed LSAP Update would not alter planned land uses in a manner that would introduce a new significant source of lighting and glare. All development would be required to meeting lighting control standards set forth in LSAP Guideline L-UDG9 and Sunnyvale Municipal Code Section 19.42.050 that requires shielding for lighting to avoid glare to adjacent areas. LSAP Guidelines BM-UDG5 and BM-UDG7 require that building materials consist of nonreflective materials. Similar to the adopted LSAP, each private development project application would be reviewed by the City to ensure consistency and compliance with the siting and design concepts set forth in the City's General Plan, Zoning Code, and the LSAP. Thus, the proposed LSAP Update would not result in any new or greater light and glare impacts beyond what was identified in the 2016 LSAP EIR. Thus, this impact would be **less than significant**.

ISI Project

The ISI project would include new/expanded sources of interior and exterior lighting and glare for the North and South sites. Exterior lighting would be installed within the ISI site and in the public right-of-way adjacent to the site for safety measures. Minimal, downward shielded landscape, safety, security lighting, and outdoor lighting would be installed. Recreation lighting would be used for the sporting fields when in use and low-level safety lighting when not in use. Outdoor lighting for the ISI project would be installed in conformance with City codes and ordinances, applicable safety and illumination requirements produced by the Illuminating Engineering Society of North America and the Recommended Practice design guides, City's Bird-Safe Design Guidelines, and California Title 24 requirements. Commercial and residential uses surrounding the ISI project site produce low levels of glare and nighttime lighting. The project site is located in a developed, urbanized area and any new sources of glare and nighttime lighting would be similar to existing conditions. Preservation of mature existing trees along the perimeter of the building would screen on-site lighting and glare. Thus, implementation of the ISI project would not result in a new significant effect related to light and glare and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Therefore, light and glare impacts associated with the ISI project would be **less than significant**.

Mitigation Measures

No mitigation is required.

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3.2 AIR QUALITY

This section includes a discussion of existing air quality conditions, a summary of applicable air quality regulations, and an analysis of potential short-term and long-term air quality impacts that could result from implementation of the Lawrence Station Area Plan (LSAP) (LSAP Update) and Intuitive Surgical Corporate Campus (ISI project). The methods of analysis for short-term construction, long-term regional (operational), local mobile-source, and toxic air emissions are consistent with the recommendations of the Bay Area Air Quality Management District (BAAQMD), the California Air Resources Board (CARB), and the U.S. Environmental Protection Agency (EPA). Mitigation is developed as necessary to reduce significant air quality impacts to the extent feasible.

The 2016 LSAP EIR included Section 3.5, "Air Quality," which evaluated the potential effects of the LSAP. The 2016 LSAP EIR concluded that with the implementation of Mitigation Measures 3.5.3a and 3.5.3b construction emissions would be significant and unavoidable. The 2016 LSAP EIR determined operation of the LSAP would be consistent with the BAAQMD's 2010 Clean Air Plan and VMT would increase at a lower rate than population growth in comparison to existing conditions, which would result in a less than significant impact. Carbon monoxide (CO) exposure during construction and operations would not exceed BAAQMD thresholds and would not result in a significant impact. Increases in Toxic Air Contaminants (TAC) would result in a less than significant impact to sensitive receptors with the implementation of Mitigation Measures 3.5.3a, 3.5.3b, 3.5.5, and 3.5.6. Odors from the implementation of the 2016 LSAP EIR were found to have a less than significant impact.

One comment letter regarding air quality was received in response to the LSAP Update notice of preparation (see Appendix A). The Earthjustice organization recommends electrifying all buildings under the LSAP Update to reduce the combustion of gas in households and avoid emissions such as nitrogen oxide (NO_X) and ground level ozone. This comment is addressed in Section 3.7, "Greenhouse Gas Emissions and Climate Change."

3.2.1 Regulatory Setting

Air quality in the region is regulated through the efforts of various federal, State, regional, and local government agencies. These agencies work to improve air quality through legislation, planning, policymaking, education, and a variety of other programs. The regulatory setting provided in the 2016 LSAP EIR remains applicable to this analysis. The regulatory information provided on pages 3.5-7 through 3.5-13 of the 2016 LSAP EIR includes a description of ambient air quality standards; air quality attainment plans; toxic air contaminant regulations; BAAQMD rules regulations, and construction mitigation measures; applicable policies of the City's General Plan; and approved LSAP policies. Since certification of the 2016 LSAP EIR, the City adopted an update to the City's General Plan Land Use Transportation Element (LUTE), the City's Climate Action Playbook, updated air quality standards, and vehicle emissions standards. Additional regulatory information has been provided which is relevant to the project's regulatory setting. These laws, regulations, plans, and guidelines are summarized below.

FEDERAL

Criteria Air Pollutants

The national ambient air quality standards (NAAQS) are shown in Table 3.2-1. The Clean Air Act (CAA) also established the requirement that each state prepare a State Implementation Plan (SIP) for attaining and maintaining the NAAQS. The federal CAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. California's SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, EPA may prepare a federal implementation plan that imposes additional control

measures. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

Table 3.2-1 National and California Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS[a,b]	NAAQS[c] Primary[b,d]	NAAQS[c] Secondary[b,e]
Ozone	1-hour	0.09 ppm (180 µg/m^3)	–[e]	Same as primary standard
	8-hour	0.070 ppm (137 µg/m^3)	0.070 ppm (147 µg/m^3)	Same as primary standard
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	Same as primary standard
	8-hour	9 ppm[f] (10 mg/m^3)	9 ppm (10 mg/m^3)	Same as primary standard
Nitrogen dioxide (NO_2)	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	53 ppb (100 µg/m^3)	Same as primary standard
	1-hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	—
	24-hour	0.04 ppm (105 µg/m^3)	—	—
Sulfur dioxide (SO_2)	3-hour	—	—	0.5 ppm (1300 µg/m^3)
	1-hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	—
Respirable particulate matter (PM_{10})	Annual arithmetic mean	20 µg/m^3	—	Same as primary standard
	24-hour	50 µg/m^3	150 µg/m^3	Same as primary standard
Fine particulate matter ($PM_{2.5}$)	Annual arithmetic mean	12 µg/m^3	12.0 µg/m^3	15.0 µg/m^3
	24-hour	—	35 µg/m^3	Same as primary standard
Lead [f]	Calendar quarter	—	1.5 µg/m^3	Same as primary standard
	30-Day average	1.5 µg/m^3	—	—
	Rolling 3-Month Average	–	0.15 µg/m^3	Same as primary standard
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m^3)	No national Standards	No national Standards
Sulfates	24-hour	25 µg/m^3	No national Standards	No national Standards
Vinyl chloride [f]	24-hour	0.01 ppm (26 µg/m^3)	No national Standards	No national Standards
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km	No national Standards	No national Standards

Notes: CAAQS = California ambient air quality standards; NAAQS = national ambient air quality standards; µg/m^3 = micrograms per cubic meter; km = kilometers; ppb = parts per billion; ppm = parts per million.

a. California standards for ozone, carbon monoxide, SO_2 (1- and 24-hour), NO_2, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

b. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

c. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. The PM_{10} 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. The $PM_{2.5}$ 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. Environmental Protection Agency for further clarification and current federal policies.

d. National primary standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

e. National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

f. The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Sources: EPA 2016; CARB 2019

Safer Affordable Fuel-Efficient Vehicles Rule

On August 2, 2018, the National Highway Traffic Safety Administration (NHTSA) and EPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule). This rule addresses emissions and fuel economy standards for motor vehicles and is separated in two parts as described below.

- Part One, "One National Program" (84 FR 51310) revokes a waiver granted by EPA to the State of California under Section 209 of the CAA to enforce more stringent emission standards for motor vehicles than those required by EPA for the explicit purpose of greenhouse gas (GHG) reduction, and indirectly, criteria air pollutants and ozone precursor emission reduction. This revocation became effective on November 26, 2019, restricting the ability of CARB to enforce more stringent GHG emissions standards for new vehicles and set zero emission vehicle mandates in California. CARB has estimated the vehicle tailpipe and evaporative emissions impacts to criteria air pollutants from SAFE Rule Part One and has provided off-model adjustment factors to adjust emissions output from CARB's Emission Factor (EMFAC) model.
- Part Two addresses Corporate Average Fuel Economy (CAFE) standards for passenger cars and light trucks for model years 2021 to 2026. This rulemaking proposes new CAFE standards for model years 2022 through 2026 and would amend existing CAFE standards for model year 2021. The proposal would retain the model year 2020 standards (specifically, the footprint target curves for passenger cars and light trucks) through model year 2026, but comment is sought on a range of alternatives discussed throughout the proposed rule. This simultaneously proposes tailpipe carbon dioxide standards for the same vehicles covered by the same model years. The final SAFE Rule Part Two was released on March 31, 2020. The outcome of any pending or potential lawsuits (and how such lawsuits could delay or affect its implementation) are unknown at this time.

LOCAL

Bay Area Air Quality Management District

BAAQMD maintains and manages air quality conditions in the San Francisco Bay Area Air Basin (SFBAAB), including Santa Clara County, through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of BAAQMD includes the preparation of plans and programs for the attainment of the NAAQS and CAAQS, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. BAAQMD also inspects stationary sources, responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the CAA and CCAA.

Projects located in the SFBAAB are subject to BAAQMD's rules and regulations. Specific rules applicable to the project include:

- **Regulation 2, Rule 1, General Permit Requirements.** Includes criteria for issuance or denial of permits, exemptions, appeals against decisions of the Air Pollution Control Officer and BAAQMD actions on applications.
- **Regulation 2, Rule 2, New Source Review.** Applies to new or modified sources and contains requirements for Best Available Control Technology and emission offsets. Rule 2 implements federal New Source Review and Prevention of Significant Deterioration requirements.
- **Regulation 6, Rule 1, General Requirements.** Limits the quantity of particulate matter in the atmosphere by controlling emission rates, concentration, visible emissions and opacity.
- **Regulation 7, Odorous Substances.** Regulation 7 places general limitations on odorous substances and specific emission limitations on certain odorous compounds. A person (or facility) must meet all limitations of this regulation but meeting such limitations shall not exempt such person from any other requirements of BAAQMD, state, or national law. The limitations of this regulation shall not be applicable until BAAQMD receives odor complaints from 10 or more complainants within a 90-day period, alleging that a person has caused odors perceived at or beyond the property line of such person and deemed to be objectionable by the complainants in the normal course of their work, travel, or residence. When the limits of this regulation become effective, as a

result of citizen complaints described above, the limits shall remain effective until such time as no citizen complaints have been received by BAAQMD for 1 year. The limits of this Regulation shall become applicable again if BAAQMD receives odor complaints from five or more complainants within a 90-day period. BAAQMD staff investigate and track all odor complaints it receives and make attempts to visit the site and identify the source of the objectionable odor and assist the owner or facility in finding a way to reduce the odor.

- **Regulation 8, Rule 3, Architectural Coatings.** Limits the quantity of volatile organic compounds in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within BAAQMD.

Under BAAQMD Regulation 2, Rule 1, "General Permit Requirements" and Regulation 2, Rule 2, "New Source Review," all sources that possess the potential to emit TACs are required to obtain permits from BAAQMD. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including new-source-review standards and air-toxics control measures.

To implement the Hot Spots Information and Assessment Act in its jurisdiction, BAAQMD requires all stationary sources of TACs that are determined to generate an incremental increase in cancer risk that exceeds 10 in one million or a non-cancer chronic or acute risk level that exceeds a hazard index of 1.0 (using the conservative estimates of screening-level analysis) to perform a detailed, formal health risk assessment (HRA). A hazard index is the ratio of the average short term (generally 1 hour) ambient concentration of a toxic substance(s) divided by the reference exposure level set by the Office of Environmental Health Hazard Assessment (OEHHA). If the ratio exceeds 1.0, then adverse health effects may occur (CAPCOA 2009:iii).

The BAAQMD's Community Air Risk Evaluation (CARE) program estimates and reports both local and regional impacts of TACs in the SFBAAB. The CARE program identifies areas with high concentrations of air pollution and populations most vulnerable to air pollutions impacts. Sunnyvale, including the project area, is not listed as a location with high concentrations of TACs.

The CCAA requires that all local air districts in the State endeavor to achieve and maintain the CAAQS in their region by the earliest practical date. The CCAA specifies that local air districts should focus attention on reducing the emissions from transportation and area-wide emission sources and provides districts with the authority to regulate indirect sources. To achieve the CAAQS, BAAQMD prepares and updates air quality plans on a regular basis. The air quality plans published by BAAQMD and other local air districts in the State are incorporated into California's SIP Strategy and meet CAA requirements.

For State air quality planning purposes, the SFBAAB is classified as a serious non-attainment area with respect to the 1-hour ozone standard. The "serious" classification triggers various plan submittal requirements and transportation performance standards. One such requirement is that BAAQMD update its Clean Air Plan every three years to reflect progress in meeting the NAAQS and CAAQS and to incorporate new information regarding the feasibility of control measures and new emission inventory data. BAAQMD's record of progress in implementing previous measures must also be reviewed. BAAQMD prepared these plans in cooperation with the Metropolitan Transportation Commission and the Association of Bay Area Governments. On April 19, 2017, BAAQMD adopted the most recent revision to the Clean Air Plan, titled the *2017 Clean Air Plan: Spare the Air, Cool the Climate* (BAAQMD 2017a). This plan serves to:

- define a vision for transitioning the region to a post-carbon economy needed to achieve 2030 and 2050 greenhouse gas reduction targets;
- decrease emissions of air pollutants most harmful to Bay Area residents, such as particulate matter, ozone, and TACs;
- reduce emissions of methane and other potent climate pollutants; and
- decrease emissions of carbon dioxide by reducing fossil fuel combustion.

City of Sunnyvale General Plan

The following policies are applicable to the project related to air quality.

- **Policy LT-1.10d**: Work with regional agencies on land use and transportation issues that affect the human environment, such as air, water, and noise, for Sunnyvale residents and businesses.
- **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 EM-11.2:** Utilize land use strategies to reduce air quality impact, including opportunities for citizens to live and work in close proximity.
- **Policy EM-11.3:** Require all new development to utilize site planning to protect citizens from unnecessary exposure to air pollutants.
- **Policy EM-11.4:** Apply the Indirect Source Rule to new development with significant air quality impacts. Indirect Source review would cover commercial and residential projects as well as other land uses that produce or attract motor vehicle traffic.
- **Policy EM-11.5:** Reduce automobile emissions through traffic and transportation improvements.
- **Policy EM-11.6:** Contribute to a reduction in Regional Vehicle Miles Traveled.
- **Policy EM-11.8:** Assist employers in meeting requirements of Transportation Demand Management (TDM) plans for existing and future large employers and participate in the development of TDM plans for employment centers in Sunnyvale.

Lawrence Station Area Plan

The adopted LSAP includes the following goals and policies related to air quality.

- **LU-G5:** Provide a mix of uses within the Plan area that encourages transit ridership, creates a neighborhood of 24-hour activity and supports the provision of amenities such as open space and support services such as retail.
- **LU-P3:** Allow transition to higher density transit-supportive uses as opportunities arise through turnover of businesses or property ownership.
- **H-G1:** Provide sufficient housing in the Plan area to support an increase rail transit ridership.
- **R-G4:** Provide retail that is convenient and accessible to pedestrians and transit users.
- **R-G5:** Do not encourage auto-oriented and auto serving retail.
- **OSG-1:** Establish a system of parks and public spaces connected by green corridors and linear parks that serve and connect both new residential development and new non-residential development.
- **OSG-2:** Provide open space within a five- to ten minute walk of all residents and employees.
- **OSG-3:** Connect open space areas to local and regional bikeways and trail networks to the greatest extent possible.
- **OSP-4:** Provide pedestrian and bicycle amenities on all Green Streets, including abundant landscaping, Class I or Class II bicycle facilities, lighting and intersection amenity and safety improvements.
- **D-G1:** Develop the Plan area with a diverse mix of uses at intensities sufficient to support and take advantage of the significant existing public investment in transit.
- **CF-G1:** Create a complete, multi-modal transportation network the supports a mixed-use neighborhood throughout the Plan area.

- **CF-G2:** Create a balanced circulation system that is accessible to all modes of travel and does not favor one mode over another.
- **CF-G3:** Create a street and block framework that provides a variety of vehicular access options and is scaled to pedestrians.
- **CF-G5:** Improve access to bus and rail transit by all modes of travel.
- **CF-G6:** Create streets (both new and improved) that are comfortable and convenient for pedestrians, so walking is a pleasure and accessing residences and businesses is easy.
- **CF-G7:** Make the area in and around the station bicycle-friendly, so residents and employees of all ages and abilities can feel comfortable and secure biking to work, services, and for recreation.
- **CF-P1:** In the residential areas south of the Caltrain tracks, retain the existing framework of streets and blocks. Improve streets connections to the residential areas south of the Caltrain tracks to provide safer street crossings and minor access improvements for pedestrians, bicycles and transit users.
- **CF-P12:** Provide a wide, landscaped pedestrian sidewalk zone, continuous Class II bicycle lanes, on-street parking and transit stops continuously along Kifer Road in the Plan area.
- **P-G1:** Provide safe, inviting, and attractive pedestrian connections for residents, workers and visitors to Lawrence Station and other key destinations in the Plan area.
- **P-P1:** Promote walking access through new street connections.
- **P-P2:** Provide two new Caltrain track crossings for pedestrians and bicyclists: one at the Calabazas Creek Trail (per study by the City of Santa Clara); the other west of Lawrence Expressway aligning with and connecting to The Loop near the western end of Sonora Court.
- **P-P3:** Facilitate pedestrian access and safety along key pedestrian corridors through pedestrian enhancements, including crosswalk enhancements, sidewalk extensions (bulbouts), and wider sidewalks.
- **P-P4:** Provide enhanced crosswalks on all legs of signalized intersections and at key pedestrian crossing locations.
- **P-P5:** Provide new pedestrian crossings, including potential mid-block crosswalks, on Reed Avenue, Kifer Road, and The Loop.
- **P-P6:** Provide sidewalk extensions (bulbouts) on all new streets, where feasible, and on select existing streets along primary pedestrian corridors.
- **B-P1:** Require property development to provide Class I and Class II bicycle facilities to fill in the gaps in the existing and planned bicycle network.
- **B-P2:** Provide direct Class I and Class II bicycle connections to the future Calabazas Creek Trail from The Loop.
- **B-P3:** Provide direct Class I multi-use public linkages between The Loop in the northeast quadrant of the Plan area to the Calabazas Creek Trail at spacings not to exceed 400 feet.
- **B-P4:** Connect new neighborhood open spaces with publicly-accessible streets, bicycle facilities and pedestrian linkages.
- **B-P5:** Install bicycle detection loops at signalized intersections.
- **B-P6:** Provide Class I or Class II bicycle parking per Lawrence Station Area Plan bicycle parking requirements.
- **B-P7:** Implement a bicycle sharing program.
- **PT-P4:** Provide bus stops with bus pull-outs, shelters, furnishings, lighting and signage along the Primary Loop Road and all other bus transit streets in the Plan area.
- **PT-P5:** Locate bus stops on the Primary Loop Road approximately every ¼-mile (1,300 feet).

- **TDM-P2:** Achieve a daily trip reduction target of 20 percent and a peak hour trip reduction target of 30 percent for new Office/R&D development.
- **TDM-P3:** Achieve a peak hour trip reduction of 5 percent for new retail and residential development.
- **PK-G1:** Manage future parking supply so that it promotes and supports transit ridership as well as the needs of local retail, employment and residential uses.
- **PK-P1:** Adopt specific parking requirements for all new development in the Plan area.
- **PK-P3:** Establish a shared parking program in advance of development, with the following features:
  - a) Require developers to submit a shared parking analysis.
  - b) Allow new development to either provide sufficient off-street parking supply to meet the incremental increase in parking demand associated with the proposed project, and/or lease parking spaces from earlier parcel owners who have available parking located adjacent to the development parcel (within ¼ mile radius or closer).
  - c) Require new residential development to provide no more than 1.7 parking spaces per residential unit for exclusive use by residents. Additional parking supply that may be needed for the development shall be provided in shared facilities that will be required to be open to all users, including transit station patrons.
  - d) Price shared parking facilities according to market conditions, and encourage management by either the parcel owner, or the Plan area Parking Management District.
  - e) Consider allowing on-street parking spaces to be added as part of the development of a parcel to count towards a project's required shared parking supply, but do not allow it to be used as reserved spaces for residential uses.
  - f) Verify the accuracy of the parking demand estimates of the shared parking model based on interim parking demand counts over the course of the build-out of the Plan area. Conduct parking counts during the peak parking demand period as identified in the shared parking analysis: weekday afternoons in December. Parking ratios in the shared parking model shall be calibrated to the parking demand counts if there is a significant discrepancy.
- **PMP-4:** Plan for structured parking as demand increases. This can be in the form of a stand-alone parking structure for nearby users, or shared parking integrated with residential or office/R&D uses.
- **PMP-5:** Unbundle parking costs from property or lease costs.
- **PMP-6:** Provide parking spaces at the Lawrence Caltrain Station for the exclusive use of car sharing vehicles.
- **PMP-7:** Implement a parking pricing system as demand for parking in the area increases.
- **PMP-8:** Establish a residential parking permit (RPP) program in the Plan area in the future if / when analysis demonstrates a need for such measures.
- **STP-UDG1:** Plant street trees on all streets
- **L-UDG4:** Utilize energy-efficient lighting, such as light-emitting diode (LED) bulbs.

3.2.2 Environmental Setting

The 2016 LSAP EIR provides an overview of the regional topography, meteorology, climate, and air pollutants of concern on pages 3.5-1 through 3.5-7, which adequately describes the conditions throughout the LSAP, including the ISI expansion site. The following section describes the project's environmental setting since the adopted 2016 LSAP EIR and includes additional information applicable to the project's impact analysis.

MONITORING STATION DATA AND ATTAINMENT DESIGNATIONS

The attainment status of criteria air pollutants with respect to the NAAQS and CAAQS in Santa Clara County are shown in Table 3.2-2. Monitoring data representative of ambient air concentrations in the project area are provided in Table 3.2-3.

Table 3.2-2 Attainment Status Designations for Santa Clara County

Pollutant	NAAQS	CAAQS
Ozone	Attainment (1-hour)[1]	Nonattainment (1-hour) Classification[2]
	Nonattainment (8-hour)[3] Classification – Marginal	Nonattainment (8-hour)
	Nonattainment (8-hour)[3] Classification – Marginal	Nonattainment (24-hour)
Respirable particulate matter (PM_{10})	Attainment (24-hour)	Nonattainment (24-hour)
	Attainment (24-hour)	Nonattainment (Annual)
Fine particulate matter ($PM_{2.5}$)	Nonattainment (24-hour)	(No State Standard for 24-Hour)
	Nonattainment (Annual)	Nonattainment (Annual)
Carbon monoxide (CO)	Attainment (1-hour)	Attainment (1-hour)
	Attainment (8-hour)	Attainment (8-hour)
Nitrogen dioxide (NO_2)	Unclassified/Attainment (1-hour)	Attainment (1-hour)
	Unclassified/Attainment (Annual)	Attainment (Annual)
Sulfur dioxide (SO_2)[4]	(Attainment) (1-Hour)	Attainment (1-hour)
	Attainment (3-month rolling avg.)	Attainment (24-hour)
Lead (Particulate)	Attainment (3-month rolling avg.)	Attainment (30-day average)
Hydrogen Sulfide	No Federal Standard	Unclassified (1-hour)
Sulfates		Attainment (24-hour)
Visibly Reducing Particles		Unclassified (8-hour)
Vinyl Chloride		Unclassified (24-hour)

Notes: NAAQS = national ambient air quality standards; CAAQS = California ambient air quality standards

[1] Air Quality meets federal 1-hour Ozone standard (77 FR 64036). EPA revoked this standard, but some associated requirements still apply. SMAQMD attained the standard in 2009. SMAQMD has requested EPA recognize attainment to fulfill the requirements.

[2] Per Health and Safety Code Section 40921.5(c), the classification is based on 1989–1991 data, and therefore does not change.

[3] 2015 Standard.

[4] 2010 Standard.

Sources: EPA 2019; CARB 2018a

Criteria air pollutant concentrations are measured at several monitoring stations in the SFBAAB. The San Jose-Jackson Street monitoring station, the station closest to the project are and most representative, has recent data for ozone, PM_{10}, and $PM_{2.5}$. Table 3.2-3 summarizes the air quality data from the last 3 years (2016-2018).

Table 3.2-3 Summary of Annual Data on Ambient Air Quality – San Jose-Jackson Street Monitoring Station (2016-2018)

	2016	2017	2018
Ozone			
Maximum concentration (1-hr/8-hr avg, ppm)	0.087/0.067	0.121/0.099	0.078/0.061
Number of days State standard exceeded (1-hr/8-hr)	0/0	3/4	0/0
Number of days national standard exceeded (8-hr)	0	4	0
Fine Particulate Matter ($PM_{2.5}$)			
Maximum concentration ($\mu g/m^3$)	22.7	49.7	133.9
Number of days national standard exceeded (24-hour measured)	0	6.0	15.5
Respirable Particulate Matter (PM_{10})			
Maximum concentration ($\mu g/m^3$)	40.0	69.4	155.8
Number of days State standard exceeded	0	19.2	12.2
Number of days national standard exceeded	0	0	3.1

Notes: $\mu g/m^3$ = micrograms per cubic meter; ppm = parts per million

Source: CARB 2020

ODORS

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Odor sources of concern include wastewater treatment plants, sanitary landfills, composting facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting operations, rendering plants, and food packaging plants (BAAQMD 2017b:3-4). None of these odorous land uses are within the LSAP area.

SENSITIVE RECEPTORS

Sensitive receptors are generally considered to include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the elderly. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and/or the potential for increased and prolonged exposure of individuals to pollutants.

The closest sensitive receptors to the ISI project are the multi-family residences approximately 120 feet south of the ISI project site, across the railroad tracks. In addition, the ISI project would include a temporary concrete batch plant that would be located in the northern portion of the South Site, approximately 400 feet north of the nearest multi-family residences. The plan area is bordered by commercial and industrial land uses to the east, west, and north; however, these would not be considered sensitive receptors. Additional information on project sensitive receptors can be found in Appendix D.

3.2.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

Regional and local criteria air pollutant emissions and associated impacts, as well as impacts from TACs, CO concentrations, and odors were assessed in accordance with BAAQMD-recommended methodologies. The projects' emissions are compared to BAAQMD-adopted thresholds. Construction and operational emissions of criteria air pollutants and precursors were calculated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 computer program (CAPCOA 2017).

LSAP Update

Since the adoption of the 2016 LSAP EIR, CalEEMod has been updated to a newer model version. The 2016 LSAP EIR emissions were modeled using CalEEMod Version 2013.2.2, while the latest modeling version is 2016.3.2. In addition, since the adoption of the 2016 LSAP EIR various State and federal policy measures have been either enacted or updated such as California's Building Energy Efficiency Standards Title 24 Parts 6 and 11, the State increase in renewable energy sources, and the State's fuel efficiency standards under the SAFE Rule. Default vehicle emissions factors in CalEEMod were adjusted based on updated EMFAC SAFE Rule emission factors. In order to evaluate emissions of the LSAP Update with the conditions of the 2016 LSAP EIR, the land uses proposed in the 2016 LSAP EIR were remodeled with the mentioned policy measures applied. Modeling assumptions and outputs can be found in Appendix D.

Because of the unknown variability of the future development, including project-specific land use development size/type and construction schedules, under the LSAP Update, air quality emissions from future, short-term construction activities are unable to be determined. Therefore, short-term construction emissions were not quantified. For future developments proposed under the LSAP Update that may result in project-level threshold exceedance, mitigation measures are recommended.

Operational-related impacts were evaluated according to the increase in residential dwelling units, VMT, and population compared to the 2016 LSAP EIR. VMT was estimated using CalEEMod Version 2016.3.2 default trip rates with the application of trip reductions due to the plan's proposal to increase transit accessibility. Population for the LSAP Update was determined based on the 2016 LSAP EIR 2.42 residents per dwelling unit factor applied to the total number of proposed residential units.

Since the 2016 LSAP Update was adopted, the plan-level health risk from construction- and operational-related TAC emissions exposure has not changed due to project-specific information not available. Therefore, a plan-level TAC analysis was conducted, similar to the analysis in the 2016 LSAP EIR based on the proximity of TAC-generating activity to off-site sensitive receptors and the duration of potential TAC exposure.

The assessment of odor-related impacts is based on the types of odor sources associated with the land uses that would be developed under the LSAP Update and their location relative to existing off-site sensitive receptors.

ISI Project

Modeling was based on project-specific information (e.g., building square footage, construction schedule) where available, reasonable assumptions based on typical construction activities, and default values in CalEEMod that are based on the project's location and land use type.

The assumed CalEEMod land use types and sizes can be found in Appendix D. Construction for the ISI project is anticipated to begin in late 2021 and projected out over a three-year time frame and would include demolition, site preparation, grading, trenching, building construction, architectural coating, and paving. Additional construction activities include the operation of a concrete batch plant and rock crushing. The concrete batch plant was estimated to process a total of 138,000 cubic yards of concrete over a duration of 22 months. Rock crushing was estimated to occur for 30 days with an estimated weight of 50,000 tons. Additional project features include the total demolition of 8,558 tons of building and concrete material as well as the export of 570,000 cubic yards of soil. Construction equipment, vendor and worker trips were based on CalEEMod defaults.

Operational emissions of criteria air pollutants and precursors were estimated using project-specific information, where available, and default values in CalEEMod based on the ISI project's location, land use, and build out year of 2024. Mobile-source emissions were modeled in CalEEMod Version 2016.3.2 using the number of project-generated vehicle trips provided by the traffic analysis and ITE's Trip Generation Manual provided in Appendix D and used to support the impact analyses in Section 3.14, "Transportation." Because the ISI project is located approximately a half mile distance to a transit station, the CalEEMod trip reduction measure was applied to the ISI project. The ISI project was compared to the site's existing uses to determine the overall net emissions of the project. Modeling of the existing site was based on the occupancy of 105,000 square feet of office/R&D use. Additional features of the existing site were modeled based on CalEEMod defaults with historical energy rates applied. The ISI project does not propose use of natural gas and therefore was excluded from the operational emission. Specific model assumptions and inputs for both the ISI project and the existing site can be found in Appendix D.

Using the screening criteria set forth by BAAQMD and results of daily trips estimated in CalEEMod, the level of health risk from exposure to construction- and operation-related TAC emissions was assessed based on the HRA analysis conducted by Kimley-Horn and Associates, Inc. (2020) provided in Appendix D. The HRA analysis was based on the proximity of TAC-generating construction activity to off-site sensitive receptors, the number and types of diesel-powered construction equipment being used, and the duration of potential TAC exposure. An operational-related TAC exposure assessment was based on the ISI project's introduction of new sources of TAC-generated activities to off-site receptors.

The assessment of odor-related impacts is based on the types of odor sources associated with the land uses that would be developed under the ISI project and their location relative to existing off-site sensitive receptors.

THRESHOLDS OF SIGNIFICANCE

BAAQMD adopted thresholds of significance in 2010, but these thresholds were subject to a series of lawsuits, including whether the development of the thresholds was itself a project that should be subject to CEQA evaluation, and whether the thresholds could be used to determine if existing environmental hazards could result in significant impacts to projects exposed to these hazards. None of the lawsuits addressed the merits of the thresholds themselves. BAAQMD explains that "The Guidelines for implementation of the Thresholds are for informational purposes to assist local agencies…These Guidelines may inform environmental review for development projects in the Bay Area, but do not commit local governments or the Air District to any specific course of regulatory action" (BAAQMD 2018). Although these thresholds remain unadopted, they provide the most current evidence upon which to base significance conclusions related to air quality and are used herein as the basis for determining significant impacts.

BAAQMD's air quality thresholds of significance are tied to achieving or maintaining attainment designations with the NAAQS and CAAQS. The BAAQMD's project level thresholds, which are scientifically substantiated, are numerical concentrations of criteria air pollutants considered to be protective of human health. At the project level, implementation would have a significant impact related to air quality such that human health would be adversely affected if it would:

- cause daily average construction-generated criteria air pollutant or precursor emissions to exceed 54 pounds per day (lb/day) for ROG and NO_X, 82 lb/day for PM_{10} exhaust, and 54 lb/day for $PM_{2.5}$ exhaust, or substantially contribute to emission concentrations (e.g., PM_{10}, $PM_{2.5}$) that exceed applicable NAAQS or CAAQS;
- cause daily average long-term criteria air pollutant or precursor emissions to exceed 54 lb/day or 10 tons per year (tons/year) of ROG and NO_X, 82 lb/day or 15 tons/year for PM_{10} exhaust, and 54 lb/day or 10 tons/year for $PM_{2.5}$ exhaust, or substantially contribute to emission concentrations (e.g., PM_{10}, $PM_{2.5}$) that exceed the applicable NAAQS or CAAQS;
- not implement BAAQMD's Basic Construction Mitigation Measures for dust emissions (e.g., PM_{10} and $PM_{2.5}$);
- result in long-term operational local mobile-source CO emissions that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 parts per million (ppm) or the 8-hour CAAQS of 9 ppm (SMAQMD 2015);

- expose sensitive receptors to a substantial incremental increase in TAC emissions that exceed 10 in one million for carcinogenic risk (i.e., the risk of contracting cancer) and/or a noncarcinogenic hazard index of 1.0 or greater and/or a chronic or acute hazard index of 1; or
- result in other emissions (such as those leading to odors) adversely affecting a substantial number of people (i.e., five confirmed complaints per year averaged over 3 years).

According to the BAAQMD CEQA Guidelines, for a plan-level analysis to identify whether a violate of any ambient air quality standard or contribute substantially to an existing or projected air quality violation, the proposed plan must demonstrate consistency with the control measures of the most recent revision to the Clean Air Plan, the *2017 Clean Air Plan: Spare the Air, Cool the Climate.* The plan must also show that the projected vehicle miles traveled (VMT) increases as a result of the plan are less than or equal to projected population increases over the planning period of the plan.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: Cause Construction-Generated Criteria Air Pollutant or Precursor Emissions to Exceed BAAQMD-Recommended Thresholds

The 2016 LSAP EIR determined that with implementation of Mitigation Measures 3.5.3a and 3.5.3b, construction emissions would be significant and unavoidable due to unknown construction details. Similar to the adopted LSAP, construction-generated criteria air pollutant and precursor emissions are unknown for the LSAP Update due to the uncertainties of future construction of individual projects proposed under the LSAP Update. Furthermore, because the LSAP Update would increase allowable housing potential within the LSAP and no change to allowable density of other land uses are proposed within the LSAP, the anticipated construction schedule of subsequent developments would be similar and would not result in substantially greater daily construction emissions than what was analyzed in the 2016 LSAP EIR. Thus, the LSAP Update would not result in a new or substantially more severe construction-related air quality impact beyond what was identified in the 2016 LSAP EIR. Construction of the ISI project would result in project-generated emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ from construction phase activity, material and equipment delivery trips, worker commute trips, and other miscellaneous activities (e.g., application of architectural coatings). Implementation of the ISI project would require adopted Mitigation Measures 3.5.3a and 3.5.3b, with the addition of Mitigation Measure 3.2-1 to reduce NO_X emissions. However, with mitigation applied, ISI construction-related emissions would continue to exceed BAAQMD's threshold for NO_X. Similar to the 2016 LSAP EIR, the LSAP Update and ISI project would result in a **significant and unavoidable** impact to air quality.

Impact 3.5.3 of the 2016 LSAP EIR evaluated whether the plan would contribute to an air quality violation during construction activities. The 2016 LSAP EIR concluded that due to the unknown extent of construction that may occur at any specific period of time, it is unknown and whether Mitigation Measures 3.5.3a and 3.5.3b would fully mitigate the impact. Given this uncertainty, this impact is significant and unavoidable.

Adopted LSAP Mitigation Measure 3.5.3a

Prior to the issuance of grading or building permits, the City of Sunnyvale shall ensure that the BAAQMD's basic construction mitigation measures from Table 8-1 of the BAAQMD 2011 CEQA Air Quality Guidelines (or subsequent updates) are noted on the construction documents. These basic construction mitigation measures include the following:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
7. A publicly visible sign shall be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Adopted LSAP Mitigation Measure 3.5.3b

In the cases where construction projects are projected to exceed the BAAQMD air pollutant significance thresholds for NO_X, PM_{10}, and/or $PM_{2.5}$, all off-road diesel-fueled equipment (e.g., rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors) shall be at least CARB Tier 3 Certified or better.

LSAP Update

The LSAP Update would increase the potential for residential units within the LSAP by an additional 3,612 residential units. However, overall construction duration would be similar to what was previously evaluated, and daily construction activities would not be substantially greater than what was analyzed in the 2016 LSAP EIR. The construction activities would generate emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ from construction activities such as demolition, off-road equipment, material hauling, worker trips, and other miscellaneous activities (e.g., application of architectural coatings). Fugitive dust emissions of PM_{10} and $PM_{2.5}$ would be associated primarily with demolition and vary as a function of soil silt content, soil moisture, wind speed, and acreage of disturbance. PM_{10} and $PM_{2.5}$ are also contained in exhaust from off-road equipment and on-road vehicles. Emissions of ozone precursors, ROG and NO_X, would be associated primarily with construction equipment and on-road mobile exhaust. The application of architectural coatings results in off-gas emissions of ROG.

As described in Impact 3.5.3 of the 2016 LSAP EIR, quantifying air pollutant emissions from future construction activities under the proposed plan area is speculative due to the uncertainties and variability of individual projects, including project-specific land use development size/type and construction schedules. As such, the BAAQMD does not provide a threshold of significance for plan-level construction analysis. Individual projects proposed under the LSAP Update would need to be analyzed on a project-by-project basis according to BAAQMD project-level thresholds of significance. According to BAAQMD's CEQA Guidelines (2017), all construction projects are required to implement all *Basic Construction Mitigation Measures* whether construction-related emissions exceed project-level thresholds or not. Furthermore, the *Basic Construction Mitigation Measures* would be required by the 2016 LSAP EIR Mitigation Measure 3.5.3a. For projects that exceed the District's construction-related thresholds, 2016 LSAP EIR Mitigation Measure 3.5.3b would be required to reduce emissions from off-road diesel equipment. If additional mitigation is needed to reduce emissions below the District's thresholds, project mitigation will need to be evaluated on a project-by-project basis.

Similar to buildout capacity analyzed in the 2016 LSAP EIR, project specific construction details under the LSAP Update are unknown and have the potential to exceed significance thresholds and contribute to a nonattainment designation in the SFBAAB and exacerbate health risk. The LSAP Update does not proposed a change in the overall nature of the plan from what was evaluated in the 2016 LSAP EIR. Although the LSAP Update would result in an increase in residential units, daily construction activity would not be substantially greater. Implementation of the LSAP Update would not result in a new or substantially more significant impact than the impact identified in the 2016 LSAP EIR. With implementation of adopted LSAP Mitigation Measures 3.5.3a and 3.5.3b, the impact to air quality would remain **significant and unavoidable**.

ISI Project

Construction activities for the ISI project are anticipated to begin in late 2021 and last approximately three years. All construction equipment for the ISI project is to be certified with Tier 4 engines to be consistent with the LSAP off-road diesel fuel equipment engine requirements. Assumed construction activities, their duration, and equipment mix can be found in Appendix D.

Table 3.2-4 summarizes the modeled average daily emissions from construction activities over the estimated three-year construction period. As shown in Table 3.2-4, daily emissions of NO_X would exceed the respective thresholds. Construction emissions were modeled assuming a construction start date in late 2020 and ending late 2023. Construction timing has now been revised to begin in late 2021 and end in late 2024. As a result, the emissions identified in Table 3.2-4 are overstated. Emissions during the revised timeframe would be reduced because construction equipment would be more efficient as a result of technological advances over time. However, with a later timeframe, it is assumed NO_X emissions would still exceed significance thresholds.

The addition of NO_X, which is a precursor to ozone, could result in an increase in ambient concentrations of ozone in the SFBAAB, and moreover, increase the likelihood that ambient concentrations exceed the CAAQS and NAAQS. As summarized in the 2016 LSAP EIR (page 3.5-4, Table 3.5-1), human exposure to ozone may cause acute health impacts including inflammation of the mucous membranes and lung airways; wheezing, coughing, and pain when inhaling deeply; decreased lung capacity; and lung and heart problems. However, it would be misleading to correlate the levels of criteria air pollutant and precursor emissions associated with implementation of the ISI project to specific health outcomes for sensitive receptors. While the description of effects noted above could manifest in the recipient receptors, actual effects on individuals depend on individual factors, such as life stage (e.g., older adults are more sensitive), preexisting cardiovascular or respiratory diseases, and genetic polymorphisms. Even armed with this type of specific medical information (which is confidential to the individual), there are wide ranges of potential outcomes from exposure to ozone precursors and particulates, from no effect to the effects described above. In addition, the models used to predict health outcomes from criteria air quality emissions are designed to evaluate the health impacts of long-term exposure on a regionwide or citywide basis rather than exposure from any single project. Therefore, other than determining the types of health effects that could occur, it would be speculative to more specifically correlate exposure to criteria air pollutant and precursors from this project to specific health outcomes for sensitive receptors. When evaluating emissions of air pollutants against BAAQMD's thresholds, it is conservatively possible that health complications associated with ozone could be exacerbated by construction-generated emissions.

Table 3.2-4 Summary of the ISI Project's Unmitigated Average Daily Construction-Generated Emissions of Criteria Air Pollutants and Precursors by Construction Year

Year[1]	ROG (lb/day)	NO_X (lb/day)	PM_{10} Exhaust (lb/day)	$PM_{2.5}$ Exhaust (lb/day)
2020	2	13	<1	<1
2021	10	101	<1	<1
2022	35	135	1	<1
2023	44	77	<1	<1
Average Daily Emissions	**29**	**104**	**<1**	**<1**
Threshold of Significance	54	54	82	54
Exceeds Average Daily Threshold	No	Yes	No	No

Notes: lb/day = pounds per day; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; ROG = reactive organic gases.

1. Construction activities are expected to overlap. As such, average daily emission levels are summarized by year.

See Appendix D for detailed input parameters and modeling results.

Source: Modeling conducted by Ascent Environmental in 2020.

Because the ISI project's construction phase emissions would exceed BAAQMD's average daily threshold for NO_X, the ISI project would contribute to the nonattainment of ozone in the SFBAAB and could therefore increase the potential for, adverse health impacts to receptors from exposure to ozone. Similar to the 2016 LSAP EIR and with required implementation of adopted Mitigation Measures 3.5.3a and 3.5.3b, construction of the ISI project would exceed BAAQMD's thresholds. This would be a **significant** impact.

Mitigation Measures

Mitigation Measure 3.2-1: Reduce construction-related NO_X emissions for the ISI project

The applicant shall require its construction contractors to use high-performance renewable diesel (HPRD) fuel for diesel-powered construction equipment, to the extent available. Any HPRD product that is considered for use by the construction contractor shall comply with California's Low Carbon Fuel Standards. HPRD fuel must meet the following criteria:

- be hydrogenation-derived (reaction with hydrogen at high temperatures) from 100 percent biomass material (i.e., nonpetroleum sources), such as animal fats and vegetables,
- contain no fatty acids or functionalized fatty acid esters, and
- have a chemical structure that is identical to petroleum-based diesel which ensures HPRD will be compatible with all existing diesel engines; it must comply with American Society for Testing and Materials D975 requirements for diesel fuels.

Significance after Mitigation

For the LSAP Update component, implementation of adopted LSAP Mitigation Measures 3.5.3a and 3.5.3b is required. However, it is currently unknown the extent of construction that may occur at any specific period of time to determine whether the mitigation measures would fully mitigate this temporary impact below BAAQMD thresholds. For the ISI project component, the use of HPRD can reduce NO_X emissions by approximately 10 percent and PM_{10} exhaust emissions by approximately 30 percent (CalEPA 2013). With the application of renewable diesel fuel use, ISI project construction would still remain above the NO_X threshold (i.e., 54 lb/day). Because the use of HPRD would not reduce NO_X emissions to below 54 lb/day, the ISI project would contribute to a nonattainment designation of ozone and could potentially result in an adverse health impact to receptors. Therefore, with the implementation of adopted Mitigation Measures 3.5.3a and 3.5.3b and the addition of Mitigation Measure 3.2-1, the LSAP Update and ISI project would result in a **significant and unavoidable** impact to air quality, but these impacts are not new or substantially more significant than the impacts identified in the 2016 LSAP EIR.

Impact 3.2-2: Result in a Net Increase in Long-Term Operational Criteria Air Pollutant and Precursor Emissions that Exceed BAAQMD-Recommended Thresholds

The 2016 LSAP EIR determined operation of the LSAP would be consistent with the BAAQMD's 2010 Clean Air Plan and VMT would increase at a lower rate than population growth in comparison to existing conditions and would not contribute to an air quality violation during long-term operations. Similar to the adopted LSAP, the LSAP Update would be consistent with the BAAQMD's most recent Clean Air Plan's control measures developed to reduce criteria air pollutants and precursors. In addition, the projected VMT would result in a lower percent increase than the projected population. Because the LSAP Update would not violate applicable thresholds, the LSAP Update would not contribute to non-attainment designations of the SFBAAB. Therefore, the LSAP Update would not result in a new or substantially more severe operational-related air quality impact beyond what was identified in the 2016 LSAP EIR. Although the ISI project's operations would result in the generation of long-term operational emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$, the emissions would not exceed BAAQMD's thresholds of significance (54 lb/day for ROG, 54 lb/day for NO_X, 82 lb/day for PM_{10} exhaust, and 54 lb/day for $PM_{2.5}$ exhaust). The ISI project was determined to not exceed respected thresholds and would not contribute to a non-attainment status of the SFBAAB. The LSAP Update and ISI project would not result in a new or substantially more significant operational-related air quality impact beyond what was identified in the 2016 LSAP EIR. Long-term operational air quality impacts of the project would be **less than significant**.

Impact 3.5.2 of the 2016 LSAP EIR evaluated whether operation of the LSAP would contribute to an air quality violation during long-term operations. The 2016 LSAP EIR concluded that the LSAP would not conflict with the Bay Area 2010 Clean Air Plan since the expected VMT increase would not exceed the projected population increase. Because the LSAP is consistent with the BAAQMD guidance. the 2016 LSAP EIR concluded the impact from long-term operations is less than significant.

LSAP Update

A consistency analysis with the BAAQMD's control measures in the District's Clean Air Plan, the *2017 Clean Air Plan: Spare the Air, Cool the Climate,* was conducted to determine whether the LSAP Update would result in long-term operational impacts. The *2017 Clean Air Plan* includes 85 control measures that are designed to reduce criteria air pollutants and precursors and TACs. Like the 2016 LSAP EIR, control measures of the most current Clean Air Plan were compared to the goals and policies of the LSAP Update to determine consistency. Table 3.2-5 demonstrates the consistency between the most applicable Clean Air Plan control measures with the adopted LSAP's goals and policies.

Table 3.2-5 LSAP Update Consistency with Clean Air Plan Control Strategies

2017 Clean Air Plan	Adopted LSAP Policies & Guidelines
Transportation Control Measures	
TR3 - Local and Regional Bus Service	LU-G5, LU-P3, H-G1, R-G4, D-G1, CF-G5, CF-P1, PT-P4, & PT-P5
TR4 - Local and Regional Rail Service	
TR2 - Trip Reduction Programs	OSG-1, OSG-2, OSG-3, OSP-4, CF-G1, CF-G2, CF-G3, CF-G6, CF-G7, CF-P1, CF-P12, P-G1, P-P1, P-P2, P-P3, P-P4, P-P5, PP6, B-P1, B-P2, B-P3, B-P5, B-P6, B-P7, TDM-P2, TDM-P3, & TDM-P4, ST-G3
TR7 - Safe Routes to Schools and Safe Routes to Transit	
TR8 - Ridesharing, Last-Mile Connection	
TR12 - Smart Driving	
TR15 - Public Outreach and Education	
TR9 - Bicycle and Pedestrian Access and Facilities	LU-G5, LU-P3, R-G4, R-G5, D-G1, CF-G2, CF-G3, CF-G7, PG1, P-P1 P-P2, P-P3, P-P4, P-P5, P-P6, B-P1, B-P2, B-P3, BP4,B-P5, B-P6, B-P7
TR10 - Land Use Strategies	
TR11 - Value Pricing	PK-G1, PK-P1, PK-P3, PMP-4, PMP-5, PMP-6, PMP-7, & PMP-8
TR13 - Parking Policies	
Energy Control Measures	
EN2 - Decrease Electricity Demand	L-UDG4, BM-UDG4, BM-UDG6, BM-UDG7, STP-UDG1
Building Control Measures	
BL1 - Green Buildings	L-UDG4, BM-UDG3, BM-UDG4, BM-UDG 5, BM-UDG6, BM-UDG7
BL2 - Decarbonize Buildings	
BL3 - Market-Based Solutions	
BL4 - Urban Heat Island Mitigation	OSG-1, OSG-2, OSG-3, OSP-1, OSP-3, OSP-5, OSP-6, U-P1, BM-UDG 5, BM-UDG6, OS-G2, PK-UDG9, STP-UDG1
Water Control Measures	
WR2 - Support Water Conservation	U-P7, U-P8, U-P09

Operational-related criteria air pollutants and precursors were also evaluated to determine whether the plan would result in VMT or vehicle trip increases less than or equal to the projected population increase. Table 3.2-6 provides a comparison between the total population and VMT increase from the 2016 LSAP EIR to the LSAP Update.

Table 3.2-6 Comparison Summary of Population and VMT Increase for the 2016 LSAP EIR and the LSAP Update

	2015 Existing Conditions	2016 LSAP EIR – Remodel[1]	LSAP Update[2]	2015 + LSAP Update (% change)
Annual VMT	38,464,795	37,995,455	66,712,737	73%
Population	3,204	5,622	14,363	348%
			VMT Increase > Increase in Population from 2016 LSAP EIR?	No

1. The 2016 LSAP EIR VMT estimates were remodeled based on the 2016 LSAP EIR's CalEEMod *Operational Detail-Mobile* Outputs and therefore differ than what was analyzed in the 2016 LSAP EIR.

2. LSAP Update VMT estimates are based on the traffic impact analysis by Hexagon (2020a) and calculated using CalEEMod. Plan population was estimated by applying a 2.42 residents per dwelling unit factor, as applied in 2016 EIR, to the proposed increase in residential units.

As shown in Table 3.2-6 above, the VMT of the plan area is anticipated to increase by 73 percent, while the population is estimated to increase by 348 percent when comparing the LSAP Update to the 2015 Existing Conditions analyzed in the 2016 LSAP EIR. Because the VMT would increase at a lower rate compared to the population, the LSAP Update would not result in a new or substantially more significant impact of operational emissions beyond what was identified in the 2016 LSAP EIR. Furthermore, the LSAP Update would be more VMT-efficient than the 2016 LSAP EIR when considering the 2015 exiting conditions. This impact would be **less than significant**.

BAAQMD does not provide numeric thresholds for operational-related plan-level emissions. For informational purposes, Table 3.2-7 and Table 3.2-8 provide the estimated emissions from the remodeled 2016 LSAP EIR and the LSAP Update, respectively. Both tables present the emissions for full build out for year 2035 according to the land uses proposed. It should be noted that operations emissions modeling was based on a build out date of 2035. After modeling was conducted, the build out date for the LSAP Update was revised to 2040. Emissions identified in Tables 3.2-7 and 3.2-8 are overstated because they do not reflect the increase in building energy efficiency that technological advances will provide over time.

Table 3.2-7 2016 LSAP EIR Remodel Operational-Generated Criteria Pollutant and Precursor Emissions at Full Build Out (2035)

Source	ROG	NO_X	CO	SO_2	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Annual (tons/year)						
Area	17	<1	17	<1	<1	<1
Energy	<1	1	1	<1	<1	<1
Mobile	3	13	27	<1	<1	<1
Total	**20**	**15**	**46**	**<1**	**<1**	**<1**
Summer (lb/day)						
Area	96	17	197	<1	2	2
Energy	1	8	5	<1	1	1
Mobile	18	72	155	1	<1	<1
Total	**114**	**97**	**358**	**1**	**3**	**3**
Winter (lb/day)						
Area	96	17	197	<1	2	2
Energy	1	8	5	<1	1	1
Mobile	15	74	158	1	<1	<1
Total	**111**	**99**	**360**	**1**	**3**	**3**

Notes: lb/day = pounds per day; CO = carbon monoxide; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; ROG = reactive organic gases; SO_2 = sulfur dioxide.

See Appendix D modeling results.

Source: Modeling conducted by Ascent Environmental in 2020.

Table 3.2-8 LSAP Update Operational-Generated Criteria Pollutant and Precursor Emissions at Full Build Out (2035)

Source	ROG	NO_X	CO	SO_2	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Annual (tons/year)						
Area	34	1	44	<1	<1	<1
Energy	<1	2	1	<1	<1	<1
Mobile	4	22	54	<1	<1	<1
Total	**39**	**25**	**99**	**<1**	**1**	**1**
Summer (lb/day)						
Area	199	42	504	<1	6	6
Energy	2	13	8	<1	1	1
Mobile	32	132	322	1	1	1
Total	**232**	**188**	**834**	**2**	**8**	**7**
Winter (lb/day)						
Area	199	42	504	<1	6	6
Energy	2	13	8	<1	1	1
Mobile	27	136	320	1	1	1
Total	**227**	**192**	**831**	**2**	**8**	**7**

Notes: lb/day = pounds per day; CO = carbon monoxide; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; ROG = reactive organic gases; SO_2 = sulfur dioxide.

See Appendix D modeling results.

Source: Modeling conducted by Ascent Environmental in 2020.

Table 3.2-7 presents the remodeled emissions using the latest version of CalEEMod and the application of updated policies such as California's Building Energy Efficiency Standards Title 24 Parts 6 and 11, the State increase in renewable energy sources, and the State's fuel efficiency standards under the SAFE Rule. Updating the 2016 LSAP EIR modeling allows for an emissions comparison based on the changes in land uses only. The emissions results between the remodel of the 2016 LSAP EIR, as shown in Table 3.2-7, and the LSAP Update, as shown in Table 3.2-8, present an increase in operational-related emissions due to the increase in residential units of the LSAP Update. It is important to note that these emissions estimates reflect combined emissions from all proposed land uses and do not reflect emissions attributable to individual projects.

The District's plan-level thresholds are intended to maintain or achieve attainment designations in the SFBAAB with respect to the CAAQS and NAAQS. If the LSAP Update does not exceed the District's thresholds and does not contribute to nonattainment designations, it would not exacerbate or interfere with the region's ability to attain the health-based standards. Furthermore, the lack of exposure of criteria air pollutants that may exceed the NAAQS and CAAQS would avoid health impacts. Because the LSAP Update's policies and goals are consistent with the 2017 Clean Air Plan and the increase in project VMT is less than the project population increase from the 2016 LSAP EIR, the plan would not contribute to non-attainment designations of the SFBAAB. Because the ambient air quality standards are established to be protective of public health, adverse health impacts to receptors are not anticipated due to the plan not exceeding the Districts plan-level thresholds. Therefore, the LSAP Update does not result in a new or substantially more significant operational-related impact beyond what was estimated in the 2016 LSAP EIR. This impact would be **less than significant**.

ISI Project

Project operations would result in the generation of long-term operational emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$. Mobile-source emissions of criteria air pollutants and precursors would result from vehicle trips to and from the project site by employees and visitors, as well as delivery and maintenance vehicles. Project mobile-sources were estimated based on the daily vehicle trips from the ISI project's traffic impact analysis (see Appendix E). The estimated net vehicle trips are considered with trips generally distributed to the surrounding roadway network based on existing travel patterns in the area and locations of nearby complementary land uses (e.g., residences, schools, commercial retail, places of employment).

In addition to mobile sources, operational source emissions would include use of electricity; landscape maintenance equipment such as mowers and leaf blowers; regular testing of a diesel emergency backup generators; the application of architectural coatings, as part of regular maintenance; and the use of various consumer products such as cleaning chemicals that would also generate emissions of ROG. Installation of a 1,200-horsepower emergency backup generator would require periodic testing limited to 50 hours per year and would only be used in the event of an emergency. According to the District's Regulation 2-1 (General Permit Requirements), Regulation 2-2 (New Source Review), and Regulation 2-5 (New Source Review Toxic Air Contaminants) the ISI project would be required to obtain an Authority to Construct and Permit to Operate before installing the new generators to ensure that the District's regulations are met, and air emissions are not exceeded.

Table 3.2-9 summarizes the net average daily operational-related emissions of criteria air pollutants at full buildout. It should be noted that operations emissions modeling was based on a build out date of 2024. After modeling was conducted, the build out date for the ISI project was changed to 2025. Emissions identified in Table 3.2-9 are overstated because they do not reflect the increase in building energy efficiency that technological advances will provide over time. Emissions were calculated based on the proposed land use type and trip generation rates (Appendix D). As shown in Table 3.2-9, the net daily emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ would not exceed the respective thresholds and therefore would not cumulatively contribute to the nonattainment designations of the SFBAAB or exacerbate health risk. This impact would be **less than significant.**

Table 3.2-9 Summary of the ISI Project's Net Average Daily Operational Emissions of Criteria Air Pollutants and Precursors at Full Buildout (2024)

Year	ROG (lb/day)	NO_X (lb/day)	PM_{10} Exhaust (lb/day)	$PM_{2.5}$ Exhaust (lb/day)
Existing Emissions				
Area Sources[1]	3	<1	<1	<1
Energy Use	<1	1	<1	<1
Mobile Sources (Vehicle Trips)	1	6	<1	<1
Total	**4**	**6**	**<1**	**<1**
ISI Project Emissions				
Area Sources[1]	28	<1	<1	<1
Energy Use[2]	<1	<1	<1	<1
Mobile Sources (Vehicle Trips)[3]	11	42	<1	<1
Stationary[4]	1	2	<1	<1
EV Chargers[5]	<1	-10	<1	<1
Total	**39**	**35**	**<1**	**<1**

Year	ROG (lb/day)	NO_X (lb/day)	PM_{10} Exhaust (lb/day)	$PM_{2.5}$ Exhaust (lb/day)
Net Emissions				
Area Sources	25	<1	<1	<1
Energy Use	<1	<1	<1	<1
Mobile Sources (Vehicle Trips)	10	36	<1	<1
Stationary	1	2	<1	<1
EV Chargers	<1	-10	<1	<1
Total	**31**	**28**	<1	<1
Threshold of Significance	54	54	82	54
Exceeds Average Daily Threshold	No	No	No	No

Notes: lb/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; $PM_{2.5}$ = fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less;

Totals may not sum exactly due to rounding.

1. Area-source emissions include emissions from landscape maintenance activity, the application of architectural coatings as part of regular maintenance, and consumer products.
2. It was assumed the ISI project would generate 3,228,000 kWh/year from on-site solar. No natural gas use.
3. Mobile-source emissions were estimated using trip generation rates included in the ISI project's traffic impact analysis (Appendix E) and ITE's 10th Edition Trip Generation Manual.
4. Stationary sources include the testing and maintenance of two emergency generators for a total operation of 50 hours per year.
5. Reductions in emissions from the implementation of 155 on-site EV Chargers.

See Appendix D for detailed input parameters and modeling results.

Source: Modeling conducted by Ascent Environmental in 2020.

Mitigation Measures

No mitigation is required.

Impact 3.2-3: Result in a Short- or Long-Term Increase in Localized CO Emissions that Exceed BAAQMD-Recommended Thresholds

The 2016 LSAP EIR determined construction and operations would not result in an increase in localized CO Emissions. Similar to the adopted LSAP, the LSAP Update and the ISI project are not expected to result in concentrations of CO emissions due to construction activities being spread out over the duration a construction schedule. Long-term operation-related emissions of CO generated by the LSAP Update and ISI project implementation would not result in long-term operational local mobile-source CO emissions that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 ppm or the 8-hour CAAQS of 9 ppm. This is because both the LSAP Update- and ISI project-generated vehicle trips would not cause any exceedance of traffic volumes at affected intersections. Furthermore, the LSAP Update requires projects within the LSAP to implement TDM measures, and this requirement applies to the ISI project. For these reasons, both the LSAP Update and the ISI project would not result in, or contribute to, CO concentration that exceed the NAAQS or CAAQS for CO. Therefore, the LSAP Update and ISI project would not result in a new or substantially more severe CO emission-related air quality impact beyond what was identified in the 2016 LSAP EIR. Localized CO emissions of the project would be **less than significant**.

Impact 3.5.4 of the 2016 LSAP EIR evaluated whether the plan would expose sensitive receptors to substantial CO pollutant concentrations. The 2016 LSAP EIR concluded that the LSAP would not violate BAAQMD guidelines of a project increase in more than 44,000 vehicles per hour at an affected intersection nor would the project increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited. Therefore, the exposure to substantial CO pollutant emissions is less than significant.

Local mobile-source CO emissions near roadway intersections are a direct function of traffic volume, vehicle speed, and traffic delay. A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on

major roadways, typically near intersections. Transport of CO is extremely limited because it disperses rapidly with distance from the source under normal meteorological conditions. However, under stable meteorological conditions, CO concentrations near roadways and/or intersections may reach unhealthy levels, adversely affecting nearby sensitive land uses, such as residential units, hospitals, schools, and childcare facilities. CO is a pollutant of localized concern and, therefore, is analyzed at the local level. Construction activities are rarely a cause of localized CO impacts because they do not typically result in substantial traffic increases at any one location. BAAQMD provides a screening methodology to determine whether CO emissions generated by traffic at congested intersections have the potential to exceed, or contribute to an exceedance of, the 8-hour CAAQS of 9.0 ppm or the 1-hour CAAQS of 20.0 ppm. Projects that meet the following screening criteria would not have a significant effect on CO concentrations:

1. Consistency with an applicable congestion management program established by the county congestion management agency for designated road or highways, regional transportation plan, and local congestion management agency plans.
2. Introduce traffic volumes less than 44,000 vehicles per hour.
3. Introduce traffic volumes less 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).

LSAP Update

The LSAP Update's net change in daily vehicle trips from the 2016 LSAP EIR was estimated using CalEEMod. The remodel of land uses proposed in the 2016 LSAP EIR was estimated to generate a total of 25,731 daily vehicle trips, while the LSAP Update is estimated to generate a maximum of 53,942 daily vehicle trips. This results in a net increase of 28,211 daily vehicle trips. Using a peak hour k-factor of 10, the 2016 LSAP EIR would generate 2,573 daily peak hour trips and the LSAP Update would generate 5,394 daily peak hour trips. This would result in a net increase in 2,821 daily peak trips. Therefore, the LSAP Update would generate trips well below the peak hour thresholds of intersections experiencing a traffic volume greater than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited. As such, the LSAP Update would meet the aforementioned criteria recommended by BAAQMD. Therefore, the LSAP Update operations would not violate a standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial CO concentrations. Thus, the LSAP Update would not result in new or substantially more significant CO emission impacts beyond what was identified in the 2016 LSAP EIR. This impact would be **less than significant**.

ISI Project

The ISI project is estimated to generate a net increase in 11,528 daily vehicle trips, 637 AM peak hour trips and 685 PM peak hour trips (Hexagon 2020b). Therefore, the ISI project is not anticipated to result in any affected intersection experiencing a traffic volume greater than 44,000 vehicles per hour or 24,000 vehicles per hour. Additionally, the ISI project would be required to implement a TDM plan with a 30 percent trip reduction requirement or pay a penalty, similar to other nonresidential projects in the LSAP. As such, the ISI project would meet the aforementioned criteria recommended by BAAQMD. Therefore, the ISI project operation would not violate a standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial CO concentrations. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.2-4: Expose Sensitive Receptors to Substantial Increases in TAC Emissions

The 2016 LSAP EIR determined, that the Increase in toxic air contaminant (TAC) would result in a less than significant impact to sensitive receptors with the implementation of Mitigation Measures 3.5.3a, 3.5.3b, 3.5.5, and 3.5.6. Construction- and operations-related emissions of TACs associated with the implementation of the LSAP Update would not change from the previous analysis in the 2016 LSAP EIR due to individual project information being uncertain. Therefore, this impact would not result in a new or substantially more severe TAC emission-related air quality impact beyond what was identified in the 2016 LSAP EIR. The expansion of the LSAP boundary was analyzed in the HRA analysis for the ISI project. With implementation of adopted LSAP Mitigation Measures 3.5.3a, 3.5.3b, 3.5.5, and 3.5.6 the HRA determined that the implementation of the ISI project and expansion of the LSAP boundary would not result in an incremental increase in cancer risk greater than 10 in one million or a hazard index greater than 1.0 for existing or future sensitive receptors. Sensitive receptor exposure to increased TAC emissions would be **less than significant**.

Impact 3.5.5 and 3.5.6 of the 2016 LSAP EIR evaluated whether the plan would expose sensitive receptors to substantial TACs emissions during project construction and operations. The 2016 LSAP EIR concluded that although plan construction details are unknown, it could result in large scale construction projects resulting in exposure to TAC emissions. During operations, the Caltrain train, mobile traffic on Lawrence Expressway, adjacent industrial land uses, and potential use of heavy-duty trucks from the Plan's proposed nonresidential development are sources that would expose sensitive receptors to TACs in the Plan area. Impacts from construction would be less than significant with the implementation of Mitigation Measures 3.5.3a, 3.5.3b, and 3.5.5. The reader is referred to Impact 3.2-1 for a completion description of Mitigation Measures 3.5.3a and 3.5.3b. Impacts from operations would be less than significant with the implementation of Mitigation Measure 3.5.6.

Adopted LSAP Mitigation Measure 3.5.5

In the case when a subsequent project's construction is span greater than five acres and is scheduled to last more than two years, the subsequent project shall be required to prepare a site-specific construction pollutant mitigation plan in consultation with the BAAQMD staff prior to the issuance of grading permits. A project-specific construction-related dispersion modeling acceptable to BAAQMD shall be used to identify potential toxic air contaminant impacts, including diesel particulate matter. If BAAQMD risk thresholds (i.e., probability of contracting cancer is greater than 10 in 1 million) would be exceeded, mitigation measures shall be identified in the construction pollutant mitigation plan to address potential impacts and shall be based on site-specific information such as the distance to the nearest sensitive receptors, project site plan details, and construction schedule. The City shall ensure construction contracts include all identified measures and that the measures reduce the health risk below BAAQMD risk thresholds. Construction pollutant mitigation plan measures shall include, but not be limited to:

1. Limiting the amount of acreage to be graded in a single day,
2. Restricting intensive equipment usage and intensive ground disturbance to hours outside of normal preschool hours,
3. Notification of affected sensitive receptors one week prior to commencing on-site construction so that any necessary precautions (such as rescheduling or relocation of outdoor activities) can be implemented. The written notification shall include the name and telephone number of the individual empowered to manage construction of the project. In the event that complaints are received, the individual empowered to manage construction shall respond to the complaint within 24 hours. The response shall include identification of measures being taken by the project construction contractor to reduce construction-related air pollutants. Such a measure may include the relocation of equipment.

Adopted LSAP Mitigation Measure 3.5.6

The following measures shall be utilized in site planning and building designs to reduce TAC and $PM_{2.5}$ exposure where new receptors are located within 1,000 feet of emission sources:

- Future development with the LSAP that includes sensitive receptors (such as residences, schools, hospitals, daycare centers, or retirement homes) located within 1,000 feet from Caltrain and/or stationary sources shall require site-specific analysis to determine the level of health risk. This analysis shall be conducted following procedures outlined by BAAQMD. If the site-specific analysis reveals significant exposures from all sources (i.e., health risk in terms of excess cancer risk greater than 100 in one million, acute or chronic hazards with a hazard Index greater than 10, or annual $PM_{2.5}$ exposures greater than 0.8 $\mu g/m^3$) measures shall be employed to reduce the risk to below the threshold (e.g., electrostatic filtering systems or equivalent systems and location of vents away from TAC sources). If this is not possible, the sensitive receptors shall be relocated.
- Future nonresidential developments projected to generate more than 100 heavy-duty trucks daily will be evaluated through the CEQA process or BAAQMD permit process to ensure they do not cause a significant health risk in terms of excess cancer risk greater than 10 in one million, acute or chronic hazards with a hazard Index greater than 1.0, or annual $PM_{2.5}$ exposures greater than 0.3 $\mu g/m^3$.

Diesel PM is the focus of the following impact discussions because it would be emitted during construction and operation of the LSAP Update and ISI project. Although other TACs exist (e.g., benzene, 1,3-butadiene, hexavalent chromium, formaldehyde, methylene chloride), they are associated primarily with industrial operations, and the project would not include any industrial sources of other TACs.

Particulate exhaust emissions from diesel-fueled engines (i.e., diesel PM) were identified as a TAC by CARB in 1998. The potential cancer risk from inhaling diesel PM outweighs the potential for all other diesel PM–related health impacts (i.e., noncancer chronic risk, short-term acute risk) and health impacts from other TACs (CARB 2018b). Chronic and acute exposure to noncarcinogens is expressed as a hazard index, which is the ratio of expected exposure levels to an acceptable reference exposure level. Health risk impacts are discussed for the LSAP Update and the ISI project separately below.

LSAP Update

The proposed LSAP modifications would increase the allowable housing potential and expand the plan boundaries. Sensitive receptor types analyzed in the 2016 LSAP EIR, such as residences, schools, hospitals, and daycare centers, would remain the same under the LSAP Update, with the primary difference being an addition of 3,612 residential units within the LSAP Update in comparison to the 2016 LSAP. All new sensitive receptors due to the expansion of the LSAP boundary are analyzed under the ISI project level analysis. As indicated in the 2016 LSAP EIR, construction projects allowed under the LSAP Update would be temporary and episodic and would occur in isolated areas within the plan area. With the application of the 2016 LSAP EIR Mitigation Measures 3.5.3a, 3.5.3b, and 3.5.5, the LSAP Update would not result in substantial risk to sensitive receptors from construction activities. Furthermore, because future proposed projects are unknown, impacts of sensitive receptors in the plan area are to be addressed on a project-by-project basis, since operational risk impacts are generally localized and specific developments have not been proposed. Although the LSAP Update proposes an increase in residential units, the construction duration of individual projects would be similar to what was previously analyzed, daily construction activity would not be substantially greater, and land uses would be within the same proximity to receptors. Application of the 2016 LSAP EIR Mitigation Measures 3.5.5 and 3.5.6 would reduce the risk to sensitive receptors from operational activities. Thus, the LSAP Update would not result in any new or substantially more significant impacts beyond what was identified in the 2016 LSAP EIR. This impact would be **less than significant**.

ISI Project

Construction-related activities would result in project-generated emissions of diesel PM, particularly $PM_{2.5}$, from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., demolition, clearing, grading); paving; application of architectural coatings; on-road truck travel; and other miscellaneous activities. For construction activity, $PM_{2.5}$ is the primary toxic air contaminant of concern as it considered the most harmful air pollutant in the SFBAAB. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment

are less of a concern because they would not stay on the site for long durations. TAC and $PM_{2.5}$ from diesel exhaust of construction equipment operating at the site poses a health risk to nearby sensitive receptors. Sensitive receptors near the ISI project site include multi-family residences approximately 120 feet south of the site, across the railroad tracks. The ISI project would include a temporary concrete batch plant that would be located in the northern part of the south site, approximately 400 feet north of the nearest multi-family residences. The concrete batch plant is anticipated to generate a maximum of approximately 138,000 cubic yards over 22 months of construction. The batch plant would include the equipment such as loaders, silos, and storage piles.

Although construction emissions would span over approximately three years, the risk modeling by Kimley-Horn and Associates, Inc. (2020) conservatively assumed the year with the highest emissions for each construction phase. As indicated in Table 2 of the ISI project's HRA (Appendix D), the maximum concentration of $PM_{2.5}$ during construction with the application of CARB Tier 4 Final equipment engines as a project condition would be 0.013 $\mu g/m^3$ which is below the BAAQMD 0.3 $\mu g/m^3$ significance threshold. The highest calculated carcinogenic risk from project construction is 3.17 per million, which is below the BAAQMD threshold of 10 in one million. Non-cancer hazards for diesel PM would be below BAAQMD threshold, with a chronic hazard index computed at 0.006 and an acute hazard index of 0.015. Acute and chronic hazards would be below the BAAQMD significance threshold of 1.0.

The operation of land uses on the project site would result in the long-term emissions of diesel $PM_{2.5}$ from the usage of an emergency diesel generator and diesel trucking idling during loading. Average annual exhaust emissions of diesel $PM_{2.5}$ are based on average daily emissions estimated in the ISI HRA (Appendix D).

Based on the air dispersion modeling the highest expected hourly average diesel $PM_{2.5}$ emission concentrations from diesel truck traffic at the project site would be 0.003 $\mu g/m^3$. The highest expected annual average diesel $PM_{2.5}$ emission concentrations at the project site would be 0.014 $\mu g/m^3$. the highest calculated carcinogenic risk at the closest sensitive receptors is 2.79 per million for residents, which is below the BAAQMD threshold of 10 per million. Acute and chronic hazards also would be below the BAAQMD significance threshold of 1.0. Therefore, the ISI project would not result in the exposure of any nearby sensitive receptors to TAC concentrations that exceed applicable thresholds of significance during operations.

In summary, health risks associated with emissions of TACs during construction with the application of CARB Tier 4 Final equipment engines and the adopted LSAP Mitigation Measures 3.5.3a, 3.5.3b, 3.5.5, and 3.5.6 would result in an incremental increase in cancer risk but would not exceed applicable thresholds of significance. Similarly, ISI project operations would not exceed applicable thresholds of significance. This impact would be **less than significant**.

Mitigation Measures

No new mitigation is required. Implementation of adopted LSAP Mitigation Measures 3.5.5 and 3.5.6 is required.

Impact 3.2-5: Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People

The 2016 LSAP EIR determined construction and operation of the LSAP would not result in substantial odorous emissions. Similar to the adopted LSAP, future development and other physical changes that could occur as a result of the LSAP Update and ISI project could result in construction activities that would introduce new odor sources in the area (e.g., temporary diesel exhaust emissions during construction and delivery trucks associated with commercial and residential land uses). However, these odor sources would be temporary and intermittent. Further, BAAQMD Regulation 7 limits the potential odor impacts on existing and new sensitive receptors or future sensitive receptors. Construction activities would be subject to VOC limits under Regulation 8, Rule 3, and Regulation 15. As a result, the projected and proposed development under the LSAP Update and ISI project would not result in odor impacts to new or existing sensitive receptors. The LSAP Update and ISI project would not result in a new or substantially more notable odor-related air quality impact beyond what was identified in the 2016 LSAP EIR. Emissions leading to odors would be **less than significant**.

Impact 3.5.7 of the 2016 LSAP EIR evaluated whether the plan would expose sensitive receptors to odorous emissions. The 2016 LSAP EIR concluded that due to compliance with BAAQMD Regulation 8, Rule 3, Architectural Coatings, and Rule 15, Emulsified Asphalt and the short-term exposure of construction emissions, the LSAP would result less than significant exposure. The 2016 LSAP EIR also concluded that the Plan's development of residential, institutional, office, and commercial would not result in land uses that result in odorous operational emissions. Therefore, the exposure of sensitive receptors to substantial odorous emissions would be less than significant.

Future development and other physical changes could expose existing sensitive receptors to new land uses that could include odor sources and may cause a nuisance. Additionally, new sensitive receptors could be exposed to existing land uses that include odors and may result in a nuisance. The occurrence and severity of odors impacts depends on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the affected receptors. While offensive odors rarely cause any physical harm, they can still be very unpleasant, leading to considerable distress among the public, and they often generate citizen complaints to local governments and regulatory agencies. BAAQMD has developed a list of odor sources of concern which include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. As noted in Section 3.2.2, above, there are currently no odor sources identified in BAAQMD's list of odor sources within the LSAP area and boundary expansion.

LSAP Update

The increase in allowable housing units and expansion of the LSAP boundary do not include any land uses (e.g., industrial) that are typically associated with substantial odors or included in the BAAQMD's odor source list. In addition, should a new odor source be proposed within the LSAP area, BAAQMD's Regulation 7, Odorous Substances, places limitations on odorous substances and specific emission limitations on certain odorous compounds. As a result, any odor sources cited in the LSAP area would be required to implement specific actions to remain in compliance with Regulation 7.

Minor odors from the use of heavy-duty diesel equipment and the laying of asphalt during construction activities would be intermittent and temporary. Due to the characteristics of diesel exhaust emission, odors generated from the use of heavy-duty diesel equipment would dissipate rapidly within 150 meters (492 feet) (Zhu et al. 2002a; Zhu et al. 2002b). While construction would occur intermittently between 2020 and 2040, these types of odor-generating activities would not occur at any single location, or within close proximity to the same off-site receptors, for an extended period of time and would not result in permanent odor sources. In addition, projects proposed under the LSAP would be required to comply with BAAQMD Regulation 8, Rule 3, Architectural Coatings, and Rule 15, Emulsified Asphalt, which reduce odors from VOC limits of construction material. Therefore, construction is not anticipated to result in substantial odors.

Land uses that would be developed under the LSAP would not allow for the sitting of any odor sources identified in the BAAQMD odor source list. The use of heavy-duty diesel equipment for development of land uses in the LSAP area are not anticipated to result in substantial odors. Furthermore, because the LSAP Update land use types and overall nature of the plan is similar to what was analyzed in the 2016 LSAP EIR, implementation of the LSAP would not result in odor impacts on existing sensitive receptors or future sensitive receptors beyond what was identified in the 2016 LSAP EIR. This impact would be **less than significant**.

ISI Project

The operations of land uses proposed in the ISI project would not result in new sources of substantial odors and are not included in BAAQMD's odor source list. In the case, that a new odor be proposed under the ISI project, it would be subject to BAAQMD's Regulation 7, Odorous Substances and would be required to maintain compliance during the lifetime of the source.

Construction of the ISI project would result in minor odors from the use of heavy-duty diesel equipment. These odors would be intermittent and temporary, as they would only occur during the construction phase. Furthermore, construction of the ISI project would not occur at any single location in close proximity to nearby off-site receptors. Construction activities would be subject to BAAQMD Regulation 8, Rule 3, Architectural Coatings, and Rule 15,

Emulsified Asphalt, which reduce odors from VOC limits of construction material. Therefore, construction is not anticipated to result in substantial odors.

The land uses proposed under the ISI project would not introduce new odor sources to the project area. The use of heavy-duty diesel equipment during construction would be intermittent and short-term and would not result in substantial odors. As a result, the ISI project would not result in substantial odor impacts to both existing and future sensitive receptors. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

3.3 CULTURAL AND TRIBAL CULTURAL RESOURCES

This section analyzes and evaluates the new potential impacts of the LSAP Update and ISI project on known and unknown cultural resources. Cultural resources include districts, sites, buildings, structures, or objects generally older than 50 years and considered to be important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. They include pre-historic resources, historic-era resources, and "tribal cultural resources" (the latter as defined by Assembly Bill (AB) 52, Statutes of 2014, in Public Resources Code [PRC] Section 21074).

Archaeological resources are locations where human activity has measurably altered the earth or left deposits of prehistoric or historic-era physical remains (e.g., stone tools, bottles, former roads, house foundations). Historical (or architectural) resources include standing buildings (e.g., houses, barns, outbuildings, cabins) and intact structures (e.g., dams, bridges, roads, districts), or landscapes. A cultural landscape is defined as a geographic area (including both cultural and natural resources and the wildlife therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. Tribal cultural resources were added as a resource subject to review under CEQA, effective January 1, 2015 under AB 52 and includes site features, places, cultural landscapes, sacred places, or objects, which are of cultural value to a tribe.

The 2016 LSAP EIR included Section 3.10, "Cultural Resources," which evaluated the potential effects of the LSAP on cultural resources. The 2016 LSAP EIR concluded that there would be no impact related to disturbance of historic resources (Impact 3.10-1). The 2016 LSAP EIR also concluded that that impacts related to the disturbance of archaeological resources would be reduced to a less-than-significant impact with implementation of Mitigation Measure MM 3.10.2, which set forth required actions should previously unknown cultural resources be discovered during grading or construction (Impact 3.10.2). As stated on page 3.10-7 of the 2016 Draft EIR, the Notice of Preparation (NOP) for the LSAP project was filed on August 9, 2013, so the LSAP project was not subject to the requirements of AB 52. The City initiated consultation pursuant to SB 18 in 2013, but no responses were received.

The NOP for the LSAP Update was filed on January 11, 2019. One comment letter regarding cultural resources was received in response to the 2019 NOP (see Appendix A). The Native American Heritage Commission (NAHC) recommended consultation with Native American tribes as required by AB 52 and SB 18, and provided recommendations for assessment, avoidance, and preservation of potential tribal cultural resources.

3.3.1 Regulatory Setting

The regulatory information provided on pages 3.10-4 through 3.10-8 of the 2016 LSAP DEIR remains applicable to this analysis and includes a description of Section 106 of the National Historic Preservation Act of 1966, and California Public Resource Code Sections 21084.1, 21083.2, 5024, Senate Bill 18, Senate Bill 52, and City of Sunnyvale General Plan (Policies CC-5.1 and CC-5.5). Supplemental regulatory information relevant to understanding the potential impacts of the LSAP Update and ISI project on cultural resources is provided below.

CITY OF SUNNYVALE GENERAL PLAN

In addition to Policy CC-5.1 and CC-5.5 of the Community Character chapter of the Sunnyvale General Plan (as described in Section 3.10 of the 2016 LSAP DEIR), a policy and action adopted in April 2017 as part of the Land Use and Transportation Element of the General Plan would also be relevant to the cultural resources.

- **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.
  - **Action LT-1.10f:** Continue to condition projects to halt all ground-disturbing activities when unusual amounts of shell or bone, isolated artifacts, or other similar features are discovered. Retain an archaeologist to determine the significance of the discovery. Mitigation of discovered significant cultural resources shall be consistent with Public Resources Code Section 21083.2 to ensure protection of the resource (City of Sunnyvale 2017).

SUNNYVALE MUNICIPAL CODE

Chapter 19.96 – Heritage Preservation

Chapter 19.96 of the Sunnyvale Municipal Code prescribes specific procedures and requirements for the filing, processing, and consideration of heritage resource and local landmark permits by the Heritage Preservation Commission. The City maintains a Heritage Resources Inventory, recognizing properties which have architectural or historic significance.

3.3.2 Environmental Setting

The environmental setting provided on pages 3.10-1 through 3.10-4 of the 2016 LSAP EIR is relevant to understanding the potential cultural resources impacts of the LSAP modifications. The following information is relevant to understanding the potential impacts of the ISI project on cultural resources and potential impacts of both the LSAP modifications and ISI project on tribal cultural resources.

RECORDS SEARCHES, SURVEYS, AND CONSULTATION

In July 2019, a cultural resources report was prepared for the ISI site (Far Western 2019). The records search performed for this report noted that while no archaeological resources have been previously recorded within the ISI project site or within one eighth-mile of the site, one prehistoric archaeological resource, SCL-863, has been recorded approximately 150 feet outside of the one-eighth mile records search radius (Far Western 2019:16). The human remains found at that location were reinterred at another location (Far Western 2019:16). A site investigation performed at the property referenced above at 150 feet outside of the one-eighth mile record search in 2010 noted that the discovery site was completely covered in pavement and recommended the site be deemed ineligible for listing in the National Register (Far Western 2019:17). A pedestrian survey was performed of the project site and no new prehistoric or historic-era archaeological resources were observed during the surface survey (Far Western 2019:25).

As part of the cultural resources study, Far Western contacted NAHC and requested that they conduct a search of their Sacred Lands file to determine if there were known cultural sites within or near the ISI project area and requested a list of Native American groups and individuals interested in the general vicinity of the ISI project. NAHC responded stating that no Native American cultural resources were reported from the sacred lands file records search and provided a list of seven interested individuals. Far Western mailed a letter providing information regarding the ISI project to all seven contacts on September 28, 2018 but no comments had been received as of July 2019.

The study noted that the ISI project site is located on youthful soils of an alluvial fan on the Santa Clara Valley floor, on former oak woodland, less than 500 meters away from the interface with wet meadows, in the same ecotone and geomorphic setting as other buried prehistoric sites (e.g., SCL-863). These factors indicate that the ISI project area has a high potential for the presence of buried prehistoric archaeological resources (Far Western 2019:24).

The study includes an evaluation of the potential historic resources on the ISI project site. The buildings and structures at 945–955 Kifer Road and 950 Kifer Road were constructed within the last 35 years, making them too young to require further evaluation because insufficient time has passed to fully assess the historical importance of the properties (Far Western 2019:1). The report also details the results of the evaluation of the 932 Kifer Road property, as the building on that property is more than 50 years old (Far Western 2019:1). The evaluation concluded that while the property retains overall historic integrity, it does not meet any of the significance criteria required for listing in the National Register of Historic Places (National Register), California Register of Historical Resources (California Register), or local designation (Far Western 2019:27).

Tribal Cultural Resources

Native American Consultation

On January 11, 2019, the City sent letters inviting tribes to consult on the project under AB 52, with separate letters on the same date inviting tribes to consult under SB 18. Tribes included in these mailings include the following list.

- Cahto Tribe,
- Coyote Valley Band of Pomo Indians,
- Guidiville Rancheria of California,
- Hopland Band of Pomo Indians,
- Kashia Band of Pomo Indians of the Stewarts Point Rancheria,
- Manchester Band of Pomo Indians,
- Novo River Indian Community,
- Pinoleville Pomo Nation,
- Potter Valley Tribe,
- Redwood Valley or Little River Band of Pomo Indians,
- Round Valley Indian Tribes of the Round Valley Reservation, and
- Sherwood Valley Band of Pomo Indians.

As of the date of this Draft SEIR, responses have been received from the Kashia Band of Pomo Indians of the Stewarts Point Rancheria and Round Valley Indian Tribes of the Round Valley Reservation. These tribes declined consultation and did not have any comments. The other tribes contacted have not responded to the consultation invitations.

3.3.3 Impacts and Mitigation Measures

METHODOLOGY

The following impact analysis is based on a review of the 2016 LSAP EIR as well as the cultural resources report prepared for the ISI project (Far Western 2019).

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the project would result in a significant impact on cultural resources or tribal cultural resources if it would:

- cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5 of the State CEQA Guidelines;
- cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5 of the State CEQA Guidelines;
- cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is (a) listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or (b) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, where in applying the criteria set forth in subdivision (c)

of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe; or

- disturb any human remains, including those interred outside of formal cemeteries.

ISSUES NOT DISCUSSED FURTHER

Historical Resources

The 2016 LSAP EIR noted that the plan area does not include any structures or sites identified in the City's Heritage Resources Inventory, concluding that the project would have no impact. Proposed modifications to the LSAP include allowing additional housing and expansion of the LSAP boundary. These proposed changes would not include any structures or sites identified in the City's Heritage Resources Inventory. The proposed ISI project would demolish existing structures, but a cultural resources report prepared for the ISI project determined that none of the structures are eligible for listing in the National Register, California Register, or local register.

Impact 3.10.1 of the 2016 LSAP EIR evaluated whether the LSAP would disturb historic resources. The analysis noted that none of the structures or sites identified in the City's Heritage Resources Inventory are located within or immediately adjacent to the LSAP area. The discussion concluded that the LSAP would have no impact on historic resources because of required compliance with resource protection policy provisions of the Sunnyvale General Plan and project-level CEQA review that would be required of individual development projects.

The proposed LSAP modifications would increase the allowable housing potential and expand the LSAP boundaries. The allowance of additional housing within the existing LSAP boundaries would not affect structures or sites not already anticipated for development as considered in the 2016 LSAP EIR. Impacts associated with development proposed within the LSAP boundary expansion area are analyzed in detail under the ISI project component (discussed below). Therefore, the proposed LSAP modifications would have no impact on historic resources. This issue is not discussed further in this SEIR.

The ISI project would demolish existing buildings and structures on the ISI site. The cultural resources report for the ISI project determined that none of the buildings or structures are eligible for listing in the National Register, California Register, local register, or the City's Heritage Resources Inventory (Far Western 2019:1). Because the proposed demolition of existing buildings and structures would not affect any historic resources, the proposed ISI project would have no impact on historic resources. This issue is not discussed further in this SEIR.

Known Tribal Cultural Resources

The 2016 LSAP EIR noted that letters were sent to tribes identified by NAHC, but no responses were received, and the issue was not discussed further in the 2016 LSAP EIR. Proposed modifications to the LSAP include allowing additional housing potential and expansion of the LSAP area boundary. The proposed ISI project would demolish existing structures on the ISI site and construct new buildings in their place. These project components are subject to SB 18 and AB 52. Therefore, letters were mailed to 12 tribes on January 11, 2019, inviting them to request consultation under SB 18 or AB 52. Two responses were received, but the responding tribes declined consultation and did not have any comments. Because there is no evidence of any tribal cultural resources and no tribes have requested consultation, no impact on known tribal cultural resources would occur.

Tribal cultural resources are discussed on page 3.10-7 and 3.10-8 of the 2016 LSAP EIR. While the LSAP project was not subject to AB 52 when the 2016 LSAP EIR was published, the project evaluated in this SEIR is subject to AB 52. The LSAP project was subject to SB 18 in 2016 and the City reached out to tribes identified by NAHC, but no responses were received (City of Sunnyvale 2016: 3.10-8). Because no potential tribal cultural resources were identified and no response was received from tribes, the 2016 LSAP EIR did not evaluate impacts related to tribal cultural resources.

Because the LSAP site is already developed, it is unlikely that tribal cultural resources are present. As discussed in Impact 3.4-2 above, adopted LSAP Mitigation Measure 3.10.2 requires text to be included on project plans regarding the steps to be taken should construction crews discover archaeological resources or human remains during project

construction. These steps would also protect previously undiscovered tribal cultural resources during construction, though the presence of tribal cultural resources in the area is unlikely.

The proposed LSAP modifications would increase the allowable housing potential and expand the boundaries of the LSAP. The allowance of additional housing potential within the existing LSAP boundaries would not affect sites not already anticipated for development as assumed in the 2016 LSAP EIR. Impacts associated with development proposed within the LSAP boundary expansion area are analyzed in detail under the ISI project component (discussed below). On January 11, 2019, the City sent letters to 12 tribes inviting them to consult under AB 52, with separate letters on the same date inviting them to consult under SB 18. As noted above, two responses were received, but the responding tribes declined consultation and did not have any comments. As such, it can be concluded that there are no tribal cultural resources in the project area and the project would have no impact. This issue is not discussed further in this SEIR.

The ISI project would demolish the buildings and structures in the expansion area of the LSAP and build new structures in their place. The area includes existing buildings so it is unlikely that tribal cultural resources would be present in the project area. As discussed above, the City invited tribes to consult under AB 52 and SB 18 in January 2019, but no tribes requested consultation. As such, it can be concluded that there are no known tribal cultural resources in the project area. As discussed on page 3.10-7 of the 2016 LSAP EIR, Section 7050.5(b) of the California Health and Safety Code specifies steps to be taken should human remains be discovered during construction activities. State CEQA Guidelines Section 15064.5(e) specifies steps to be taken, should any human remains be determined to be Native American. Also, adopted LSAP Mitigation Measure 3.10.2 would apply to any previously unknown archeological resources within the LSAP, including archeological resources that are also potential tribal cultural resources, discovered during construction. Thus, while there are no anticipated tribal cultural resources in the project area, there are protocols in place that would require coordination with the NAHC, should any Native American remains be discovered, and proper treatment of archeological resources. The ISI project would have no impact related to tribal cultural resources. This issue is not discussed further in this SEIR.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.3-1: Archaeological Resources and Human Remains

The 2016 LSAP EIR determined development under the LSAP could involve subsurface disturbance which could uncover previously undiscovered archaeological resources or human remains. Adopted LSAP Mitigation Measure 3.10.2 requires subsequent projects in the LSAP to include a note on project plans indicating the steps to be taken should construction crews encounter archaeological resources or human remains. Implementation of Mitigation Measure 3.10.2 would reduce potential effects on archaeological resources and human remains to a less-than-significant level, including the ISI project site which has a high potential for buried archaeological resources. Therefore, there is no new significant effect, and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The impact would remain **less-than-significant**.

Impact 3.10.2 of the 2016 LSAP EIR evaluated whether the LSAP would disturb archaeological resources or human remains. The analysis noted that while development in the LSAP area would not directly affect known archaeological resources, development could involve subsurface disturbance which could uncover previously undiscovered archaeological resources or human remains. The impact was determined to be potentially significant and adopted LSAP Mitigation Measure 3.10.2 was included to reduce impacts to a less-than-significant level.

Adopted LSAP Mitigation Measure 3.10.2

All subsequent projects within the LSAP plan area shall be required to include information on the improvement plans that if, during the course of grading or construction, cultural resources (i.e., prehistoric or historic sites) are discovered, work will stop in that area and within 100 feet of the find until a qualified archaeologist can [assess] the significance of the find and, if necessary, develop appropriate treatment measures as part of a treatment plan in consultation with the City and all other appropriate agencies. The treatment plan shall include measures to document and protect the discovered resource. Consistent with CEQA Guidelines Section 15126.4(b)(3),

preservation in place will be the preferred method of mitigating impacts to the discovered resource. Pursuant to Government Code Section 6254.10, information on the discovered resource shall be confidential.

LSAP Update

The proposed LSAP modifications would increase the allowable housing potential within the LSAP and expand the LSAP boundary. The allowance of additional housing potential within the adopted LSAP boundaries would result in similar ground disturbing activities analyzed in the 2016 LSAP EIR. Impacts associated with development proposed within the LSAP boundary expansion area are analyzed in detail under the ISI project component discussed below. The proposed LSAP Sense of Place Plan would function as a policy document for LSAP improvements and would require new development in the area to implement improvements and/or public amenities. As discussed above, adopted LSAP Mitigation Measure 3.10.2 from the 2016 LSAP EIR requires all subsequent projects within the LSAP area to include information on improvement plans regarding the steps to be taken should construction crews encounter archaeological resources or human remains (i.e., stop work in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures as part of a treatment plan in consultation with the City and all other appropriate agencies). Construction within and other modifications to the LSAP resulting in earth-disturbing activities would be subject to adopted LSAP Mitigation Measure 3.10.2, which would ensure that potential impacts on previously undiscovered archaeological resources or human remains would be reduced to a **less-than-significant** level.

ISI Project

The ISI project would demolish buildings and structures on the ISI site and construct new buildings, parking garages (above- and below-ground), a pedestrian bridge, and infrastructure improvements, including those associated with implementation of the LSAP Sense of Place Plan (i.e., improvements to bicycle and pedestrian pathways, roadways, and driveways). These activities would include ground disturbance, which has the potential to uncover previously unknown archaeological resources or human remains. The cultural resources report prepared by Far Western for the ISI project determined that the project site has a high potential for the presence of buried archaeological resources (Far Western 2019:24). Implementation of adopted LSAP Mitigation Measure 3.10.2 from the 2016 LSAP EIR is required for all subsequent projects within the LSAP area, including the ISI site to be included within the LSAP boundary. Required implementation of adopted LSAP Mitigation Measure 3.10.2 would ensure that the ISI project would result in **less-than-significant** impacts related to previously unknown archaeological resources and human remains.

Mitigation Measures

The proposed project (i.e., LSAP Update and ISI project) is subject to adopted LSAP Mitigation Measure 3.10.2.

3.4 BIOLOGICAL RESOURCES

This section analyzes and evaluates the new potential impacts of the LSAP Update and the ISI project on common and sensitive biological resources. This evaluation is based on data contained within the adopted 2016 LSAP EIR and technical reports produced for the ISI project (ISI 2018a; ISI 2018b; ISI 2018c). The technical reports contain the results of queries of the California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDB), U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation database (IPaC), and observations from reconnaissance surveys.

The 2016 EIR included Section 3.9, "Biological Resources," which evaluated the potential effects of development within the LSAP on biological resources. The 2016 LSAP EIR concluded that there would be less-than-significant impacts to biological impacts with implementation of adopted Mitigation Measures 3.9-1, 3.9-2, and 3.9-3.

No comments regarding biological resources specific to the project were received in response to the NOP.

3.4.1 Regulatory Setting

The regulatory framework provided on pages 3.9-9 through 3.9-12 of the 2016 LSAP Draft EIR is relevant to understanding regulations relevant to the proposed LSAP modifications. The following summarizes regulations relevant to biological resource regulations that are relevant to the LSAP modifications and ISI project.

FEDERAL

Federal Endangered Species Act

Pursuant to the federal Endangered Species Act (ESA) (16 U.S.C. Section 1531 et seq.), the USFWS regulates the taking of species listed in the ESA as threatened or endangered. In general, persons subject to ESA (including private parties) are prohibited from "taking" endangered or threatened fish and wildlife species on private property, and from "taking" endangered or threatened plants in areas under federal jurisdiction or in violation of state law. Under Section 9 of the ESA, the definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS has also interpreted the definition of "harm" to include significant habitat modification that could result in take.

Section 10 of the ESA applies if a non-federal agency is the lead agency for an action that results in take and no other federal agencies are involved in permitting the action. Section 7 of the ESA applies if a federal discretionary action is required (e.g., a federal agency must issue a permit), in which case the involved federal agency consults with USFWS.

Clean Water Act

Section 404 of the Clean Water Act (CWA) requires project proponents to obtain a permit from the U.S. Army Corps of Engineers (USACE) before performing any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters of the United States, interstate waters, tidally influenced waters, and all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. Many surface waters and wetlands in California meet the criteria for waters of the United States.

In accordance with Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must obtain water quality certification from the appropriate regional water quality control board (RWQCB) indicating that the action would uphold state water quality standards. The San Francisco Bay RWQCB has jurisdiction over the project area.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it will be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. Under the MBTA, "take" is defined as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities." A take does not include habitat destruction or alteration, as long as there is not a direct taking of birds, nests, eggs, or parts thereof. The current list of species protected by the MBTA can be found in Title 50 of the Code of Federal Regulations (CFR), Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

STATE

California Endangered Species Act

Pursuant to the California Endangered Species Act (CESA), a permit from CDFW is required for projects that could result in the "take" of a plant or animal species that is listed by the State as threatened or endangered. Under CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species but does not include "harm" or "harass," as does the federal definition. As a result, the threshold for take is higher under CESA than under the federal ESA. Authorization for take of State-listed species can be obtained through a California Fish and Game Code (FGC) Section 2081 incidental take permit.

Protection of Bird Nests and Raptors under the California FGC

Section 3503 of the FGC states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (e.g., hawks, owls, eagles, and falcons), including their nests or eggs. Section 3513 of the FGC codifies the federal MBTA. Violations of these codes include destroying active nests by removing the vegetation in which the nests are located and disturbance of nesting pairs that results in the failure of active raptor nests.

Fully Protected Species under the California FGC

Protection of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the FGC. These statutes prohibit take or possession of fully protected species and do not provide for authorization of incidental take. CDFW has informed nonfederal agencies and private parties that their actions must avoid take of any fully protected species unless the take is covered under a Natural Community Conservation Plan that is approved by CDFW.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) (California FGC Section 1900 et seq.) allows the California Fish and Game Commission to designate plants as rare or endangered. Sixty-four species, subspecies, and varieties of plants are protected as rare under the NPPA. The act prohibits take of endangered or rare native plants but includes exceptions for agricultural and nursery operations; for emergencies; and, after proper notification of CDFW, for vegetation removal from canals, roads, and other building sites, changes in land use, and other situations.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act requires that each of the nine RWQCBs prepare and periodically update basin plans for water quality control. Each basin plan sets forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to protect wetlands through the establishment of water quality objectives. The RWQCB's jurisdiction includes waters of the United States, as well as areas that meet the definition of "waters of the State." "Waters of the State" is defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The RWQCB has the discretion to take jurisdiction over areas not federally protected under CWA Section 404 provided they meet the definition of waters of the State and the State Water Resources Control Board published a new set of procedures for discharges of dredged or fill material into waters of the State on March 22, 2019. Mitigation requiring no net loss of wetlands functions and values of waters of the State typically is required by the RWQCB.

The State Water Resources Control Board has adopted the following definition of wetlands:

> *An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater or shallow surface water or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.*

California FGC Section 1602—Streambed Alteration

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under Section 1602 of the California FGC. Under Section 1602, it is unlawful for any person, governmental agency, or public utility to do the following without first notifying CDFW:

- substantially divert or obstruct the natural flow of, or 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 regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with a surface or subsurface flow that supports or has supported riparian vegetation. CDFW's regulatory authority within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A CDFW streambed alteration agreement must be obtained for any action that would result in an impact on a river, stream, or lake.

LOCAL

City of Sunnyvale General Plan

The City's General Plan includes the following policies and guidelines related to biological resources that are relevant to the proposed project:

Environmental Protection and Adaptation

- **Policy LT-1.10b:** Coordinate with regional agencies such as the Bay Area Conservation and Development Commission (BCDC) regarding new and changing land uses proposed along the San Francisco Bay.
- **Policy LT-1.10c:** Advocate the City's interests to regional, state, and federal agencies that have influence over the natural environment in Sunnyvale.
- **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.

Urban Forestry

- **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-2.3d:** Require tree replacement for any project that results in tree removal, or in cases of constrained space, require payment of an in-lieu fee. Fee revenues shall support urban forestry programs.
- **Policy LT-2.4a:** 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.

City of Sunnyvale Municipal Code

The City of Sunnyvale Municipal Code Chapter 19.94, Tree Preservation, is the City's tree preservation ordinance. Section 19.94.030, Definitions, defines a protected tree as any tree of 38 inches or greater in circumference measured four and one-half feet above ground for single-trunk trees. For multi-trunk trees, protected trees are those where at least one trunk has a circumference 38 inches, or in which the measurements of the circumferences of each of the multi-trunks, when added together equal an overall circumference 113 inches or greater. To preserve protected trees, the tree preservation ordinance requires tree surveys, a tree protection plan, and other measures, such as replacement trees for permitted tree removals.

Bird Safe Building Design Guidelines

The City of Sunnyvale adopted the Bird Safe Building Design Guidelines in 2014. The guidelines outline tiered design requirements to reduce the likelihood of bird collisions with buildings. The requirements are based on the location of a building relative to the nearest water body or directly adjacent to a park or open space. A more rigorous set of design requirements applies to sites within 300 feet of a body of water or adjacent to an open space or park area larger than 1 acre. A second set of requirements applies to other locations within the City that are likely to be at lower risk for bird collisions. Both sets of requirements require building design that minimizes reflective surfaces and glass walls, reduces nighttime lighting, discourages the placement of larger water features, and avoids landscape designs that emphasize tall landscaping adjacent to reflective surfaces.

These guidelines include measures such as avoiding the use of reflective or transparent glass in the first 60 feet of the buildings, avoiding the use of glass adjacent to landscaped areas, prohibition of glass skyways or freestanding glass walls, and avoiding the use of night-time indoor lighting, among others. Implementation of these measures is expected to reduce the likelihood of birds strikes.

Lawrence Station Area Plan

The adopted LSAP includes the following policies and guidelines related to biological resources that are relevant to the proposed project:

Open Space Policies

- **Policy OSP-6**: Preserve and protect the existing mature street trees on Sonora Court (Redwoods) and Kifer Road.

Street Planting Guidelines

- **STP-UDG6:** Protect existing street trees wherever possible throughout the Plan area, particularly in the southern residential neighborhoods, along Kifer Road and on Sonora Court.
- **STP-UDG7:** Where tree removal is unavoidable, provide replacement trees.

3.4.2 Environmental Setting

The environmental setting provided on pages 3.9-1 through 3.9-9 of the 2016 LSAP Draft EIR is relevant to understanding the potential biological resources impacts of the LSAP modifications. The following information is relevant to understanding the potential impacts of the ISI project on biological resources. The following is a description of biological resources in the ISI project area.

VEGETATION

The ISI site consists of parcels located within a highly urbanized area of the City of Sunnyvale (Figures 2-2 and 2-6 in Chapter 2, "Project Description"). The vegetation on these parcels is made up of ornamental landscaping, ruderal vegetation, and planted and/or naturalized native and non-native trees (ISI 2018a; ISI 2018b; ISI 2018c). Some of the tree species found in the ISI project area include coast redwood (*Sequoia sempervirens*), coast live oak (*Quercus agrifolia*), blue gum (*Eucalyptus globulus*), oleander (*Nerium oleander*), Monterey pine (*Pinus radiata*), and Mexican fan palm (*Washingtonia robusta*). A total of 1,062 protected trees (i.e., a single trunk 38 inches in circumference and

larger or a multi-trunk tree where the circumferences of the multi-trunks added together equal at least 113 inches) are located on the ISI project site, with 679 protected trees located within the North Site and 383 protected trees located within the South Site. The parcel at 945-955 Kifer Road also contains a drained, artificial pond (ISI 2018b). Vegetation within this artificial pond includes curly dock (*Rumex crispus*) and rabbitsfoot grass (*Polypogon monspeliensis*).

COMMON WILDLIFE SPECIES

Common wildlife species that are likely to be found within the ISI project area would be limited to those that are associated with highly urbanized settings, such as American crow (*Corvus brachyrhynchos*), American robin (*Turdus migratorius*), house sparrow (*Passer domesticus*), European starling (*Sturnus vulgaris*), eastern fox squirrel (*Sciurus niger*) and racoon (*Procyon lotor*).

SENSITIVE BIOLOGICAL RESOURCES

Special-Status Species

Special-status species are defined as species that are legally protected or that are otherwise considered sensitive by federal, State, or local resource agencies. Special-status species are species, subspecies, or varieties that fall into one or more of the following categories, regardless of their legal or protection status:

- species listed or proposed for listing as threatened or endangered under ESA (50 CFR 17.12 for listed plants, 50 CFR 17.11 for listed animals, and various notices in the Federal Register for proposed species) or candidates for possible future listing as threatened or endangered under ESA (75 CFR 69222);
- species listed or candidates for listing by the State of California as threatened or endangered under CESA (14 CCR Section 670.5);
- species identified by CDFW as Species of Special Concern;
- species listed as Fully Protected under the California FGC (FGC) (Section 3511 for birds, Section 4700 for mammals, Section 5050 for reptiles and amphibians, and Section 5515 for fish);
- plants listed as rare under the California Native Plant Protection Act (FGC Section 1900 et seq.);
- species afforded protection under local or regional plans, policies, or ordinances;
- plants considered by CDFW to be "rare, threatened or endangered in California" (California Rare Plant Ranks of 1A, presumed extinct in California and either rare or extinct elsewhere; 1B, considered rare or endangered in California and elsewhere; 2A, presumed extinct in California but common elsewhere; and 2B, considered rare or endangered in California but more common elsewhere). Note, that while these rankings do not afford the same type of legal protection as ESA or CESA, the uniqueness of these species requires special consideration under Section 15380 of the State CEQA Guidelines (14 CCR Section 15000 et seq.); or
- taxa (i.e., taxonomic category or group) that otherwise meet the definition of rare or endangered under Section 15380 of the State CEQA Guidelines (14 CCR Section 15000 et seq.).

The term "California species of special concern" is applied by CDFW to animals not listed under ESA or CESA, but that are considered to be declining at a rate that could result in listing, or that historically occurred in low numbers and known threats to their persistence currently exist. CDFW's fully protected status was California's first attempt to identify and protect animals that were rare or facing extinction. Most species listed as fully protected were eventually listed as threatened or endangered under CESA; however, some species remain listed as fully protected but do not have simultaneous listing under CESA. Fully protected species may not be taken or possessed at any time and no take permits can be issued for these species except for scientific research purposes or for relocation to protect livestock.

Table 3.4-1 provides a list of special-status plant species that have been known to occur in the project region, and describes their regulatory status, habitat, and potential for occurrence at the ISI project site. No special-status plant species are expected to occur within the ISI project area (Table 3.4-1). Table 3.4-2 provide a list of wildlife special-

status species known to occur in the project region and their potential for occurring in the ISI project area. A total of two wildlife species could occur in the ISI project area (Table 3.4-2). These species are the pallid bat (*Antrozous pallidus*) and Townsend's big-eared bat (*Corynorhinus townsendii*). These lists were developed through a review of biological studies conducted for the ISI project (ISI 2018a; ISI 2018b; ISI 2018c) and they are included as Appendix C of this Draft SEIR.

Table 3.4-1 Special-Status Plant Species Known to Occur in the Project Region and their Potential for Occurrence in the ISI Project Area

Species	Status[1]			Habitat and Blooming Period	Potential for Occurrence[2]
	Federal	State	CRPR		
Alkali milk-vetch *Astragalus tener* var. *tener*			1B.2	Wetland. Alkali playa, valley and foothill grassland, vernal pools. Low ground, alkali flats, and flooded lands; in annual grassland or in playas or vernal pools. 0–551 feet in elevation. Blooms March–June.	**Not Expected to Occur.** Suitable annual grassland, alkali playa, vernal pool, or other suitable habitat not present within project area.
Brittlescale *Atriplex depressa*			1B.2	Alkali playa, wetland. Chenopod scrub, meadows and seeps, playas, valley and foothill grassland, vernal pools. Usually in alkali scalds or alkaline clay in meadows or annual grassland; rarely associated with riparian, marshes, or vernal pools. 3–1,066 feet in elevation. Blooms April–October.	**Not Expected to Occur.** Suitable annual grassland, alkali playa, vernal pool, or other suitable habitat not present within project area.
Lesser saltscale *Atriplex minuscula*			1B.1	Alkali playa. Chenopod scrub, playas, valley and foothill grassland. In alkali sink and grassland in sandy, alkaline soils. 0–738 feet in elevation. Blooms May–October.	**Not Expected to Occur.** Suitable annual grassland, alkali playa, or other suitable habitat not present within project area.
Congdon's tarplant *Centromadia parryi* ssp. *congdonii*			1B.1	Valley and foothill grassland. Alkaline soils, sometimes described as heavy white clay. 0–755 feet in elevation. Blooms May–October.	**Not Expected to Occur.** Suitable annual grassland habitat not present within project area.
Point Reyes salty bird's-beak *Chloropyron maritimum* ssp. *palustre*			1B.2	Salt marsh, Wetland. Coastal salt marsh. Usually in coastal salt marsh with Salicornia, Distichlis, Jaumea, Spartina, etc. 0–377 feet in elevation. Blooms June–October.	**Not Expected to Occur.** Suitable salt marsh habitat not present within project area.
Robust spineflower *Chorizanthe robusta* var. *robusta*	E		1B.1	Cismontane woodland, coastal dunes, coastal scrub, chaparral. Sandy terraces and bluffs or in loose sand. 30–804 feet in elevation. Blooms April–September.	**Not Expected to Occur.** Suitable woodland, coastal dunes, coastal scrub, or chaparral habitat not present within project area.
Western leatherwood *Dirca occidentalis*			1B.2	Broadleafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, north coast coniferous forest, riparian forest, riparian woodland. On brushy slopes, mesic sites; mostly in mixed evergreen and foothill woodland communities. 82–1,394 feet in elevation. Blooms January–March.	**Not Expected to Occur.** Suitable woodland, forested, or riparian habitat not present within project area.
Hoover's button-celery *Eryngium aristulatum* var. *hooveri*			1B.1	Vernal pools, wetland. Alkaline depressions, vernal pools, roadside ditches and other wet places near the coast. 3–164 feet in elevation. Blooms July .	**Not Expected to Occur.** Suitable vernal pool, or other suitable habitat not present within project area.
San Joaquin spearscale *Extriplex joaquinana*			1B.2	Alkali playa. Chenopod scrub, alkali meadow, playas, valley, and foothill grassland. In seasonal alkali wetlands or alkali sink scrub with *Distichlis spicata*, *Frankenia*, etc. 3–2,740 feet in elevation. Blooms April–October.	**Not Expected to Occur.** Alkali playa, vernal pool, or other suitable alkali habitat not present within project area.

Species	Status[1]			Habitat and Blooming Period	Potential for Occurrence[2]
	Federal	State	CRPR		
Loma Prieta hoita *Hoita strobilina*			1B.1	Ultramafic. Chaparral, cismontane woodland, riparian woodland. Serpentine; mesic sites. 197–3,199 feet in elevation. Blooms May–July.	**Not Expected to Occur.** Serpentine habitat not present within project area.
Contra Costa goldfields *Lasthenia conjugens*	E		1B.1	Alkali playa, wetland. Valley and foothill grassland, vernal pools, alkaline playas, cismontane woodland. Vernal pools, swales, low depressions, in open grassy areas. 3–1,476 feet in elevation. Blooms March–June.	**Not Expected to Occur.** Alkali playa, vernal pool, or other suitable alkali habitat not present within project area.
Arcuate bush-mallow *Malacothamnus arcuatus*			1B.2	Chaparral, cismontane woodland. Gravelly alluvium. 3–2,411 feet in elevation. Blooms April–September.	**Not Expected to Occur.** Chaparral or woodland habitat not present within project area.
Hall's bush-mallow *Malacothamnus hallii*			1B.2	Ultramafic. Chaparral, coastal scrub. Some populations on serpentine. 33–2,395 feet in elevation. Blooms May–September.	**Not Expected to Occur.** Chaparral, coastal scrub, or serpentine habitat not present within project area.
Woodland woollythreads *Monolopia gracilens*			1B.2	Ultramafic. Chaparral, valley and foothill grassland, cismontane woodland, broadleafed upland forest, north coast coniferous forest. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns but may have only weak affinity to serpentine. 328–3,937 feet in elevation. Blooms March–July.	**Not Expected to Occur.** Chaparral, grassland woodland, or serpentine habitat not present within project area.
Prostrate vernal pool navarretia *Navarretia prostrata*			1B.1	Wetland. Coastal scrub, valley and foothill grassland, vernal pools, meadows, and seeps. Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. 10–4,052 feet in elevation. Blooms April–July.	**Not Expected to Occur.** Suitable annual grassland, wetland, vernal pool, or other suitable habitat not present within project area.
Hairless popcornflower *Plagiobothrys glaber*			1A	Salt marsh, Vernal pool, Wetland. Meadows and seeps, marshes, and swamps. Coastal salt marshes and alkaline meadows. 16–591 feet in elevation. Blooms March–May.	**Not Expected to Occur.** Suitable marsh, wetland, vernal pool, or other suitable habitat not present within project area.
California alkali grass *Puccinellia simplex*			1B.2	Meadows and seeps, chenopod scrub, valley and foothill grasslands, vernal pools. Alkaline, vernally mesic. Sinks, flats, and lake margins. 3–3,002 feet in elevation. Blooms March–May.	**Not Expected to Occur.** Suitable meadows, scrub, grassland, vernal pool, or other suitable habitat not present within project area.
Slender-leaved pondweed *Stuckenia filiformis* ssp. *alpina*			2B.2	Wetland. Marshes and swamps. Shallow, clear water of lakes and drainage channels. 984–7,054 feet in elevation. Blooms May–July.	**Not Expected to Occur.** Suitable marsh, wetland, or other suitable habitat not present within project area.
California seablite *Suaeda californica*	E		1B.1	Wetland. Marshes and swamps. Margins of coastal salt marshes. 0–16 feet in elevation. Blooms July–October.	**Not Expected to Occur.** Suitable marsh, wetland, or other suitable habitat not present within project area.
Saline clover *Trifolium hydrophilum*			1B.2	Wetland. Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 0–984 feet in elevation. Blooms April–June.	**Not Expected to Occur.** Suitable marsh, wetland, vernal pool, or other suitable habitat not present within project area.
Caper-fruited tropidocarpum *Tropidocarpum capparideum*			1B.1	Valley and foothill grassland. Alkaline clay. 0–1,181 feet in elevation. Blooms March–April.	**Not Expected to Occur.** Suitable alkaline grassland habitat not present within project area.

Notes: CRPR = California Rare Plant Rank; CNPS California Native Plant Society; ESA = Federal Endangered Species Act; CESA = California Endangered Species Act.

[1] Legal Status Definitions

Federal:
E Endangered (legally protected by ESA)
T Threatened (legally protected by ESA)
State:
E Endangered (legally protected by CESA)
T Threatened (legally protected by CESA)

California Rare Plant Ranks:
1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
2 Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

Threat Ranks
0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

[2] Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present on the project site due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

Could occur: Suitable habitat is available at the project site; however, there are little to no other indicators that the species might be present.

Known to occur: The species, or evidence of its presence, was observed at the project site during reconnaissance surveys, or was reported by others.

Sources: CNDDB 2021a; ISI 2018a; ISI 2018b; ISI 2018c

Table 3.4-2 Special-Status Wildlife Species Known to Occur in the Project Region and their Potential for Occurrence in the ISI Project Area

Species	Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Invertebrates				
bay checkerspot butterfly *Euphydryas editha bayensis*	T		Coastal dunes, ultramafic, valley and foothill grassland. Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. *Plantago erecta* is the primary host plant; *Orthocarpus densiflorus* and *O. purpurscens* are the secondary host plants.	**Not Expected to Occur.** Suitable serpentine soils and suitable habitat not present within project area.
Crotch bumble bee *Bombus crotchii*		S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia*, and *Eriogonum*.	**Not Expected to Occur.** Sufficient floral resources to support a hive are not likely with the previously developed project area. There have been two recent documented occurrences of the species within Santa Clara County since 2019 (CNDDB 2021b).
San Bruno elfin butterfly *Callophrys mossii bayensis*	E		Valley and foothill grassland. Coastal, mountainous areas with grassy ground cover, mainly in the vicinity of San Bruno Mountain, San Mateo County. Colonies are located on steep, north-facing slopes within the fog belt. Larval host plant is *Sedum spathulifolium*.	**Not Expected to Occur.** Suitable grassland habitat on north facing slopes within the fog belt not present within the project area.
western bumble bee *Bombus occidentalis*		S1	Bumble bees have three basic habitat requirements: suitable nesting sites for the colonies, availability of nectar and pollen from floral resources throughout the duration of the colony period (spring, summer, and fall), and suitable overwintering sites for the queens.	**Not Expected to Occur** Sufficient floral resources to support a hive are not likely with the previously developed project area. There have been no documented occurrences within Santa Clara County since 1979 (CNDDB 2021b). The project area is outside of the current range of the species (CDFW 2019).

Species	Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Vernal pool tadpole shrimp *Lepidurus packardi*	E		Valley and foothill grassland, vernal pool, wetland. Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	**Not Expected to Occur.** There is no suitable vernal pool habitat within the project area.
Fish				
delta smelt *Hypomesus transpacificus*	T	E	Aquatic, estuary. Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities > 10 parts per thousand. Most often at salinities < 2 parts per thousand.	**Not Expected to Occur.** There is no suitable estuary habitat for the species within the project area.
longfin smelt *Spirinchus thaleichthys*	C	SC	Aquatic, estuary. Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 parts per thousand, but can be found in completely freshwater to almost pure seawater.	**Not Expected to Occur.** There is no suitable estuary habitat for the species within the project area.
steelhead - central California coast DPS *Oncorhynchus mykiss irideus* pop. 8	T		Aquatic. Sacramento/San Joaquin flowing waters. From Russian River, south to Soquel Creek and to, but not including, Pajaro River. Also San Francisco and San Pablo Bay basins.	**Not Expected to Occur.** No suitable stream habitat within the project area.
tidewater goby *Eucyclogobius newberryi*	E	SC	Aquatic, Klamath/north coast flowing waters, Sacramento/San Joaquin flowing waters, South coast flowing waters. Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	**Not Expected to Occur.** No suitable lower reach stream habitat within the project area.
Amphibians and Reptiles				
Alameda whipsnake *Masticophis lateralis euryxanthus*	T	T	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Typically found in chaparral and scrub habitats but will also use adjacent grassland, oak savanna, and woodland habitats. Mostly south-facing slopes and ravines, with rock outcrops, deep crevices, or abundant rodent burrows, where shrubs form a vegetative mosaic with oak trees and grasses.	**Not Expected to Occur.** No suitable chaparral, scrub, woodland, or grassland habitat within the project area.
California giant salamander *Dicamptodon ensatus*		SC	Aquatic, meadow and seep, north coast coniferous forest, and riparian forest. Known from wet coastal forests near streams and seeps from Mendocino County south to Monterey County and east to Napa County. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	**Not Expected to Occur.** No suitable meadow, seep, north coast coniferous forest, or riparian forest habitat within the project area.

Species	Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
California red-legged frog *Rana draytonii*	T	SC	Aquatic, artificial flowing waters, artificial standing waters, freshwater marsh, marsh & swamp, riparian forest, riparian scrub, riparian woodland, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, south coast flowing waters. Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	**Not Expected to Occur.** No suitable freshwater marsh, marsh & swamp, riparian forest, riparian scrub, riparian woodland habitat within the project area. The artificial water feature within the project area is drained and therefore not suitable aquatic habitat.
California tiger salamander *Ambystoma californiense*	T	T	Cismontane woodland, meadow and seep, riparian woodland, valley and foothill grassland, vernal pool, and wetlands. Central Valley DPS federally listed as threatened. Santa Barbara and Sonoma Counties DPS federally listed as endangered. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	**Not Expected to Occur.** No suitable woodland, meadow, seep, riparian woodland, valley and foothill grassland, vernal pool, or wetland habitat within the project area. The artificial water feature within the project area is drained and therefore not suitable aquatic habitat.
foothill yellow-legged frog *Rana boylii*		E	Aquatic, chaparral, cismontane woodland, coastal scrub, Klamath/north coast flowing waters, lower montane coniferous forest, meadow and seep, riparian forest, riparian woodland, and Sacramento/San Joaquin flowing waters. Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.	**Not Expected to Occur.** No suitable chaparral, cismontane woodland, coastal scrub, Klamath/north coast flowing waters, lower montane coniferous forest habitat within the project area. The artificial water feature within the project area is drained and therefore not suitable aquatic habitat.
green sea turtle *Chelonia mydas*	T		Marine bay. Marine. Completely herbivorous; needs adequate supply of seagrasses and algae.	**Not Expected to Occur.** No suitable marine habitat in the project area.
Northern California legless lizard *Anniella pulchra*		SC	Chaparral. Coastal dunes. Coastal scrub. Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	**Not Expected to Occur.** No suitable chaparral, coastal scrub, or dune habitat within the project area.
San Francisco garter snake *Thamnophis sirtalis tetrataenia*	E	E FP	Artificial standing waters, marsh and swamp, Sacramento/San Joaquin standing waters, wetland. Vicinity of freshwater marshes, ponds and slow-moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also very important.	**Not Expected to Occur.** The artificial water feature within the project area is drained and therefore not suitable aquatic habitat. project area is outside of the range of the species which does not extend into Santa Clara County (USFWS 2019).
Santa Cruz black salamander *Aneides niger*		SC	Mixed deciduous and coniferous woodlands and coastal grasslands in San Mateo, Santa Cruz, and Santa Clara Counties. Adults found under rocks, talus, and damp woody debris.	**Not Expected to Occur.** No suitable chaparral, coastal scrub, or dune habitat within the project area.

Species	Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
western pond turtle *Actinemys marmorata*		SC	Aquatic, artificial flowing waters, Klamath/north coast flowing waters, Klamath/north coast standing waters, marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing and standing waters. A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation, below 6,000 feet elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 kilometer from water for egg-laying.	**Not Expected to Occur.** The artificial water feature within the project area is drained and therefore not suitable aquatic habitat.
Birds				
Alameda song sparrow *Melospiza melodia pusillula*		SC	Salt marsh. Resident of salt marshes bordering south arm of San Francisco Bay. Inhabits Salicornia marshes; nests low in Grindelia bushes (high enough to escape high tides) and in Salicornia.	**Not Expected to Occur.** No suitable salt marsh habitat within the project area.
American peregrine falcon *Falco peregrinus anatum*	D	D FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	**Not Expected to Occur.** Existing buildings within the project area are not likely tall enough to function as nesting habitat.
Black skimmer *Rynchops niger*		SC	Alkali playa, sand shore. Nests on gravel bars, low islets, and sandy beaches, in unvegetated sites. Nesting colonies usually less than 200 pairs.	**Not Expected to Occur.** No suitable alkali playa or sandy shore habitat within the project area.
burrowing owl *Athene cunicularia*		SC	Coastal prairie, coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, and valley and foothill grassland. Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	**Not Expected to Occur.** While this species may inhabit areas with low-growing ruderal vegetation, the landscaped and developed nature of the project area likely does not provide adequate burrows or foraging habitat to support the species.
California (Ridgway's) clapper rail *Rallus obsoletus obsoletus*	E	E FP	Brackish marsh, marsh and swamp, salt marsh, wetlands. Salt-water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed but feeds away from cover on invertebrates from mud-bottomed sloughs.	**Not Expected to Occur.** No suitable marsh or wetland habitat within the project area.
California black rail *Laterallus jamaicensis coturniculus*		T FP	Brackish marsh, freshwater marsh, marsh and swamp, salt marsh, wetland. Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	**Not Expected to Occur.** No suitable marsh or wetland habitat within the project area.
California least tern *Sternula antillarum browni*	E	E FP	Alkali playa, wetland. Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	**Not Expected to Occur.** No suitable alkali playa or sandy shore habitat within the project area.
marbled murrelet *Brachyramphus marmoratus*	T	E	Lower montane coniferous forest, old growth, redwood. Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir.	**Not Expected to Occur.** No suitable old growth redwood habitat within the project area.

Species	Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
northern harrier *Circus cyaneus*		SC	Coastal scrub, Great Basin grassland, marsh and swamp, riparian scrub, valley and foothill grassland, and wetlands. Coastal salt and fresh-water marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	**Not Expected to Occur.** No suitable grassland, scrub, or marsh habitat within the project area.
saltmarsh common yellowthroat *Geothlypis trichas sinuosa*		SC	Marsh and swamp. Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**Not Expected to Occur.** No marsh or swamp habitat within the project area.
Swainson's hawk *Buteo swainsoni*		T	Great Basin grassland, riparian forest, riparian woodland, valley, and foothill grassland. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	**Not Expected to Occur.** Trees within the project area may provide nesting sites; however, there is no foraging habitat within the vicinity of the project area that would support this species.
tricolored blackbird *Agelaius tricolor*		T SC	Freshwater marsh, marsh and swamp, swamp, wetland. Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	**Not Expected to Occur.** No marsh, swamp or riparian habitat within the project area.
western snowy plover *Charadrius alexandrinus nivosus*	T	SC	Great Basin standing waters, sand shore, wetland. Sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting.	**Not Expected to Occur.** No suitable beach or similar habitat within the project area.
western yellow-billed cuckoo *Coccyzus americanus occidentalis*	T	E	Riparian forest. Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	**Not Expected to Occur.** No suitable riparian habitat within the project area.
white-tailed kite *Elanus leucurus*		FP	Cismontane woodland, marsh and swamp, riparian woodland, valley and foothill grassland, and wetlands. Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**Not Expected to Occur.** Trees within the project area may provide nesting sites; however, there is no foraging habitat within the vicinity of the project area that would support this species.
yellow rail *Coturnicops noveboracensis*		SC	Freshwater marsh, meadow, and seep. Summer resident in eastern Sierra Nevada in Mono County. Fresh-water marshlands.	**Not Expected to Occur.** No marsh habitat within the project area.
Mammals				
American badger *Taxidea taxus*		SC	Alkali marsh, alkali playa, alpine, alpine dwarf scrub, bog a fen, brackish marsh, broadleaved upland forest, chaparral, chenopod scrub, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils, and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	**Not Expected to Occur.** No suitable natural habitats in the project area that would support this species.

Species	Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Mountain lion-Southern California/Central Coast evolutionary significant unit *Puma concolor*		CT	Found in most habitats within Central California. Uses caves, other natural cavities, and brush thickets for cover and denning, often within riparian habitats.	**Not Expected to Occur.** No suitable natural habitats in the project area that are likely to support this species.
pallid bat *Antrozous pallidus*		SC	Chaparral, coastal scrub, desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, valley, and foothill grassland. Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Could Occur.** The abandoned buildings and large trees within the project area could provide roosting sites for this species.
salt-marsh harvest mouse *Reithrodontomys raviventris*	E	E FP	Marsh and swamp, wetland. Only in the saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is primary habitat, but may occur in other marsh vegetation types and in adjacent upland areas. Does not burrow, build loosely organized nests. Requires higher areas for flood escape.	**Not Expected to Occur.** No salt marsh habitat within the project area.
salt-marsh wandering shrew *Sorex vagrans halicoetes*		SC	Marsh and swamp, wetland. Salt marshes of the south arm of San Francisco Bay. Medium high marsh 6-8 feet above sea level where abundant driftwood is scattered among Salicornia.	**Not Expected to Occur.** No salt marsh habitat within the project area.
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*		SC	Chaparral, redwood. Forest habitats of moderate canopy and moderate to dense understory. May prefer chaparral and redwood habitats. Constructs nests of shredded grass, leaves and other material. May be limited by availability of nest-building materials.	**Not Expected to Occur.** No suitable natural habitats in the project area that would support this species.
San Joaquin kit fox *Vulpes macrotis mutica*	E	T	Chenopod scrub, valley, and foothill grassland. Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	**Not Expected to Occur.** No suitable natural habitats in the project area that would support this species.
Townsend's big-eared bat *Corynorhinus townsendii*		SC	Broadleaved upland forest, chaparral, chenopod scrub, Great Basin grassland, Great Basin scrub, Joshua tree woodland, lower montane coniferous forest, meadow & seep, Mojavean desert scrub, riparian forest, riparian woodland, Sonoran desert scrub. Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	**Could Occur.** The abandoned buildings and large trees within the project area could provide roosting sites for this species.

[1] Legal Status Definitions

Federal:
E Endangered (legally protected)
T Threatened (legally protected)
C Candidate (legally protected)

State:
FP Fully protected (legally protected)
SC Species of special concern (no formal protection other than CEQA consideration)
S1 Critically imperiled (no formal protection other than CEQA consideration)

S2 Imperiled (no formal protection other than CEQA consideration)
E Endangered (legally protected)
T Threatened (legally protected)
Other:
WBWG: M Western Bat Working Group - Medium

[2] Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present in the project area due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

Could occur: Suitable habitat is available in the project area; however, there are little to no other indicators that the species might be present.

Known to occur: The species, or evidence of its presence, has been reported by others.

Source: CDFW 2019; CNDDB 2021a; CNDDB 2021b; ISI 2018a; ISI 2018b; ISI 2018c

Sensitive Natural Communities

Sensitive natural communities include those that are of special concern to resource agencies or are afforded specific consideration through CEQA or other federal or State laws. Sensitive natural communities may be of special concern to regulatory agencies and conservation organizations for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat to common and special-status species. Similar to the LSAP area, there are no sensitive natural communities within or adjacent to the ISI project area (ISI 2018a; ISI 2018b; ISI 2018c).

3.4.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

This impact evaluation is based on a review of the 2016 EIR as well as data collected during reconnaissance-level field surveys (ISI 2018a; ISI 2018b; ISI 2018c) and tree removal inventory (ISI 2019) at the ISI project site.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, an impact on biological resources is considered significant if implementation of the LSAP Update and ISI project would do any of the following:

- 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 CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS;
- 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 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;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and/or
- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

ISSUES NOT DISCUSSED FURTHER

Loss or Degradation of State or Federally Protected Wetlands

As discussed in the 2016 LSAP EIR, a portion of Calabazas Creek is located along the eastern edge of the LSAP plan area, and the El Camino Storm Drain Channel traverses through the residential neighborhoods south of the Station and along the south edge of the rail tracks before draining into Calabazas Creek. Impact 3.9.6 of the 2016 LSAP EIR concluded buildout of the LSAP would result in a less-than-significant impact to these federally protected waters because no direct loss or fill of these waters was proposed as part of the LSAP. Calabazas Creek divides the current M-S/LSAP-zoned area from the MXD-II zoned area east of Lawrence Expressway. Similar to the project analyzed in the 2016 LSAP EIR, direct loss or fill of these waters is not proposed. In addition, the areas proposed for LSAP Update buildout or the ISI project site are not located near the El Camino Storm Drain Channel. The North Site contains a concrete and gravel lined artificial water feature. This water feature contains hydrophytic vegetation that does not contain hydric soils and is not supported by hydric soils or natural hydrology (ISI 2018c). Therefore, the feature does not meet the criteria established by the U.S. Army Corps of Engineers or the State Water Resources Control Board to define wetlands (ISI 2018c). There are no other potential wetlands within the project area, and therefore the LSAP Update and ISI project would have no impact on State or federally protected wetlands and this issue is not discussed further in this document. Refer to Impact 3.9.1 of this Draft SEIR for analysis of how runoff from proposed development may contribute to the degradation of downstream water quality.

Wildlife Movement and Nursery Sites

The project area is located within a developed landscape in the City of Sunnyvale. As discussed in the 2016 LSAP EIR, this urban and disturbed setting does not support native wildlife nursery sites. The LSAP expansion and ISI project area are similarly developed. The LSAP expansion and ISI project would not alter any existing wildlife corridor and would not interfere with the movement of migratory fish species or other wildlife species. Therefore, the proposed project would result in no impact on movement of native resident or migratory fish or wildlife species, movement corridors, or native wildlife nursery sites, and this topic is not discussed further in this document.

Riparian Habitat or Other Sensitive Natural Communities

The 2016 LSAP EIR disclosed that no riparian habitat or other sensitive natural communities occur in the plan area. In addition, no riparian habitat or other sensitive natural communities occur within the proposed LSAP expansion and ISI project area (ISI 2018a; ISI 2018b; ISI 2018c). Therefore, the LSAP Update and ISI project would not have any impact on riparian habitat or other sensitive natural communities and this issue is not discussed further in this document.

Conflict with Adopted Habitat Conservation Plan or Other Conservation Plan

As disclosed in the 2016 LSAP EIR, the LSAP is not located within the geographic extent of the Santa Clara Valley Habitat Plan, although other areas of Santa Clara County are included in the plan. There are no other conservation plans within the project region. The LSAP modifications and ISI project would also occur outside of the Santa Clara Valley Habitat Plan. Because the location of the project is outside of the Habitat Plan and any effects of the project on habitat or species would not extend within the area of the Habitat Plan, there would be no conflict with the Habitat Plan; therefore, this issue is not discussed further in this document.

Bird Collisions with Buildings

Building designs that include reflections of vegetation and other habitat features that are attractive to birds can lead to bird injury and death due to collisions with the structure. As disclosed in the 2016 LSAP EIR, the City of Sunnyvale has adopted the Bird Safe Building Design Guidelines that would be applied to all construction within the LSAP including the area of LSAP modifications, and the ISI project. These guidelines reduce the likelihood of bird collisions and resulting mortality by limiting reflective surfaces and glass walls, reducing nighttime lighting, discouraging the placement of larger water features, and avoiding landscape designs that emphasize tall landscaping adjacent to reflective surfaces. With the application of these Bird Safe Building Design Guidelines to the LSAP modifications and ISI project, there would be no increase in the likelihood of bird collisions with buildings and this issue is not discussed further in this document.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.4-1: Substantially Affect Special-Status Species Either Directly or Through Habitat Modifications

The 2016 LSAP EIR disclosed that construction within the LSAP has the potential to remove maternity roosts of special-status bats. The LSAP Update area does not include the Corn Palace property and the proposed LSAP boundary expansion area (ISI site) does not include suitable habitat for burrowing owl. However, the ISI project and LSAP modifications could result in loss of special-status bat maternity roosts. All projects within the LSAP would be subject to adopted LSAP Mitigation Measure 3.9.2 would avoid impacts to special-status bat maternity roosts, including the LSAP Update and ISI project. Thus, implementation of the LSAP Update and ISI project would not result in a new significant effect on special-status species and their habitat and the impact is not more severe than the impact identified in the 2016 LSAP EIR. With implementation of adopted LSAP Mitigation Measure 3.9-2, the impact of the LSAP Update and ISI project on special-status species and their habitats would be **less-than-significant**.

The potential impact to special-status species from implementation of the LSAP was analyzed in Section 3.9 of the 2016 LSAP Draft EIR. That analysis found potentially significant impacts to burrowing owl (*Athene cunicularia*) on the vacant portion of the Corn Palace property and special-status bats. However, the Corn Palace property was not included within the adopted boundaries of the LSAP and is not subject to the LSAP Update. In addition, suitable nesting habitat for burrowing owl is not located at the ISI site. Thus, impacts to nesting burrowing owls would be less than significant for the LSAP Update and ISI project. The 2016 LSAP EIR concluded that no other special-status species were anticipated to be adversely affected by the LSAP. Adopted LSAP Mitigation Measure 3.9-2 from the 2016 LSAP EIR addresses potential for impacts to special-status bat maternity roosts.

Adopted LSAP Mitigation Measure 3.9.2

Prior to the removal of trees or the demolition of buildings, a bat survey shall be performed by a qualified biologist no more than 3 days prior to the start of construction activities. If bat roosts are identified, the City shall require that the bats be safely flushed from the sites where roosting habitat is planned to be removed. If maternity roosts are identified during the maternity roosting season (typically May to September), they must remain undisturbed until a qualified biologist has determined the young bats are no longer roosting. If roosting is found to occur on-site, replacement roost habitat (e.g., bat boxes) shall be provided to offset roosting sites removed. If no bat roosts are detected, no further action is required if the trees and buildings are removed prior to the next breeding season.

If a female or maternity colony of bats is found on the project site, and the project can be constructed without the elimination or disturbance of the roosting colony (e.g., if the colony roosts in a large oak tree not planned for removal), a qualified biologist shall determine what buffer zones shall be employed to ensure the continued success of the colony. Such buffer zones may include a construction-free barrier of 200 feet from the roost and/or the timing of the construction activities outside of the maternity roost season (after July 31 and before March 1).

If an active nursery roost is documented on-site and the project cannot be conducted outside of the maternity roosting season, bats shall be excluded from the site after July 31 and before March 1 to prevent the formation of maternity colonies. Nonbreeding bats shall be safely evicted under the direction of a bat specialist.

LSAP Update

The proposed LSAP modifications would increase the allowable housing potential within the LSAP and expand the LSAP boundary to include the ISI site. Suitable habitat for special-status bat species is located within the LSAP area and ISI site. The increase in allowable housing as part of the LSAP Update could result in impacts to suitable habitat for special-status bats that are not substantially different in magnitude or type from those described in the 2016 LSAP Draft EIR.

Adopted LSAP Mitigation Measure 3.9.2 requires a survey for bats be conducted before tree removal or building demolition, avoidance of maternity roosts during the roosting season, and exclusion of bats from roosts. Thus, implementation of the LSAP Update would not result in a new significant effect on special-status species and their habitat and the impact is not more severe than the impact identified in the 2016 LSAP EIR. With implementation of adopted Mitigation Measure 3.9.2, the proposed LSAP Update would have a **less-than-significant** impact on sensitive species and habitats.

ISI Project

The buildings and large trees within the ISI project area may be occupied by the roosts of special-status bat species. Pallid bat (*Antrozous pallidus*) may use buildings and hollows of large trees within the project area for roosting (CWHR 1990), while only the buildings in the project area may provide roosting habitat for Townsend's big-eared bat (*Corynorhinus townsendii*). Outdoor lighting within the ISI project would be installed meeting standard guidelines including Bird Safe Guidelines as discussed in Section 2.4.2, "ISI Project." Required implementation of standard guidelines for outdoor lighting and given the previously disturbed and urban nature of the ISI project area, outdoor lighting installed as part of the ISI project would result in a less than substantial effect on special-status bats. Both pallid bat and Townsend's big-eared bat are sensitive to roost disturbance, which can lead to abandonment of roosts. Tree removal and demolition of existing buildings within the ISI site have the potential to impact roosts of pallid bat and Townsend's big eared bat. The removal of occupied maternity roosts may cause direct injury or mortality of bats and young which would result in a substantial adverse effect on these species; the loss of multiple individuals and reproductive effort could reduce the local populations of these rare species. The ISI project would be required to implement the adopted LSAP Mitigation Measure 3.9.2, necessitating a survey for bats be conducted before tree removal or building demolition, avoidance of maternity roosts during the roosting season, and exclusion of bats from roosts. Thus, implementation of the ISI project would not result in a new significant effect on special-status species and their habitat, and the impact is not more severe than the impact identified in the 2016 LSAP EIR. With implementation of adopted LSAP Mitigation Measure 3.9.2, the ISI project would avoid or minimize impacts to special-status bats, resulting in a **less-than-significant** impact.

Mitigation Measures

No new mitigation is required. Implementation of adopted LSAP Mitigation Measure 3.9.2 is required.

Impact 3.4-2: Loss of Raptor and Other Common Bird Nests

The 2016 LSAP EIR determined tree removal and construction associated with implementation of the LSAP could result in direct disturbance of nesting raptors and other migratory birds. With implementation of adopted Mitigation Measure 3.9.3 of the 2016 LSAP EIR, subsequent development under the LSAP would avoid removal and disturbance of nests within the LSAP, resulting in a less-than-significant impact. Implementation of the LSAP Update and ISI project would result in construction and/or tree removal activities that could remove or disturb nests of common raptors and other nesting birds. All projects within the LSAP would be subject to adopted LSAP Mitigation Measure 3.9.3, which would avoid the loss and disturbance of nests to a less-than-significant level. Construction and tree removal activities that occur with implementation of the ISI project or subsequent development projects under the LSAP Update would be required to comply with adopted LSAP Mitigation Measure 3.9.3 and would not result in a new significant effect on nesting raptors and other migratory birds that would be more severe than the impact identified in the 2016 LSAP EIR. With implementation of adopted LSAP Mitigation Measure 3.9.3, the LSAP Update and ISI project would result in a **less-than-significant** impact to nesting raptors and other migratory birds.

Impact 3.9.3 of the 2016 LSAP EIR evaluated the potential impact on raptors and other common bird nests from implementation of the LSAP. That analysis concluded implementation of the LSAP would result in potentially significant impacts to raptors and other common birds. Mitigation Measure 3.9.3 was included in the LSAP Draft EIR to reduce this impact to a less-than-significant level.

Adopted LSAP Mitigation Measure 3.9.3

All construction and clearing activities shall be conducted outside of the avian nesting season (January 15–August 31), when feasible. If clearing and/or construction activities occur during the nesting season, preconstruction surveys for nesting raptors, special-status resident birds, and other migratory birds protected by the Migratory Bird Treaty Act shall be conducted by a qualified biologist, up to 3 days before initiation of construction activities. The qualified biologist shall survey the construction zone and a 250-foot radius surrounding the construction zone to determine whether the activities taking place have the potential to disturb or otherwise harm nesting birds. If an active nest is located within 100 feet (250 feet for raptors) of construction activities, the project applicant shall establish an exclusion zone (no ingress of personnel or equipment at a minimum radius of 100 feet or 250 feet, as appropriate, around the nest). Alternative exclusion zones may be established through consultation with the CDFW and the USFWS, as necessary. The City shall be notified if altered exclusion zones widths are authorized by these agencies prior to the initiation of work. The exclusion zones shall remain in force until all young have fledged.

LSAP Update

The proposed LSAP Update would increase the allowable housing potential within the LSAP and expand the LSAP boundary to include the ISI site. The expansion of the LSAP boundary would include more potentially suitable habitat for nesting raptors and other common birds that currently exists within the LSAP. Proposed redevelopment within the LSAP boundary expansion area (ISI site) and increase in allowable housing potential within the LSAP would result in additional development and tree removal which could result in loss of raptor and other common bird nests. The nests of common raptors and other common birds are protected under Sections 3503 and 3503.5 of the FGC and the federal Migratory Bird Treaty Act and compliance with these regulations would be required. Implementation of adopted LSAP Mitigation Measure 3.9.3 from the 2016 LSAP EIR would require work be performed outside of the nesting season and preconstruction nest surveys and non-disturbance buffers around any nests. With implementation of adopted LSAP Mitigation Measure 3.9.3, impacts to the nests of common raptors and other common nesting birds would be minimized or avoided with implementation of the LSAP Update. Thus, implementation of the LSAP Update would not result in a new significant effect on nesting raptors and other migratory birds and their habitat and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The impact would be **less than significant**.

ISI Project

Although habitat within the ISI project area is mostly landscaped and ruderal vegetation, mature trees within the project area may provide nesting habitat for raptors such as great horned owl (*Bubo virginianus*) and other common nesting birds. Removal of trees may result in the destruction of active nests and construction located in proximity to active nests can result in nest abandonment, resulting in the loss of eggs and young. The nests of common raptors and other common birds are protected under Sections 3503 and 3503.5 of the FGC and compliance with these regulations would be required. Implementation of adopted LSAP Mitigation Measure 3.9.3 requires work be performed outside of the nesting season and preconstruction nest surveys and non-disturbance buffers around any nests. With implementation of adopted LSAP Mitigation Measure 3.9.3, the ISI project would minimize or avoid impacts to the nests of common raptors and other common nesting birds. Thus, implementation of the ISI project would not result in a new significant effect on nesting raptors and other migratory birds and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The impact would be **less than significant**.

Mitigation Measures

No new mitigation is required. Implementation of adopted LSAP Mitigation Measure 3.9.3 is required.

Impact 3.4-3: Protected Tree Removal

The 2016 LSAP EIR determined that implementation of subsequent developments under the LSAP would result in removal of protected trees, but implementation of the City's tree preservation requirements under the Sunnyvale Municipal Code and LSAP policies and guidelines would ensure no net loss of protected trees. The proposed LSAP Update and ISI project would be required to comply with the City's tree preservation requirements (Sunnyvale Municipal Code Chapter 19.94) and adopted LSAP policies and guidelines that provide protection measures for trees within the LSAP. Project-level CEQA review would be required of individual development projects under the LSAP Update. In addition, implementation of a tree mitigation plan has been incorporated as an element of the ISI project. As part of the ISI project and consistent with the requirements of City Municipal Code Section 19.94, the ISI project would retain more than 85 percent (581 of 679) of the protected onsite trees on the North Site, 3 percent of protected onsite trees (11 of 383) on the South Site, and plant 663 trees within the ISI Site. Required compliance with the City's tree preservation requirements and LSAP policies and guidelines would ensure that the ISI project and future development associated with LSAP Update buildout would result in no net loss of protected trees. Thus, implementation of the project would not result in a new significant effect on protected trees and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Both the LSAP Update and the ISI project would result in a **less-than-significant** impact on protected trees.

Impact 3.9.8 of the 2016 LSAP EIR determined that tree removal resulting from LSAP implementation would be reduced to a less-than-significant level with implementation of the City's tree preservation requirements under Sunnyvale Municipal Code Chapter 19.94 and LSAP Policy OSP-6 and Guidelines STP-UDG6 and STP-UDG7 that ensure avoidance of removal or replacement of protected trees. Compliance with these requirements would result in no net loss of protected trees. Therefore, the 2016 LSAP EIR concluded the LSAP would result in a less-than-significant impact on protected trees.

LSAP Update

The proposed LSAP Update would increase the allowable housing potential within the LSAP and expand the LSAP boundary. The increase in allowable housing and the Lawrence Station Sense of Place Plan may result in future construction that requires removal of protected trees within the LSAP beyond what was anticipated in the 2016 LSAP EIR. Implementation of adopted LSAP Policy OSP-6, Guidelines STP-UDG6 and STP-UDG7, and Sunnyvale Municipal Code Chapter 19.94 would ensure the protection or replacement of protected trees within the LSAP. Future developments resulting from the LSAP Update that could impact protected trees would be required to conduct tree surveys and prepare a tree protection plan that includes a replacement plan for any proposed removal of protected trees for City review prior to development. Thus, implementation of the LSAP Update would not result in a new significant effect on protected trees and the impact is not more severe than the impact identified in the 2016 LSAP EIR. With implementation of these requirements, future development that occurs as a result of the LSAP Update would result in the avoidance or replacement of protected trees. The impact would be **less than significant**.

ISI Project

A tree mitigation plan is included as part of the ISI project to address the removal of protected (i.e., 38 inches in circumference and larger) redwoods and other trees located within the ISI project site. Consistent with the requirements of Sunnyvale Municipal Code Section 19.94.120, the ISI project would retain 85 percent (581 of 679) of the protected onsite trees on the North Site (see Figure 2-9a of this Draft SEIR) and 3 percent of all trees (11 of 383) on the South Site (see Figure 2-9b of this Draft SEIR). In accordance with the City Municipal Code Chapter 19.94, and LSAP guideline STPUDG7, 663 trees would be planted within the ISI project site. Most of the existing protected trees along the perimeter of the North Site would be retained in place and landscaping at the site would include three different planting typologies: redwood forest, foothill woodland, and grassland meadow. Thus, implementation of the ISI project would not result in a new significant effect on nesting raptors and other migratory birds and the impact is not more severe than the impact identified in the 2016 LSAP EIR. With implementation of the tree mitigation plan, the ISI project would result in a **less-than-significant** impact on protected trees.

Mitigation Measures

No mitigation is required.

3.5 ENERGY

This section evaluates whether implementing the LSAP Update and ISI project would result in an environmental impact related to the inefficient, wasteful, or unnecessary consumption of energy and evaluates the project's consistency with applicable plans related to energy conservation or renewable energy. The capacity of existing and proposed infrastructure to serve the project is evaluated in Section 3.15, "Utilities and Service Systems."

The 2016 LSAP EIR includes Section 3.11.8, "Electrical/Natural Gas and Energy," within Section 3.11, "Public Services and Utilities," which evaluated the potential effects of the LSAP. The 2016 LSAP EIR concluded that there would be less-than-significant impacts related to energy and fuel consumption (Impact 3.11.8.1).

One comment letter regarding energy was received in response to the notice of preparation (see Appendix A). The Earthjustice organization recommends electrifying all buildings under the LSAP Update to reduce the combustion of gas in households. This comment is addressed in Section 3.7, "Greenhouse Gas Emissions and Climate Change."

3.5.1 Regulatory Setting

Energy conservation is embodied in many federal, State, and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g., the U.S. Environmental Protection Agency's [EPA's] EnergyStar™ program) and transportation (e.g., fuel efficiency standards). At the State level, 24 CCR (Title 24) sets forth energy standards for buildings. Further, the State provides rebates and tax credits for installing renewable energy systems, and its Flex Your Power program promotes conservation in multiple areas. At the local level, individual cities and counties establish policies in their general plans and climate action plans related to the energy efficiency of new development and land use planning and related to the use of renewable energy sources.

The regulatory setting provided in the 2016 LSAP EIR remains applicable to this analysis. The regulatory information provided on pages 3.11-45 through 3.11-47 of the 2016 LSAP EIR includes a description of building efficiency standards; green building standards; applicable policies of the City's Climate Action Plan (CAP); and adopted LSAP policies. Since certification of the 2016 LSAP EIR, various State and federal policies have been updated. Policies that were not included in the 2016 LSAP EIR have been included in this analysis as they are related to the LSAP Update.

FEDERAL

Energy Policy and Conservation Act and CAFE Standards

In October 2012, the U.S. Environmental Protection Agency (EPA) and the National Highway Traffic Safety Administration (NHTSA), on behalf of the Department of Transportation, issued final rules to further reduce GHG emissions and improve Corporate Average Fuel Economy (CAFE) standards for light-duty vehicles for model years 2017 and beyond (77 FR 62624). NHTSA's CAFE standards have been enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. This program would increase fuel economy to the equivalent of 54.5 miles per gallon limiting vehicle emissions to 163 grams of carbon dioxide (CO_2) per mile for the fleet of cars and light-duty trucks by model year 2025 (77 FR 62630).

On August 2, 2018, NHTSA and EPA proposed the Safer Affordable Fuel-Efficient Vehicle Rule (SAFE Rule). This rule addresses emissions and fuel economy standards for motor vehicles and is separated in two parts. Part One addresses emission standards, while Part Two addresses CAFE standards for passenger cars and light trucks for model years 2021 to 2026. This rulemaking proposes new CAFE standards for model years 2022 through 2026 and would amend existing CAFE standards for model year 2021. The proposal would retain the model year 2020 standards (specifically, the footprint target curves for passenger cars and light trucks) through model year 2026, but comment is sought on a range of alternatives discussed throughout the proposed rule. This proposal addressing CAFE standards is being jointly developed between NHSTA and EPA. The final SAFE Rule Part Two was released on March 31, 2020.

The outcome of any pending or potential lawsuits (and how such lawsuits could delay or affect its implementation) are unknown at this time.

Energy Policy Act of 1992 and 2005

The Energy Policy Act of 1992 was passed to reduce the country's dependence on foreign petroleum and improve air quality. The act includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. The act requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are also included in the act. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs. The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is designed to improve vehicle fuel economy and help reduce U.S. dependence on oil. It represents a major step forward in expanding the production of renewable fuels, reducing dependence on oil, and confronting global climate change. The Energy Independence and Security Act of 2007 increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly fivefold increase over current levels. It also reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020—an increase in fuel economy standards of 40 percent.

By addressing renewable fuels and the CAFE standards, the Energy Independence and Security Act of 2007 builds upon progress made by the Energy Policy Act of 2005 in setting out a comprehensive national energy strategy for the 21st century; however, in August of 2018, NHTSA and EPA proposed the SAFE Rule. Part One of the SAFE Rule revokes a waiver granted by EPA to the State of California under Section 209 of the Clean Air Act to enforce more stringent emission standards for motor vehicles than those required by EPA for the explicit purpose of GHG emission reduction, and indirectly, criteria air pollutant and ozone precursor emission reduction. On March 31, 2020, Part Two of the SAFE Rule was published and would amend existing CAFE and tailpipe CO_2 emissions standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026.

STATE

Warren-Alquist Act

The 1974 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the California Energy Commission (CEC). The creation of the act occurred as a response to the State legislature's review of studies projecting an increase in statewide energy demand, which would potentially encourage the development of power plants in environmentally sensitive areas. The act introduced State policy for siting power plants to reduce potential environmental impacts and sought to reduce demand for these facilities by directing CEC to develop statewide energy conservation measures to reduce wasteful, inefficient, and unnecessary uses of energy. Conservation measures recommended establishing design standards for energy conservation in buildings, which ultimately resulted in the creation of the Title 24 Building Energy Efficiency Standards (California Energy Code). These standards are updated regularly and remain in effect today. The act additionally directed CEC to cooperate with the Governor's Office of Planning and Research, the California Natural Resources Agency, and other interested parties in ensuring that a discussion of wasteful, inefficient, and unnecessary consumption of energy is included in all EIRs required on local projects.

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to AB 2076 (Chapter 936, Statutes of 2000), CEC and the California Air Resources Board (CARB) prepared and adopted a joint agency report in 2003, *Reducing California's Petroleum Dependence*. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita vehicle miles traveled (VMT) (CEC and CARB 2003). Further, in response to CEC's 2003 and 2005 Integrated Energy Policy Reports (IEPRs), the governor directed CEC to take the lead in developing a long-term plan to increase alternative fuel use.

A performance-based goal of AB 2076 was to reduce petroleum demand to 15 percent below 2003 demand by 2030.

Integrated Energy Policy Report

SB 1389 (Chapter 568, Statutes of 2002) required CEC to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the State's economy, and protect public health and safety" (PRC Section 25301[a]). This work culminated in preparation of the first IEPR.

CEC adopts an IEPR every 2 years and an update every other year. The 2017 IEPR, which is the most recent IEPR, was adopted March 16, 2018. The 2017 IEPR provides a summary of priority energy issues currently facing the State, outlining strategies and recommendations to further the State's goal of ensuring reliable, affordable, and environmentally responsible energy sources. Energy topics covered in the report include progress toward statewide renewable energy targets and issues facing future renewable development; efforts to increase energy efficiency in existing and new buildings; progress by utilities in achieving energy efficiency targets and potential; improving coordination among the State's energy agencies; streamlining power plant licensing processes; results of preliminary forecasts of electricity, natural gas, and transportation fuel supply and demand; future energy infrastructure needs; the need for research and development efforts to statewide energy policies; and issues facing California's nuclear power plants.

Legislation Associated with Electricity Generation

The State has passed legislation requiring the increasing use of renewable energy to produce electricity for consumers. California utilities are required to generate 33 percent of their electricity from renewables by 2020 (SB X1-2 of 2011), 52 percent by 2027 (SB 100 of 2018), 60 percent by 2030 (also SB 100 of 2018), and 100 percent by 2045 (also SB 100 of 2018). More detail about these regulations is provided in Section 3.7, "Greenhouse Gas Emissions and Climate Change."

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statutes of 2005) required CEC to prepare a State plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other State, federal, and local agencies. The plan presents strategies and actions California must take to increase the use of nonpetroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce greenhouse gas (GHG) emissions, and increase in-state production of biofuels without causing a significant degradation to public health and environmental quality.

California Energy Efficiency Action Plan

The 2019 California Energy Efficiency Action Plan has three primary goals for the State: double energy efficiency savings by 2030 relative to a 2015 base year (per SB 350), expand energy efficiency in low-income and disadvantaged communities, and reduce greenhouse gas emissions from buildings. This plan provides guiding principles and recommendations on how the State would achieve those goals. These recommendations include:

- identifying funding sources that support energy efficiency programs,
- identifying opportunities to improve energy efficiency through data analysis,
- using program designs as a way to encourage increased energy efficiency on the consumer end,
- improving energy efficiency through workforce education and training, and
- supporting rulemaking and programs that incorporate energy demand flexibility and building decarbonization. (CEC 2019).

California Building Energy Efficiency Standards (Title 24, Part 6)

The 2019 California Energy Code was adopted by CEC on May 9, 2018, and will apply to projects constructed after January 1, 2020. Nonresidential buildings are anticipated to reduce energy consumption by 30 percent as compared to the 2016 California Energy Code, primarily through prescriptive requirements for high-efficiency lighting (CEC 2018). The code is enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary in response to local climatologic, geologic, or topographic conditions, provided that these standards exceed those provided in the California Energy Code.

California Green Building Standards (Title 24, Part 11)

The California Green Building Standards, also known as CALGreen, has required green building standards and reach codes (i.e., optional standards that exceed the requirements of mandator codes) developed by CEC that provides green building standards for statewide residential and non-residential construction. The current version is the 2019 CALGreen Code, which went into effect on January 1, 2020. The CALGreen Code sets equivalent or more stringent design requirements than the California Energy Code for energy efficiency, water efficiency, waste diversion and indoor air quality. These codes are adopted by local agencies (including the City of Sunnyvale) that enforce building codes and used as guidelines by State agencies for meeting the requirements of B-18-12.

Legislation Associated with Greenhouse Gas Reduction

The State has passed legislation that aims to reduce GHG emissions. The legislation often has an added benefit of reducing energy consumption. SB 32 requires a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. EO S-3-05 sets a long-term target of reducing statewide GHG emissions by 80 percent below 1990 levels by 2050.

SB 375 aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. The Advanced Clean Cars program, approved by CARB, combines the control of GHG emissions and criteria air pollutants and the increase in the number of zero-emission vehicles into a single package of standards. The program's zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025.

Implementation of the State's legislation associated with GHG reduction will have the co-benefit of reducing California's dependency on fossil fuel and making land use development and transportation systems more energy efficient.

More details about legislation associated with GHG reduction are provided in the regulatory setting of Section 3.7, "Greenhouse Gas Emissions and Climate Change."

LOCAL

City of Sunnyvale General Plan

The policy pertaining to energy consumption contained in the City of Sunnyvale General Plan is relevant to the project:

- **Policy LT-2.1:** Enhance the public's health and welfare by promoting the city's environmental and economic health through sustainable practices for the design, construction, maintenance, operation, and deconstruction of buildings, including measures in the Climate Action Plan.

Sunnyvale Climate Action Plan

The City of Sunnyvale adopted the Climate Action Playbook (Playbook) on August 13, 2019. The Playbook builds upon the City's previous Climate Action Plan (CAP 1.0), prepared in 2014. Through implementation of measures in the CAP 1.0, the City calculated a 12 percent decrease below 1990 emissions levels in 2016. In 2016, the city emitted 880,000 metric tons of CO_2 equivalent. To support compliance with the State's long-term climate change reduction goals, the City must achieve an interim target of a 40 percent reduction below 1990 levels by 2030 (SB 32) with the goal of meeting the State's target of 80 percent below 1990 emissions by 2050 (EO S-3-05). To this end, the Playbook specifies an interim target of 40 percent reduction below 1990 levels by 2030 (superseding the State's 2030 target) and a long-term target of 80 percent reduction by 2050. The Playbook includes a Game Plan 2020 which contains the "Next Moves" for the City and contains 46 actions that are planned for implementation over three years (FY 2020 through FY 2021-2022). Several Playbook Next Moves are directly applicable to land use development projects.

The following strategies and plays contained in the City of Sunnyvale's Playbook are relevant to the project:

- **Strategy 1:** Promoting Clean Electricity
  - Play 1.1: Promote 100 percent clean electricity
  - Play 1.2: Increase local solar photovoltaics
  - Play 1.3: Increase distributed electricity storage
- **Strategy 2:** Decarbonizing Buildings
  - Play 2.1: Reduce energy consumption in existing buildings
  - Play 2.2: Support electrification of existing buildings
  - Play 2.3: Achieve all-electric new construction
- **Strategy 3:** Decarbonizing Transportation & Sustainable Land Use
  - Play 3.1: Increase opportunities for and encourage development of mixed-use sites to reduce vehicle miles per person
  - Play 3.2: Increase transportation options and support shared mobility
  - Play 3.3: Increase zero-emission vehicles

City of Sunnyvale Reach Codes

Starting in January 2021, the City adopted reach codes for the development of new nonresidential and residential buildings. The reach codes were adopted to exceed CEC's requirements for energy efficiency to reduce GHG emissions. The City's reach codes require the installation of electric appliances only, solar panels at or greater than the dwelling's annual electrical usage per CEC Code 15.1(c)(14), and electric vehicle (EV) chargers dependent on the development type.

Lawrence Station Area Plan

The adopted LSAP includes the following goals and policies related to energy:

- **CF-G1:** Create a complete, multi-modal transportation network the supports a mixed-use neighborhood throughout the Plan area.
- **STP-UDG1**: Plant street trees on all streets
- **L-UDG4**: Utilize energy-efficient lighting, such as light-emitting diode (LED) bulbs.

3.5.2 Environmental Setting

PHYSICAL SETTING

Energy Facilities and Services in the Project Area

The City of Sunnyvale as well as the cities of Campbell, Cupertino, Gilroy, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Morgan Hill, Mountain View, Saratoga, and unincorporated Santa Clara County are members of Silicon Valley Clean Energy (SVCE), which serves as the Community Choice Aggregation for its member jurisdictions. SVCE was established in March 2016 following the adoption of the 2014 CAP and works in partnership with Pacific Gas and Electric Company (PG&E) to deliver GHG-efficient electricity to customers within its member jurisdictions. Consistent with State law, all electricity customers in the City of Sunnyvale were automatically enrolled in SVCE; however, customers can choose to opt out and be served by PG&E. According to the Sunnyvale Climate Action Plan Biennial Progress Report released in 2019, 98 percent of residential and commercial accounts received clean electricity from SVCE, and 100 percent of City facilities were powered by renewable energy (City of Sunnyvale 2018). Currently, all power supplied by SVCE is carbon-free. PG&E supplies natural gas service to the City of Sunnyvale through State-regulated public utility contacts.

ENERGY USE FOR TRANSPORTATION

On-road vehicles use about 90 percent of the petroleum consumed in California. The California Department of Transportation projected that 965 million gallons of gasoline and diesel were consumed in Santa Clara County in 2015, an increase of approximately 110 million gallons of fuel from 2010 levels (Caltrans 2008).

ENERGY USE AND CLIMATE CHANGE

Scientists and climatologists have produced substantial evidence that the burning of fossil fuels by vehicles, power plants, industrial facilities, residences, and commercial facilities has led to an increase of the earth's temperature. For an analysis of greenhouse gas production and the project's contribution to climate change, refer to Section 3.7, "Greenhouse Gas Emissions and Climate Change."

3.5.3 Impacts and Mitigation Measures

METHODOLOGY

Construction and Operational energy consumption estimates were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 computer software (CAPCOA 2017) and CARB's EMAFC 2017 Web Database. Where project-specific information was unknown, CalEEMod default values based on the project's location and land uses were used. CalEEMod default electricity consumption rates were adjusted to account for energy-efficiency improvements of the 2019 Building Energy Efficiency Standards, which would result in a 30-percent reduction in energy consumption compared with the 2016 Building Energy Efficiency Standards included in CalEEMod (CEC 2018). CalEEMod model runs were applied with the same assumptions used in the analyses in Section 3.2, "Air Quality," and Section 3.7, "Greenhouse Gas Emissions and Climate Change." Because the opt-out rate of SVCE for the LSAP area and ISI Corporate Campus is unknown at the time of preparing this EIR and PG&E provides more conservative emissions then SCVE, PG&E was the selected utility provider in CalEEMod. Refer to Appendix D for detailed assumptions and modeling results.

LSAP Update

As indicated in Section 3.2, "Air Quality," of this SEIR, the 2016 LSAP EIR land uses were remodeled to evaluate the project according to the most recent version of CalEEMod and State and federal policy measures, which include the California's Building Energy Efficiency Standards Title 24 Parts 6 and 11, the State increase in renewable energy

sources, and the State's fuel efficiency standards under the SAFE Rule. Default vehicle emissions factors in CalEEMod were adjusted based on updated EMFAC SAFE Rule emission factors. Because construction activities for future individual projects proposed under the adopted 2016 LSAP EIR and the proposed LSAP Update are uncertain, construction energy use was not quantified. Energy consumed for operation of the LSAP Update would include electricity, measured in megawatt-hours per year, therms of natural gas, gallons of gasoline, and gallons of diesel fuel. Energy and natural gas use were calculated in CalEEMod, while gasoline and diesel fuel use were calculated using EMFAC2017 county-wide fuel use, and CalEEMod's default vehicle fleet mix and estimated VMT.

ISI Project

Energy consumed by the ISI project during construction includes gasoline and diesel fuel, measured in gallons per year of construction. Energy consumed during operation includes electricity, measured in megawatt-hours per year, gallons of gasoline, and gallons of diesel fuel based on the net change in existing land uses to the proposed project. The ISI project does not propose any natural gas use. Natural gas use, which was estimated in CalEEMod, was converted to electricity (kWh) assuming an equivalent efficiency rate. Energy use design features of the project include the installation of onsite solar photovoltaic voltaic (PV) systems with a total generation of 3,228,000 kilowatt per hour (kWh) per year.

THRESHOLDS OF SIGNIFICANCE

An impact related to energy would be significant if implementation of the LSAP Update and ISI project would:

- result in the wasteful, inefficient, or unnecessary consumption of energy during project construction or operation or
- conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.5-1: Wasteful, Inefficient, or Unnecessary Consumption of Energy during Project Construction or Operation

The 2016 LSAP EIR determined a less than significant impact in regard to the plan resulting in wasteful, inefficient, or unnecessary use of energy. Implementation of the ISI project would result in the consumption of energy supplies during construction of new land uses within the project area. However, the consumption of energy during construction activities for the ISI project would be temporary and are not anticipated to require additional capacity or substantially increase peak or base period demands for electricity and other forms of energy. Operation of new land uses associated with the LSAP Update and ISI project implementation would also result in additional energy consumption. However, the LSAP Update would comply with the latest building energy efficiency standards which would increase in energy efficiency. The ISI project would be built to meet 2019 Building Title 24 Building Energy Standards and is required to achieve LEED Gold certification. Furthermore, both the LSAP Update and ISI project would consist of infill development and be built with a range of land uses in proximity to a transit station, which will reduce transportation-related energy demand compared to building in locations not close to high quality transit. The LSAP Update and ISI project would not result in the wasteful, inefficient, or unnecessary consumption of energy during construction or operation or produce new or substantially more significant energy impacts than disclosed in the 2016 LSAP EIR. The wasteful, inefficient, or unnecessary energy consumption impact would be **less than significant**.

Impact 3.11.8.1 of the 2016 LSAP EIR evaluated whether the plan would result in wasteful, inefficient, or unnecessary use of energy. The 2016 LSAP EIR concluded that due to the unknown extent of construction that may occur at any specific period of time construction energy use is speculative. However, it was determined that due to the nature of construction, energy use would be temporary. In addition, because the plan is subject to the latest building efficiency standards, Renewable Portfolio Standards, reduction in VMT due to the nearby Caltrain, and use of efficient energy infrastructure, the impact is less than significant.

Appendix G of the State California Environmental Quality Act (CEQA) Guidelines requires consideration of the energy implications of a project. CEQA requires mitigation measures to prevent or reduce wasteful, inefficient, and unnecessary energy usage. Neither the law nor the State CEQA Guidelines establish thresholds that define when energy consumption is considered wasteful, inefficient, or unnecessary.

LSAP Update

Construction

The energy needs for future project construction under the LSAP Update would be temporary and are not anticipated to require additional capacity or substantially increase peak or base period demands for electricity and other forms of energy. Because construction and timing details are unknown under the LSAP Update, construction energy consumption would need to be evaluated on a project-by-project basis. Therefore, quantification of energy use would be speculative.

Operations

The proposed increase in residential units would increase electricity and natural gas consumption in the region relative to the project analyzed in the adopted 2016 LSAP EIR. However, the new facilities would, at a minimum, be built to 2019 Title 24 Building Energy Efficiency Standards, which are more efficient than 2013 Standards which were applied to the 2016 LSAP EIR. As indicated, the 2016 LSAP EIR's land uses were remodeled to reflect current State and federal policy measures and the latest emission factors with the most updated version of CalEEMod used in the LSAP Update model. Table 3.5-1 summarizes the levels of energy consumption associated with operations of the plan at the horizon year of 2035 compared to the land uses proposed under the 2016 LSAP EIR. It should be noted that the operations energy use modeling was based on a build out date of 2035. After modeling was conducted, the build out date for the LSAP Update was revised to 2040. Energy use identified in Table 3.5-1 is overstated because it does not reflect the increase in building energy efficiency that technical advances will provide over time.

Table 3.5-1 LSAP Update Operational Energy Consumption for Horizon Year (2035)

Energy Type	Energy Consumption	Units
2016 LSAP EIR Use - Remodel		
Electricity	27,913	MWh/year
Natural Gas	312,983	therm/year
Gasoline	1,018,345	gal/year
Diesel	81,769	gal/year
LSAP Update Use		
Electricity	40,768	MWh/year
Natural Gas	520,048	therm/year
Gasoline	2,444,031	gal/year
Diesel	196,246	gal/year
Net Change in Energy Consumption		
Electricity	12,855	MWh/year
Natural Gas	207,065	therm/year
Gasoline	1,425,686	gal/year
Diesel	114,477	gal/year

Notes: MWh/year = megawatt-hours per year; therm/year = thermal units per year, gal/year = gallons per year. Operational emissions do not account for the changes in energy use from the implementation of the City's reach codes.

Source: Calculations by Ascent Environmental in 2020.

The operation of land uses allowed under the LSAP Update would increase energy demands within the adopted LSAP boundary, primarily associated with electricity and natural gas consumption for building operations and

transportation fuel consumption from commute trips taken by new residents and employees. This would include natural gas and electricity for use in appliances (e.g., water heating, building heating and cooling, clothes washers, dishwashers). Electricity would be used for lighting in buildings, as well as for street and public lighting. Energy could also be used in the form of fuels for stationary equipment (e.g., generators, landscaping equipment). Transportation-related energy consumption would include the use of fuels and electricity to power cars, trucks, and public transportation vehicles.

Although energy use was modeled to reflect 2019 Title 24 Building Energy Efficiency Standards, new developments would become increasingly more stringent with updates to the efficiency standards until the plan's horizon year. This would result in increased building energy efficiency over time as buildings continue to be developed within the plan area. The LSAP's consistency with the City's Playbook would result in an increase in renewable energy, decarbonization of buildings, and adoption of 100 clean energy procurement. In addition, new development proposed under the LSAP Update would be required to comply with the City's reach codes to increase building electrification, renewable energy from solar, and the installation of EV chargers. Nonetheless, implementation of the LSAP Update would still result in an increase in overall energy use compared to 2016 LSAP EIR due to the net increase in residential units that may occur. In addition, because the plan's objective is to increase housing supply in the area with a mix of land uses and increase ridership at the Lawrence Caltrain station, the plan would increase VMT efficiency and, therefore, reduce transportation-related energy demand. Table 3.5-2 reports the LSAP Update's decrease in VMT per service population compared to the 2016 LSAP EIR remodel. For these reasons, implementation of the LSAP Update would not result in in the wasteful, inefficient, or unnecessary consumption of energy resources during operation of uses within the plan area. This impact would not be new or substantially more significant than disclosed in the 2016 LSAP EIR and would remain **less than significant**.

Table 3.5-2 Comparison Summary of the LSAP VMT per Service Population

	2016 LSAP EIR – Remodel[1]	LSAP Update[2]
Population	5,622	14,363
Jobs	3,459	6,959
Service Population	9,081	21,322
Annual VMT	37,995,455	66,712,737
VMT per Service Population	4,184	3,129
	Percent Decrease in VMT per Service Population	**25%**

1. The 2016 LSAP EIR VMT estimates were remodeled based on the 2016 LSAP EIR's CalEEMod *Operational Detail-Mobile* Outputs and therefore differ than what was analyzed in the 2016 LSAP EIR.

2. The LSAP Update VMT estimates are based on the traffic impact analysis by Hexagon (2020) and calculated using CalEEMod. Plan population was estimated by applying a 2.42 residents per dwelling unit factor, as applied in 2016 EIR, to the proposed increase in residential units.

ISI Project

Construction

Energy would be required to operate and maintain construction equipment and transport construction materials. The one-time energy expenditure required to construct the physical buildings and infrastructure associated with the ISI project would be nonrecoverable. Most energy consumption would result from operation of off-road construction equipment and on-road vehicle trips associated with commutes by construction workers and haul truck trips.

Table 3.5-3 summarizes the levels of energy consumption associated with the construction of the ISI project by construction year. Most of the construction-related energy consumption would be associated with off-road equipment and the transport of equipment and waste using on-road haul trucks for all phases of construction. An estimated 631,901 gallons of gasoline and 691,610 gallons of diesel fuel would be used during construction of the project (Appendix D). Construction energy use was modeled based on an anticipated construction timeframe beginning in late 2020 and ending late 2023. Construction energy use was modeled before the construction timeframe was revised to begin in late 2021 and end in late 2024. As a result, the energy use identified in Table 3.5-3

is overstated. Energy use during the later timeframe would be reduced because construction equipment would be more efficient as a result of technological advances over time.

Table 3.5-3 ISI Project Construction Energy Consumption

Year	Diesel (Gallons)	Gasoline (Gallons)
2020	6,557	213
2021	33,155	217,013
2022	291,653	241,973
2023	360,245	172,702
Total	**691,610**	**631,901**

Notes: Gasoline gallons include on-road gallons from worker trips. Diesel gallons include off-road equipment and on-road gallons from worker and vendor trips.

Source: Calculations by Ascent Environmental in 2020.

The energy needs for project construction would be temporary and are not anticipated to require additional capacity or substantially increase peak or base period demands for electricity and other forms of energy. Associated energy consumption would be typical of that associated with commercial projects of this size in an urban setting. Automotive fuels would be consumed to transport people to and from the project site. Energy would be required for construction elements and transport construction materials. The one-time energy expenditure required to construct the physical infrastructure associated with the project would be nonrecoverable. There is no atypical construction-related energy demand associated with the proposed project. Non-renewable energy would not be consumed in a wasteful, inefficient and unnecessary manner when compared to other construction activity in the region.

Operations

The project would increase electricity consumption in the region relative to existing conditions. However, the new facilities would, at a minimum, be built to 2019 Title 24 Building Energy Efficiency Standards, which for nonresidential buildings are 30 percent more efficient than 2016 Standards. With respect to stationary sources, the project could include the operation of two new diesel emergency generators for the onsite utility plant. Table 3.6-4 summarizes the levels of energy consumption associated with the operation of the project for the first full year (2024) of operations compared to the existing land uses. It should be noted that operations energy use modeling was based on a build out date of 2024. After modeling was conducted, the build out date for the ISI project was revised to 2025. Energy use identified in Table 3.5.4 is overstated because it does not reflect the increase in building energy efficiency that technological advances will provide over time.

Table 3.5-4 ISI Project Operational Energy Consumption during the First Year of Operation (2024)

Energy Type	Energy Consumption	Units
Existing Use		
Electricity	2,160	MWh/year
Natural Gas	20,958	therm/year
Gasoline	79,434	gal/year
Diesel	5,446	gal/year
Proposed Use		
Electricity[1]	21,805	MWh/year
Natural Gas	0	therm/year
Gasoline	765,382	gal/year
Diesel	54,423	gal/year

Energy Type	Energy Consumption	Units
Net Change in Energy Consumption		
Electricity	19,645	MWh/year
Natural Gas	-20,958	therm/year
Gasoline	685,948	gal/year
Diesel	48,977	gal/year

Notes: MWh/year = megawatt-hours per year; therm/year = thermal units per year, gal/year = gallons per year.

[1] The ISI project electricity use offset by onsite solar PV with a total generation of 3,228,000 kWh per year.

Source: Calculations by Ascent Environmental in 2020.

Operation of the project would be typical of commercial uses requiring electricity for lighting, climate control, kitchen facilities, and miscellaneous appliances. Title 24 Building Energy Efficiency Standards would be integrated into the project to reduce the projects energy demands. In addition, the ISI project would be required to comply with the City's reach codes to increase building electrification, renewable energy from solar, and the installation of EV chargers.

The net fuel consumption associated with project-related vehicle trips would not be considered wasteful, inefficient, or unnecessary in comparison to other similar developments in the region. State and federal regulations regarding fuel efficiency standards for vehicles in California are designed to reduce wasteful, inefficient, and unnecessary use of energy for transportation. Additionally, because the proposed project is sited within the LSAP boundary expansion, the project helps to create a mix of land uses in the LSAP area that will reduce vehicle trips and increase ridership at the Lawrence Caltrain Station.

Summary

According to Appendix F of the State CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing per capita energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. The ISI project would implement energy efficiency measures to meet U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Gold certification for building design and construction and go above and beyond the 2019 Building Energy Efficiency Standards the with the implementation of onsite solar PV, electric vehicle charging, light-emitting diode lighting, all electric EnergyStar®–certified appliances, and no natural gas use. For these reasons, the ISI project would not result in wasteful, inefficient, or unnecessary consumption of energy. This impact would be within the scope of impacts anticipated by the 2016 LSAP and 2016 LSAP EIR and would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.5-2: Conflict with or Obstruction of a State or Local Plan for Renewable Energy or Energy Efficiency

Although implementation of the LSAP Update and ISI project would increase energy demands from existing conditions, development would be required to comply with applicable Building Energy Efficiency Standards and Renewable Portfolio Standards. As a result, implementation of the LSAP Update and ISI project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. This impact would be **less than significant**.

The 2016 LSAP EIR did not analyze the LSAP's consistency with State or local plans for renewable energy or energy efficiency. However, this impact analysis has been included for consistency with CEQA Guidelines Appendix G Checklist.

As noted above, new land uses developed as part of the LSAP Update and ISI project implementation would comply with the Title 24 2019 Building Energy Efficiency Standards, which are intended to increase the energy efficiency of new development projects in the state. Through the permitting process, all development projects proposed under the LSAP Update would comply with the current and future versions of the State's Building Energy Efficiency

Standards. The 2019 Building Energy Efficiency Standards, which the ISI project is subject to, are designed to move the State closer to its zero-net energy goals. In addition to exceeding the 2019 standards through the City's reach code, the ISI project will achieve LEED Gold certification with the installation of energy efficiency features including, all-electric buildings, onsite renewable energy, electric vehicle charging, light-emitting diode lighting, and EnergyStar®–certified appliances. As stated above in Section 3.5.1, "Regulatory Setting," PG&E, as an electricity utility, is required to comply with the State's Renewable Portfolio Standard. Because electricity utilities in the state are required to increase the percentage of renewable energy sources in the electricity they provide, over time electricity consumed as part of the LSAP Update and ISI project will increasingly be provided by renewable sources. Further, the LSAP Update increases development capacity new high-quality transit, which is consistent with State and regional plans, including Plan Bay Area, to reduce energy use from motor vehicles and VMT. Due to the inclusion of energy efficiency and renewable energy measures as part of the LSAP Update and ISI project, locations of these projects, and compliance with State regulations related to energy efficiency and renewable energy, implementation would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

3.6 GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

This section summarizes geologic and seismic hazards (such as ground shaking and liquefaction) and soil-related hazards (such as expansive soils) in the Lawrence Station Area Plan (LSAP) plan area, as described in the 2016 LSAP EIR, and evaluates the potential for the LSAP Update and ISI project to affect or be affected by geologic and soil hazards. Paleontological resources impacts are also evaluated in this section.

The 2016 LSAP EIR included Section 3.7, "Geology, Soils, and Paleontological Resources," which evaluated the potential effects of the LSAP. The 2016 LSAP EIR concluded that there would be less-than-significant impacts related to seismic hazards, erosion and loss of topsoil, and development on unstable or expansive soils (Impacts 3.7-1, 3.7-2, and 3.7-3). The LSAP Draft EIR also concluded that that impacts related to the disturbance of paleontological resources would be reduced to a less-than-significant impact with implementation of Mitigation Measure 3.7.4, which sets forth required actions, including worker education and stop-work provisions applicable to subsequent projects. The 2016 analysis is supplemented in this section by three geotechnical investigations (ISI 2019a, 2019b, 2019c) prepared for the ISI expansion area.

No comments regarding geology, soils, or paleontological resources were received in response to the NOP (see Appendix A).

3.6.1 Regulatory Setting

The regulatory setting provided in the 2016 LSAP EIR remains applicable to this analysis. The regulatory information provided on pages 3.7-6 through 3.7-7 of the 2016 LSAP EIR includes a description of the Uniform Building Code, California Building Code, Alquist-Priolo Earthquake Fault Zoning Act, Seismic Hazards Mapping Act, the Association of Bay Area Governments' Multi-Jurisdictional Hazard Mitigation Plan for the Bay Area, and City of Sunnyvale Municipal Code. Since certification of the 2016 LSAP EIR, the City has adopted the 2018 International Building Code in its entirety, along with Appendices C, I, and J as published by the International Code Council, Inc., and amendments to sections of the 2018 International Building Code adopted by the State Building Standards Commission in California Code of Regulations Title 24, Part 2, known as the 2019 California Building Code.

3.6.2 Environmental Setting

The 2016 LSAP EIR provides an overview of the regional geologic setting, local geology and topography, faults and seismicity, soils, subsidence, and paleontological resources on pages 3.7-1 through 3.7-6 that adequately describes the conditions throughout the LSAP area, including the ISI expansion site. As described therein, the LSAP is in a seismically active region, but is not within an area subject to fault rupture or underlain by active faults. Soils generally consist of thick, unconsolidated quaternary alluvial sediments deposited by paleochannels flowing northward through the area to the San Francisco Bay.

3.6.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The following impact analysis is based primarily on review of the information and analysis presented in the 2016 LSAP EIR and the data provided in the preliminary geotechnical investigations for the ISI site. Where the 2016 LSAP EIR concluded that there would be no impacts or impacts would be less than significant without the application of mitigation and there is no evidence of potential impacts due to the proposed LSAP modifications or development of the ISI site, impacts are not evaluated in detail herein.

Further, in response to 2018 revisions to the State CEQA Guidelines (Public Resources Code Section 15126.2) and the 2015 California Supreme Court case, *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, impacts associated with exposure of a project to environmental hazards are not considered significant effects unless the project would exacerbate the risks from such hazards. However, because lead agencies retain the authority, separate and apart from CEQA, to include a review of potential impacts of the environment on a project, the analysis of geologic hazards in this section considers both whether the LSAP could cause or exacerbate geologic hazards impacts and whether the LSAP could be exposed to geologic hazards. The discussion of potential impacts from exposure to geologic hazards is provided for information purposes only.

THRESHOLDS OF SIGNIFICANCE

A geology and soils impact is considered significant if implementation of the LSAP Update and ISI project would do any of the following:

- directly or indirectly cause substantial adverse impacts, including the risk of loss, injury, or death through the rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, soil liquefaction, or landslides;
- result in substantial soil erosion or the loss of topsoil;
- locate project facilities 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-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- locate project facilities on expansive soil, 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; and/or
- directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

ISSUES NOT DISCUSSED FURTHER

Seismic Hazards

Sunnyvale is not within an Alquist-Priolo Earthquake Fault Zone and would not be subject to hazards associated with significant fault surface rupture. However, the plan area is in a seismically active area and could experience strong seismic ground shaking and seismic-related ground movement (e.g., liquefaction and settlement) from earthquakes on active faults located outside of the plan area. Impact 3.7-1 of the 2016 LSAP EIR evaluated the seismic hazards within the plan area. Subsequent projects developed under the LSAP would result in the exposure of people, structures, and infrastructure to strong seismic ground shaking. However, California Building Code standards, as implemented by the City through Chapter 16.16 of the Municipal Code, would address seismic hazards. Conditions of concern on the ISI site include: potential for significant static and seismic settlement; shallow groundwater; presence of undocumented fill; presence of expansive soil; soil corrosion potential; and reduced bearing capacity at depth (ISI 2019a, 2019b, 2019c). These are reflective of the typical concerns throughout the plan area. The City requires geotechnical evaluations for all discretionary development as part of the permit process (City of Sunnyvale 2011:6-3). There are no aspects of the LSAP Update or ISI project that would increase the potential for seismic activity, or the inherent risks associated with such activity. Therefore, no significant impact would occur and this issue is not discussed further.

Erosion and Loss of Topsoil

As described in Impact 3.7-2 of the 2016 LSAP EIR, subsequent projects developed under the LSAP would involve construction and grading activities that could temporarily increase soil erosion. However, ground-disturbing activities at projects in the LSAP area would be required to comply with CBC Chapter 70 standards, which would ensure implementation of appropriate measures during grading activities to reduce soil erosion. Additionally, any development involving clearing, grading, or excavation that causes soil disturbance of 1 or more acres would be

required to prepare and comply with a stormwater pollution prevention plan that provides a schedule for the implementation and maintenance of erosion control measures and a description of the erosion control practices, including appropriate design details and a time schedule. Continued implementation of the City's Municipal Code would effectively address erosion potential.

Although the LSAP revision would expand the plan area, the same regulations would be applied. The ISI project would also be subject to these State and local regulations. In addition, development at 932 Kifer Road in the ISI project area would be subject to the restrictions established in a 2009 Site Management Plan that governs procedures for all future ground disturbance and provides further regulation of activities such as soil excavation, trenching, and backfilling to limit the potential for exposure to contaminants in the site soils. Due to adherence to these regulations, this impact would not be significant and this issue is not discussed further.

Development on Unstable or Expansive Soils

Subsequent projects, including the ISI project, developed under the LSAP could occur on a geologic unit or soil that is unstable, thus creating substantial risks to life and property. The City requires preparation of geotechnical reports for all development projects (City of Sunnyvale 2011). These geotechnical reports would include soil sampling and laboratory testing to determine the soil's susceptibility to expansion and differential settlement and would provide recommendations for design and construction methods to reduce potential impacts, as necessary. Furthermore, the CBC includes common engineering practices requiring special design and construction methods that reduce potential expansive soil and settlement-related impacts. Preparation of site-specific geotechnical reports and continued compliance with CBC regulations would ensure the adequate design and construction of building foundations to resist soil movement. Thus, no impact would occur and this issue is not evaluated further.

Wastewater Disposal Systems

Effects on wastewater disposal systems were dismissed from evaluation in the 2016 Draft EIR. Section 12.08.010 of the City's Municipal Code requires sewer connections for all new development. Septic tanks would not be used for new development in the LSAP. Therefore, no impact would result and this issue is not evaluated further.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.6-1: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature

The 2016 LSAP EIR determined excavation and grading activities resulting from the construction of subsequent projects developed under the LSAP could potentially result in inadvertent damage or destruction of paleontological resources. Similar to the adopted LSAP area, the underlying geology of the proposed LSAP boundary expansion area consists of basin and alluvial deposits that have the potential to contain fossils, based on previously reported finds in similar materials in other locations in the Bay Area. Inadvertent damage or destruction during excavation and grading activities during construction of the LSAP boundary expansion area for the ISI project could further reduce this finite resource base. All projects within the LSAP would be subject to adopted LSAP Mitigation Measure 3.7.4, which would reduce potential impacts to paleontological resources to a less-than-significant level. Grading and excavation activities resulting from buildout of the LSAP Update and the ISI project would be required to comply with adopted LSAP Mitigation Measure 3.7.4 and would not result in a new or substantially more severe impact to paleontological resources that what was addressed in the 2016 LSAP EIR. With implementation of adopted LSAP Mitigation Measure 3.7.4, the project would result in a **less-than-significant** impact to paleontological resources.

Impact 3.7.4 of the 2016 LSAP EIR evaluated the potential for inadvertent damage or destruction of paleontological resources as a result of excavation and grading activities that occur at depths greater than 10 feet. The 2016 LSAP EIR concluded that project implementation could result in a potentially significant impact to paleontological resources because excavation activities at depths greater than 10 feet could potentially occur within Holocene-age deposits or older Pleistocene alluvial materials, which could contain fossils. With implementation of mitigation measure 3.7.4, the 2016 LSAP EIR concluded potential impacts to paleontological resources would be reduced to a less-than-significant level.

Adopted LSAP Mitigation Measure 3.7.4

All subsequent projects within the LSAP plan area shall be required to include information on the improvement plans that if, during the course of grading or construction fossils are discovered, work shall be halted immediately within 50 feet of the discovery, the Sunnyvale Community Development Department shall be notified, and the significance of the find and recommended actions must be determined by a qualified paleontologist. In addition, prior to the commencement of project site preparation, all construction personnel shall be informed of the potential to discover fossils and the procedures to follow.

LSAP Update

The proposed LSAP modifications would establish the Lawrence Station Sense of Place Plan, increase the housing potential within the LSAP, and expand the LSAP boundary. Buildout of the Sense of Place Plan and additional housing potential would occur within the boundaries of the adopted LSAP analyzed in the 2016 LSAP EIR. Similar to the underlying geology of the adopted LSAP area, the LSAP boundary expansion area consists of basin and alluvial deposits that have the potential to contain fossils, based on previously reported finds in similar materials in other locations in the Bay Area. As discussed above, adopted LSAP Mitigation Measure 3.7.4 from the 2016 LSAP EIR requires all subsequent projects within the LSAP area to include information on improvement plans regarding the steps to be taken should construction crews encounter paleontological resources (i.e., stop work in that area and within 50 feet of the find until a qualified paleontologist can assess the significance of the find). Excavation and grading activities associated with expansion of the LSAP boundary would be subject to adopted LSAP Mitigation Measure 3.7.4, which would reduce or avoid potential impacts to paleontological resources. There is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. With implementation of adopted LSAP Mitigation Measure 3.7.4, the LSAP Update would result in a **less-than-significant** impact to paleontological resources.

ISI Project

Within the proposed LSAP boundary expansion area, the ISI project would result in demolition of existing buildings and structures, construction of a corporate campus and pedestrian bridge, and infrastructure improvements, including those associated with implementation of the proposed Lawrence Station Sense of Place Plan (i.e., improvements to bicycle and pedestrian pathways and roadways). Similar to the adopted LSAP area, the underlying geology of the ISI project consists of basin and alluvial deposits that have the potential to contain fossils, based on previously reported finds in similar materials in other locations in the Bay Area. Implementation of the ISI project would result in grading and excavation activities, which have the potential to encounter paleontological resources. With project implementation, the ISI project would be located within the LSAP boundary, Therefore, implementation of adopted LSAP Mitigation Measure 3.7.4 would be required. There is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. With implementation of adopted LSAP Mitigation Measure 3.7.4, the ISI project would result in a **less-than-significant** impact to paleontological resources.

Mitigation Measures

No new mitigation is required. Implementation of adopted LSAP Mitigation Measure 3.7.4 is required.

3.7 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

This section presents a summary of the current state of climate change science and greenhouse gas (GHG) emissions sources in California; a summary of applicable regulations; quantification of GHG emissions generated by the LSAP Update and ISI project and discussion about their potential contribution to global climate change.

For the purposes of this analysis, GHG emissions are measured as metric tons of carbon dioxide equivalent ($MTCO_2e$). The atmospheric impact of a GHG is based on the global warming potential (GWP) of that gas. GWP is a measure of the heat trapping ability of one unit of a gas over a certain timeframe relative to one unit of carbon dioxide (CO_2). The GWP of CO_2 is one (IPCC 2014).

The 2016 LSAP EIR included Section 3.13, "Greenhouse Gases and Climate Change," which evaluated the potential effects of the LSAP. The 2016 LSAP EIR concluded that the LSAP's objectives are consistent with the current CAP and the project being under the CAP's GHG emission target, the LSAP's impact would be less than significant.

One comment letter regarding GHG emissions was received in response to the notice of preparation (see Appendix A). The Earthjustice organization recommends electrifying all buildings under the LSAP Update to reduce the combustion of gas in households and reduce GHG emissions. Electrification of buildings is discussed in the impact analysis section below.

3.7.1 Regulatory Setting

The regulatory setting provided in the 2016 LSAP EIR remains applicable to this analysis. The regulatory information provided on pages 3.13.-5 through 3.13-10 of the 2016 LSAP EIR includes State and regional policies adopted to reduce GHG emissions and set GHG emission targets. Since certification of the 2016 LSAP EIR, the City adopted an update to the City's General Plan Land Use Transportation Element (LUTE) and the City's LSAP. In 2019, the City also adopted an updated climate action plan, called the Climate Action Playbook, which outlines updated GHG emissions targets for 2030 and 2050, and also includes targets for vehicle miles traveled (VMT). Additional regulatory information has been provided from the 2016 LSAP EIR which is relevant to the project's regulatory setting. These laws, regulations, plans, and guidelines are summarized below.

FEDERAL

In *Massachusetts et al. v. Environmental Protection Agency et al.,* 549 U.S. 497 (2007), the Supreme Court of the United State ruled that CO_2 is an air pollutant as defined under the federal Clean Air Act and that the U.S. Environmental Protection Agency (EPA) has the authority to regulate GHG emissions. In 2010, EPA started to address GHG emissions from stationary sources through its New Source Review permitting program, including operating permits for "major sources" issued under Title V of the federal Clean Air Act (CAA).

In October 2012, EPA and the National Highway Traffic Safety Administration (NHTSA), on behalf of the U.S. Department of Transportation, issued final rules to further reduce GHG emissions and improve corporate average fuel economy (CAFE) standards for light-duty vehicles for model years 2017 and beyond (77 [Federal Register] FR 62624). These rules would increase fuel economy to the equivalent of 54.5 miles per gallon, limiting vehicle emissions to 163 grams of CO_2 per mile for the fleet of cars and light-duty trucks by model year 2025 (77 FR 62630). On August 2, 2018, NHTSA and EPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule). Part One of the SAFE Rule revokes a waiver granted by EPA to the State of California under Section 209 of the CAA to enforce more stringent emission standards for motor vehicles than those required by EPA for the explicit purpose of GHG emission reduction, and indirectly, criteria air pollutant and ozone precursor emission reduction. On March 31, 2020, Part Two of the SAFE Rule was published and would amend existing CAFE and tailpipe CO_2 emissions standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026.

In June 2019, EPA, under authority of the Clean Air Act Section 111(d), issued the Affordable Clean Energy rule which provides guidance to states on establishing emissions performance standards for coal-fired electric generating units (EGUs). Under this rule, states are required to submit plans to the EPA which demonstrate the use of specifically listed retrofit technologies and operating practices to achieve CO_2 emission reductions though heat rate improvement (HRI). HRI is a measurement of power plant efficiency that EPA determined as part of this rulemaking to be the best system of emission reductions for CO_2 generated from coal-fired EGUs (EPA 2019a).

STATE

Statewide GHG Emission Targets and Climate Change Scoping Plan

Reducing GHG emissions in California has been the focus of the State government for approximately two decades (State of California 2019). GHG emission targets established by the State legislature include reducing statewide GHG emissions to 1990 levels by 2020 (Assembly Bill [AB] 32 of 2006) and reducing them to 40 percent below 1990 levels by 2030 (Senate Bill [SB] 32 of 2016). Executive Order S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. Executive Order B-55-18 calls for California to achieve carbon neutrality by 2045 and achieve and maintain net negative GHG emissions thereafter. These targets are in line with the scientifically established levels needed in the U.S. to limit the rise in global temperature to no more than 2 degrees Celsius, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius (United Nations 2015:3).

California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), prepared by the California Air Resources Board (CARB), outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and "substantially advance toward our 2050 climate goals" (CARB 2017: 1, 3, 5, 25–26). It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste). CARB and other State agencies also released the *January 2019 Draft California 2030 Natural and Working Lands Climate Change Implementation Plan* (Natural and Working Lands Implementation Plan) consistent with the carbon neutrality goal of Executive Order B-55-18 (CalEPA, CNRA, CDFA, CARB, and SGC 2019).

The State has also passed more detailed legislation addressing GHG emissions associated with transportation, electricity generation, and energy consumption, as summarized below.

Cap-and-Trade Program

CARB administers the State's cap-and-trade program, which covers GHG emission sources that emit more than 25,000 $MTCO_2e$ per year ($MTCO_2e$/year), such as refineries, power plants, and industrial facilities. This market-based approach to reducing GHG emissions provides economic incentives for achieving GHG emission reductions.

Transportation-Related Standards and Regulations

As part of its Advanced Clean Cars program, CARB established more stringent GHG emission standards and fuel efficiency standards for fossil fuel–powered on-road vehicles than EPA. In addition, the program's zero-emission vehicle (ZEV) regulation requires battery, fuel cell, and plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025 (CARB 2018). When the rules are fully implemented by 2025, GHG emissions from the statewide fleet of new cars and light-duty trucks will be reduced by 34 percent and cars will emit 75 percent less smog-forming pollution than the statewide fleet in 2016 (CARB 2016:1).

Executive Order B-48-18, signed into law in January 2018, requires all State entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as 200 hydrogen fueling stations and 250,000 electric vehicle–charging stations installed by 2025. It specifies that 10,000 of these charging stations must be direct-current fast chargers.

The Clean Air Act (CAA) requires that a waiver be provided by EPA for states to enact more stringent emissions standards for new cars, which was granted to CARB by EPA on June 14, 2011; however, in addition to the SAFE Rule, but as a separate action, on September 19, 2019, EPA issued a final action entitled the "One National Program Rule"

which would institute a nationwide, uniform fuel economy and GHG standard for all automobiles and light-duty trucks (EPA 2019b). The action would include the revocation of California's waiver under the CAA which would affect the enforceability of CARB's ZEV programs. While EPA has issued an action to revoke the waiver, the outcome of any related lawsuits and how such lawsuits could delay or affect the SAFE Rule implementation or CARB's ZEV programs is unknown at this time.

SB 743 of 2013 required that the Governor's Office of Planning and Research (OPR) propose changes to the State CEQA Guidelines to address transportation impacts in transit priority areas and other areas of the State. In response, Section 15064.3 was added to CEQA in December 2018, requiring that transportation impacts no longer consider congestion (level of service) but instead focus on the impacts of vehicle miles traveled (VMT). Agencies had until July 1, 2020 to implement these changes but could also choose to implement these changes immediately. In support of these changes, OPR published its Technical Advisory on Evaluating Transportation Impacts in CEQA, which recommends that the transportation impact of a project be based on whether the project would generate a level of VMT per capita (or VMT per employee or some other metric) that is 15 percent lower than that of existing development in the region (OPR 2017:12–13), or that a different threshold is used based on substantial evidence. OPR's technical advisory explains that this criterion is consistent with Public Resources Code Section 21099, which states that the criteria for determining significance must "promote the reduction in greenhouse gas emission" (OPR 2017:18). This metric is intended to replace the use of delay and level of service to measure transportation-related impacts. More detail about SB 743 is provided in the "Regulatory Setting" section of Section 3.14, "Transportation." On June 30, 2020, the City adopted VMT guidelines and thresholds to meet the State requirements set by SB 743 and CEQA Guidelines Section 15064.3.

Building Energy Efficiency Standards (Title 24, Part 6)

The energy consumption of new residential and nonresidential buildings in California is regulated by the California Code of Regulations Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The California Energy Commission (CEC) updates the California Energy Code every three years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions. The current California Energy Code will require builders to use more energy-efficient building technologies for compliance with increased restrictions on allowable energy use. The CEC estimates that the 2019 California Energy Code will result in new commercial buildings that use 30 percent less energy than those designed to meet the 2016 standards, primarily through the transition to high-efficacy lighting, and will result in residential construction using seven percent less energy (CEC 2018).

LOCAL

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) is the primary agency responsible for addressing air quality concerns in the San Francisco Bay Area, including Santa Clara County—its role is discussed further in Section 3.2, "Air Quality." BAAQMD also recommends methods for analyzing project-related GHGs in CEQA analyses and recommends multiple GHG reduction measures for land use development projects. BAAQMD developed thresholds of significance to provide a uniform scale to determine the CEQA significance of GHG emissions associated with land use and stationary source projects that align with the statewide GHG target mandated by AB 32 (BAAQMD 2017). BAAQMD's goals in developing GHG thresholds include ease of implementation; use of standard analysis tools; and emissions mitigation consistent with AB 32. However, BAAQMD has not adopted thresholds of significance or guidance for determining whether a project's GHG emissions would be consistent with the statewide GHG target established by SB 32 (i.e., 40 percent below 1990 levels by 2030).

City of Sunnyvale General Plan

The General Plan contains the following policies related to global climate change and GHGs applicable to the project (City of Sunnyvale 2017):

- **Policy LT-2.1:** Enhance the public's health and welfare by promoting the City's environmental and economic health through sustainable practices for the design, construction, maintenance, operation, and deconstruction of buildings, including measures in the Climate Action Plan.

- **Policy LT-2.2:** Reduce greenhouse gas emissions that affect climate and the environment though land use and transportation planning and development.
- **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-2.7:** Provide Sunnyvale residents and businesses with opportunities to develop private, renewable energy facilities.
- **Policy LT-3.1:** Use land use planning, including mixed and higher-intensity uses, to support alternatives to the single-occupant automobile such as walking and bicycling and to attract and support high investment transit such as light rail, buses, and commuter rail.

Sunnyvale Climate Action Playbook

The City of Sunnyvale adopted the Climate Action Playbook (Playbook) on August 13, 2019. The Playbook builds upon the City's previous Climate Action Plan (CAP 1.0) in 2014. Through implementation of measures in the CAP 1.0, the City calculated a 12 percent decrease below 1990 emissions levels in 2016. In 2016, the City emitted 880,000 $MTCO_2e$. To support compliance with the State's long-term climate change reduction goals, the City must achieve an interim target of a 40 percent reduction below 1990 levels by 2030 (SB 32) with the goal of meeting the State's target of 80 percent below 1990 emissions by 2050 (EO S-3-05). To this end, the Playbook specifies an interim target of 40 percent reduction below 1990 levels by 2030 (superseding the State's 2030 target) and a long-term target of 80 percent reduction by 2050. The Playbook includes a Game Plan 2020 which contains the "Next Moves" for the City and contains 46 actions that are planned for implementation over three years (FY 2020 through FY 2021-2022). Several Playbook Next Moves are directly applicable to land use development projects.

The following strategies and plays contained in the City's Playbook are relevant to the project:

- **Strategy 1:** Promoting Clean Electricity
  - Play 1.1: Promote 100 percent clean electricity
  - Play 1.2: Increase local solar photovoltaics
  - Play 1.3: Increase distributed electricity storage
- **Strategy 2:** Decarbonizing Buildings
  - Play 2.3: Achieve all-electric new construction
- **Strategy 3:** Decarbonizing Transportation & Sustainable Land Use
  - Play 3.1: Increase opportunities for and encourage development of mixed-use sites to reduce vehicle miles per person
  - Play 3.2: Increase transportation options and support shared mobility
  - Play 3.3: Increase zero-emission vehicles
- **Strategy 4:** Managing Resources Sustainably
  - Play 4.1: Achieve Zero Waste goals for solid waste
  - Play 4.2: Ensure resilience of water supply
  - Play 4.3: Enhance natural carbon sequestration capacity
  - Play 4.4: Promote awareness of sustainable goods and services

City of Sunnyvale Reach Codes

Starting in January 2021, the City adopted reach codes for the development of new nonresidential and residential buildings. The reach codes were adopted to exceed CEC's requirements for energy efficiency to reduce GHG emissions. The City's reach codes require the installation of electric appliances only, solar panels at or greater than the dwelling's annual electrical usage per CEC Code 15.1(c)(14), and electric vehicle (EV) chargers dependent on the development type.

Lawrence Station Area Plan

The adopted LSAP includes the following goals and policies related to GHG:

- **LU-G5:** Provide a mix of uses within the Plan area that encourages transit ridership, creates a neighborhood of 24-hour activity and supports the provision of amenities such as open space and support services such as retail.
- **LU-P3:** Allow transition to higher density transit-supportive uses as opportunities arise through turnover of businesses or property ownership.
- **H-G1:** Provide sufficient housing in the Plan area to support an increase rail transit ridership.
- **R-G4:** Provide retail that is convenient and accessible to pedestrians and transit users.
- **R-G5:** Do not encourage auto-oriented and auto serving retail.
- **OSG-1:** Establish a system of parks and public spaces connected by green corridors and linear parks that serve and connect both new residential development and new nonresidential development.
- **OSG-2:** Provide open space within a five- to ten minute walk of all residents and employees.
- **OSG-3:** Connect open space areas to local and regional bikeways and trail networks to the greatest extent possible.
- **OSP-4:** Provide pedestrian and bicycle amenities on all Green Streets, including abundant landscaping, Class I or Class II bicycle facilities, lighting and intersection amenity and safety improvements.
- **D-G1:** Develop the Plan area with a diverse mix of uses at intensities sufficient to support and take advantage of the significant existing public investment in transit.
- **CF-G1:** Create a complete, multi-modal transportation network the supports a mixed-use neighborhood throughout the Plan area.
- **CF-G2:** Create a balanced circulation system that is accessible to all modes of travel and does not favor one mode over another.
- **CF-G3:** Create a street and block framework that provides a variety of vehicular access options and is scaled to pedestrians.
- **CF-G5:** Improve access to bus and rail transit by all modes of travel.
- **CF-G6:** Create streets (both new and improved) that are comfortable and convenient for pedestrians, so walking is a pleasure and accessing residences and businesses is easy.
- **CF-G7:** Make the area in and around the station bicycle-friendly, so residents and employees of all ages and abilities can feel comfortable and secure biking to work, services, and for recreation.
- **CF-P1:** In the residential areas south of the Caltrain tracks, retain the existing framework of streets and blocks. Improve streets connections to the residential areas south of the Caltrain tracks to provide safer street crossings and minor access improvements for pedestrians, bicycles and transit users.
- **CF-P12:** Provide a wide, landscaped pedestrian sidewalk zone, continuous Class II bicycle lanes, on-street parking and transit stops continuously along Kifer Road in the Plan area.
- **P-G1:** Provide safe, inviting, and attractive pedestrian connections for residents, workers and visitors to Lawrence Station and other key destinations in the Plan area.

- **P-P1:** Promote walking access through new street connections.
- **P-P2:** Provide two new Caltrain track crossings for pedestrians and bicyclists: one at the Calabazas Creek Trail (per study by the City of Santa Clara); the other west of Lawrence Expressway aligning with and connecting to The Loop near the western end of Sonora Court.
- **P-P3:** Facilitate pedestrian access and safety along key pedestrian corridors through pedestrian enhancements, including crosswalk enhancements, sidewalk extensions (bulbouts), and wider sidewalks.
- **P-P4:** Provide enhanced crosswalks on all legs of signalized intersections and at key pedestrian crossing locations.
- **P-P5:** Provide new pedestrian crossings, including potential mid-block crosswalks, on Reed Avenue, Kifer Road, and The Loop.
- **P-P6:** Provide sidewalk extensions (bulbouts) on all new streets, where feasible, and on select existing streets along primary pedestrian corridors.
- **B-P1:** Require property development to provide Class I and Class II bicycle facilities to fill in the gaps in the existing and planned bicycle network.
- **B-P2:** Provide direct Class I and Class II bicycle connections to the future Calabazas Creek Trail from The Loop.
- **B-P3:** Provide direct Class I multi-use public linkages between The Loop in the northeast quadrant of the Plan area to the Calabazas Creek Trail at spacings not to exceed 400 feet.
- **B-P4:** Connect new neighborhood open spaces with publicly-accessible streets, bicycle facilities and pedestrian linkages.
- **B-P5:** Install bicycle detection loops at signalized intersections.
- **B-P6:** Provide Class I or Class II bicycle parking per Lawrence Station Area Plan bicycle parking requirements.
- **B-P7:** Implement a bicycle sharing program.
- **PT-P4:** Provide bus stops with bus pull-outs, shelters, furnishings, lighting and signage along the Primary Loop Road and all other bus transit streets in the Plan area.
- **PT-P5:** Locate bus stops on the Primary Loop Road approximately every ¼-mile (1,300 feet).
- **TDM-P2:** Achieve a daily trip reduction target of 20 percent and a peak hour trip reduction target of 30 percent for new Office/R&D development.
- **TDM-P3:** Achieve a peak hour trip reduction of 5 percent for new retail and residential development
- **TDM-P4:** Include incentives for the provision of the following features as part of a TDM program for the Plan area:
    a. Provide shuttle service
    b. Provide bicycle parking and end-of-trip facilities (e.g., lockers, showers)
    c. Create marketing campaigns to discourage auto trips
    d. Offer low-cost or free transit passes to employees
    e. Dedicate carpool/vanpool parking spaces
    f. Offer cash in place of a free parking space (parking cash-out)
    g. Charge for parking
    h. GreenTrip registration.
- **PK-G1:** Manage future parking supply so that it promotes and supports transit ridership as well as the needs of local retail, employment and residential uses.

- **PK-P3:** Establish a shared parking program in advance of development, with the following features:
  a. Require developers to submit a shared parking analysis.
  b. Allow new development to either provide sufficient off-street parking supply to meet the incremental increase in parking demand associated with the proposed project, and/or lease parking spaces from earlier parcel owners who have available parking located adjacent to the development parcel (within ¼ mile radius or closer).
  c. Require new residential development to provide no more than 1.7 parking spaces per residential unit for exclusive use by residents. Additional parking supply that may be needed for the development shall be provided in shared facilities that will be required to be open to all users, including transit station patrons.
  d. Price shared parking facilities according to market conditions, and encourage management by either the parcel owner, or the Plan area Parking Management District.
  e. Consider allowing on-street parking spaces to be added as part of the development of a parcel to count towards a project's required shared parking supply, but do not allow it to be used as reserved spaces for residential uses.
  f. Verify the accuracy of the parking demand estimates of the shared parking model based on interim parking demand counts over the course of the build-out of the Plan area. Conduct parking counts during the peak parking demand period as identified in the shared parking analysis: weekday afternoons in December. Parking ratios in the shared parking model shall be calibrated to the parking demand counts if there is a significant discrepancy.
- **PMP-5:** Unbundle parking costs from property or lease costs.
- **PMP-6:** Provide parking spaces at the Lawrence Caltrain Station for the exclusive use of car sharing vehicles.
- **PMP-7:** Implement a parking pricing system as demand for parking in the area increases.
- **U-P7:** Minimize the use of irrigation-dependent landscape improvements for public streets, rights-of-way, and open space.
- **U-P8:** In areas where large irrigation demand is anticipated, construct improvements such that they can be efficiently switched to recycled water when it is available.
- **STP-UDG1:** Plant street trees on all streets
- **L-UDG4:** Utilize energy-efficient lighting, such as light-emitting diode (LED) bulbs.

Silicon Valley Clean Energy

The City of Sunnyvale as well as the cities of Campbell, Cupertino, Gilroy, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Morgan Hill, Mountain View, Saratoga, and unincorporated Santa Clara County are members of Silicon Valley Clean Energy (SVCE), which serves as the Community Choice Aggregation (CCA) program for its member jurisdictions. SVCE was established in March 2016 following the adoption of the 2014 CAP and works in partnership with Pacific Gas and Electric Company (PG&E) to deliver GHG-efficient electricity to customers within its member jurisdictions. Consistent with State law, all electricity customers in the City of Sunnyvale were automatically enrolled in SVCE; however, customers can choose to opt out and be served by PG&E. According to the Sunnyvale Climate Action Plan Biennial Progress Report released in 2018, as of 2016, 98 percent of residential and commercial accounts received electricity from SVCE and 100 percent of City facilities were powered by renewable energy (City of Sunnyvale 2018). Currently, all power supplied by SVCE is carbon-free. For purposes of this analysis, all electricity is assumed to be provided by PG&E as emissions rates are more conservative, and the project's possible opt-out rate is currently unknown.

3.7.2 Environmental Setting

The 2016 LSAP EIR provides an overview of GHG emissions and the global and regional effects of climate change on pages 3.13-1 through 3.13-4. The setting in the 2016 LSAP EIR adequately describes the conditions throughout the LSAP, including the ISI expansion site. The following section describes the project's environmental setting since the adopted 2016 LSAP EIR and includes additional information applicable to the project's impact analysis.

GREENHOUSE GAS EMISSION SOURCES

As discussed previously, GHG emissions are attributable in large part to human activities. The total GHG inventory for California in 2017 was 424 million $MTCO_2e$ ($MMTCO_2e$) (CARB 2019). This is less than the 2020 target of 431 $MMTCO_2e$ (CARB 2019). Table 3.7-1 summarizes the statewide GHG inventory for California by percentage.

Table 3.7-1 Statewide GHG Emissions by Economic Sector

Sector	Percent
Transportation	41
Industrial	24
Electricity generation (in state)	9
Agriculture	8
Residential	7
Electricity generation (imports)	6
Commercial	5

Source: CARB 2019

As shown in Table 3.7-1 above, transportation, industry, and in-state electricity generation are the largest GHG emission sectors.

Emissions of CO_2 are byproducts of fossil fuel combustion. Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices, landfills, and wildfire. Nitrous oxide is also largely attributable to agricultural practices and soil management. CO_2 sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution (CO_2 dissolving into the water), respectively, two of the most common processes for removing CO_2 from the atmosphere.

Since adoption of the Playbook, the City updated its GHG emissions inventory for year 2018. Table 3.7-2 summarizes the City of Sunnyvale's updated GHG inventory.

Table 3.7-2 City of Sunnyvale Greenhouse Gas Inventory for the Year 2018 ($MTCO_2e$)

Emissions Sector	2018 Emissions ($MTCO_2E$)	Percentage of Total
Electricity (residential and commercial)	34,943	5%
Natural gas (residential)	98,938	14%
Natural gas (commercial)	137,671	19%
On-road transportation (gasoline and diesel)	360,884	50%
Waste & wastewater	2,694	0.37%
Solid Waste	42,832	6%
Off-road equipment	43,390	6%
Caltrain	1,110	<1%
Total	**722,462**	**100%**

Notes: Totals may not equal the sum of the numbers because of independent rounding.
$MTCO_2e$ = metric tons of carbon dioxide equivalent.
Source: Hiremath, pers. comm., 2020

3.7.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

LSAP Update

GHG emissions associated with the LSAP Update would be generated during project construction and operation. As indicated in Section 3.2, "Air Quality," the 2016 LSAP EIR modeling was updated using the newest version of the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 computer program (CAPCOA 2017). In addition, since the adoption of the 2016 LSAP EIR, various State and federal policy measures have been either enacted or updated, such as California's Building Energy Efficiency Standards Title 24 Parts 6 and 11, the State increase in renewable energy sources, and the State's fuel efficiency standards. Default vehicle emissions factors in CalEEMod were adjusted based on updated EMFAC SAFE Rule emission factors. In order to evaluate emissions of the LSAP Update in comparison to the 2016 LSAP EIR, the land uses proposed in the 2016 LSAP EIR were remodeled with the mentioned policy measures applied.

Because of the unknown variability of the future development under the LSAP Update, GHG emissions from future, short-term construction activities are unable to be determined. Therefore, construction emissions were not quantified. For projects proposed under the LSAP Update that may result in project-level threshold exceedance, mitigation measures are recommended.

Operational-related impacts were evaluated according to the increase in residential dwelling units, VMT, and population compared to the conditions of the 2016 LSAP EIR. VMT was estimated using CalEEMod Version 2016.3.2 default trip rates with the application of trip reductions due to the plan's proposal to increase transit accessibility. Population for the LSAP Update was determined based on the 2.42 residents per dwelling unit factor used in 2016 LSAP EIR, applied to the total number of proposed residential units. The service population for the project was determined based on the increase in population and jobs due to the LSAP boundary expansion and increase in residential units.

Because future SVCE service to the LSAP area is unknown at the time of preparing this EIR, PG&E emissions factors based on the horizon date of 2035 were applied in CalEEMod. Detailed model assumptions and inputs for these calculations are presented in Appendix D. As noted below, after modeling was conducted, the build out date for the LSAP Update was revised to 2040. The modeling results presented in this section, which do not reflect the increase in building energy efficiency or renewable energy procurement over time, are therefore overstated.

ISI Project

Construction-related emissions for the ISI project were calculated using project-specific information where available; reasonable assumptions based on typical construction activities; and default values in CalEEMod were used based on the ISI project's location and land use types. Construction is anticipated to start in 2021 and last through 2023. Additional project features include the total demolition of 8,558 tons of building and concrete material as well as the export of 570,000 cubic yards of soil.

Operational-related emissions were estimated using project-specific information, where available, and default values in CalEEMod based on the ISI project's location, land use, and build out year of 2024. Mobile-source emissions were modeled in CalEEMod Version 2016.3.2 using the number of project-generated vehicle trips provided by the traffic analysis and ITE's Trip Generation Manual provided in Appendix E and used to support the impact analyses in Section 3.14, "Transportation." Because the ISI project is located approximately a half mile distance to a transit station and the ISI project would have a robust TDM program, the CalEEMod trip reduction measure was applied to the ISI project. The ISI project was compared to the site's existing uses to determine the overall net emissions of the project. Modeling of the existing site was based on the occupancy of 105,000 square feet of office/R&D use. Additional features of the existing site were modeled based on CalEEMod defaults with historical energy rates applied.

Similar to the LSAP Update analysis, PG&E emissions factors for the ISI project build out year of 2024 were applied in CalEEMod due to the uncertainty of SVCE servicing the project area. Energy use for the project would be from electrical sources only as natural gas would not be used. Natural gas use, which was estimated in CalEEMod, was

converted to electricity using an equivalent efficiency rate. GHG emissions from the converted natural gas use was then estimated using a $MTCO_2e$ per thousand British Thermal Units (kBTU) emissions factor estimated from the CalEEMod output file. Detailed model assumptions and inputs for these calculations are presented in Appendix D.

Specific model assumptions and inputs for both the ISI project and the existing site can be found in Appendix D.

Because the ISI project is contained within the LSAP boundary expansion and is considered in the land uses modeled in the LSAP Update, the ISI project GHG emissions are presented to show the subset of emissions from the LSAP Update.

THRESHOLDS OF SIGNIFICANCE

The issue of global climate change is inherently a cumulative issue because the GHG emissions of individual projects cannot be shown to have any material effect on global climate. Thus, the LSAP Update and ISI project's impact on climate change is addressed only as a cumulative impact.

The significance criteria used to evaluate project impacts on climate change under CEQA are based on Section 15064 of the CEQA statute and relevant portions of Appendix G of the State CEQA Guidelines, which recommend that a lead agency consider a project's consistency with relevant, adopted plans and discuss any inconsistencies with applicable regional plans, including plans to reduce GHG emissions. Implementing the project would result in a cumulatively considerable contribution to climate change if it would:

- generate GHG 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 GHGs.

With respect to GHG emissions, the CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or performance-based standards" (Section 15064.4[a]). A lead agency may use a "model or methodology" to estimate greenhouse gas emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change" (Section 15064.4[c]). The CEQA Guidelines provide that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment (Section 15064.4[b]):

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The 2016 LSAP EIR determined significance by comparing the 2016 LSAP's emissions to the City's efficiency metric threshold of GHG emissions per service population, calculated in the City's original CAP and based on the GHG emissions inventory and emissions targets at that time, and whether the LSAP policies are consistent with those in the City's original CAP. The LSAP Update was evaluated using a similar methodology; however, based on the updated GHG emissions inventory and GHG reduction targets in the City's Playbook (City of Sunnyvale 2019). Because the Playbook did not provide a GHG emissions per service population threshold, one was calculated based on the revised GHG emission targets and service population provided in the City's General Plan Land Use and Transportation Element (City of Sunnyvale 2017). Furthermore, the Playbook's "Strategies" and "Plays" were compared to the goals and policies of the LSAP Update to determine consistency. Thus, for purposes of determining significance of the LSAP Update, the project would result in a cumulatively considerable contribution to climate change if it would:

- exceed the service population (SP) threshold of 1.27 $MTCO_2e/yr/SP$, (see calculation in Table 3.7-4), or
- conflict with goals, policies, or strategies outlined in the Playbook.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.7-1: Generate GHG Emissions 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 GHGs

The 2016 LSAP EIR determined that because the LSAP would not exceed the City's GHG emissions per service population threshold and is consistent with the objectives of the original CAP, the LSAP would not have a significant impact on the environment. Similar to the adopted LSAP, the LSAP Update would not exceed the City's updated GHG efficiency metric threshold of 1.27 $MTCO_2e$/yr/SP, demonstrating consistency with the City's 2019 Climate Action Playbook to reduce GHG emissions and meet State targets. The objectives of the LSAP Update are to increase residential density within a transit-oriented development; this would contribute to achieving the City's GHG reduction targets by reducing amount of VMT and infrastructure required for development. For purposes of this SEIR, ISI project emissions are evaluated in the LSAP Update's net emissions analysis as a subset of the total LSAP Update. As part of the implementation of the Playbook, the City will establish additional GHG reduction measures that subsequent development in the LSAP would be required to comply with. Compliance with these development standards would help the City achieve updated State GHG emission reduction targets. The LSAP Update and ISI project would not result in a new or a substantially more significant impact to climate change beyond what was identified in the 2016 LSAP EIR. The project would result in a **less-than-significant** impact.

Impact 3.13.1 of the 2016 LSAP EIR evaluated whether the plan would comply with a qualified GHG reduction plan. The 2016 LSAP EIR concluded that because the plan's objectives are consistent with the original CAP and fall under the CAP's GHG emission target, the LSAP would result in a less than significant impact on the environment.

LSAP Update

Since the 2016 LSAP EIR was adopted, the City of Sunnyvale updated its CAP to include revised emissions targets and strategies that will help the City achieve updated State emission reduction targets. Similar to the 2016 LSAP EIR, the per service population emissions target provided in the CAP 1.0 was compared to the overall emissions of the LSAP Update. Because future individual construction project details proposed under the LSAP Update are uncertain, quantification of short-term construction emissions are not feasible. As indicated in Section 3.2, "Air Quality," of this Draft SEIR, the project would need to comply with adopted Mitigation Measures 3.5.3a and 3.5.3b, which include BAAQMD's Basic Construction Mitigation Measures. Operational-related GHG emissions estimated for the LSAP Update compared to the remodel of the 2016 LSAP EIR are presented in Table 3.7-3. It should be noted that operations emissions modeling was based on a build out date of 2035. After modeling was conducted, the build out date for the LSAP Update was revised to 2040. Emissions identified in Table 3.7-3 are overstated because they do not reflect the increase in building energy efficiency that technological advances will provide or renewable energy procurement over time.

Table 3.7-3 LSAP Operational-Generated Greenhouse Gas Emissions

Emissions Source	Total $MTCO_2e$/year
2016 LSAP EIR - Remodel	
Area Sources	122
Energy Use	2,653
Mobile Sources	11,035
Waste Generation	3,284
Water/Wastewater	482
Total	**17,576**
LSAP Update	
Area Sources	312
Energy Use	4,213

Emissions Source	Total $MTCO_2e$/year
Mobile Sources	18,899
Waste Generation	1,949
Water/Wastewater	791
Total	**26,164**
Net Change in GHG Emissions	
Area Sources	190
Energy Use	1,560
Mobile Sources	7,865
Waste Generation	-1,335
Water/Wastewater	309
Total	**8,588**

Notes: Totals may not add due to rounding. Operational emissions do not account for GHG emission reductions from the implementation of the City's reach codes.

$MTCO_2e$ = metric tons of carbon dioxide equivalent; GHG = greenhouse gas.

Source: Calculations by Ascent Environmental in 2020.

The LSAP Update would result in more GHG emissions due to the increase in residential units. The total operational-related GHG emissions are compared to the project's service population to determine the total GHG emissions per service population.

Since the adoption of the 2016 LSAP EIR, the City adopted the Playbook which sets emissions targets of 56 percent and 80 percent reductions below 1990 levels by 2030 and 2050, respectively. An efficiency metric threshold for 2035 was estimated by interpolating emissions targets in the Playbook for years 2030 and 2050. Service population was also estimated for 2035 using population and job totals provided in the City's General Plan Land Use and Transportation Element update. Table 3.7-4 shows the City's updated efficiency metric threshold to be 1.27 $MTCO_2e$/yr/SP as well as the efficiency metric's calculated for both the 2016 LSAP EIR remodel and the proposed LSAP Update.

Table 3.7-4 LSAP GHG Emissions Per Service Population

City Efficiency Metric Threshold	2030	2035	2050
City GHG Emissions Target[1] ($MTCO_2e$/year)	437,685	378,128	199,458
Population[2]	-	174,500	-
Jobs[2]	-	123,010	-
Service Population[3]	-	297,510	-
City Efficiency Metric Threshold ($MTCO_2e$/yr/SP)	-	**1.27**	-
2016 LSAP EIR (Remodel) GHG Emissions Summary[4]		**2035**	
2016 LSAP EIR - Remodel - GHG Emissions ($MTCO_2e$/year)		17,576	
Population[5]		5,622	
Jobs[5]		3,459	
Service Population[3]		9,081	
2016 LSAP EIR (Remodel) GHG Efficiency ($MTCO_2e$/yr/SP)		**1.94**	
LSAP Update GHG Emissions Summary		**2035**	
LSAP Update - GHG Emissions ($MTCO_2e$/year)		26,164	
Population[6]		14,363	
Jobs[7]		6,959	
Service Population[3]		21,322	
LSAP Update GHG Efficiency ($MTCO_2e$/yr/SP)		**1.23**	
Sunnyvale CAP Playbook Target Exceeded?		**No**	

Notes: $MTCO_2e$ = metric tons of carbon dioxide equivalent; SP = service population; yr = year. As noted in Chapter 2, the ISI project would fall within the remaining allowable office/R&D development capacity of the adopted LSAP and as analyzed in the 2016 LSAP EIR.

1. 2035 City GHG emission target was interpolated using 2030 and 2050 emissions targets provided in the Climate Action CAP Playbook.
2. Source: City of Sunnyvale 2017
3. Service Population = Population + Jobs
4. The 2016 LSAP EIR was remodeled using CalEEMod's most updated model and most update to date policies such as 2019 Title 24 Building Energy Efficiency Standards, the State's renewable energy standards, and the SAFE Rule.
5. Source: Adopted 2016 LSAP EIR.
6. Plan population was estimated by applying a 2.42 residents per dwelling unit factor, as applied in 2016 EIR, to the proposed increase in residential units.
7. Estimated number of jobs evaluated in the 2016 LSAP EIR plus the addition of 3,500 jobs due to the implementation of the ISI project within the LSAP boundary.

Source: Calculations by Ascent Environmental in 2020.

As shown above in Table 3.7-4, the LSAP Update would not exceed the adjusted service population threshold derived from the City's Playbook, similar to the finding in the 2016 LSAP EIR. However, it is important to note that the LSAP Update would result in an overall increase in GHG emissions compared to the adopted LSAP. As shown in Table 3.7-4, the LSAP Update would result in annual GHG emissions of 26,164 $MTCO_2e$ compared to the estimated annual GHG emissions of 17,576 $MTCO_2e$ that are associated with the remodeled 2016 LSAP. Although total emissions would increase, so would the service population of the LSAP area, and as a result, the LSAP Update would be more efficient than the adopted LSAP on a GHG per service population basis. Specifically, the LSAP Update would result in 1.23 $MTCO_2e$/service population in comparison to 1.94 $MTCO_2e$/service population associated with the adopted LSAP, as remodeled with current models.

Since certification of the 2016 LSAP EIR, the City adopted the Playbook which identifies GHG reduction Strategies that set the foundation for bold climate action and Plays that identify opportunities for action to achieve the City's overall GHG reduction targets. The Playbook provides six key "Strategies" to reduce overall fossil fuel consumption and greenhouse gasses by target year 2050. The six strategies are accommodated with 18 "Plays" that provide the City with a plan of action to achieve measurable targets. In addition, the Playbook provides 46 "Next Moves" which include immediate action items to be accomplished in three years following adoption. Strategies and Plays in which future development under the LSAP and its Update would be applicable include:

- Strategy 2: Decarbonizing Buildings
- Strategy 3: Decarbonizing Transportation & Sustainable Land Use
  - Play 3.1: Increase opportunities for and encourage development of mixed-use sites to reduce vehicle miles per person
  - Play 3.2: Increase transportation options and support shared mobility
  - Play 3.3: Increase zero-emission vehicles
- Strategy 4: Managing Resources Sustainably
  - Play 4.2: Ensure resilience of water supply
  - Play 4.3: Enhance natural carbon sequestration capacity

The vision of the LSAP and its Update is to create a transit-oriented development that provides a diversity of land use types and densities. The LSAP and its Update would bring economically, environmentally, and socially sustainable development to the plan area. Land use goals and policies that promote a mix of land uses to reduce vehicle miles per person include LU-G3, LU-G4, LU-G5, LU-G7, LU-G10, H-G1, G-G5, R-P1, OSG-2, OSG-3, D-G1, D-G2, and CF-G1. Through these goals and policies, the LSAP Update would require future development to provide a mix of land uses to the plan area and reduce VMT while supporting the use of nearby transit options. In addition to mixed-use land policies, the LSAP Update would increase the residential density in the plan area. Increasing land use density within the planning area would contribute to achieving the City's GHG reduction targets by reducing amount of VMT and infrastructure required for development. Through the 2019 Title 24 Building Energy Efficiency Standards, both residential and non-residential development would be required to install electric vehicle chargers or "electric vehicle charger ready" parking facilities to support the use of zero-emission electric vehicles.

Under the 2019 Title 24 Building Energy Efficiency Standards, the LSAP Update would be required to implement water conservation features such as low flow faucets in all new buildings. The LSAP Update also includes landscaping water demands with the implementation of drought tolerant and low maintenance plantings. Reducing water demand in the LSAP area, energy demand would also be reduced. In addition, the LSAP area encourages the enhancement of natural carbon sequestration through the implementation of street trees, shade trees, or replacement of trees when tree removal is unavoidable. Natural carbon sequestration supporting goals and policies of the LSAP Update include STP-G1, STP-UDG1- STP-UDG9.

Though the specific policies of the LSAP Update are not intended to reduce GHG emissions from all-electric new construction, the LSAP Update would contribute to the decarbonization of buildings through the applicable building energy efficiency standards at the time of development. In addition, new development proposed under the LSAP Update would be required to comply with the City's reach codes to increase building electrification, renewable energy from solar, and the installation of EV chargers. Sustainable building features such as energy efficient lighting and efficient building material (L-UDG4, BM-UDG3, BM-UDG4, BM-UDG4) would also contribute to the decarbonization of buildings.

Future development projects proposed under the LSAP and its Update would be subject to GHG reduction requirements implemented under the Playbook to help the City achieve updated State GHG emission reduction targets.

The LSAP Update would not exceed the City's updated GHG efficiency metric threshold of 1.27 MTCO2e/yr/SP and demonstrates consistency with the City's 2019 Climate Action Playbook. In addition, the objectives of the LSAP

Update are to increase residential density within a transit-oriented development, which would contribute to achieving the City's GHG reduction targets by reducing the amount of VMT and infrastructure required for development. Therefore, implementation of the LSAP Update would not result in a new or substantially more severe impact to climate change beyond what was identified in the 2016 LSAP EIR. This impact would be **less than significant**.

ISI Project

The ISI project would result in construction-related exhaust GHG emissions from the use of heavy-duty off-road construction equipment, material transport and hauling, and worker commutes. Construction emission modeling in CalEEMod estimates that the project would generate a total of 17,421 $MTCO_2e$ over the 3-year construction period (2020-2023). See Appendix D for detailed input parameters and modeling results. Construction emissions were modeled based on an anticipated construction timeframe beginning in late 2020 and ending late 2023. Construction emissions were modeled before the construction timeframe was revised to begin in late 2021 and end in late 2024. As a result, the emissions identified in Table 3.7-5 are overstated. Emissions during the later timeframe would be reduced because construction equipment would be more efficient as a result of technological advances over time.

Operation of the project would result in mobile-source GHG emissions associated with vehicle trips to and from the ISI project (i.e., project-generated VMT), electricity for space and water heating, and landscape maintenance activity, the conveyance and treatment of wastewater, the generation of solid waste, and the testing of diesel generators. The project does not propose natural gas use. In addition, the project would result in the reduction of project related GHG emissions by generating 3,228,000 kWh per year of electricity on-site through photovoltaic solar panels, the installation of 155 electric vehicles, and the preservation of 692 trees from the existing use. With these GHG reduction features the project would be consistent with the Playbook's strategies of decarbonizing buildings, zero-emission vehicles, and enhanced carbon sequestration. The net operational emissions from the ISI project are reported in Table 3.7-5. It should be noted that operations emissions modeling was based on a build out date of 2024. After modeling was conducted, the build out date for the ISI project was revised to 2025. Emissions identified in Table 3.7-5 are overstated because they do not reflect the increase in building energy efficiency that technical advances will provide or renewable energy procurement over time.

Table 3.7-5 ISI Operational-Generated Greenhouse Gas Emissions

Emissions Source	Total $MTCO_2e$/year
Existing GHG Emissions	
Area Sources	<1
Energy Use	301
Mobile Sources	822
Waste Generation	49
Water/Wastewater	38
Vegetation	-917
Total	**293**
ISI Project GHG Emissions	
Area Sources	<1
Energy Use	1,542
Mobile Sources	7,836
Waste Generation	630
Water/Wastewater	84
Stationary	46
EV Chargers	-4
Vegetation	-490
Total	**9,644**

Emissions Source	Total $MTCO_2e$/year
Net GHG Emissions	
Area Sources	<1
Energy Use	1,241
Mobile Sources	7,014
Waste Generation	581
Water/Wastewater	47
Stationary	46
EV Chargers	-4
Vegetation	427
Total	**9,352**

Notes: Totals may not add due to rounding.

$MTCO_2e$ = metric tons of carbon dioxide equivalent; GHG = greenhouse gas.

Source: Calculations by Ascent Environmental in 2020.

The LSAP Update includes the expansion of the LSAP boundary designated for the construction and operation of the ISI project. Thus, the total net emissions from the ISI project are a subset of the total LSAP Update emissions and the ISI project emissions are evaluated in the LSAP Update's net emissions analysis and are not compared to a project-level GHG emission threshold. As such, the ISI project would not exceed the City's updated GHG efficiency metric threshold of 1.27 MTCO2e/yr/SP and demonstrates consistency with the City's 2019 Climate Action Playbook to meet updated City and State targets. Therefore, the ISI project would not result in a new or substantially more severe impact to climate change beyond what was identified in the 2016 LSAP EIR. This impact is **less than significant**.

Mitigation Measures

No mitigation is required.

3.8 HAZARDS AND HAZARDOUS MATERIALS

This section describes the risk of exposure associated with the routine use, storage, and transport of hazardous materials during construction and operation, the potential to encounter hazardous materials during construction, and the potential to interfere with emergency response plan or evacuation plan that could result from implementation of the LSAP Update and ISI project. The potential for wildland fire and risk of exposure of schools to hazardous materials that could result from implementation of the project is also discussed. This section describes the applicable federal, State, and local regulations pertaining to hazards and hazardous materials. The analysis identifies the project's potential impacts related to hazards and hazardous material, including cumulative impacts, and describes mitigation measures to reduce the level of impact to less than significant.

The 2016 LSAP Draft EIR included Section 3.3, "Hazards and Human Health," which evaluated the potential effects of the LSAP with respect to hazards and hazardous materials. The 2016 LSAP EIR concluded that there would be a less-than-significant impact related to routine use, transport, and disposal of hazardous materials (Impact 3.3.1); accidental release and exposure to hazardous materials (Impact 3.3.2); release of hazardous materials within one-quarter mile of an existing school (Impact 3.3.4); and interference with adopted emergency response and evacuation plans (Impact 3.3.6). The 2016 LSAP EIR determined that that impacts related to future development encountering contamination would be reduced to a less-than-significant level with the implementation of Mitigation Measure MM 3.3.3, which requires that a Phase I and II (if required) Environmental Site Assessment (ESA) be performed on any parcel proposed for development and that a building permit can only be issued for a site where contamination has been remedied and a proper dewatering plan has been approved (Impact 3.3.3). The 2016 LSAP EIR also concluded that impacts related to interference with an emergency response or evacuation plan during construction would be reduced to a less-than-significant impact with the implementation of Mitigation Measure MM 3.3.5, which requires evaluation of a project's effect on traffic conditions and that if emergency response could be inhibited by the project, a Construction Traffic Control Plan must be approved before permit issuance (Impact 3.3.5). The 2016 LSAP EIR also determined that there were no wildland fire hazards.

No comments regarding hazards or hazardous materials were received in response to the Notice of Preparation (see Appendix A).

3.8.1 Regulatory Setting

The regulatory setting for hazards and hazardous materials on pp. 3.3-4 through 3.3-8 of the 2016 LSAP EIR is relevant to understanding the effects of the LSAP Update and is summarized below with additional information relevant to the proposed ISI project. The Adopted LSAP does not include any hazard or hazardous material policies relevant to the proposed LSAP Update or ISI project.

FEDERAL

Management of Hazardous Materials

Various federal laws address the proper handling, use, storage, and disposal of hazardous materials, as well as requiring measures to prevent or mitigate injury to health or the environment if such materials are accidentally released. The U.S. Environmental Protection Agency (EPA) is the agency primarily responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. Applicable federal regulations pertaining to hazardous materials are primarily contained in Code of Federal Regulations (CFR) Titles 29, 40, and 49. Hazardous materials, as defined in the Code, are listed in 49 CFR 172.101. Management of hazardous materials is governed by the following laws:

- The Toxic Substances Control Act of 1976 (15 U.S. Code [USC] Section 2601 et seq.) regulates the manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials. Section 403 of the Toxic Substances Control Act establishes standards for lead-based paint hazards in paint, dust, and soil.

- The Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.) is the law under which EPA regulates hazardous waste from the time the waste is generated until its final disposal ("cradle to grave").
- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also called the Superfund Act or CERCLA) (42 USC 9601 et seq.) gives EPA authority to seek out parties responsible for releases of hazardous substances and ensure their cooperation in site remediation.
- The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499; USC Title 42, Chapter 116), also known as SARA Title III or the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), imposes hazardous materials planning requirements to help protect local communities in the event of accidental release.
- The Spill Prevention, Control, and Countermeasure (SPCC) rule includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires specific facilities to prepare, amend, and implement SPCC Plans. The SPCC rule is part of the Oil Pollution Prevention regulation, which also includes the Facility Response Plan rule.

Transport of Hazardous Materials

The U.S. Department of Transportation regulates transport of hazardous materials between states and is responsible for protecting the public from dangers associated with such transport. The federal hazardous materials transportation law, 49 USC 5101 et seq. (formerly the Hazardous Materials Transportation Act, 49 USC 1801 et seq.) is the basic statute regulating transport of hazardous materials in the United States. Hazardous materials transport regulations are enforced by the Federal Highway Administration, the U.S. Coast Guard, the Federal Railroad Administration, and the Federal Aviation Administration.

Worker Safety

The federal Occupational Safety and Health Administration (OSHA) is the agency responsible for assuring worker safety in the handling and use of chemicals identified in the Occupational Safety and Health Act of 1970 (Public Law 91-596, 9 USC 651 et seq.). OSHA has adopted numerous regulations pertaining to worker safety, contained in CFR Title 29. These regulations set standards for safe workplaces and work practices, including standards relating to the handling of hazardous materials and those required for excavation and trenching.

STATE

Management of Hazardous Materials

In California, both federal and State community right-to-know laws are coordinated through the Governor's Office of Emergency Services. The federal law, SARA Title III or EPCRA, described above, encourages and supports emergency planning efforts at the State and local levels and to provide local governments and the public with information about potential chemical hazards in their communities. Because of the community right-to-know laws, information is collected from facilities that handle (e.g., produce, use, store) hazardous materials above certain quantities. The provisions of EPCRA apply to four major categories:

- emergency planning,
- emergency release notification,
- reporting of hazardous chemical storage, and
- inventory of toxic chemical releases.

The corresponding State law is Chapter 6.95 of the California Health and Safety Code (Hazardous Materials Release Response Plans and Inventory). Under this law, qualifying businesses are required to prepare a Hazardous Materials Business Plan, which would include hazardous materials and hazardous waste management procedures and emergency response procedures, including emergency spill cleanup supplies and equipment. At such time as the applicant begins to use hazardous materials at levels that reach applicable State and/or federal thresholds, the plan is submitted to the administering agency.

The California Department of Toxic Substances Control (DTSC), a division of the California Environmental Protection Agency, has primary regulatory responsibility over hazardous materials in California, working in conjunction with EPA to enforce and implement hazardous materials laws and regulations. As required by Section 65962.5 of the California Government Code, DTSC maintains a hazardous waste and substances site list for the State, known as the Cortese List. Individual regional water quality control boards (RWQCBs) are the lead agencies responsible for identifying, monitoring, and cleaning up leaking underground storage tanks (USTs). The San Francisco Bay RWQCB has jurisdiction over the LSAP Update Project site.

Transport of Hazardous Materials and Hazardous Materials Emergency Response Plan

The State of California has adopted U.S. Department of Transportation regulations for the movement of hazardous materials originating within the state and passing through the state; State regulations are contained in 26 California Code of Regulations (CCR). State agencies with primary responsibility for enforcing State regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation (Caltrans). Together, these agencies determine container types used and license hazardous waste haulers to transport hazardous waste on public roads.

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Response to hazardous materials incidents is one part of the plan. The plan is managed by the Governor's Office of Emergency Services, which coordinates the responses of other agencies in the project area.

Management of Construction Activities

Through the Porter-Cologne Water Quality Act and the National Pollution Discharge Elimination System (NPDES) program, RWQCBs have the authority to require proper management of hazardous materials during project construction. For a detailed description of the Porter-Cologne Water Quality Act, the NPDES program, and the role of the San Francisco Bay RWQCB, see Section 3.9, "Hydrology and Water Quality."

The State Water Board adopted the statewide NPDES General Permit in August 1999. The State requires that projects disturbing more than one acre of land during construction file a Notice of Intent with the RWQCB to be covered under this permit. Construction activities subject to the General Permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters. A stormwater pollution prevention plan (SWPPP) must be developed and implemented for each site covered by the permit. The SWPPP must include best management practices (BMPs) designed to prevent construction pollutants from contacting stormwater and keep products of erosion from moving off-site into receiving waters throughout the construction and life of the project; the BMPs must address source control and, if necessary, pollutant control.

Worker Safety

The California Occupational Safety and Health Administration (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within the state. Cal/OSHA standards are typically more stringent than federal OSHA regulations and are presented in Title 8 of the CCR. Cal/OSHA conducts onsite evaluations and issues notices of violation to enforce necessary improvements to health and safety practices.

Title 8 of the CCR also includes regulations that provide for worker safety when blasting and explosives are utilized during construction activities. These regulations identify licensing, safety, storage, and transportation requirements related to the use of explosives in construction.

Uniform Fire Code

The Uniform Fire Code (UFC) includes regulations relating to construction, maintenance, and use of buildings. Topics addressed in the UFC 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 premises. The UFC includes specialized technical regulations related to fire and life safety.

California Fire Code

The California Fire Code is Part 9 of the CCR, Title 24, also referred to as the California Building Standards Code. The California Fire Code incorporates the UFC with necessary California amendments. It prescribes regulations consistent with nationally recognized good practices for the safeguarding to a reasonable degree of life and property from the hazards of fire, explosion, and dangerous conditions arising from the storage, handling, and use of hazardous materials and devices and from conditions hazardous to life or property in the use or occupancy of buildings or premises and provisions to assist emergency response personnel.

LOCAL

City of Sunnyvale General Plan

The Safety and Noise Chapter and Land Use and Transportation Chapter of the General Plan contains the following policies that are relevant to the hazards and hazardous materials impact analysis:

- **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.
- **Policy SN-1.5:** Promote a living a working environment safe from exposure to hazardous materials.
- **Policy SN-1.6:** Operate a response system that will provide effective control and investigation of hazardous materials emergencies.
- **Policy LT-14.5b:** During the transition from industrial to residential uses, anticipate and monitor compatibility issues between residential and industrial uses (e.g. noise, odors, and hazardous materials). Identify appropriate lead departments and monitoring strategies for each compatibility issue.
- **Policy LT-14.5f:** Rezone industrial sites for conversion to residential uses only after environmental remediation sufficient to enable residential use of the sites is completed and any deed restrictions are removed from subject properties. Such sites may be counted toward RHNA obligations after environmental remediation is completed and any deed restrictions are removed.

City of Sunnyvale Municipal Code

Title 20, Hazardous Materials of the Sunnyvale Municipal Code describes the hazardous material regulations adopted to protect health, life, resources, and property arising from the storage, handling, and use of hazardous substances, materials, and devices, and from conditions hazardous to life or property in the use or occupancy of buildings or structures. The Municipal Code requires permits for certain hazardous activities and operations and inspections to determine whether such activities or operations can be conducted in a manner that complies with the State's hazardous materials regulations.

City of Sunnyvale Department of Public Safety

The Department of Public Safety is the Certified Unified Program Agency (CUPA) for the City of Sunnyvale. The department conducts inspections of hazardous materials facilities, reviews and certifies risk management plans, and reviews construction plans and permits. The City maintains a Type 2 hazardous materials response team which is specially trained and equipped to mitigate emergencies that result in hazardous materials spills, releases, and discharges. This team is relied upon to maintain the safety of all citizens when confronted with an emergency involving hazardous materials (Sunnyvale General Plan page 6-11). Type 2 Hazardous Materials Team is able to address known and unknown industrial chemicals including liquids, solvents, powders, vapors, and gases. Hazardous materials response team trained and equipped to mitigate emergencies such as hazardous materials spills, releases, and discharges.

Santa Clara Valley Water District Local Hazard Mitigation Plan

Hazard Mitigation planning is the process through which hazards that threaten communities are identified, likely impacts of those hazards are determined, mitigation goals are set, and appropriate strategies to lessen impacts are

determined, prioritized, and implemented. To achieve the goals of the Plan, the LHMP identifies critical facilities; discusses the District's capabilities and resources; provides an overview of potential hazards that may affect the District; lists strategies to reduce risks; and discusses guidance and coordination of mitigation actions between the District and other government agencies.

Santa Clara County Department of Environmental Health

The Santa Clara County Department of Environmental Health (DEH) Site Mitigation Program administers the Local Oversight Program to oversee the investigation and remediation of leaking USTs within the City of Sunnyvale. The Site Mitigation Program also oversees remediation of certain other contaminated sites within the City as part of the State Voluntary Cleanup Program.

Bay Area Air Quality Management District

The Bay Area Air Quality Management District, Regulation 11, Rule 2 regulates the demolition and renovation of buildings and structures that may contain asbestos, and the manufacture of materials known to contain asbestos. These rules address testing of demolition and renovation sites, excavation procedures, and monitoring and reporting requirements.

3.8.2 Environmental Setting

The environmental setting provided on pages 3.3-1 through 3.3-3 of the 2016 LSAP Draft EIR is relevant to understanding the potential hazardous materials impacts of the LSAP Update. The following information is relevant to understanding the potential impacts of the ISI project on hazards and hazardous materials and potential impacts of both the LSAP Update and ISI project on hazards and hazardous materials.

For purposes of this section, the term "hazardous materials" refers to both hazardous substances and hazardous wastes. A "hazardous material" is defined in the CFR as "a substance or material that … is capable of posing an unreasonable risk to health, safety, and property when transported in commerce" (49 CFR 171.8). California Health and Safety Code Section 25501 defines a hazardous material as follows:

> "Hazardous material" means any material that, because of its quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

"Hazardous wastes" are defined in California Health and Safety Code Section 25141(b) as wastes that:

> … because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

RECORD SEARCH RESULTS FOR EXISTING HAZARDOUS MATERIAL SITES

Existing hazardous material sites in the original LSAP boundary were documented in the 2016 LSAP EIR and included 16 sites within the original plan area. Most of the sites (10) are associated with leaking underground fuel tanks, and those cases have been closed. There are four underground fuel storage tanks permitted by the City of Sunnyvale within the original plan area. All are located in areas currently designated for and containing industrial/R&D uses as well as at the Costco retail store location.

Much of the plan area north of the Caltrain tracks contain buildings that were constructed during the 1950s through 1970s. Depending on the specific age of each building and whether there have been renovations during the time they have been occupied, they may have asbestos-containing materials or lead-based paints, and electrical components or

fixtures within the buildings could contain polychlorinated biphenyl (PCB) because such materials were widely used before prohibitions on them beginning in the early 1970s. Hazardous material could have been disposed of in sink traps and plumbing lines during this time period before restrictions that were placed on the disposal of hazardous waste.

Phase I ESAs (RPS 2018a, 2018b, 2018c) and Phase II Subsurface Investigations (RPS 2019a, 2019b, 2019c; Farallon 2020a) were completed for the ISI project site. Additionally, a record search for existing hazardous material sites in the updated project area were completed using the State Water Resources Control Board Geotracker database (SWRCB 2020) and the California Department of Toxic Substances Control Envirostor database (DTSC 2020) (Figure 3.8-1).

SITES WITH KNOWN CONTAMINATION AND/OR REGULATORY AGENCY OVERSIGHT

The LSAP area contains sites that were historically contaminated but have been remediated, sites that are known or believed to be contaminated that are being characterized or cleaned up, and sites that are regulated because they use or store hazardous materials and wastes. The following sites of past and current regulatory concern within the LSAP area are mapped (shown by name) in Figure 3.8-1.

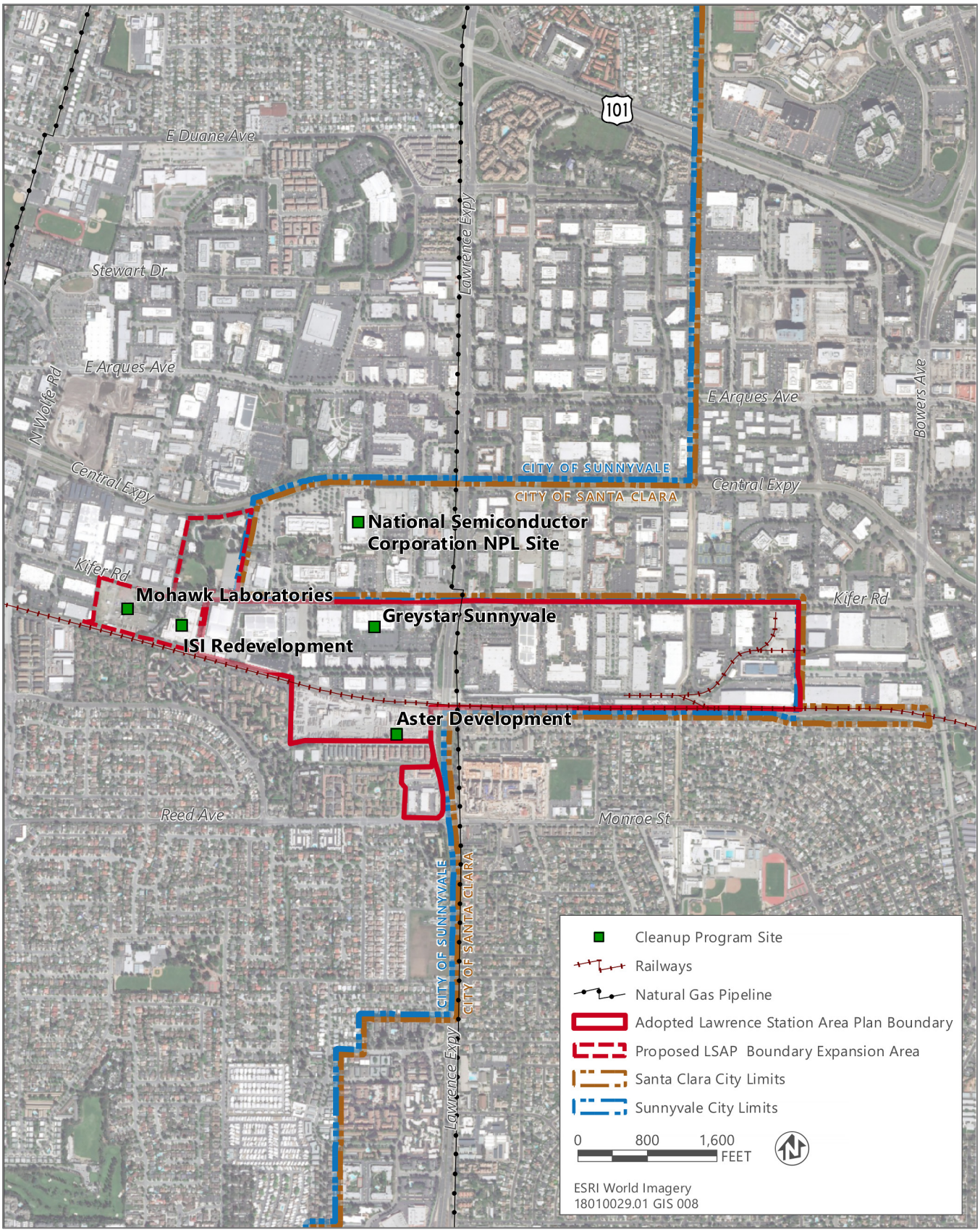
Adopted LSAP Area

1. **Greystar Sunnyvale, 1120 and 1130 Kifer Road**. This site was a former commercial site that has been redeveloped for residential use. There is a trichloroethylene (TCE) plume which extends under the Greystar site as confirmed by detections of TCE in soil vapor and groundwater on site (SWRCB 2020). Therefore, DTSC determined that soil vapor may be contaminated with chlorinated volatile organic compounds (VOCs). A soil vapor sampling report was performed in 2018 which concluded that no further investigation with respect to vapor intrusion is recommended (Greystar 2018). As a precautionary measure, Greystar opted to install a vapor intrusion mitigation system underneath the slab of the future residential buildings.
2. **Aster Development, 1155 and 1175 Aster Avenue**. This site was a former commercial use site and is approved for redevelopment to residential use. Commercial uses included Calstone which manufactured and sold concrete blocks, building, and paving materials. Peninsula Building Materials also sold and stored building materials on site. Maintenance of trucks and equipment and fueling from gasoline and diesel underground storage tanks also took place on site. The underground storage tanks have been removed (JJ&W 2019). Groundwater sampling revealed the presence of tetrachloroethylene above vapor intrusion protection screening level in samples collected beneath limited areas of the site. A site management plan (SMP) outlines procedures to be implemented during site development such as soil vapor extraction and vapor mitigation systems.

ISI Project Site

3. **Mohawk Laboratories, 932 Kifer Road (South Site)**. This parcel is under the regulatory oversight of the San Francisco Bay RWQCB and subject to Order Number R2-2007-0047, Adoption of the Final Site Cleanup Requirements and Rescission of Order No. 00-106 for NCH Corporation and Mohawk Laboratories dated July 11, 2007 (the Order), which was adopted by the Water Board in 2007 and rescinded previous Water Board Order No. 00-106, which was adopted on October 18, 2000 (San Francisco Bay RWQCB 2007). The Order was issued to Mohawk, as former site owner and operator, and NCH Corporation, Mohawk's parent company and former co-owner of the site. ISI is the current owner of the site.

   Mohawk and NCH owned and operated a chemical blending and distribution plant at the site from 1967 to 2017. Subsurface investigations have found significant concentrations of organic chemicals in soil and groundwater beneath the site. The predominant contaminants of interest (COIs) associated with the groundwater plume include tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), and petroleum hydrocarbons. The most significant contamination is in the area immediately down-gradient of a former aboveground tank farm that was on the western portion of the site.



Source: data downloaded from Santa Clara County in 2017 and 2020, California Energy Commission in 2018, California Department of Toxic Substances Control in 2020

Figure 3.8-1 Known Hazards in LSAP Area

Mohawk has conducted extensive on- and offsite investigations since 1987 to define the extent of soil and groundwater contamination. The investigations detected volatile organic compounds (VOCs) in soil, soil gas, indoor air, and groundwater. The Mohawk groundwater plume has commingled with other groundwater plumes originating from nearby properties. The combined groundwater plume extends north to DeGuigne Drive, outside of the LSAP area. Remedial actions have been conducted at the site since 1993 and include a groundwater/soil vapor extraction and treatment system, a soil vapor extraction (SVE) system, an ozone injection system, an enhanced anaerobic biodegradation treatment approach, and monitored natural attenuation as presented in the 2007 Remedial Action Plan (Farallon 2020b). The purpose of a Remedial Action Plan, also referred to as a RAP, is to outline the course of cleanup action and necessary remediation methods for a site that is under the regulatory oversight of environmental agencies. The 2007 Remedial Action Plan established Site-specific cleanup standards for unsaturated soil and groundwater. Site-specific cleanup standards for unsaturated soil have been met and the Water Board approved the curtailment of the SVE in the two onsite Areas of Concern (AOCs) in 2008 and 2010 (Farallon 2020b). Site-specific cleanup standards for groundwater have not been met. PCE, TCE, cis-1,2-DCE, trans-1,2-dichloroethene, vinyl chloride, and 1,4-dichlorobenzene were detected at concentrations exceeding the short- and long-term cleanup standards established in the 2007 Remedial Action Plan in onsite groundwater samples collected during the April 2018 groundwater monitoring event. The on- and offsite areas that exceed short-term groundwater cleanup standards for active remediation were being remediated using enhanced anaerobic biodegradation to further reduce VOC concentrations in the subsurface, as required by the Water Board Order.

The Order requires implementation of institutional controls, including a deed restriction and Site Management Plan (SMP) (Farallon 2020b). A Covenant and Environmental Restriction on Property prepared by Mohawk and recorded with Santa Clara County in 2007 prohibits the use of shallow zone groundwater as a source of drinking water and prohibits residential uses, daycare facilities, playgrounds, schools, and hospitals at the site. The SMP governs all future redevelopment and/or intrusive work at the site such as soil excavation, trenching and backfilling activities. The Covenant and SMP were also prepared to mitigate risk associated with isolated concentrations of arsenic detected in Site soils. The SMP for the site, which was required by the Order, requires that a soil gas survey be conducted before any redevelopment that will result in completion of a new building on the site.

On January 17, 2017, the Water Board issued a Status of Property letter to ISI. The Status of Property letter indicates that the Water Board considers Mohawk to be the primarily responsible party in connection with the remediation of contamination at the site, and the Water Board expects that Mohawk will continue to implement the current Remedial Action Plan until closure is obtained. In this case, the Water Board will not pursue the prospective purchaser where the responsible party has the financial resources necessary to conduct the remediation, where that responsible party is satisfactorily engaged in active remediation, and where the prospective purchaser provides reasonable access for necessary remedial activities. However, the Water Board may hold such a prospective purchaser responsible for investigation or cleanup tasks if he or she refuses to provide reasonable access to a responsible party attempting to conduct necessary remedial activities (Farallon 2020b).

Extensive onsite infrastructure (i.e. groundwater monitoring wells, extraction wells, injection wells, etc.) associated with Mohawk's subsurface environmental investigations and remediation programs exist on the western third of the parcel.

Phase I Environmental Site Assessment and Phase II Subsurface Investigation

ISI acquired the site in 2014 and took occupancy in 2017. A Phase I ESA for the site was prepared in 2018 (RPS 2018a). Subsurface investigations found significant concentrations of organic chemicals in soil and groundwater beneath the site. The predominant contaminants of interest (COIs) associated with the groundwater plume include tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), and petroleum hydrocarbons. The most significant contamination is in the area is immediately down-gradient of the former aboveground tank farm that was on the western portion of the site.

In 2019, a Phase II subsurface investigation of the 932 Kifer site (RPS 2019a) was completed to further investigate potential environmental concerns identified in the Phase I ESA. This investigation evaluated potential human health risks from direct soil exposure for construction workers, vapor intrusion for future building occupants, and potential VOCs in groundwater that may pose a vapor intrusion risk for future commercial workers at the site. In addition, groundwater samples were collected to compare site conditions with the City of Sunnyvale discharge permit requirements in preparation of planned dewatering associated with basement excavation for the ISI project.

Soil sampling results were detected at concentrations less than the construction and commercial ESLs with the following exceptions:

- Arsenic was detected at concentrations exceeding the construction and commercial ESLs in 32 soil samples; however. arsenic is naturally occurring in San Francisco Bay Area soils at concentrations consistent with 23 of the samples (<11 milligrams per kilogram [mg/kg]). Thirteen samples had arsenic concentrations from 11 to 52 mg/kg, exceeding typical background conditions;
- Cobalt was detected at concentrations ranging from 32 to 36 mg/kg, exceeding the non-cancer (NC) hazard construction ESL of 28 mg/kg in five samples;
- Lead was detected at a concentration of 430 mg/kg, exceeding the NC construction and commercial ESLs in one sample (L932-03-1.0);
- Heptachlor and heptachlor epoxide were both detected at concentrations exceeding the cancer hazard construction and commercial ESLs in one sample (L932-12-1.0); and
- Nickel was detected at concentrations of 92 and 114 mg/kg, exceeding the NC hazard construction ESL of 86 mg/kg, in two samples (L932-27-10.0 and L932-27-16.0) (Farallon 2020b: 3-7).

As required by the SMP, the soil sampling results from the 932 Kifer parcel were screened against soil cleanup standards documented in the Order. Any unsaturated soil beneath the 932 Kifer parcel that exceeds the soil cleanup standards documented in the Order is subject to the SMP. Soil sampling results for the site were all less than the short-term cleanup standards. Vinyl chloride and 1,4-dichlorobenzene, although not detected, had reporting limits exceeding the cleanup standards. Soil with arsenic concentrations detected at concentrations exceeding background levels on the 932 Kifer parcel will be handled in accordance with the SMP (Farallon 2020b: 3-7).

Soil gas samples were analyzed for analytes as necessary for evaluating the potential for vapor intrusion concerns, including soil gas analytical results for VOCs that were compared to Water Board ESLs for potential soil gas vapor intrusion concerns The majority of VOC analytical results were either: (a) non-detect with reporting limits less than half of the applicable ESL, or (b) low-level detections that do not exceed the applicable ESL or do not have an applicable ESL. VOCs detected in soil gas exceeding the applicable ESL include the following:

- Benzene was detected at concentrations ranging from 26 to 180 micrograms per cubic meter (ug/m^3), exceeding the ESL of 14 ug/m^3 in four samples (L932-14-SG, L932-15-SG, L932-17-SG, and L932-19-SG);
- Carbon tetrachloride was detected at a concentration of 45 ug/m^3, exceeding the ESL of 9.7 ug/m^3 in one sample (L932-13-SG);
- PCE was detected at concentrations ranging from 68 to 5,000 ug/m^3 exceeding the ESL of 67 ug/m^3 in 15 samples; and
- TCE was detected at concentrations ranging from 100 to 680 ug/m^3, exceeding the ESL of 100 ug/m^3 in five samples (Farallon 2020b: 3-8).

In May 2020, a data gap investigation was performed at the 932 Kifer Road site to further characterize the areas where arsenic in shallow soil exceeded the commercial/industrial shallow soil exposure ESLs (Farallon 2020b: 3-9). Soil sampling analysis results indicated:

- Arsenic was detected at concentrations exceeding the current Water Board accepted background concentration for arsenic of 11 mg/kg in 107 of the 155 soil samples. Detections ranged in concentration from 11.1 to 279 mg/kg in samples SS-05-2.5 and SS-01-4.0, respectively.

- Arsenic was detected in all 36 samples requiring Soluble Threshold Limit Concentration (STLC) analysis, ranging in concentration from 0.440 to 7.17 milligrams per liter (mg/l) in samples SS-07-5.0 and SS-02-4.0, respectively. Arsenic was detected at concentrations of 7.17, 5.75, and 5.47 mg/l in three soil samples, SS-02-4.0, SS-12-1.0, and SS-17-1.0, respectively, which exceeded the California non-Resource Conservation and Recovery Act (RCRA) hazardous waste STLC screening limit of 5 mg/l.
- Arsenic was detected in all 11 soil samples requiring Toxicity Characteristic Leaching Procedure (TCLP) analysis, ranging in concentrations from 0.126 to 1.54 mg/l in samples SS-07-1.0 and SS-17-1.0, respectively. None of the concentrations exceeded the RCRA hazardous waste TCLP screening limit of 5 mg/l.
- Chromium was detected in all 12 STLC chromium samples, ranging in concentration from 0.0577 to 1.12 mg/l in samples F-L932-12-4.0 and F-L932-18-1.0, respectively. None of the concentrations exceeded the non-RCRA California hazardous waste STLC limit of 5 mg/l.
- PCBs were not detected at concentrations exceeding the laboratory reporting limits in any of the soil samples.

In July 2020, Farallon Consulting, L.L.C. (Farallon) prepared a Remedial Action Plan for ISI to document the investigations performed (as described above) and describe the proposed remedial action to address soil issues identified at 932 Kifer Road (Farallon 2020b). The 2020 Remedial Action Plan for 932 Kifer Road property proposes remedial measures to address known risks related to direct contact with onsite soil for construction workers. The Remedial Action Plan is currently being reviewed by the San Francisco Bay RWQCB and approval is expected in 2021. In May 2021, the San Francisco Bay RWQCB invited the public to provide comments through June 21, 2021, on the proposed cleanup plan 932 Kifer Road that would result in removal of arsenic and lead detected in shallow soil at concentrations greater than environmental screening levels. for the 932 Kifer Road site.

As described in the Phase II ESA for 932 Kifer Road (RPS 2019a), mitigation of onsite VOCs is warranted. NCH Corporation is the responsible party for the VOCs and is currently performing cleanup under Water Board oversight. Therefore, ISI's responsibility for this issue would be limited to protecting future onsite workers from vapor intrusion using engineering controls while NCH continues its cleanup. Soil gas, groundwater, and soil measures are described in the Phase II investigation.

4. **ISI Redevelopment, 950 Kifer Road (South Site).** The 950 Kifer Road site is currently owned by ISI and the existing onsite building is used for ISI customer service offices and repair and refurbishing of ISI robot-assisted surgery devices (RPS 2018b: 7). A Phase I ESA of the parcel was conducted in 2018 (RPS 2018b) to identify Recognized Environmental Conditions (RECs) at the site (RPS 2018b) and notes that the quenching tanks had since been removed. A Phase II subsurface investigation of the 950 Kifer site was conducted in 2019 (RPS 2019b) to evaluate potential human health risks from contaminated soil for construction workers, vapor intrusion for future building occupants, and potential VOCs in groundwater that may pose a vapor intrusion risk for future commercial workers at the site. Results of the investigation found all onsite soil gas sampling results were below vapor intrusion ESLs for commercial/industrial land use and that planned soil vapor intrusion minimization measures would address any issues. Groundwater sampled in the area of proposed dewatering wells and a proposed subsurface parking structure detected analytes at concentrations below respective ESLs; however, barium was detected in a concentration above the discharge limits set by City of Sunnyvale in one sample. Isolated soil samples with analytical results exceeding the ESLs were located outside of the proposed building and basement footprints (RPS 2019b:10-12). Hydraulic modeling of the potential effects of dewatering on the surrounding groundwater during construction of the proposed buildings was performed by Entera Geoscience, Inc. The result of this study indicates that dewatering activities are not expected to cause VOC-impacted groundwater to migrate into the planned basement area provided properly constructed slurry walls are utilized (Entera 2020). Soils investigated at the site had no detections of TPH, VOC, and SVOC compounds that exceed applicable screening criteria for commercial and industrial land use. Arsenic was detected in a concentration slightly exceeding the northern California background level of 11 mg/kg in one sample collected at 10 feet below ground surface (bgs) within the proposed basement area; however, the depth of that sample indicates that the arsenic is likely naturally occurring. The laboratory analytical results from the Phase II investigation indicate that Site soils

meet commercial/industrial screening limits. Therefore, RPS did not recommend any soil mitigation. Results of the Phase II investigation determined soil measures are not warranted and recommends implementation of soil vapor and groundwater measures at the 950 Kifer Road parcel (RPS 2019b:10-12).

5. **ISI Redevelopment, 945 and 955 Kifer Road (North Site)**: These parcels are currently owned and occupied by ISI and used as a private sports complex with a surface parking lot. A building was constructed on the parcel in 1984 and used as a conference center and office supply storage. The building was demolished in 2009. No records of historical hazardous materials use have been identified on this site (RPS 2018c). A recent subsurface investigation of the 945-955 Kifer Road site (RPS 2019c) included evaluation of potential human health risks from contaminated soil for construction workers, vapor intrusion for future building occupants, and potential VOCs in groundwater that may pose a vapor intrusion risk for future commercial workers at the site. Results of the investigation found all onsite soil gas sampling results were below vapor intrusion ESLs for commercial/industrial land use and that soil vapor intrusion minimization measures would address any issues. Groundwater sampled in three locations detected analytes were in concentrations below their respective ESLs; however, barium, chromium, cobalt, lead and zinc were detected in concentrations above their respective discharge limits. Hydraulic modeling of the potential effects of dewatering on the surrounding groundwater during construction of the proposed buildings was performed by Entera Geoscience, Inc. The result of this study indicates that dewatering activities would not cause VOC-impacted groundwater to migrate into the planned basement area provided properly constructed slurry walls are utilized (Entera 2020). Soils investigated at the site had no detections of TPH, VOC, pesticides, or SVOCs exceeding applicable screening criteria for commercial and industrial land use. Two soil samples had concentrations of nickel (100 and 90 mg/kg) exceeding the non-cancer (NC) hazard construction ESL of 86 mg/kg. (RPS 2019c: 10-12). Results of the Phase II investigation recommend soil vapor, groundwater, and soil remedial measures at the 945 and 955 Kifer Road parcels (RPS 2019c: 10).

Outside the LSAP Area

6. **National Semiconductor Corporation (NSC) National Priorities List Site 2900 Semiconductor Drive.** The NSC National Priorities List (NPL) site, which merged with Texas Instruments in 2011, is located northeast of the LSAP area. Semiconductors were designed and manufactured at the NSC property from 1967 until 1999. Historically, VOCs and to a lesser extent perchlorate impacted soil on the site. Various mitigation and remedial measures have been implemented at the NSC property since the mid-1980s including source removal, soil excavation, groundwater extraction and treatment, chemical oxidation, SVE, ozone sparging, and enhanced in situ bioremediation. Residual VOCs continue to be present in the groundwater, but concentrations have been significantly reduced through remedial measures. Eleven of the 12 source areas have received a no further action status from the RWQCB. A comparison of groundwater plume concentrations and extent indicates that the lateral extent of the plume has decreased and concentrations continue to decrease within the internal portions of the plume which runs to the north towards the San Francisco Bay (Texas Instruments 2019).

LAND USES

LSAP Area

Southern Pacific railroad tracks were present on the south side of the LSAP area as early as 1897 (RPS 2018b). The LSAP area was used as an orchard from 1939 through the 1970s. Organochlorine- and heavy metal-based pesticides were frequently employed during such orchard operations at that time. In the mid-1960s, commercial structures were constructed in the LSPA area (RPS 2018a). Residual inorganic or organic components from chemicals commonly used in the past have the potential to persist in shallow soils for many decades. Significant changes to the site are not evident on more recent historical sources (RPS 2018a).

Transmission Pipeline

There is a Pacific Gas and Electric Company high-pressure natural gas major distribution pipeline that traverses along Lawrence Expressway through the plan area (PG&E 2020). (Figure 3.8-1). The American Petroleum Institute (API) recommends setbacks of 50 feet from petroleum and hazardous liquid lines for new homes, businesses, and places of

public assembly. It also recommends 25 feet for garden sheds, septic tanks, and water wells, as well as 10 feet for mailboxes and yard lights (Transportation Research Board 2004).

Transportation Corridors

Major transportation corridors are used daily to transport goods throughout the region, state, and country. Hazardous substances often are associated with both the freight transported in these corridors and the soil surrounding them. Leaded gasoline was used as a vehicle fuel in the United States from the 1920s until the late 1980s. Although lead is no longer used in gasoline formulations, lead emissions from automobiles (i.e., aerially deposited lead) are a recognized source of contamination in soils along roadways. Surface and near-surface soils along heavily used roadways have the potential to contain elevated lead concentrations. The results of studies by Caltrans suggest that hazardous waste levels of lead, if present, generally are found in soils within 30 feet of the pavement edge (DTSC 2009).

The Southern Pacific railroad track runs parallel to the southern boundary of the LSAP Update area. The railroad tracks were adjacent to the LSAP boundary as early as 1897 (RPS 2018b). The area could be affected by creosote on rail ties. Train traffic along the line is mostly passenger train service. Contaminants common in railway corridors include wood preservatives (e.g., creosote and arsenic) and heavy metals in ballast rock. Ballast rock and soils associated with railroad tracks also may contain naturally occurring asbestos. In addition, soils in and adjacent to these corridors may contain herbicide residues from historical and ongoing weed-abatement practices.

Lead, Asbestos, Radon, and Other Hazardous Materials

Hazardous materials are commonly found in building materials. Until 1978, lead compounds were used in interior and exterior paints. Before the 1980s, building materials often contained asbestos fibers, which were used to provide strength and fire resistance. In addition, other common items present in buildings, such as electrical transformers, fluorescent lighting, electrical switches, heating/cooling equipment, and thermostats, can contain hazardous materials that may pose a health risk if not handled and disposed of properly. These include PCBs, which were used in hundreds of industrial and commercial applications because of their nonflammability, chemical stability, high boiling point, and electrical insulating properties. Older equipment that might contain PCBs includes electrical equipment and thermal insulation material (e.g., fiberglass, felt, foam, or cork). Older, pole-mounted electrical transformers also can contain PCBs.

Radon is a is a natural decay product of uranium present in varying amounts in rocks and soil. Radon is present in background concentrations in the atmosphere and is a colorless, odorless, tasteless radioactive gas. EPA has recommended an "action" level for indoor radon concentrations at or exceeding 4 picocuries per liter (pCi/L) of air. Sunnyvale is located in Zone 2, which by EPA standards is considered "moderate potential," with levels of radon greater than 2.0 pCi/L but less than 4.0 pCi/L (EPA 2020).

ISI Project Site

932 Kifer Road (South Site): The main building on the parcel was constructed before 1956 and was owned and operated by Mohawk and NCH who operated a chemical blending and distribution plant between 1967 and 2017. The main building was used for office uses, mixing and storing water-based water treatment compounds, storing solvent-based chemicals manufactured at offsite facilities, and distribution of the water-based and solvent-based compounds and chemicals. The northwestern portion of the building was occupied by a small laboratory and maintenance room. The laboratory was used primarily to conduct pH tests of finished products. Across the hall from the laboratory, the maintenance room stored general maintenance equipment and a boiler used to heat elevated mix tanks. An above-ground tank farm, with a capacity of 157,000 gallons, was located on the western portion of the parcel from the mid-1950s to 1989. Chemicals stored in the tank farm included chlorinated solvents, methylene chloride, mineral spirits, kerosene, xylene, and isopropanol. Chemicals stored in the tank farm were transferred into a blending/warehouse building also located on site before sale and distribution (RPS 2018a). In June 1989, use of the tank farm was discontinued.

An acid building was constructed in 1963 and was utilized as a space to manufacture acids until approximately 2015. The acid building was used for storage of liquid and powder chemicals including ethanolamine, phosphoric acid and Kemguard. Chemicals stored onsite included corrosive liquids, flammable liquids, irritants, combustible liquids,

oxidizers, toxic chemicals, and water reactive chemicals. Chemicals were stored in containers, totes, and above ground storage tanks of various sizes in the onsite buildings and outside in two staging areas west and northwest of the main building. Mohawk stored flammable, poisonous, and combustible chemicals onsite. Most of the chemicals stored onsite in 1994 consisted of concentrated chemicals, of up to 20,000 gallons or pounds (RPS 2018a). Violations noted in the various inspection reports include evidence of spillage on the floors of the fill room, mix room, hot room, elevator equipment area, main warehouse area, and the second floor, secondary containment missing in various areas, incompatible chemicals not separated by 20 feet or a non-combustible partition, and labeling and reporting errors and omissions (RPS 2018a).

950 Kifer Road (South Site): The first buildings were constructed on the parcel in the 1960s and 1970s and their tenants included Petersen Engineering, Pengo Corporation Divisional, Co. Inc. Civil Engineers, and Comptroller Mov. Mfr. (1968), Pengo Corporation (1975-1986), Pengo Heat Treating (1986), Tandem Computers Inc. (1991), Chip Shot Golf Corporation (2001), and ISI (2010-current). Building permits indicate that an office and manufacturing building with a paint spray booth was constructed in 1965. It is likely that hazardous materials, such as paints and thinners, were historically used on the parcel. The current building on site was constructed in the early 1980s for manufacturing operations (RPS 2018b). Approximately one half of the building is used by ISI for offices associated with customer service orders and the remainder of the building is used for repair and refurbishing of ISI's da Vinci robot-assisted surgery devices. Hazardous materials used in ISI's customer service operations includes cavicide wipes containing isopropyl alcohol and aluminum chloride, which are used to sanitize the da Vinci machines that are brought in for service at the site (RPS 2018b). Isopropyl alcohol and acetone are also used in machine cleaning and repair operations. Lead acid batteries are contained in ISI's uninterruptible power supply.

The parcel is currently owned and occupied by ISI. The mix tanks and pipes used in previous operations were emptied and cleaned by a subcontractor and are currently empty and unused. Staining of the concrete floors is apparent throughout the main building and smaller building. Three outbuildings are maintained by the Apex Companies, LLC in the northwestern portion of the site. Current hazardous materials use on the parcel is limited to small quantities of paint containers and bar and chain oil (RPS 2018b).

945 and 955 Kifer Road (North Site): The North Site is currently owned and occupied by ISI and is used as a private sports complex. The first building was constructed on the parcel in 1984 and was demolished in 2009. The building was used as a conference center and for office supply storage. No records of historical hazardous materials use have been identified on this site (RPS 2018c).

EMERGENCY RESPONSE AND EVACUATION ROUTES

The City of Sunnyvale's Department of Public Safety's Office of Emergency Services provides training and services to ensure the City is prepared to respond to and recover from the effects of major emergencies. The City of Sunnyvale coordinates emergency planning with the County of Santa Clara Office of Emergency Services, which maintains the Countywide Emergency Operations Plan (EOP) and provides a comprehensive, single-source of guidance and procedure for the County to prepare for, respond to, and manage significant or catastrophic natural or man-made threats, crises, incidents, or events that produce situations requiring a coordinated response (Santa Clara County 2017). The EOP conforms to the requirements of the National Incident Management System, Standardized Emergency Management System, Incident Command System, and the California State Emergency Plan for managing response to multi-agency and multijurisdictional incidents and is consistent with federal and State emergency plans and guidance documents.

The Santa Clara Valley Water District Local Hazard Mitigation Plan provides guidance for mitigating hazard events and ensures a coordinated response between police, fire departments, and trained volunteers (SCVWD 2017). Four major freeways could serve as the primary evacuation routes in the vicinity of the LSAP area Highway 101, Interstate 280, Interstate 680, and Interstate 880 (SCVWD 2017). Highway 101 is most easily accessible via Lawrence Expressway from the LSAP area and runs south to Salinas and north to San Francisco. A handful of lower-capacity freeways can also serve as evacuation routes. State Route 85 connects Mountain View to San Jose and is also an evacuation route for Sunnyvale (SCVWD 2017).

AIRPORTS AND AIRSTRIPS

Sunnyvale lies in the landing pattern of Moffett Federal Airfield and, during south winds, planes take off over heavily developed areas. Risk of future accidents exists even though the Navy's usage of Moffett Field as a Naval Air Station ended in 1994 (City of Sunnyvale 2011). NASA/Ames has recently explored and initiated the leasing of airfield usage to large private companies as part of corporate collaborations (City of Sunnyvale 2011). The LSAP is located approximately 2.4 miles away from Moffett Federal Airport and just outside of the Airport Influence Area (AIA) (Santa Clara County 2016a).

The LSAP is approximately 2.25 miles away from the Norman Y. Mineta San Jose International Airport. The San Jose AIA is a composite of the areas surrounding the Airport that are affected by noise, height, and safety considerations. The LSAP and ISI site are located outside of the AIA for the San Jose International Airport (Santa Clara County 2016b).

WILDLAND FIRE HAZARDS

Many California communities are becoming more susceptible to wildfire risk as a result of past fire suppression efforts coupled with increases in population. These trends have increased the number of people living in heavily vegetated areas where wildlands meet urban development, also referred to as the wildland urban interface (WUI). Fires in WUI areas can result in major losses of property and structures. The LSAP is not located near any wildlands because of development in the Sunnyvale area. The California Department of Forestry and Fire Protection has mapped fire severity zones in Santa Clara County. The LSAP area and ISI site are not located in a Very High Fire Hazard Severity Zone (CAL FIRE 2008).

3.8.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The following impact analysis is based on a review of the 2016 LSAP EIR, publicly available hazard and hazardous materials information, site/location and cleanup status information, Phase I ESA's (RPS 2018a, 2018b, 2018c) and Phase II Subsurface Investigations (RPS 2019a, 2019b, 2019c) prepared for all parcels within the ISI Site, and a Remedial Action Plan prepared for the 932 Kifer Road parcel (Farallon 2020b) located within the ISI Site. This impact analysis considers the potential for changes in the nature, extent, and presence of hazardous conditions to occur as a result of ISI project and LSAP Update construction and operation, compared to that which was analyzed in the 2016 LSAP EIR.

THRESHOLDS OF SIGNIFICANCE

An impact related to hazards and hazardous materials is considered significant if implementation of the LSAP Update and ISI project would do any of the following:

- create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment;
- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- 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;
- for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area;

- impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

ISSUES NOT DISCUSSED FURTHER

The LSAP plan area and ISI site are not located within an airport land use plan or within two miles of a public airport or public use airport; therefore, the project would not result in a safety hazard or excessive noise for people residing or working in the project area. The LSAP plan area and ISI site are not located in a very high fire severity zone because of the urbanized nature of the surrounding area. New construction is subject to the City Municipal Code and the California Fire Code, which includes safety measures to minimize the threat of fire. Similar to the conclusions of the 2016 LSAP EIR, the LSAP Update and ISI project would have no impact related to location within an airport land use plan or wildfire risk. These issues are not discussed further in this SEIR.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.8-1: Transport, Use, and Disposal of Hazardous Materials During Construction

Buildout of the LSAP Update and ISI project would involve the use, storage, and transport of hazardous materials associated with new development and redevelopment construction. This issue was addressed for the adopted LSAP in Impact 3.3.1 of the certified 2016 LSAP EIR. During construction activities, all work would be conducted in accordance with Cal/OSHA training and worker protection rules and regulations. Use, storage, and transport of hazardous materials for buildout of the LSAP Update and construction of the ISI project would occur in compliance with local, State, and federal regulations, which would minimize but not eliminate the potential for upset or accident conditions. Implementation of the LSAP Update and ISI project would not result in a new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The impact to the public and the environment from exposure to these hazardous materials and other hazards during construction would be **less than significant**.

Impacts 3.3.1 and 3.3.2 of the 2016 LSAP Draft EIR (pp. 3.3-9 through 3.3-11) evaluated whether the routine use, storage, transport, and accidental release of hazardous materials during buildout of the LSAP could cause accidental release or exposure to hazardous or acutely hazardous materials, substances, or waste. The 2016 LSAP EIR concluded that compliance with all federal, State, and local regulations related to the transport, use, disposal, and accidental release of hazardous materials during construction would reduce the impact to less than significant.

LSAP Update

The proposed LSAP Update would increase allowable housing potential within the adopted LSAP and would expand the LSAP boundary. The allowance of additional housing potential within the adopted LSAP boundaries would result in similar use of hazardous materials for construction purposes, as analyzed in the 2016 LSAP DEIR. Impacts associated with development proposed within the LSAP boundary expansion area are analyzed under the ISI project component (discussed below). The proposed Lawrence Station Sense of Place Plan would function as a policy document for LSAP streetscape and pedestrian/bicycle improvements and would require future development resulting from implementation of the LSAP Update to implement improvements and/or public amenities or payment of an in-lieu fee. Similar to the 2016 LSAP EIR, compliance with all federal, State, and local regulations related to the transport, use, disposal, and accidental release of hazardous materials during construction of development associated with the LSAP Update would reduce this impact. Thus, implementation of the LSAP Update would not result in a new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Therefore, the impact would remain **less than significant**.

ISI Project

The ISI project would result in demolition of buildings and structures on the ISI site and construction of new buildings, structures, and infrastructure improvements, including those associated with implementation of the proposed Lawrence Station Sense of Place Plan (i.e., improvements to bicycle and pedestrian pathways, roadways, and driveways). Demolition and redevelopment in the ISI project area would involve the use, storage, and transport of hazardous materials including gases used in construction for testing, fuels, coolants, and oils, and lubricants. Construction activities would also include implementation of the project's SMP in coordination with the San Francisco Bay RWQCB for the cleanup of existing onsite groundwater and soil contamination. The SMP proposes procedures to manage soil, soil vapor, and groundwater during construction; installation of soil vapor barriers and venting system to prevent vapors from moving up into buildings; and soil excavation. Similar to the 2016 LSAP EIR, all hazardous materials and activities would be typical for such uses and compliance with all federal, State, and local regulations related to the transport, use, disposal, and accidental release of hazardous materials during construction of the ISI project would reduce this impact. Thus, implementation of the ISI project would not result in a new significant effect and the impact would not be more severe than the impact identified in the 2016 LSAP EIR. The impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.8-2: Transport, Use, and Disposal of Hazardous Material During Operation

Operations resulting from buildout of the LSAP Update and ISI project would include the transport, use, and disposal of hazardous materials. General commercial and household hazardous materials are generally handled and transported in small quantities and would be required to comply with regulations covering the use, storage, and disposal of hazardous materials and wastes. This issue was addressed in the 2016 LSAP EIR. Businesses that store hazardous materials and/or waste onsite would be required to submit business information and hazardous materials inventory forms contained in a Hazardous Materials Management Plan and Hazardous Materials Business Plan by the State of California Office of Emergency Services. With adherence to existing regulatory requirements, operational impacts related to routine use or disposal of hazardous materials resulting from the ISI project and/or development under the LSAP Update would be minimized. Thus, implementation of the LSAP Update and ISI project would not result in a new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Therefore, the impact is **less than significant**.

Impacts 3.3.1 and 3.3.2 of the 2016 LSAP Draft EIR (pp. 3.3-9-3.3-11) evaluated whether the routine use, storage, transport, and accidental release resulting from operation of the LSAP could cause exposure to hazardous or acutely hazardous materials, substances, or waste. The storage, use, and disposal of hazardous materials would be associated with residential, commercial, and industrial uses resulting from operation of the LSAP. The 2016 LSAP EIR concluded that compliance with all federal, State, and local regulations related to the transport, use, disposal, and accidental release of hazardous materials resulting from operation of the LSAP would reduce the impact to less than significant.

LSAP Update

The allowance of additional housing potential within the adopted LSAP boundaries would result in a slightly higher potential of exposure to hazardous materials during operation than analyzed in the 2016 LSAP Draft EIR due to the presence of more residential units. The allowance of additional housing potential within the adopted LSAP boundaries would result in similar use of hazardous materials for residential uses. Impacts associated with development proposed within the LSAP boundary expansion area are analyzed under the ISI project component (discussed below). The proposed Lawrence Station Sense of Place Plan would function as a policy document for LSAP streetscape and pedestrian/bicycle improvements and would require future development resulting from implementation of the LSAP Update to implement improvements and/or public amenities or payment of an in-lieu fee. Similar to the 2016 LSAP EIR, compliance with all federal, State, and local regulations related to the transport, use, disposal, and accidental release of hazardous materials during construction of development associated with the LSAP Update would minimize potential operational impacts. Thus, implementation of the LSAP Update would not result in

a new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Therefore, the impact is **less than significant**.

ISI Project

Operation of the ISI project would result in the use of hazardous materials similar to those used at existing ISI sites within the adopted LSAP. The ISI project would generate less than 2,200 pounds of hazardous waste per month, considered a small quantity generator as defined by DTSC. The ISI project would generate small quantities of batteries, fluorescent light bulbs and electronic waste (less than 100 pounds per month) which would be sent offsite for recycling or proper disposal. The specific hazardous material substances that would be used during operation of the ISI project include:

- Acetone
- 3E-ZYME
- Argon
- Butane
- Envirocide (surface disinfectant)
- Isopropanol (70%)
- Lubricating Oils
- Lead Acid Batteries (Sealed)
- N.O.S (Wipes with acetone, isopropyl alcohol, and lead contaminants)
- Gasoline
- Lead Acid Batteries
- Acetone
- Isopropyl Alcohol
- Diesel Fuel No. 2

All hazardous wastes would be disposed of according to applicable laws and regulations. Similar to the conclusions of the 2016 LSAP EIR, compliance with all federal, State, and local regulations related to the transport, use, disposal, and accidental release of hazardous materials during operation of the ISI project would minimize potential operational impacts. Thus, implementation of the ISI project would not result in a new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Therefore, the impact is **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.8-3: Exposure of School Sites to Hazardous or Acutely Hazardous Materials, Substances, or Waste within 0.25 Mile of an Existing or Proposed School

There are no public schools and no proposed schools within the adopted LSAP boundary or the ISI project site and there is an existing daycare facility within the southern portion of the adopted LSAP. There are three schools and one daycare within one-quarter mile of the adopted LSAP boundary and no proposed or existing schools or daycare facilities within one-quarter mile of the ISI project site. Similar to the project analyzed in the 2016 LSAP Draft EIR, the ISI project and future development projects proposed under the LSAP Update would be required to comply with all federal, State, and local regulations related to the transport, use, and disposal of hazardous materials. Any hazardous dust from construction would be controlled by adhering to existing regulations and site control measures. Thus, implementation of the LSAP Update and ISI project would not result in a new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. This impact would be **less than significant**.

Impact 3.3.4 of the 2016 LSAP Draft EIR (p. 3.3-13) evaluated whether the LSAP would expose existing or proposed school sites to hazardous or acutely hazardous materials, substances, or waste located within one-quarter mile. There are no new schools proposed in the LSAP area. One daycare (Tulip Kids Academy) is located in an existing residential neighborhood within the adopted LSAP and three schools are located within one-quarter mile of the adopted LSAP boundary: Santa Clara Christian School, Adrian Wilcox High School, and Monticello Academy. The 2016 LSAP Draft EIR concluded that the impact would be less than significant because each subsequent development associated with buildout of the adopted LSAP would be required to comply with all federal, State, and local regulations related to the transport, use, and disposal of hazardous materials, which would be enforced by the City, and any hazardous dust from construction would be controlled by adhering to existing regulations and site control measures.

LSAP Update

The proposed LSAP Update would increase the allowable housing potential within the LSAP and expand the LSAP boundary. The proposed allowance of additional housing potential within the adopted LSAP boundaries would result in similar storage, use, and transport of hazardous materials within one-quarter mile of an existing school as analyzed in the 2016 LSAP Draft EIR. Impacts associated with development proposed within the LSAP boundary expansion area are analyzed under the ISI project component (discussed below). The proposed Lawrence Station Sense of Place Plan would function as a policy document for LSAP streetscape and pedestrian/bicycle improvements and would require future development resulting from implementation of the LSAP Update to implement improvements and/or public amenities or payment of an in-lieu fee. Similar to the adopted LSAP, future development associated with the LSAP Update and within one-quarter mile of an existing school would be subject to all federal, State, and local regulations related to the transport, use, and disposal of hazardous materials and enforced by the City, and any hazardous dust from construction would be controlled by adhering to existing regulations and site control measures (see Section 3.2, "Air Quality," of this Draft SEIR). Thus, implementation of the LSAP Update would not result in a new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. This impact would be **less than significant**.

ISI Project

The ISI project would result in demolition of buildings and structures on the ISI site, construction of new buildings and infrastructure improvements, and operations which would involve the use, transport, disposal, and/or release of hazardous material. There are no existing or proposed schools within one-quarter mile of the ISI site and the ISI project would not result in a new significant or more severe effect than the impact identified in the 2016 LSAP EIR. The ISI project would result in a **less-than-significant** impact related to hazardous materials within one-quarter mile of a school.

Mitigation Measures

No mitigation is required.

Impact 3.8-4: Location on a Hazardous Materials Site Where Contamination Could Be Encountered

Impact 3.3.3 of the 2016 LSAP EIR concluded that buildout of the LSAP would involve subsurface disturbance where hazardous material could be encountered and that implementation of adopted LSAP Mitigation Measure 3.3.3 would reduce the potential impact to a less-than-significant level. Similar to the adopted LSAP, demolition and redevelopment activities associated with future developments under the LSAP Update could occur in areas of the adopted LSAP where existing hazardous materials such as contaminated soil, soil vapor, or groundwater may pose a human health or environmental risk. ESAs and subsurface investigations have been performed for the ISI project area, and they identify known RECs that could be encountered during construction. The LSAP Update and ISI project would be subject to Mitigation Measure 3.8-1, which was adapted from adopted LSAP Mitigation Measure 3.3.3 to include some minor modifications and clarifications. Mitigation Measure 3.8-1 requires preparation of a Phase I ESA and/or Phase II ESA (subsurface investigation), to determine the lateral and vertical extent of contamination and appropriate remediation to be completed before City issuance of a building permit for a development. Implementation of this measure would be required during project-level review of subsequent developments under the LSAP to ensure impacts associated with disturbance of known or suspected hazardous contamination is remediated. Implementation of the LSAP Update and ISI project would not result in a new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. With implementation of Mitigation Measure 3.8-1, as adapted from adopted LSAP Mitigation Measure 3.3.3, the potential to encounter contaminated soil, soil vapors, or groundwater from buildout of the LSAP Update and ISI project, would be reduced to a **less-than-significant** level.

Impact 3.3.3 of the 2016 LSAP EIR concludes that the potential for future developments within the LSAP to encounter contaminated soil, soil vapors, or groundwater, which may pose a human health or environmental risk is considered a potentially significant impact that would be reduced to less than significant with implementation of LSAP Mitigation Measure 3.3.3.

Adopted LSAP Mitigation Measure 3.3.3

The City shall require a Phase I Environmental Site Assessment (ESA) prepared and submitted with any application for new development or redevelopment in any LSAP subarea north of the Caltrain tracks, the Peninsula subarea, the Lawrence/Reed/Willow subarea, or the Corn Palace property. The Phase I ESA shall be prepared by a qualified professional registered in California and in accordance with ASTM E1527-13 (or the most current version at the time a development application is submitted for the project).

If determined necessary by the Phase I ESA, a Phase II ESA shall be conducted to determine the lateral and vertical extent of soil, groundwater, and/or soil vapor contamination, as recommended by the Phase I ESA.

The City shall not issue a building permit for a site where contamination has been identified until remediation or effective site management controls appropriate for the use of the site have been completed consistent with applicable regulations and to the satisfaction of the City of Sunnyvale, DTSC, or SFBRWQCB (as appropriate) before initiation of construction activities. Deed restrictions, if appropriate, shall be recorded. If temporary dewatering is required during construction or if permanent dewatering is required for subterranean features, the City shall not issue an improvement permit or building permit until documentation has been provided to the City that the Water Pollution Control Permit has approved the discharge to the sewer. Discharge of any groundwater removed from a construction site in any LSAP subarea north of the Caltrain tracks, the Peninsula subarea, the Lawrence/Reed/Willow subarea, or the Corn Palace property to the El Camino Storm Drain Channel, Calabazas Creek, or storm drain shall be prohibited. The City shall ensure all plans and permits state this prohibition.

If the Phase I ESA determines there are no recognized environmental conditions (RECs), no further action is required. However, the City shall ensure any grading or improvement plan or building permit includes a statement if hazardous materials contamination is discovered or suspected during construction activity, all work shall stop immediately until a qualified professional has determined an appropriate course of action.

LSAP Update

The proposed LSAP Update would increase the allowable housing potential within the adopted LSAP, resulting in ground disturbing activities and a potential to encounter contamination, similar to the project analyzed in the 2016 LSAP Draft EIR. Impacts associated with development proposed within the LSAP boundary expansion area are analyzed under the ISI project component (discussed below). The proposed Lawrence Station Sense of Place Plan would function as a policy document for LSAP streetscape and pedestrian/bicycle improvements and would require future development resulting from implementation of the LSAP Update to implement improvements and/or public amenities or payment of an in-lieu fee. Subsequent developments under the LSAP would be required to assess impacts associated with Sense of Place Plan improvements at the project level. Adopted LSAP Mitigation Measure 3.3.3 requires all subsequent projects within the LSAP to have a Phase I ESA prepared and submitted with any application for new development or redevelopment within the LSAP. In accordance with Mitigation Measure 3.3.3, a Phase I (and in some cases a Phase II) ESA has been performed for other developments proposed within the LSAP after adoption of the LSAP and includes 1020, 1050, 1090, 1120, 1130 Kifer Road, 1155-1175 Aster Avenue, 1155-1175 Aster Ave, and 106 Lawrence Station Road. Remediation actions have been identified for some of these sites.

The 2016 LSAP EIR included analysis of LSAP subareas/study areas, including the Corn Palace Property. Because these areas are located outside of the adopted LSAP boundary, they are excluded from the analysis in this SEIR but are discussed in adopted LSAP Mitigation Measure 3.3.3. Therefore, adopted Mitigation Measure 3.3.3 shall be replaced by Mitigation Measure 3.8-1 to remove reference to LSAP subareas/study areas that are not relevant to the adopted LSAP and to clarify that discharge of any groundwater removed from a construction site will be subject to NPDES permit requirements. Similar to other developments within the LSAP, future developments associated with buildout of the LSAP Update would be subject to Mitigation Measure 3.8-1, which would ensure that the potential for disturbance of known or unknown hazardous contamination would be reduced to a **less-than-significant** level.

ISI Project

A Phase I ESA and Phase II subsurface investigation were completed for each parcel in the ISI project site and a Remedial Action Plan has been prepared for the 932 Kifer Road parcel and is currently under review with San Francisco Bay RWQCB. Results of these investigations are described in detail above (see Section 3.8.2, "Environmental

Setting"). Due to known and/or suspected soil vapor, groundwater, and/or soil contamination, measures are required for construction and/or operation of each parcel within the ISI site. As described in the Phase II ESA for 932 Kifer Road (RPS 2019a), It should be noted that NCH Corporation is the responsible party for VOCs within the 932 Kifer Road parcel and is currently performing cleanup under San Francisco Bay RWQCB oversight. Therefore, ISI's responsibility for this issue would be limited to protecting future onsite workers from vapor intrusion using engineering controls while NCH continues its cleanup.

Required soil gas, groundwater, and soil measures that are the responsibility of ISI are described in the Remedial Action Plan and Phase II investigations for the ISI Site and are summarized below. At the discretion of agencies overseeing the ISI project site (San Francisco Bay RWQCB and City of Sunnyvale), some of these measures may be modified and/or additional measures may be required.

In addition to the measures described below, all construction activities that may involve direct contact with soil would be completed in compliance with standard Cal/OSHA regulations as the intent of these standards are to prepare workers for the types of hazards that are likely to be encountered during such activities.

932 Kifer Road

Required measures from the 2019 Phase II Subsurface Investigation and 2020 Remedial Action Plan for the 932 Kifer Road parcel are described below. The Remedial Action Plan for 932 Kifer Road is available online at: https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/6776513159/T10000012798.PDF ; refer to Appendix D of the Remedial Action Plan at this link for the SMP prepared for 932 Kifer Road parcel.

Soil

As described in the Remedial Action Plan, remedial measures are required to address known and unknown risks related to direct contact with soil for intrusive construction workers. Planned remedial action includes source removal by excavation and offsite disposal of soil containing COIs to eliminate the potential direct-contact exposure pathway to soil. A COI is defined as a regulated hazardous substance, hazardous waste, hazardous material, toxic substance, solid waste, pollutant or contaminant. Twenty-one excavation areas have been identified for the parcel in the Remedial Action Plan and are located primarily on the western and southern edge of the parcel. The excavation areas include all soil sampling locations where concentrations of arsenic exceed the background threshold value and lead exceeds the NC Hazard ESL for 'Construction Worker: Any Land Use/Any Depth Soil Exposure' 'Direct Exposure Human Health Risk Level' (Farallon 2020b: 5-1). Contaminated soils would be disposed of offsite at a non-RCRA hazardous waste Class I disposal facility or a non-hazardous waste Class II disposal facility.

As outlined in the July 2020 Remedial Action Plan, implementation of the remedial approach will require that:

- All cleanup activities be conducted in accordance with applicable local, State, and federal regulations.
- The contractor performing the excavation, soil handling, and backfilling will be responsible for obtaining permits as needed from Santa Clara County and/or the City of Sunnyvale before the commencement of the proposed excavation work.
- The Bay Area Air Quality Management District (BAAQMD) is to be notified at least 5 days before commencing excavation activities, as required by Regulation 8 of Rule 40.
- A Health and Safety Plan (HASP) will be prepared for all field activities before starting work and in accordance with guidelines provided in Section 6.1 of the Remedial Action Plan.
- A Notice of Intent will be filed and a Stormwater Pollution Prevention Plan (SWPPP) that outlines best management practices (BMPs) related to the remediation activities will be developed and implemented; the Notice of Intent and SWPPP will be submitted to the Water Board.
- Soil excavation and confirmation sampling will be conducted in accordance with Section 6.2 of the Remedial Action Plan.
- Excavations will be backfilled using clean overburden or imported soil and in accordance with measures described in Section 6.3 of the Remedial Action Plan.

- Soil stockpile management, profiling, and disposal shall be implemented in accordance with measures provided in Section 6.4 of the Remedial Action Plan.
- Implementation of dust-control measures to minimize dust generation is required during earthwork activities conducted at the Site. Basic dust-control measures described in the BAAQMD California Environmental Quality Act Guidelines: Assessing the Air Quality Impacts of Projects and Plans dated December 1999, prepared by BAAQMD (1999), must be followed. All dust monitoring and controls will be implemented in accordance with the guidelines provided in Section 6.5 of the Remedial Action Plan.
- Equipment control and spill cleanup, signage, and security and fencing will be implemented in accordance with the health and safety guidelines described in Section 6.6 of the Remedial Action Plan.

  To provide further protection for workers and the public, a SMP has been prepared for 932 Kifer Road parcel and will be used during and after site remediation. Required compliance with the soil guidance and controls outlined in the Remedial Action Plan and SMP will ensure the site is safely developed. Review and final approval of the Remedial Action Plan by the San Francisco Bay RWQCB is expected in late 2020. A report documenting the removal activities must be submitted to the San Francisco Bay RWQCB following implementation of the Remedial Action Plan.

Groundwater

As described above and in the Phase II subsurface investigation, groundwater samples collected from within the footprint of the planned basement area indicate that total concentrations of five distinct metals are greater than the discharge limit requirements set forth by the City of Sunnyvale. Before applying for a discharge permit to the sanitary sewer system, an onsite treatment system designed to remove suspended metals would be incorporated into the dewatering plan for the project in coordination with the City of Sunnyvale and engineering subcontractors to accommodate the anticipated dewatering program.

Hydraulic modeling of the potential effects of dewatering on the surrounding groundwater during construction of the proposed buildings was performed by Entera Geoscience, Inc. (Entera 2020). The result of this study indicates that dewatering activities will not cause VOC-impacted groundwater to migrate into the planned basement area provided properly constructed slurry walls are utilized.

In accordance with San Francisco Bay RWQCB directives, existing groundwater monitoring wells within the proposed building footprints on the 932 Kifer parcel must be decommissioned before redevelopment activities.

Soil Vapor

As stated above, ISI's mitigation for soil vapor is limited to protecting future onsite workers from vapor intrusion using engineering controls while NCH continues its cleanup of the site. Technical specifications for the engineering controls will be developed and submitted to the San Francisco Bay RWQCB and/or DTSC for review and approval. As described in the Phase II subsurface investigation (RPS 2019a: 11), planned vapor intrusion minimization measures for basements and beneath buildings will include the following:

- Volatile chemicals that were detected in the shallow soil gas during this investigation will be removed during site grading and excavation activities.
- Construction plans would include waterproof membranes around basements and beneath building foundations. Waterproofing would reduce or eliminate intrusion of volatile chemicals.
- Proposed basements and parking garages would include active ventilation systems that meet California Building Code requirements. Active ventilation equipment would dilute and remove subgrade volatile chemicals that may enter structures.

950 Kifer Road

Soil

The laboratory analytical results from the Phase II subsurface investigation indicate that site soils meet commercial/industrial screening limits. Therefore, no soil mitigation is recommended.

Groundwater

As described above and in the Phase II subsurface investigation, groundwater samples collected from within the footprint of the planned basement area indicate that total concentrations of five distinct metals are greater than the discharge limit requirements set forth by the City of Sunnyvale. Before applying for a discharge permit to the sanitary sewer system, an onsite treatment system designed to remove suspended metals would be incorporated into the dewatering plan for the project in coordination with the City of Sunnyvale and engineering subcontractors to accommodate the anticipated dewatering program.

Hydraulic modeling of the potential effects of dewatering on the surrounding groundwater during construction of the proposed buildings was performed by Entera Geoscience, Inc. (Entera 2020). The result of this study indicates that dewatering activities are not expected to cause VOC-impacted groundwater to migrate into the planned basement area provided properly-constructed slurry walls are utilized.

Soil Vapor

Planned vapor intrusion minimization measures would include the following:

- Volatile chemicals that were detected in the shallow soil gas during this investigation will be removed during site grading and excavation activities.
- Construction plans would include waterproof membranes around basements and beneath building foundations. Waterproofing would reduce or eliminate intrusion of volatile chemicals.
- Proposed basements and parking garages would be required to include active ventilation systems that meet California Building Code requirements to dilute and remove subgrade volatile chemicals that may enter these structures.

945-955 Kifer Road

Soil

As described above and in the Phase II ESA (RPS 2019c), arsenic exceeded applicable screening criteria for commercial and industrial land use in one soil sample. As prescribed in the Phase II ESA, the shallow soils exceeding applicable screening criteria shall be mitigated using targeted excavation, removal, and confirmation sampling during site grading and development. A report documenting the removal activities shall be submitted to the San Francisco Bay RWQCB following completion of this remediation activity.

Before commencement of construction activities, environmental data for the 945-955 Kifer Road site shall be provided to site contractors. During construction activities that may involve direct contact with soil, all work is expected to be conducted in accordance with Cal/OSHA.

Groundwater

As described above and in the Phase II subsurface investigation, groundwater samples collected from within the footprint of the planned basement area indicate that total concentrations of five distinct metals are greater than the discharge limit requirements set forth by the City of Sunnyvale. Before applying for a discharge permit to the sanitary sewer system, an onsite treatment system designed to remove suspended metals would be incorporated into the dewatering plan for the project in coordination with the City of Sunnyvale and engineering subcontractors to accommodate the anticipated dewatering program.

Hydraulic modeling of the potential effects of dewatering on the surrounding groundwater during construction of the proposed buildings was performed by Entera Geoscience, Inc. (Entera 2020). The result of this study indicates that

dewatering activities are not expected to cause VOC-impacted groundwater to migrate into the planned basement area provided properly-constructed slurry walls are utilized.

Soil Vapor

Planned vapor intrusion minimization measures would include the following:

- Volatile chemicals that were detected in the shallow soil gas during this investigation will be removed during site grading and excavation activities.
- Construction plans would include waterproof membranes around basements and beneath building foundations. Waterproofing would reduce or eliminate intrusion of volatile chemicals.
- Proposed basements and parking garages would be required to include active ventilation systems that meet California Building Code requirements to dilute and remove subgrade volatile chemicals that may enter these structures.

In addition to these measures under the regulatory oversight of the San Francisco Bay RWQCB, implementation of Mitigation Measure 3.8-1, as adapted from adopted LSAP Mitigation Measure 3.3.3, would be applicable to the ISI project. This measure would prohibit the City from issuing a building permit for an identified contaminated site until remediation and effective site management controls appropriate for the use of the site have been completed, consistent with applicable regulations and to the satisfaction of the City of Sunnyvale, DTSC, or San Francisco Bay RWQCB (as appropriate) and before initiation of ground-disturbing activities. In addition, Mitigation Measure 3.8-1 ensures an improvement permit or building permit from the City will not be issued for projects requiring temporary or permanent dewatering activities until documentation has been provided showing the Water Pollution Control Permit has been approved for discharge to the sewer. Thus, implementation of the LSAP Update and ISI project would not result in a new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Implementation of Mitigation Measure 3.8-1, as adapted from adopted LSAP Mitigation Measure 3.3.3, Similar to other developments within the LSAP, the ISI project would be subject to Mitigation Measure 3.8-1, which would ensure that the potential for disturbance of known or unknown hazardous contamination would be reduced to a **less-than-significant** level.

Mitigation Measures

Mitigation Measure 3.8-1 has been adapted from adopted LSAP Mitigation Measure 3.3.3 to include some minor modifications and clarifications. Minor modifications have been made to Mitigation Measure 3.3.3 to provide clarifications and remove reference to LSAP subareas that were included in the 2016 LSAP EIR study area but are located outside of the adopted LSAP boundary and therefore, no longer relevant to the LSAP. Mitigation Measure 3.8.1 would replace adopted LSAP Mitigation Measure 3.3.3.

Mitigation Measure 3.8-1

The City shall require that a Phase I ESA is prepared and submitted with any application for new development or redevelopment within the adopted LSAP boundary. The Phase I ESA shall be prepared by a qualified professional registered in California and in accordance with ASTM E1527-13 (or the most current version at the time a development application is submitted for the project).

If determined necessary by the Phase I ESA, a Phase II ESA shall be conducted to determine the lateral and vertical extent of soil, groundwater, and/or soil vapor contamination, as recommended by the Phase I ESA.

The City shall not issue a building permit for a site where contamination has been identified until remediation or effective site management controls appropriate for the use of the site have been completed, consistent with applicable regulations and to the satisfaction of the City of Sunnyvale, DTSC, or San Francisco Bay RWQCB (as appropriate) before initiation of construction activities. Deed restrictions, if appropriate, shall be recorded. If temporary dewatering is required during construction or if permanent dewatering is required for subterranean features, the City shall not issue an improvement permit or building permit until documentation has been provided to the City that the San Francisco Bay RWQCB has approved the discharge to the sewer. Discharge of any groundwater removed from a construction site

within the adopted LSAP and to the El Camino Storm Drain Channel, Calabazas Creek, or storm drain shall be subject to Water Pollution Control Permit requirements.

If the Phase I ESA determines there are no RECs, no further action is required. However, the City shall ensure any grading or improvement plan or building permit includes a statement if hazardous materials contamination is discovered or suspected during construction activity, all work shall stop immediately until a qualified professional has determined an appropriate course of action.

Significance after Mitigation

For the LSAP Update and ISI project component, implementation of Mitigation Measure 3.8-1 is required and replaces adopted LSAP Mitigation Measure 3.3.3 with some minor modifications. Specifically, Mitigation Measure 3.8-1 removes reference to LSAP subareas/study areas that are not relevant to the adopted LSAP and clarifies that discharge of any groundwater removed from a construction site will be subject to Water Pollution Control Permit requirements. With Mitigation Measure 3.8-1, implementation of the LSAP Update and ISI project would not result in a new significant effect, and the impact would not be more severe than the impact identified in the 2016 LSAP EIR. Implementation of Mitigation Measure 3.8-1 would ensure that the potential for disturbance of known or unknown hazardous contamination would be reduced to a **less-than-significant** level.

Impact 3.8-5: Interfere with Implementation of an Emergency Response Plan or Emergency Evacuation Plan

The 2016 LSAP EIR concluded that buildout of the LSAP could temporarily affect roadways due to the movement of heavy equipment, worker vehicle parking, and materials delivery and storage. Adopted LSAP Mitigation Measure 3.3.5 requires the preparation of a Construction Traffic Control Plan before issuance of a permit for a specific development project or before approving a City-initiated roadway improvement if there is the potential to affect traffic conditions that could impair or inhibit emergency response or evacuation. During project occupancy/ operation, adequate emergency access routes to and from the LSAP area would continue and emergency response would not be impaired. While the ISI project site has a high potential for temporarily affecting roadways during construction, implementation of adopted LSAP Mitigation Measure 3.3.5 would reduce the impact to a **less-than-significant** level.

Impacts 3.3.5 and 3.3.6 of the 2016 LSAP Draft EIR (pp. 3.3-13 through 3.3-14) evaluated whether the LSAP would impair implementation of an emergency response plan or emergency evacuation plan during construction and occupancy of the LSAP. The 2016 LSAP EIR analysis described roadway improvements (i.e., the Loop, the Kifer Road diet, and secondary street improvements) along existing roadways as well as utility connections to water, wastewater, and storm drain lines that could involve work within the roadway. The 2016 LSAP EIR concluded that these LSAP-related activities may result in the need for temporary traffic lane closures or narrowing, which could affect emergency response or evacuation routes, resulting in a potentially significant impact. The 2016 LSAP Draft EIR included mitigation measure 3.3.5 to reduce the impact to a less-than-significant level.

Adopted LSAP Mitigation Measure 3.3.5

Before issuance of a permit for a specific development project or before approving a City-initiated roadway improvement identified in the LSAP, the City shall determine whether project construction activities have the potential to affect traffic conditions on roadways as a result of construction of the development project or roadway improvement(s). If there is the potential the activities could impair or inhibit emergency response or evacuation, a Construction Traffic Control Plan shall be prepared for City review and approval. The plan shall include, but not be limited to, schedule of construction and anticipated methods of handling traffic for each phase of construction to ensure the safe flow of traffic and adequate emergency access, including maintaining an open lane for vehicle travel at all times. All traffic control measures shall conform to City of Sunnyvale, Santa Clara County, and/or Caltrans standards, as applicable. The City shall ensure final approved plans for private development projects specify the requirement, as appropriate, to implement the construction traffic control plan.

LSAP Update

The allowance of additional housing potential within the adopted LSAP could result in similar impairments to emergency access and evacuation plans as analyzed in the 2016 LSAP Draft EIR. Impacts associated with development proposed within the LSAP boundary expansion area are analyzed under the ISI project component (discussed below). The proposed Lawrence Station Sense of Place Plan would function as a policy document for LSAP streetscape and pedestrian/bicycle improvements and would require future development resulting from implementation of the LSAP Update to implement improvements and/or public amenities or payment of an in-lieu fee. As discussed above, adopted LSAP Mitigation Measure 3.3.5 requires all subsequent projects within the LSAP to prepare a Construction Traffic Control Plan before issuance of a permit for a specific development project, or before approving a City-initiated roadway improvement, if there is the potential to affect traffic conditions that could impair or inhibit emergency response or evacuation. Future developments resulting from implementation of the LSAP Update would also comply with City Municipal Fire Code Section 16.52.3311.1.1, which requires that access be maintained for fire and emergency responders. In addition, buildout under the LSAP Update would be subject to adopted LSAP Mitigation Measure 3.3.5, which would minimize potential impacts on emergency access and evacuation. Implementation of the LSAP Update would not result in a new significant effect, and the impact would not be more severe than the impact identified in the 2016 LSAP EIR. Therefore, the impact would be **less than significant**.

ISI Project

Construction of the IS Project would include demolition activities, construction of new buildings, parking structures, a private pedestrian bridge over Kifer Road, and supporting infrastructure including improvements to public bicycle and pedestrian pathways, roadways, and driveways. These improvements would include a new landscaped median on the adjacent stretch of Kifer Road; a bus stop; frontage improvements such as sidewalks, trees, lights, and restriping Kifer Road to include a bike lane. These activities would involve construction truck traffic and potential lane/shoulder closures in work zones that could interfere with or slow emergency vehicle access and evacuation routes. The ISI project would also comply with City Municipal Fire Code Section 16.52.3311.1.1, which requires that access be maintained for fire and emergency responders. Implementation of the ISI project would not result in a new significant effect, and the impact would not be more severe than the impact identified in the 2016 LSAP EIR. Implementation of adopted LSAP Mitigation Measure 3.3.5 would ensure that the ISI project would result in **less-than-significant** impacts related to emergency response or evacuation.

Mitigation Measures

No new mitigation is required.

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3.9 HYDROLOGY AND WATER QUALITY

This section identifies the regulatory context and policies related to hydrology and water quality, describes the existing hydrologic conditions at the project site, and evaluates potential hydrology and receiving water-quality impacts of the proposed LSAP Update and the ISI project. Potential effects on the capacity of City of Sunnyvale water-supply, sewer/wastewater, and drainage/stormwater facilities are addressed in Section 3.15, "Utilities and Service Systems."

The 2016 LSAP EIR included Section 3.8, "Hydrology and Water Quality," which evaluated the potential effects of the LSAP. The 2016 LSAP EIR concluded that there would be less-than-significant impacts related to construction and operational water quality impacts and interference with groundwater recharge or flows (Impacts 3.8-1 and 3.8-2). The LSAP Draft EIR also concluded that impacts related to potential risks from flooding hazards (Impact 3.8.3) would be reduced to a less-than-significant impact with implementation of Mitigation Measure 3.8.3, which sets forth required actions, including hydraulic analysis for City review and approval when fill placement in the flood zone is proposed and applicable to subsequent projects. The 2016 analysis is supplemented in this section by three geotechnical investigations (ISI 2019a, 2019b, 2019c) prepared for the ISI project site.

No comments regarding hydrology or water quality were received in response to the NOP (see Appendix A).

3.9.1 Regulatory Setting

The regulatory setting provided in the 2016 LSAP EIR remains applicable to this analysis. The regulatory information provided on pages 3.8-7 through 3.8-13 of the 2016 LSAP EIR provides a description of the Clean Water Act; National Flood Insurance Act; Porter-Cologne Water Quality Act; NPDES General Permit for Stormwater Discharges Associated with Construction; Sustainable Groundwater Management Act; San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Basin Plan, municipal regional permit, and low impact design strategies; the Santa Clara Valley Water District Comprehensive Water Resources Management Plan; policies from the Environmental Management chapter of the City of Sunnyvale General Plan; Sunnyvale Urban Runoff Management Plan; and Chapter 12.60, "Stormwater Management" and Chapter 16.62, "Prevention of Flood Damage of the City of Sunnyvale Municipal Code." Some supplemental information relevant to understanding the potential impacts of the LSAP Update and ISI project on hydrology and water quality is provided below.

STATE

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act of 2014 (SGMA) became law on January 1, 2015, and applies to all groundwater basins in the state (Water Code Section 10720.3). By enacting the SGMA, the legislature intended to provide local agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater within their jurisdiction (Water Code Section 10720.1).

LOCAL

Pursuant to the SGMA, any local agency that has water supply, water management or land use responsibilities within a groundwater basin may elect to be a "groundwater sustainability agency" for that basin (Water Code Section 10723). Groundwater resources in Santa Clara County are managed by the Santa Clara Valley Water District (now known as Valley Water) since the year 1929. Groundwater is managed under guidance from Valley Water and in accordance with the 2016 Groundwater Management Plan (GWMP). The 2016 GWMP was submitted to the California Department of Water Resources (DWR) in December 2016 for approval as an Alternative to a Groundwater Sustainability Plan, as required under the Sustainable Groundwater Management Act (SGMA). On July 17, 2019, DWR

determined that the Alternative (i.e., the 2016 GWMP) satisfies the objectives of SGMA and was approved (California Department of Water Resources 2019).

Santa Clara Valley Urban Runoff Pollution Prevention Program

The Santa Clara Valley Urban Runoff Pollution Prevention Program is a multi-jurisdictional cooperative effort among the County, the Santa Clara Valley Water District, and thirteen north county cities, 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 for municipal stormwater discharges, also referred to as the Municipal Regional Stormwater Permit (MRP), into the San Francisco Bay. 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.

City of Sunnyvale General Plan

The following are General Plan policies applicable to the project for 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 storm water 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 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 define 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.
- **Policy SN-1.3**: Operate and maintain the storm drainage system at a level to minimize damages and ensure public safety.

Sunnyvale Municipal Code

Chapter 12.60: Stormwater Management

The purpose of the Stormwater Management chapter of the Municipal Code is to provide regulations and give legal effect to certain requirements of the NPDES permit issued to Sunnyvale regarding municipal stormwater and urban runoff requirements. This chapter includes:

- Discharge prohibitions to the storm water conveyance system,
- Requirements for storm water pollution prevention and the development of Storm Water 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 storm water treatment Best Management Practices (BMPs) 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, and
- Penalties for failure to comply with provisions of the chapter.

Chapter 16.62: Prevention of Flood Damage

Chapter 16.62 of the Municipal Code Title 16 Buildings and Construction provides regulations to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions. This chapter includes provisions to reduce flood hazards, including standards for construction, utilities, subdivisions, manufactured homes, floodways, and coastal high hazard areas.

2016 Lawrence Station Area Plan

The following adopted LSAP policies address drainage and water quality:

- **U-P1:** Promote the use of bio-retention basins and flow-through planters, as well as green roofs, infiltration trenches, media filtration devices, and pervious surface treatment as part of stormwater management strategies for new development.
- **U-P2:** Prepare standards for public streets that allow stormwater to be treated "at the source."
- **U-P3:** Prepare a comprehensive areawide plan for stormwater management and treatment.
- **U-P4:** Ensure adequate land area is allocated for areawide stormwater management and treatment facilities.
- **U-P5:** Require all proposed habitable structures' finished floors to have a least 0.5 feet freeboard to the 1% flood elevation.
- **U-P11:** A regional study and Conditional Letter of Map Revision by Fill (CLOMR-F) shall be submitted and approved by FEMA for each development.

3.9.2 Environmental Setting

ADOPTED LSAP AREA

The 2016 LSAP EIR (pages 3.8-1 through 3.8-6) provides an overview of hydrology, drainage, groundwater, water quality, and flood zones in the plan area that adequately describes the conditions within the LSAP area. A description of known groundwater contamination within the adopted LSAP area (at 1120 and 1130 Kifer Road and 1155 and 1175 Aster Avenue) is provided in Section 3.8, "Hazards and Hazardous Materials," of this Draft SEIR.

ISI PROJECT SITE

932 Kifer Road Parcel- ISI South Site

As described in Section 3.8, "Hazards and Hazardous Materials" of this SEIR, the 932 Kifer Road parcel located within the ISI South Site is under the regulatory oversight of the San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB) because of significant concentrations of volatile organic compounds (VOCs) in the soil and groundwater beneath the site from the Mohawk Laboratories chemical blending and distribution plant that existed at the site from 1967 to 2017 (ISI 2018a). Mohawk has conducted extensive onsite and offsite investigations to define the extent of soil and groundwater contamination beneath the site and the area downgradient of the Mohawk property. The investigations detected VOCs in soil, soil gas, indoor air, and groundwater. The Mohawk groundwater plume has mingled with other groundwater plumes originating from nearby properties. The combined groundwater plume extends north to DeGuigne Drive outside of the LSAP area. Current monitoring indicates that the groundwater plume is stable (ISI 2018a). Remedial actions have been conducted at the site since 1993 and include a groundwater/soil vapor extraction and treatment system (VES), a soil vapor extraction (SVE) system, an ozone injection system, an enhanced anaerobic biodegradation (EAB) treatment approach, and monitored natural attenuation (ISI 2018a). A Covenant and Environmental Restriction on Property (Covenant) prepared by Mohawk and recorded with Santa Clara County in 2007 prohibits the use of shallow zone groundwater as a source of drinking water and prohibits residential uses, daycare facilities, playgrounds, schools, and hospitals on the site.

A site management plan (SMP) for the parcel governs all future soil excavation, trenching, and backfilling activities (ISI 2018a). The 932 Kifer Road parcel is subject to Order Number R2-2007-0047 (the Order), which was adopted by the RWQCB in 2007 and rescinded previous RWQCB Order No. 00-106, which was adopted on October 18, 2000 (RWQCB 2007). Extensive infrastructure (i.e. groundwater monitoring wells, extraction wells, injection wells, etc.) associated with Mohawk's subsurface environmental investigations and remediation programs exist on the western third of the parcel.

According to a Dewatering and Foundation Groundwater Flow Model conducted at the ISI Site, the ISI project site is adjacent to and nearby several contaminated sites, with VOCs present in shallow soil and groundwater, located near several contaminated sites, including the Texas Instruments ([TI], former National Semiconductor Corporation [NSC]) site located east of the ISI site at 2900 Semiconductor Drive in Santa Clara and several contaminated sites located north of the ISI South Site. Simulations were conducted to evaluate constructing dewatering scenarios at both sites simultaneously and construction dewatering at 950 Kifer Road site only as well as the condition of the future foundations post construction. Groundwater modeling efforts indicated that dewatering is not likely to cause chemical plumes to migrate into the 945 Kifer Road Excavation site and negatively impact groundwater quality. The ISI project would be required to comply with all regulatory oversight and requirements from the RWQCB and the Order.

3.9.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

Evaluation of potential hydrologic and water quality impacts is based on a review of the 2016 LSAP EIR and existing documents and studies that address water resources in the vicinity of the project. Information obtained from these sources was reviewed and summarized to describe existing conditions and to identify potential environmental effects, based on the standards of significance presented in this section. In determining the level of significance, the analysis assumes that the project would comply with relevant federal, State, and local laws, ordinances, and regulations.

THRESHOLDS OF SIGNIFICANCE

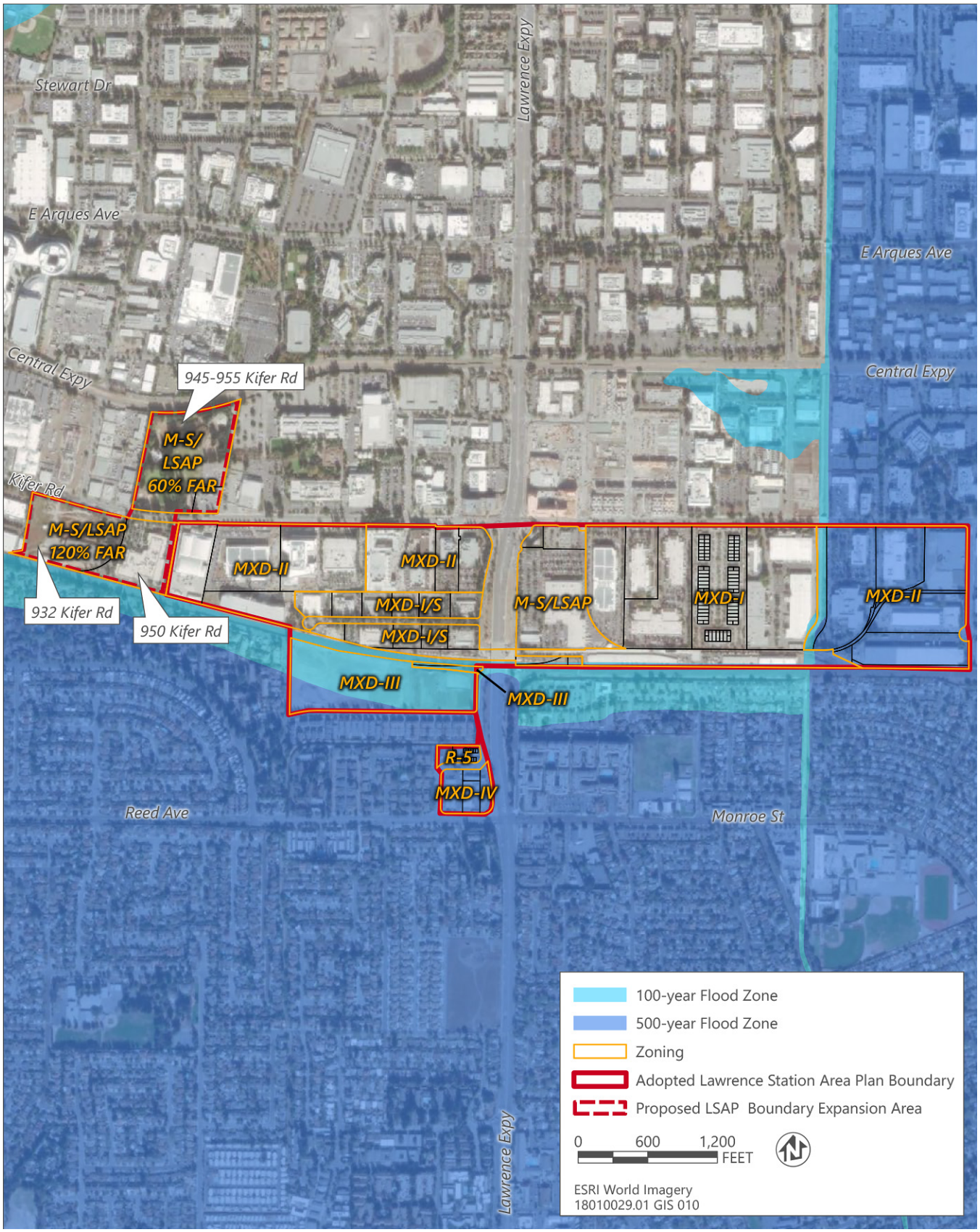
An impact on hydrology or water quality is considered significant if implementation of the project would do any of the following:

- 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, in a manner that would:
  - result in substantial erosion or siltation on- or off-site;
  - result in flooding on-site or off-site;
  - create or contribute runoff water that 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 because of project inundation; and/or
- conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

ISSUES NOT DISCUSSED FURTHER

As discussed in Section 3.8 of the 2016 LSAP Draft EIR, the project area is located outside of the inundation area for Stevens Creek Reservoir and is not considered to be at risk of inundation in the event of a dam failure. The project is not in an area subject to flooding from levee failure or sea level rise. Therefore, the project is not subject to dam or levee failure or sea level rise and is not evaluated further in this section. The plan area is located over 3 miles from the San Francisco Bay; therefore, the area is not likely to be impacted by seiches and tsunamis. No steep, erodible slopes are located in or near the project area and consequently mudflows and landslides do not present as hazards for the project. Therefore, impacts related to seiche, tsunami, or mudflow are not evaluated in this Draft SEIR.

As shown in Figure 3.9-1, the ISI project site is not located within a flood hazard zone. As discussed in Impact 3.8.3 of the 2016 LSAP EIR, some locations within the adopted LSAP are within FEMA-designated 100-year flood hazard zone. The proposed LSAP Update does not propose additional residential units or changes to zoning within 100-year flood hazard zone locations. Therefore, impacts related to flood hazard are not evaluated in this Draft SEIR.



Source: Data downloaded from FEMA in 2019

Figure 3.9-1 Flood Zones

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.9-1: Violation of Water Quality Standards or Waste Discharge Requirements Related to Construction and Operation Activities

The 2016 LSAP EIR determined that subsequent development projects located within the LSAP would be required to comply with State and local regulations that would minimize the potential for construction and operational water quality impacts. Construction and operation of the ISI project and subsequent development projects under the LSAP Update would be required to comply with the same requirements and regulations. Thus, implementation of the LSAP Update and ISI project would not result in a new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Compliance with existing State and local regulations would reduce potential construction and operational water quality impacts for the LSAP Update and ISI project to **less than significant**.

Impact 3.8.1 of the 2016 LSAP EIR (p. 3.8-15) evaluated the potential for construction and operational water quality impacts associated with buildout of the LSAP, concluding that subsequent development projects under the LSAP would be required to comply with State and local regulations that would reduce the potential for water quality impacts to a less-than-significant level.

LSAP Update

The proposed LSAP modifications would establish the Lawrence Station Sense of Place Plan, increase the housing potential within the LSAP, and expand the LSAP boundary. Buildout of the Sense of Place Plan and additional housing potential would occur within the boundaries of the adopted LSAP analyzed in the 2016 LSAP EIR. Discussion of the LSAP boundary expansion is provided under "ISI Project" below. Similar to the adopted LSAP, individual development projects under the LSAP Update would include grading operations that may temporarily alter surface runoff by increasing the amount of silt and debris carried by runoff. Areas with uncontrolled concentrated flow would experience loss of material in the graded areas, potentially degrading waters beyond the construction site. Additionally, refueling and parking of construction equipment and other vehicles on site during construction may result in oil, grease, or related pollutant leaks and spills that may discharge into storm drains. During construction of projects in the City and per Sunnyvale Municipal Code Chapter 12.60, coverage under the State's General Construction NPDES permits requires dischargers to eliminate non-stormwater discharges to stormwater systems, develop and implement a SWPPP, and perform monitoring of discharges to stormwater systems. Subsequent development under the LSAP Update would also be required to implement best management practices (BMPs) for the prevention of erosion and the control of loose soil and sediment would ensure that construction of subsequent developments under the LSAP Update would not result in the movement of unwanted material into waters within or outside the construction site (e.g., use of infiltration basins designed to filter stormwater).

To decrease erosion potential (over the pre-project existing condition) and improve the quality and quantity of stormwater runoff during project operation, projects that create or replace 1 acre or more of impervious surface must implement hydromodification controls and standards per Chapter 12.60.160 of the Sunnyvale Municipal Code. However, projects that do not create an increase in impervious surface over pre-project conditions are exempt under Municipal Code Chapter 12.60.160(b)(1). Potential changes in drainage patterns and stormwater runoff water quality are a function of the rate and amount of stormwater generated and whether there is a substantial change in land use. As described in the 2016 LSAP EIR, land within the adopted LSAP is largely built out with impervious surfaces, and runoff from the plan area flows to storm drains that discharge to the ECSDC or Calabazas Creek. Consistent with City requirements, stormwater runoff from subsequent development under the LSAP Update would connect with existing drainage infrastructure and operational stormwater runoff and urban runoff from future developments would comply with the City of Sunnyvale Urban Runoff Management Plan, MRP Provision C.3 requirements, and would be consistent with the City's General Plan policies (i.e., Policy EM-8.6, EM-10.1, and EM-10.3) and adopted LSAP policies U-P1 through U-P4. Specifically, development under the LSAP Update and the ISI project would follow established basin management programs of the GMP and comply with water quality objectives, discharge requirements, and effluent limitations as noted in the Basin Plan. Construction and operational activities of the LSAP Update would be subject to the same requirements as the adopted LSAP. There is no new significant effect, and the impact is not more

severe than the impact identified in the 2016 LSAP EIR. Compliance with existing requirements described above would reduce water quality impacts to a **less-than-significant** level.

ISI Project

Similar to subsequent development under the adopted LSAP and proposed LSAP Update, construction of the ISI project would include grading operations that may temporarily alter surface runoff by increasing the amount of silt and debris carried by runoff and the refueling and parking of construction equipment on site that may result in oil, grease, or related pollutant leaks and spills that may discharge into storm drains. Per Sunnyvale Municipal Code Chapter 12.60, coverage under the State's General Construction NPDES permits requires dischargers to eliminate non-stormwater discharges to stormwater systems, develop and implement a SWPPP, and perform monitoring of discharges to stormwater systems. These requirements would ensure that construction of the ISI project would not result in the movement of unwanted material into waters within or outside the construction site.

As described in subsection 3.9.2 above and in Section 3.8, "Hazards and Hazardous Materials," of this Draft SEIR, the 932 Kifer Road parcel located within the ISI South Site is under regulatory oversight of the RWQCB and is subject to Order Number R2-2007-0047 (Order) (RWQCB 2007) due to soil and groundwater contamination. Extensive infrastructure (i.e. groundwater monitoring wells, extraction wells, injection wells, etc.) associated with Mohawk's subsurface environmental investigations and remediation programs exist on the western third of the 932 Kifer Road parcel. As part of the Order, removal of all groundwater monitoring, vapor extraction, and most injection points are required before any construction activities. The Order also requires four replacement groundwater monitoring wells and recommendations to be included in the anticipated dewatering program for the ISI site. As discussed in Impact 3.8-4 of this Draft SEIR, adopted LSAP Mitigation Measure 3.3.3 requires the City to prohibit issuance of a building permit for an identified contaminated site until remediation and effective site management controls appropriate for the use of the site have been completed, consistent with applicable regulations and to the satisfaction of the City of Sunnyvale, DTSC, or San Francisco Bay RWQCB (as appropriate) and before initiation of ground-disturbing activities. Construction activities are also subject to the requirements of the existing SMP for the 932 Kifer Road parcel in coordination with the RWQCB for the ongoing monitoring of existing onsite groundwater to avoid groundwater contamination. The ISI project would be required to comply with all regulatory oversight and requirements from the RWQCB, the Order, and SMP to avoid groundwater contamination.

Although buildout of the ISI Corporate Campus within the South Site would occur on land that is largely developed, an overall increase of more than one acre to the total amount of impervious surface within the ISI site would occur. Therefore, implementation of hydromodification controls and standards per Chapter 12.60.160 of the Sunnyvale Municipal Code would be required during project operation to decrease erosion potential and improve the quality and quantity of stormwater runoff. As described in Chapter 2, "Project Description," the ISI project proposes utilization of biofiltration planters and rain gardens to treat stormwater from impervious surfaces (i.e., roofs, roadways, and surface parking runoff) and in compliance with Provision C.3 of the MRP. The proposed biofiltration areas for the site would be sized to treat the "first flush" of rain and overflow drains would convey excess runoff to the City stormwater system on Kifer Road. The stormwater management plan for the ISI project proposes to maintain the same drainage runoff as the existing condition so as not to contribute additional runoff to adjacent sites and would connect with existing storm drainage infrastructure. Similar to the adopted LSAP, operational stormwater runoff and urban runoff from the project site would be required to comply with the City's Urban Runoff Management Plan, MRP Provision C.3 requirements and consistent with the City's General Plan policies (i.e., Policy EM-8.6, EM-10.1, and EM-10.3) and LSAP policies U-P1 through U-P4. The ISI project would also be required to comply with Chapter 12.60 Stormwater Management of the Sunnyvale Municipal Code as well as implement best management practices (BMPs) for the prevention of erosion and the control of loose soil and sediment.

Construction and operation of the LSAP Update and ISI project would be subject to the same requirements as the adopted LSAP. In addition, the ISI project would be required to comply with all regulatory oversight and requirements from the RWQCB, the Order, and SMP to avoid groundwater contamination located within the South Site. There is no new significant effect, and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Compliance with existing requirements described above would reduce water quality impacts from construction and operation to a **less-than-significant** level.

Mitigation Measures

No mitigation is required.

Impact 3.9-2: Groundwater Recharge Impacts

Development under the LSAP Update could alter current impervious surface conditions within the LSAP and the ISI project would increase the amount of impervious pavement in some undeveloped portions of the ISI site. The LSAP Update and ISI project would be subject to all the same requirements and regulations referenced in the 2016 LSAP EIR. The WSA completed for the project concluded that the City's existing water supply contracts would meet the combined increase demand of the project and the Downtown Specific Plan Amendment Project under normal and single dry year conditions. Therefore, project implementation is not expected to substantially prohibit groundwater recharge. Implementation of the LSAP Update and ISI project would not result in a new significant effect on groundwater recharge and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Therefore, impacts to groundwater recharge for the LSAP Update and ISI project would be **less than significant**.

Impact 3.8.2 of the 2016 LSAP EIR evaluated whether future projects allowed under the LSAP would impair groundwater recharge. The LSAP contains primarily developed land, is underlain by soils with low percolation rates, and does not proposes installation of groundwater wells that could alter groundwater flow. Therefore, the 2016 LSAP EIR concluded little or no effect on groundwater would occur, resulting in a less-than-significant impact.

LSAP Update

The LSAP Update would establish the Lawrence Station Sense of Place Plan, increase the housing potential within the LSAP, and expand the LSAP boundary. Buildout of the Sense of Place Plan and additional housing potential would occur within the boundaries of the adopted LSAP analyzed in the 2016 LSAP EIR. Discussion of the LSAP boundary expansion is provided under "ISI Project" below. Because the LSAP contains primarily developed land, is underlain by soils with low percolation rates, and does not proposes installation of groundwater wells that could alter groundwater flow, construction and operation of subsequent development projects under the LSAP Update would result in little to no impact on groundwater recharge.

The WSA completed for this project (Ascent Environmental 2020: 3-7, 3-8) concludes that the City's existing water supply contracts would meet the combined increase demand of the project and the Downtown Specific Plan Amendments Project under normal, single dry, multiple dry year conditions between 2020 and 2040. During multiple dry year conditions, the City would use groundwater that would be within its safe yield of 8,000 AFY. During extended droughts, the City would implement its Water Shortage Plan that consists of voluntary and mandatory water conservation measures that would address water supply shortfalls of up to 50 percent. Pursuant to SGMA, future developments would be required to comply with all applicable programs, policies, and regulations per Valley Water (formerly known as Santa Clara Valley Water District), specifically the 2016 Groundwater Management Plan (Valley Water 2016). Thus, implementation of the LSAP Update would not result in a new significant effect on groundwater recharge and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The LSAP Update would have a **less-than-significant** impact on groundwater recharge.

ISI Project

As discussed in Impact 3.9-1 above, the ISI project would result in an increase in total impervious surfaces. The proposed ISI project would also destroy all existing groundwater monitoring, vapor extraction, and most injection points and would install four replacement groundwater monitoring wells. The proposed monitoring wells would result in no alteration to groundwater flow and use of groundwater for the project is not proposed. The ISI project includes construction of a two-level below-grade parking garage on the North Site and a one-level below-grade basement on the South Site with foundations that would extend to depths of 23 and 28 feet below ground surface (ft bgs). Specifically, a two-level below-grade garage is proposed on the North Site and a one-level below-grade basement is proposed on south site. Shallow groundwater beneath the two properties is currently encountered at a depth of approximately 10 ft bgs (Todd Groundwater 2019). Since the water table is shallower than the total depth of the proposed subsurface foundations, temporary dewatering would be required during construction

using dewatering wells and slurry walls around the excavation perimeters. Groundwater dewatering during construction of foundations, and the permanent foundations themselves, may alter shallow groundwater flow directions and rates. Based on groundwater flow models for the proposed subsurface parking structures (Todd Groundwater 2019), only limited, short-term impacts to groundwater flow are predicted to occur during construction dewatering. Similar to the adopted LSAP, the ISI project site is located on primarily disturbed land with limited groundwater recharge capabilities and would be required to comply with all applicable programs, policies, and regulations per the 2016 Groundwater Management Plan (Valley Water 2016). As described above, the WSA completed for the project (Ascent Environmental 2020: 3-7, 3-8) concludes that the City's existing water supply contracts would meet the combined increase demand of the project and the Downtown Specific Plan Amendment Project under normal, single dry, multiple dry year conditions between 2020 and 2040. There is no new significant effect, and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Impacts on groundwater recharge would be **less than significant**.

Mitigation Measures

No mitigation is required.

3.10 LAND USE AND PLANNING

This land use analysis evaluates consistency of the LSAP Update and the ISI project with applicable land use plans and policies. The physical environmental effects associated with the project, many of which pertain to issues of land use compatibility (e.g., noise, aesthetics, air quality) are evaluated in other sections of Chapter 3 of this Draft SEIR.

The 2016 LSAP EIR included Section 3.1, "Land Use," which evaluated the potential effects of the LSAP to divide an established community and conflict with adopted land use plans, policies, and regulations. The 2016 LSAP EIR concluded that there would be less than significant impacts related to division of an established community (Impact 3.1.1.) and the potential to conflict with adopted land use, plans, and policies (Impact 3.1.2). Lastly, the 2016 LSAP EIR determined that the project would not conflict with any applicable habitat conservation plans or natural community conservation plan and therefore would have no impact (Impact 3.1.3). No mitigation measures were required for any land use impacts evaluated in the 2016 LSAP EIR.

No comments regarding land use were received in response to the NOP (see Appendix A).

3.10.1 Regulatory Setting

With the exception of City land use policies and regulations, the regulatory setting provided on page 3.1-8 and 3.1-9 of the 2016 LSAP EIR remains applicable to this analysis and includes Plan Bay Area. Relevant updates to the local regulatory setting that have been made since certification of the 2016 LSAP EIR and subsequent adoption of the LSAP are described below.

LOCAL PLANNING POLICIES AND LAND USE REGULATIONS

City of Sunnyvale Land Use and Transportation Element Update

In April 2017, the City Council adopted an update to the City's Land Use and Transportation Element (LUTE) of its General Plan. The LUTE incorporates and integrates policy direction and land use patterns from other City of Sunnyvale planning documents, including the LSAP, and consists of an aggregated set of goals and policies with the overall purpose of moving Sunnyvale toward a Complete Community, that is, a community that provides living space that is less dependent on automobiles. The major strategies laid out by the LUTE for achieving a Complete Sunnyvale include mixed use and village centers, jobs/housing balance, and a multimodal transportation system. The LUTE incorporated the planned land uses under the LSAP. The LUTE designates land uses in the adopted LSAP as Transit Mixed Use (TMU) and the four parcels located within the proposed LSAP boundary expansion area/ISI Site are currently designated as Industrial (IND). Existing land use designations for the project are shown in Figure 2-3 of this Draft SEIR. The following LUTE land use policies may be relevant to the project (City of Sunnyvale 2017):

- **Policy LT-1.1:** Participate in coordinated land use and transportation planning in the region.
- **Policy LT-1.2:** Minimize regional sprawl by endorsing strategically placed development density in Sunnyvale and by utilizing a regional approach to providing and preserving open space for the broader community.
- **Policy LT-1.2a:** Promote transit-oriented and mixed-use development near transit centers such as Lawrence Station, Downtown, and El Camino Real and in neighborhood villages.
- **Policy LT-1.2b:** In areas with mixed-use land designations, zone appropriate sites for mixed use.
- **Policy LT-1.6:** Integrate land use planning in Sunnyvale and the regional transportation system.
- **Policy LT-1.6a:** Promote shorter commute trips and ease congestion by advocating that all communities provide housing and employment opportunities.
- **Policy LT-1.6b:** Support regional efforts which promote higher densities near major transit and travel facilities.

- **Policy LT-14.2:** Support the following adopted specialized plans and zoning tools, and update them as needed to keep up with evolving values and new challenges in the community: Downtown Specific Plan, Lakeside Specific Plan, Arques Campus Specific Plan, Lawrence/101 Site Specific Plan, Precise Plan For El Camino Real, Moffett Park Specific Plan, Peery Park Specific Plan, and Lawrence Station Area Plan.
- **Policy LT-14.3:** Use special area plans to guide land use and development in areas that support alternative travel modes, village centers, economic development, and a better jobs/housing ratio.
- **Policy LT-14.3a:** Maintain sense of place plans that provide more focused policies and development standards to guide future land use and transportation decisions.
- **Policy LT-14.3b:** Prepare a special area plan for each of the Village Centers to provide focused land use, transportation, and design standards, policies, and guidelines.

The LUTE acknowledges that the LSAP area will likely result in high- and very high-density residential units, higher-intensity office/research and development uses, retail space, and industrial uses (City of Sunnyvale 2017: 3-93).

City of Sunnyvale Zoning Code

The Sunnyvale Municipal Code (SMC), organized by Title, Chapter, and Section, includes all the ordinances for the City. Title 19 of the SMC sets forth the City's Zoning regulations. The SMC regulates land use and development in the city and zoning is the mechanism used to implement the goals, policies, and strategic actions of the existing General Plan and to regulate all land use within the City. Zoning establishes allowable land use intensities, including density, building heights, setbacks, lot coverage, opens space, and landscaping. With adoption of the LSAP, the SMC was revised to include Chapter 19.35, which includes zoning and use standards for properties within the LSAP. Figure 2-3 of this Draft SEIR shows existing zoning of the project site and a description of each zoning district is provided below.

Existing zoning of the proposed LSAP boundary expansion area/ISI site are described below:

- Industrial and Service Zoning District (M-S): This zoning district is reserved for the construction, use and occupancy of buildings and facilities for offices, research, limited manufacturing, hotels and motels, restaurants, financial uses, retail sales and services, professional services, and other uses compatible with the zoning district. The M-S designated area is located at 945-955 Kifer Road.
- General Industrial Zoning District (M-3): This zoning district is reserved for the construction, use and occupancy of buildings and facilities for office, research, general manufacturing, and other uses compatible with the zoning district. The M-3 designated area is located at 932 and 950 Kifer Road.

Existing Zoning in the Adopted Lawrence Station Area Plan is described below.

The adopted LSAP included four new LSAP zoning districts at the time: MXD-I, MXD-II, MXD-III, and O-R. Unlike traditional zoning, which typically establishes single-use districts with fixed densities, the LSAP allows a flexible mix of uses at a range of densities to ensure that long-term development does not exceed the carrying capacity of infrastructure systems and the environment. These four zoning districts are described below:

- Flexible Mixed Use I Zoning District (MXD-I): This zoning district is specific to the LSAP area and is considered the Transit Core, appropriate for uses that are a walk of approximately five minutes or less from the station. The highest minimum intensities of future development are allowed in this district. The highest priority for the area is mixed-use development including residential, office/research and development (R&D), and retail uses. Uses may be configured as vertical mixed-use, such as with retail under several floors of residential or office or as single-use buildings or parcels. The MXD-I designated areas are located on either side of the Lawrence Expressway south of Kifer Road and north of the Caltrain tracks.
- Flexible Mixed Use II Zoning District (MXD-II): This zoning district is specific to the LSAP area. Required minimum densities for future development in this district are slightly lower than in MXD-I, but maximum allowable intensities are equal to MXD-I. A mix of land uses, including office, R&D, and residential uses, are allowed and encouraged in this land use classification. Stand-alone retail uses are not allowed. The two areas designated as

MXD-II are located adjacent to the MXD-I areas on the eastern and western edge. They are both bordered to the north by Kifer Road and the Caltrain tracks to the south. The western MXD-II area designation is bordered by 950 Kifer Road to the west and 945-955 Kifer Road to the north. The eastern MXD-II area designation is bordered by Calabazas Creek to the east.

- Flexible Mixed Use III Zoning District (MXD-III): This zoning district applies to the existing Calstone/Peninsula Building Materials site. New development must respect the scale and character of the existing residential uses. Allowable maximum densities are slightly lower than MXD-I and MXD-II. A mix of land uses, including office and residential uses, are allowed and encouraged in this land use classification. Retail development, as part of mixed-use, is allowed and encouraged along the Willow Avenue frontage.
- Office/Retail Zoning District (O-R): This zoning district is specific to parcels in the southernmost parcels in the adopted LSAP area. Residential development is prohibited in the O-R district. Local-serving retail services and office/R&D uses are appropriate here and encouraged. The O-R designated sites are located to the south of R-5 designated sites bordered by Lawrence Expressway to the east.

Within the adopted LSAP, there are also two zoning designations that are consistent with the standards and permitted uses of other Citywide zoning districts. These designations are described below:

- Lawrence Station Industrial and Service Zoning District (M-S/LSAP): This is a zoning designation of Industrial and Service with an LSAP Combining District. The M-S industrial and service zoning district is reserved for the construction, use and occupancy of buildings and facilities for offices, research, limited manufacturing, hotels and motels, restaurants, financial uses, retail sales and services, professional services, and other uses compatible with the zoning district.
- High Density Residential and Office Zoning District (R-5): The R-5 high density residential and office zoning district is reserved for the construction, use and occupancy of not more than forty-five dwelling units per acre alone or in combination with hotels or motels.

Lawrence Station Area Plan

The Sunnyvale Lawrence Station Area Plan was adopted in 2016 to guide future development of the area surrounding the Lawrence Caltrain Station in Sunnyvale, California. The following are adopted LSAP land use policies (City of Sunnyvale 2016):

- **Policy LU-P1:** Buffer / transition new development located adjacent to existing residential neighborhoods through site planning, land use and design strategies.
- **Policy LU-P2:** Allow existing businesses to remain and prosper as legal conforming uses.
- **Policy LU-P3:** Allow transition to higher density transit-supportive uses as opportunities arise through turnover of businesses or property ownership.
- **Policy LU-P4:** Establish appropriate levels of development for employment and residential uses to ensure a balance exists in the plan area. The City Council should review the thresholds for each use type as redevelopment occurs to ensure a balance remains.

3.10.2 Environmental Setting

With the exception of changes to General Plan land use designations and zoning made within the LSAP boundary after adoption of the LSAP, the environmental setting provided on pages 3.1-1 through 3.1-8 of the 2016 LSAP DEIR remains applicable to this analysis. It should be noted that portions of the study area analyzed in the 2016 LSAP EIR were not included within the adopted LSAP boundary (e.g., Corn Palace property) and are not applicable to this analysis. The following section updates the project's environmental setting since the adopted 2016 LSAP EIR and includes additional information applicable to the project's impact analysis.

Existing land use designations and zoning in the adopted LSAP and LSAP boundary expansion area/ISI Site are shown in Figure 2-3 of this Draft SEIR and summarized below in Table 3.10-1.

Table 3.10-1 Existing Land Use Designations - LSAP Plan Area and LSAP Boundary Expansion Area/ISI Site

Existing Zoning District	Acres	Existing LSAP Land Use Classification
Residential		
R-5 - High Density Residential	1.2	High Density Residential
Mixed-Use		
MXD-I – Flexible Mixed-Use I	57.9	Mixed-Use Transit Core/Mixed-Use Transit Supporting North
MXD-II – Flexible Mixed-Use II	65.8	Mixed-Use Transit Supporting North
MXD-III – Flexible Mixed-Use III	16.9	Mixed-Use Transit Supporting South
Office/R&D/Industrial/Retail		
M-S/LSAP – Industrial and Service with an LSAP Combining District	33.7	Office/R&D
O-R - Office/Retail	3.1	Office/Retail
Other		
Drainage channels/Calabazas Creek, various zoning	4	N/A
Railroads/Utility, various zoning	15.9	N/A
Total Without Roads	**198.5**	
LSAP Boundary Expansion Area (ISI Site)		
M-3 – General Industrial	16.8 *(932/950 Kifer Rd.)*	N/A
M-S –Industrial and Service	15.6 *(945-955 Kifer Rd.)*	N/A
Total Without Roads	**32.4**	

Source: City of Sunnyvale 2016 and 2019

LAND USES

Adopted LSAP

Since the LSAP was adopted in December 2016, four projects within the LSAP have been approved or were recently completed:

- Greystar Development (1120-1130 Kifer Road): Redevelopment of a 7.99-acre property that includes demolition of 100,843 square feet (sf) of office/R&D and construction of 7,400 sf of retail and 520 apartment units (recently completed).
- Calstone/PBM Project (1155-1175 Aster Avenue): Redevelopment of a 16.82-acre property that consists of 741 units (apartments, condos, and townhomes), 1,500 sf of commercial space (ground floor of apartments), and 2.3 acres of open space (Planning Commission approved).
- Intuitive Surgical Inc. Project (1050 Kifer Road): Redevelopment of a 21.7-acre property that consists of two new four-story office/R&D buildings (392,465 net sf), a parking structure, and retention of an existing one-story building and a multi-use trail (Phase I recently completed – one new office/R&D building of 307,550 gross square feet, a parking structure, and multi-use trail).
- Extra Space Properties (106 Lawrence Station Road): Construction of a 54,000 sf storage building at an existing self-storage site (recently completed).

Table 3.10-2 identifies remaining development capacity for residential units and office/R&D development within the LSAP since adoption of the plan.

Table 3.10-2 Remaining New Development Buildout Under Adopted LSAP

Land Use Type	Approved LSAP Buildout	Approved and/or Constructed Development Since LSAP Adoption	Remaining New Development Potential Under Adopted LSAP
Residential (net new units)	2,323	1,261	1,062
Office/R&D (net new sf)	1,200,000	392,465 (and 100,843 sf demolished)	908,378

Source: City of Sunnyvale 2019

LSAP Boundary Expansion Area/ISI Site

Proposed plan modifications would include expansion of the adopted LSAP boundary to include three sites (containing four parcels) located just west/northwest of the adopted LSAP boundary. The proposed LSAP boundary expansion area/ISI site contains four parcels (932, 945, 950, and 955 Kifer Road) on 32.4 acres located north and south of Kifer Road. The northern portion of the ISI Site (North Site) contains a private sports and recreation complex, a gymnasium, a baseball field, a soccer field, an amphitheater, a volleyball court, a children's play area, a tented barbeque area, an empty concrete manmade lake, portable bathroom and shower trailers, a parking area, a groundwater monitoring well, and landscaped areas with mature trees. The recreational facilities and parking lot are currently utilized by ISI employees. The southern portion of the ISI Site (South Site) contains two office/warehouse buildings (the smaller building is vacant and unused), an occupied ISI customer service center, parking lots, a basketball court, picnic tables, three outbuildings and equipment associated with previous site remediation activities, seven groundwater monitoring wells, remnants of former railroad spurs, vegetated areas, and mature trees.

3.10.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The following land use impact analysis is based on a review of the City's General Plan, SMC, 2016 LSAP EIR, and adopted LSAP.

THRESHOLDS OF SIGNIFICANCE

A land use impact is considered significant if implementation of the LSAP Update and ISI project would do any of the following:

- physically divide an established community; and/or
- 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.

Conflicts with a General Plan do not inherently result in a significant effect on the environment within the context of CEQA. As stated in Section 15358(b) of the CEQA Guidelines, "[e]ffects analyzed under CEQA must be related to a physical change." Thus, the focus of the impact analysis is whether project implementation would result in significant physical environmental impacts associated with land use. Specific impacts and issues associated with population and housing, hazards, geology and soils, hydrology, aesthetics, recreation, cultural and tribal resources, biological resources, and public services and utilities are addressed within subsections of Chapter 3 of this SEIR, and the reader is referred to these other resource sections for detailed analyses of other relevant environmental effects. Conflicts between a project and applicable policies do not constitute a significant physical environmental impact in and of themselves; as such, the project's consistency with applicable policies is discussed separately from the physical land use impacts associated with the project.

ISSUES NOT DISCUSSED FURTHER

All thresholds discussed above are evaluated in this SEIR. The potential for conflict with a Habitat Conservation Plan or Natural Community Conservation Plan impact was addressed in Impact 3.1.3 of the of the 2016 LSAP EIR. The EIR determined that because the planning area for the Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan does not include Sunnyvale, no impact would occur. In addition, this threshold is no longer a part of the CEQA Appendix G thresholds for land use and planning. Therefore, no further discussion is required.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.10-1: Physically Divide an Established Community

The 2016 LSAP EIR determined that buildout of the LSAP would not result in physical division of an established community because it would add higher intensity development consisting of mixed uses in currently developed areas that contain non-residential office/R&D/industrial uses. Implementation of the LSAP Update would increase the allowable housing potential within the LSAP, expand the western LSAP boundary to include the proposed ISI corporate campus, and establish the Lawrence Station Sense of Place Plan to promote mobility and foster connectivity within the LSAP. Similar to the adopted LSAP, no land use changes would occur that would result in development that would physically divide an established community. There is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. The impact would be **less than significant**.

Impacts 3.1.1 of the 2016 LSAP EIR evaluated whether the LSAP would physically divide an established community. The EIR determined that subsequent development allowable under the LSAP would be consistent with surrounding land use development and would not convert residential uses to non-residential use. The EIR also noted that subsequent projects developed under the LSAP would result in higher-intensity development consisting of mixed uses in areas that currently contain non-residential office/R&D/industrial uses and the establishment of a new mixed-use land use designation for the LSAP that would allow for higher multi-family residential densities and increased floor area ratios for nonresidential development in the plan area. It was also determined that land use policies established under the LSAP would enhance the project area's connectivity with the City as a whole and that the planned transportation improvements would enhance, rather than divide, the plan area's connectivity by implementing a complete streets approach to the transportation system. The impact was concluded to be less than significant.

LSAP Update

Implementation of the LSAP Update would establish a Sense of Place Plan for the LSAP, expand the western LSAP boundary, and increase allowable housing potential within the LSAP resulting in additional new residents beyond the number anticipated in the 2016 LSAP EIR. A physical division of an established community typically refers to the construction of a physical feature (such as a wall, roadway, or railroad tracks) or the removal of a means of access (such as a local roadway or bridge) that would impair mobility within an existing community or between communities. The LSAP Update does not include construction of physical features that would impair mobility or propose the closure of an existing street. The proposed Lawrence Station Sense of Place Plan would function as a policy document for LSAP area circulation, open space, and streetscape improvements. Implementation of the Sense of Place Plan would promote mobility in the LSAP by requiring new development in the LSAP to implement improvements that foster connectivity within the LSAP. Improvements would include a loop road, rail crossings (if determined to be feasible), sidewalks, curb ramps, the addition and removal of on-street parking, new roadways, intersection improvements, buffered bicycle lanes, Class I multi-used paved trails, bus stop improvements along Kifer Road, lighting, wayfinding signage, and other public amenities. Similar to the adopted LSAP, individual development projects under the LSAP Update would be evaluated at a project-level. With implementation of the LSAP Update, these new developments would be required to make appropriate improvements consistent with the Sense of Place Plan. Therefore, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. Similar to the adopted LSAP, the LSAP Update would result in a **less-than-significant** impact related to the division of an established community.

ISI Project

The ISI project would result in buildout of a corporate campus within the proposed western LSAP boundary expansion area. The ISI site does not contain housing and is located in an industrial area. As a development incentive to obtain the proposed floor area ratio, the ISI project would fulfill certain requirements of the proposed Lawrence Station Sense of Place Plan that would promote mobility; these improvements may include frontage improvements to Kifer Road, a new east-west publicly accessible pedestrian-bicycle path adjacent to the Caltrain right-of-way, and/or improvements to a bus stop on Kifer Road. These proposed improvements would increase connectivity for pedestrians and other multi-modal means of transportation, ultimately improving connectivity to the surrounding community and region. Therefore, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. The ISI project would result in a **less-than-significant** impact related to the division of an established community.

Mitigation Measures

No mitigation is required.

Impact 3.10-2: Conflict with Any Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect

The 2016 LSAP EIR determined that the LSAP would result in rezoning of the plan area in order to be compliant with the LSAP and establishment of new land use categories and zoning that did not exist within the Sunnyvale General Plan and Zoning Ordinance. The EIR determined that with approval of the LSAP, General Plan amendments, and zoning amendments, the project would be consistent with the City of Sunnyvale General Plan regarding land use designations and consistent with the City of Sunnyvale Zoning ordinance. The LSAP Update and ISI project would require changes to the land use designation in the LSAP boundary expansion area/ISI site, rezoning of many parcels and various text amendments for changes in development standards associated with some of the existing LSAP zoning districts, the removal of one and the addition of four new LSAP zoning districts, and the addition of new land use goals and policies associated with the LSAP Update and changes in City policies and standards since the 2016 LSAP adoption. The City's goals for sustainable growth include higher density residential uses to address housing needs in the City. Implementation of these LSAP modifications would ensure integration and compatibility of new development with the City's sustainable growth vision, thus further integrating the LSAP area into the City as a whole. Similar to the adopted LSAP, these proposed modifications to the LSAP would require approval from the City for amendments to the City's General Plan, Zoning Code, and LSAP. Therefore, there is no new significant effect, and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The potential for the LSAP Update and ISI project to conflict with applicable adopted land use plans, policies, or regulations would be **less than significant**.

Impact 3.1.2 of the 2016 LSAP EIR evaluated whether implementation of the LSAP would conflict with Sunnyvale's General Plan and Zoning Ordinance. As described in the 2016 EIR, the LSAP would establish new General Plan land use categories for the plan area as well as retain some of the existing designations associated with existing residential uses in the southern portion of the plan area. Ultimately, the adopted boundaries did not include existing uses in the southern portion of the plan area. The analysis for areas included in the adopted boundaries noted that these areas would require a change of zoning to be compliant with the LSAP and that new land use categories would need to be established that did not exist within the Sunnyvale General Plan and Zoning Ordinance. The EIR determined that with approval of the LSAP, General Plan amendments, and zoning amendments, the project would be consistent with the City of Sunnyvale General Plan regarding land use designations and consistent with the City of Sunnyvale Zoning ordinance regarding FAR, maximum and minimum density requirements, parking requirements and circulation requirements. Therefore, the 2016 LSAP EIR concluded the LSAP's potential to conflict with applicable adopted land use plans, policies, or regulations would be **less than significant**.

LSAP Update

Implementation of the LSAP Update would result in an increase to the allowable residential development capacity within the LSAP, a rezone and change in land use designation for the LSAP western boundary expansion area, rezone of many parcels within the adopted LSAP to reflect the proposed housing amendments, changes to development

standards of several adopted LSAP zoning districts, the establishment of new zoning designations for certain LSAP areas to clarify site-specific land use and buildout expectations, and the addition of new land use goals and policies associated with the LSAP Update and changes in City policies and standards since the 2016 LSAP adoption. The proposed project would require amendments to the City's General Plan, LSAP, and Zoning Code (Chapter 19.35) to implement proposed amendments to the adopted LSAP. A detailed description of proposed land use changes is provided in Section 2.4.1, "LSAP Modifications," of Chapter 2, "Project Description," and land use changes associated with the LSAP boundary expansion/ISI site are provided under "ISI Project" below.

City of Sunnyvale General Plan

The City of Sunnyvale General Plan provides the united vision meant to guide comprehensive development in the City. Due to growing housing needs within the City, the LSAP Update would expand housing opportunities within the LSAP area. The City's General Plan would be amended to update the residential buildout for the LSAP and land use/density descriptions, revise the Land Use Map to show the Transit Mixed Use designation for the LSAP boundary expansion area, include text edits to be consistent with the proposed LSAP amendment, and include references to the LSAP Sense of Place Plan. A description of land use changes proposed for the LSAP boundary expansion area/ISI site are provided under "ISI Project" below. No change to land use designation within the adopted LSAP boundary is proposed. With the approval of the General Plan amendments described above, the project would be consistent with the City of Sunnyvale General Plan.

City of Sunnyvale Zoning Code

The City of Sunnyvale Zoning Code regulates the development of land uses within the plan area. Rezoning proposed for the LSAP boundary expansion area/ISI site is analyzed under "ISI Project" below. Within the adopted LSAP Boundary, implementation of the LSAP Update would require rezoning of many parcels within the LSAP to reflect the proposed housing amendments and recent nonresidential redevelopment in the western end. The LSAP Update would result in the removal of one adopted LSAP zoning districts (O-R) and the addition of four new LSAP zoning districts (MXD-I/S, MXD-IV, M-S/LSAP 60%, and M-S/LSAP 120%) established for certain areas to clarify site-specific land use and buildout expectations. The LSAP Update would also include modifications to some existing LSAP zoning districts and various text amendments for changes in development standards associated with some of the existing LSAP zoning districts. Refer to Section 2.4.1, "LSAP Modifications," of this Draft SEIR for a detailed description of rezoning and zoning code amendments proposed under the LSAP Update. With approval of these rezones and zoning code amendments, the LSAP Update would be consistent with the City of Sunnyvale Zoning ordinance.

LSAP

The adopted LSAP would be amended to reflect all proposed modifications to the plan, including the proposed increase to residential development capacity of the LSAP, inclusion of the western boundary expansion area, amendments to the LSAP land use designations of parcels where zoning changes are occurring, and the addition of goals and policies associated with the LSAP Update and changes in City policies and standards since the 2016 LSAP adoption. Refer to Section 2.4.1, "LSAP Modifications," of this Draft SEIR for a detailed description of all proposed updates to the adopted LSAP.

Implementation of the LSAP modifications would ensure integration and compatibility of new development with the City's sustainable growth vision, thus further integrating the project area into the City as a whole. In addition, the City's goals for sustainable growth include higher density residential uses. Similar to the adopted LSAP, the proposed increase in allowable residential density and the change in land and zoning designation would be consistent with the City's current land use policies. With implementation of the LSAP Update, amendments to the City's General Plan, Zoning Code, and LSAP would be required. Therefore, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. Similar to the adopted LSAP, the LSAP Update would result in a **less-than-significant** impact related to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

ISI Project

Implementation of the ISI project would include changing the land use designation of the site from IND to TMU and rezoning of the site to LSAP-specific zoning designations (from M-S and M-3 to M-S/LSAP 60% and M-S/LSAP 120%). These changes would make the boundary expansion area consistent with the rest of the LSAP.

City of Sunnyvale General Plan

As part of the project, the western boundary of the LSAP would be expanded to include the ISI site. This would require a change in land use designation of the expansion area from IND to TMU and a revision of the City's Land Use Map to show the TMU designation for the LSAP boundary expansion Area/ISI Site. With inclusion of the ISI site within the LSAP boundary, the ISI project would be required to meet the transportation and design guidelines of the LSAP and would be consistent with the City's sustainable growth vision. With approval of these amendments to the General Plan, the ISI project would be consistent with the City of Sunnyvale General Plan regarding land use designations.

City of Sunnyvale Zoning Code

Within the LSAP boundary expansion Area/ISI Site, the parcel located north of Kifer Road (North Site) is zoned M-S (Industrial and Service) and the two parcels south of Kifer Road (South Site) are zoned M-3 (General Industrial). Combined, the proposed expansion area has an existing allowable development potential of 494,000 sf (assuming a base FAR of 35 percent). With implementation of the LSAP Update, rezoning of the sites to an LSAP-specific zoning designation would occur.

There is currently an M-S/LSAP zoning designation that applies to industrial parcels east of Calabazas Creek and is reserved for industrial uses such as offices and research and development. Residential uses are prohibited. This zoning designation is pertinent to the ISI site because nonresidential uses consistent with this district are proposed and residential uses are not allowed because of an existing covenant for environmental restrictions on the South Site. Therefore, the M-S/LSAP designation would be modified for the ISI site to include a maximum FAR qualifier, similar to other industrial intensification sites in the City zoned M-S 100 percent FAR. To support the proposed FAR of the ISI project and retain existing open space on the North Site, rezoning to M-S/LSAP 60 percent is proposed for the North Site and rezoning to M-S/LSAP 120 percent is proposed for the South Site. With approval of these proposed rezones and zoning code amendments, the ISI project would be consistent with the City of Sunnyvale Zoning ordinance.

LSAP

As part of the ISI project, the ISI site would be included within the boundaries of the LSAP and an LSAP designation of Office/R&D would be assigned to the ISI site. A total of 1.2 million gross sf of net new office/R&D development is allowable within the adopted LSAP. With implementation of the proposed LSAP boundary expansion and associated ISI project, a remaining balance of 123,503 sf net new office/R&D development would be available under the adopted LSAP (see Table 2-5 of this Draft SEIR). Therefore, an increase to the overall LSAP office/R&D development capacity would not be required. The LSAP would be amended to include the boundary expansion area/ISI site and update the remaining LSAP office/R&D development capacity with implementation of the ISI project.

With implementation of the ISI project, amendments to the City's General Plan, Zoning Code, and LSAP would be required. Similar to the adopted LSAP, the ISI project would result in a less-than-significant impact related to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. The ISI project would result in **less-than-significant** impacts to fire protection, police protection, and emergency medical services.

Mitigation Measures

No mitigation is required for this impact.

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3.11 NOISE AND VIBRATION

This section evaluates the new potential noise and vibration impacts of the LSAP Update and ISI project. This evaluation is based on data contained within the adopted 2016 LSAP EIR and technical reports produced for the ISI project (Kimley-Horn 2020). This section includes a summary of applicable regulations related to noise and vibration, a description of the existing noise environment, and an analysis of potential noise and vibration impacts associated with the LSAP Update and ISI project. Mitigation measures are recommended as necessary to reduce significant noise impacts. Additional data are provided in Appendix F, "Noise Modeling Calculations."

The 2016 LSAP EIR included Section 3.6, "Noise," which evaluated the potential for the LSAP to result in noise impacts exceeding the City of Sunnyvale's applicable noise level criteria. The 2016 LSAP EIR concluded that there would be no noise impacts with implementation of Mitigation Measure 3.6.4, which requires subsequent projects in the LSAP boundary to draft a Noise Control Plan and implement feasible noise control strategies.

There were no comments received on the Notice of Preparation related to noise or vibration.

3.11.1 Regulatory Setting

The regulatory setting for noise and vibration on pages 3.6-12 through 3.6-15 of the 2016 LSAP EIR remains applicable to this noise and vibration analysis, including descriptions of the California Building Standards, Sunnyvale General Plan, and Sunnyvale Municipal Code. The following supplements setting that was provided in the 2016 EIR. This includes a description of Federal Transit Administration (FTA) guidelines for maximum-acceptable vibration criteria for different types of land uses, applicable federal and State policies related to effects of groundborne vibration on buildings, and the Sunnyvale General Plan's incremental noise standards. These City standards are used in this SEIR to analyze traffic noise impacts for the LSAP Update.

FEDERAL

Federal Transit Administration

To address the human response to ground vibration, the FTA has set forth guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines are presented in Table 3.11-1.

Table 3.11-1 Ground-Borne Vibration Impact Criteria for General Assessment

Land Use Category	Ground-Borne Vibration Impact Levels (VdB re 1 microinch/second)		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1: Buildings where vibration would interfere with interior operations.	65 [4]	65 [4]	65 [4]
Category 2: Residences and buildings where people normally sleep.	72	75	80
Category 3: Institutional land uses with primarily daytime uses.	75	78	83

Notes: VdB re 1 microinch/second = vibration decibels referenced to 1 microinch/second and based on the root mean square (RMS) velocity amplitude.

1. "Frequent Events" is defined as more than 70 vibration events of the same source per day.
2. "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.
3. "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.
4. This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define acceptable vibration levels.

Source: FTA 2018.

STATE

California Department of Transportation

In 2013, Caltrans published the Transportation and Construction Vibration Manual (Caltrans 2013b). The manual provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage. Table 3.11-2 presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.

Table 3.11-2 Caltrans Recommendations Regarding Levels of Vibration Exposure

PPV (in/sec)	Effect on Buildings
0.4–0.6	Architectural damage and possible minor structural damage
0.2	Risk of architectural damage to normal dwelling houses
0.1	Virtually no risk of architectural damage to normal buildings
0.08	Recommended upper limit of vibration to which ruins and ancient monuments should be subjected
0.006–0.019	Vibration unlikely to cause damage of any type

Notes: PPV = Peak Particle Velocity; in/sec = inches per second

Source: Caltrans 2013b.

LOCAL

City of Sunnyvale General Plan

Chapter 6, "Safety and Noise," of the Sunnyvale General Plan (Sunnyvale 2011) includes the following noise policies that are relevant to the LSAP Update and ISI project:

- **Policy SN-8.1.** Enforce and supplement state laws regarding interior noise levels of residential units.
- **Policy SN-8.2.** Apply Title 24 noise insulation requirements to all new single-family detached homes.
- **Policy SN-8.3.** Attempt to achieve a maximum instantaneous noise level of 50 dB in bedrooms and 55 dB in other areas of residential units exposed to train or aircraft noise, where the exterior L_{dn} exceeds 55 dB.
- **Policy SN-8.4.** Prevent significant noise impacts from new development by applying state noise guidelines and Sunnyvale Municipal Code 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" (Figure 6-5 [presented as Table 3.11-3 in this SEIR]) 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.

Table 3.11-3 State of California Noise Guidelines for Land Use Planning Summary of Land Use Compatibility for Community Noise Environment

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dB)		
	Normally Acceptable[1]	Conditionally Acceptable[2]	Unacceptable[4]
Residential, Hotels and Motels	<60	60–70	70+
Outdoor Sports and recreation, neighborhood Parks and Playgrounds	<65	65–80	80+
Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches	<60	60–75	75+
Office Buildings, Commercial and Professional Businesses	<75	70–80	80+
Auditoriums, Concert Halls, Amphitheaters	—	<75	75+
Industrial, Manufacturing, Utilities, and Agriculture	<70	70+	—

Notes: L_{dn} = Day-Night Noise Level; CNEL = Community Noise Equivalent Level; dB = decibels

Source: City of Sunnyvale 2011:6-32

- **Policy SN-8.6.** Use Figure 6-6, (presented as Table 3.11-4 in this SEIR) "Significant Noise Impacts from New Development on Existing Land Use" to determine if proposed development results in a "significant noise impact" on existing development.

Table 3.11-4 Incremental Noise Standards for New Development on Existing Land Uses

L_{dn} Category of Existing Development (per Figure 6-4 in the General Plan)	Noise Increase Considered "Significant" Over Existing Noise Levels
Normally Acceptable	An increase of more than 3 dB and the total L_{dn} exceeds the "normally acceptable" category
Normally Acceptable	An increase of more than 5 dB
Conditionally Acceptable	An increase of more than 3 dB
Unacceptable	An increase of more than 3 dB

Notes: L_{dn} = Day-Night Noise Level; dB = decibels

Source: City of Sunnyvale 2011:6-33

- **Policy SN-8.7.** Supplement Figure 6-5 (presented as Table 3.11-3 under Policy SN-8.5 in this SEIR), "State of California Noise Guidelines for Land Use Planning" for residential uses by attempting to achieve an outdoor L_{dn} of no greater than 60 dB for common recreational areas, backyards, patios and medium and large-size balconies. These guidelines should not apply where the noise source is railroad or and airport. If the noise source is a railroad, then an L_{dn} of no greater than 70 dB should be achieved in common areas, backyards, patios and medium and large balconies. If the noise source is from aircraft, then preventing new residential uses within areas of high L_{dn} from aircraft noise is recommended.
- **Policy SN-8.8.** Avoid construction of new residential uses where the outdoor L_{dn} is greater than 70 dB as a result from train noise.
- **Policy SN-8.9.** Consider techniques which block the path of noise and insulate people from noise.
  - **SN-8.9a**. Use a combination of barriers, setbacks, site planning and building design techniques to reduce noise impacts, keeping in mind their benefits and shortcomings.
- **Policy SN-9.3.** Apply conditions to discretionary land use permits which limit hours of operation, hours of delivery and other factors which affect noise.
- **Policy SN-10.4.** Mitigate and avoid the noise impacts from trains and light rail facilities.
  - **Policy SN-10.4a.** Monitor plans and projects which would increase the number of commuter or freight trains and evaluate their noise impacts and seek mitigation for any change that worsens local conditions.
  - **Policy SN-10.4b**. Educate owners of older homes on ways to reduce noise levels from trains.
  - **Policy SN-10.4d.** Seek the cooperation of train engineers to avoid unnecessary and prolonged use of air horns except for safety purposes.
  - **Policy SN-10.4e.** Monitor regional plans for light rail facilities in Sunnyvale to ensure that noise impacts are identified and mitigated.

Sunnyvale Municipal Code

Section 19.42.030 of the Sunnyvale Municipal Code contains exterior noise standards for residential land uses. Operational noise shall not exceed 75 dB at any point on the property line of the premises upon which the noise or sound is generated or produced; provided, however, that the noise or sound level shall not exceed 50 dB during nighttime or 60 dB 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 45 dB.

Section 16.08.030 of the Sunnyvale Municipal Code contains construction noise regulations. Construction activity is permitted from 7:00 a.m. to 6:00 p.m., Monday through Friday, and from 8:00 a.m. to 5:00 p.m. on Saturdays. No construction activity is allowed on Sundays or federal holidays when City offices are closed. Construction may be permitted during prohibited times for emergency work, and such work must be completed as quickly as possible. Where additional construction activity would 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 the Municipal Code.

3.11.2 Environmental Setting

ACOUSTIC FUNDAMENTALS

Before discussing the noise setting for the project, background information about sound, noise, vibration, and common noise descriptors is needed to provide context and a better understanding of the technical terms referenced throughout this section.

Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a human ear. Noise is defined as loud, unexpected, annoying, or unwanted sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this large range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels (dB).

Addition of Decibels

Because decibels are logarithmic units, SPLs expressed in dB cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness at the same time, the resulting sound level at a given distance would be 3 dB higher than if only one of the sound sources was producing sound under the same conditions. For example, if one idling truck generates an SPL of 70 dB, two trucks idling simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level approximately 5 dB louder than one source.

A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz and perceive sounds within this range better than sounds of the same amplitude with frequencies outside of this range. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an "A-weighted" sound level (expressed in units of A-weighted decibels) can be computed based on this information.

The A-weighting approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgment correlates well with the A-scale sound levels of those sounds. Thus, noise levels are typically reported in terms of A-weighted decibels. All sound levels discussed in this section are expressed in A-weighted decibels. Table 3.11-5 describes typical A-weighted noise levels for various noise sources.

Table 3.11-5 Typical A-Weighted Noise Levels

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 1,000 feet	— 100 —	
Gas lawn mower at 3 feet	— 90 —	
Diesel truck at 50 feet at 50 miles per hour	— 80 —	Food blender at 3 feet, Garbage disposal at 3 feet
Noisy urban area, daytime, Gas lawn mower at 100 feet	— 70 —	Vacuum cleaner at 10 feet, Normal speech at 3 feet
Commercial area, Heavy traffic at 300 feet	— 60 —	
Quiet urban daytime	— 50 —	Large business office, Dishwasher next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime	— 30 —	Library, Bedroom at night
Quiet rural nighttime	— 20 —	
	— 10 —	Broadcast/recording studio
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: Caltrans 2013a: Table 2-5.

Human Response to Changes in Noise Levels

As described above, the doubling of sound energy results in a 3-dB increase in the sound level. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different from what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear can discern 1-dB changes in sound levels when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000–8,000 Hz) range. In general, the healthy human ear is most sensitive to sounds between 1,000 and 5,000 Hz and perceives both higher and lower frequency sounds of the same magnitude with less intensity (Caltrans 2013a:2-18). In typical noisy environments, changes in noise of 1–2 dB are generally not perceptible. However, it is widely accepted that people can begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness (Caltrans 2013a:2-10). Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound would generally be perceived as barely detectable.

Ground Vibration

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Ground-borne vibration is vibration of and through the ground. Ground-borne vibration can range from levels that are imperceptible by humans to levels that can create substantial damage to buildings and structures. Sources ground-borne of vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those

introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, (e.g., operating factory machinery) or transient in nature (e.g., explosions). Vibration levels can be depicted in terms of amplitude and frequency, relative to displacement, velocity, or acceleration.

Ground-borne vibration amplitudes are commonly expressed in peak particle velocity (PPV) or root-mean-square (RMS) vibration velocity. PPV and RMS vibration velocity are normally described in inches per second (in/sec) or in millimeters per second. PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is typically used in the monitoring of transient and impact vibration and has been found to correlate well to the stresses experienced by buildings (FTA 2018:110; Caltrans 2013a:6).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to average vibration amplitude. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration (FTA 2018:110, 199; Caltrans 2013b:7). This is based on a reference value of 1 microinch per second.

The typical background ground-borne vibration-velocity level in residential areas is approximately 50 VdB. Ground vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels (FTA 2018:120; Caltrans 2013b:27).

Typical outdoor sources of perceptible ground vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur to fragile buildings. Construction activities can generate sufficient ground vibrations to pose a risk to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants (FTA 2018:113).

Ground vibration levels generated by construction activity can be transient, random, or continuous. Transient construction vibrations are generated by blasting, impact pile driving, and wrecking balls. Continuous vibrations are generated by vibratory pile drivers, large pumps, and compressors. Random vibration can result from jackhammers, pavement breakers, and heavy construction equipment.

Table 3.11-6 summarizes the general human response to different ground vibration-velocity levels.

Table 3.11-6 Human Response to Different Levels of Ground Noise and Vibration

Vibration-Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

Notes: VdB = vibration decibels referenced to 1 microinch/second and based on the root mean square (RMS) velocity amplitude.

Source: FTA 2018:120.

Common Noise Descriptors

Noise in our daily environment fluctuates over time. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors used throughout this section.

Equivalent Continuous Sound Level (L_{eq}): L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound level that occurs during the same period (Caltrans 2013a:2-48). For instance, the 1-hour equivalent sound level, also referred to as the hourly L_{eq}, is the energy average of sound levels occurring during a 1-hour period and is the basis

for noise abatement criteria used by California Department of Transportation (Caltrans) and Federal Transit Administration (FTA) (Caltrans 2013a:2-47; FTA 2018:210).

Maximum Sound Level (L_{max}): L_{max} is the highest instantaneous sound level measured during a specified period (Caltrans 2013a:2-48; FTA 2018:207–208).

Day-Night Level (L_{dn}): L_{dn} is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-dB "penalty" applied to sound levels occurring during nighttime hours between 10:00 p.m. and 7:00 a.m. (Caltrans 2013a:2-48; FTA 2018:214).

Community Noise Equivalent Level (CNEL): CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to sound levels occurring during the nighttime hours between 10:00 p.m. and 7:00 a.m. and a 5-dB penalty applied to the sound levels occurring during evening hours between 7:00 p.m. and 10:00 p.m. (Caltrans 2013a:2-48).

Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which a noise level decreases with distance depends on the following factors:

Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Roads and highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources, thus propagating at a slower rate in comparison to a point source. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source.

Ground Absorption

The propagation path of noise from a source to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave–canceling provides additional attenuation associated with geometric spreading. Traditionally, this additional attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), additional ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the attenuate rate associated with cylindrical spreading, the additional ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance. This would hold true for point sources, resulting in an overall drop-off rate of up to 7.5 dB per doubling of distance.

Atmospheric Effects

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels, as wind can carry sound. Other factors such as air temperature, humidity, and turbulence can also affect sound attenuation.

Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB of noise reduction (Caltrans 2013a:2-41; FTA 2018:42). Barriers higher than the line of sight provide increased noise reduction (FTA 2018:16). Vegetation between the source and receiver is rarely effective in reducing noise because it does not create a solid barrier unless there are multiple rows of vegetation of sufficient height (FTA 2018:15, 104, 106).

EXISTING NOISE ENVIRONMENT

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 increased and prolonged exposure of individuals to both interior and exterior noise levels, and because of the potential for nighttime noise to result in sleep disruption. Additional land uses such as schools, transient lodging, historic sites, cemeteries, and places of worship are also generally considered sensitive to increases in noise levels. These land use types are also considered vibration-sensitive land uses in addition to commercial and industrial buildings where vibration would interfere with operations within the building, including levels that may be well below those associated with human annoyance.

LSAP Update

The environmental setting provided on pages 3.6-6 through 3.6-11 of the 2016 LSAP EIR is sufficient to describe the sensitive receptors and existing noise and vibration sources near and within the LSAP. The 2016 LSAP EIR also described ambient noise levels at various locations within the LSAP by providing noise measurements. Sensitive receptors include the residential land uses south of the Caltrain tracks. Existing noise sources in the area, which are discussed further in the 2016 LSAP EIR, include noise and vibration generated by Caltrain activity and traffic-generated noise.

ISI Project

The existing noise environment around the ISI project site, which is adjacent to the west side of the adopted LSAP boundary, is generally similar in the LSAP Update area. Caltrain runs along the south side of the South Site, Kifer Road splits the South Site and North Site, and the Central Expressway passes along the north side of the North Site. Surrounding land uses include office and warehouse buildings, other commercial buildings, and parking lots. Multifamily residential land uses are located across the Caltrain line south of the South Site of the ISI project.

Existing Roadway Noise Levels

In addition to Caltrain activity, another predominant noise source in the Plan area is vehicle traffic on the surrounding roadway network, including the Lawrence Expressway, Central Expressway, and Kifer Road. Existing traffic noise levels on roadway segments in the Plan area were modeled using calculation methods consistent with FHWA Traffic Noise Model, Version 2.5 (FHWA 2004) and using average daily traffic (ADT) volumes provided in the traffic analysis conducted by Hexagon and summarized in Section 3.14, "Transportation." Table 3.11-7 summarizes the modeled existing traffic noise levels along each roadway segment in the study area. For further details on traffic-noise modeling inputs and parameters, refer to Appendix F.

Table 3.11-7 Summary of Modeled Existing Traffic Noise Levels

Roadway Segment	Adjacent Land Use Type(s)	L_{dn} at 75 feet from Center of Near Direction of Travel (dB)
Kifer Road between Wolfe Road and Commercial Street	O, C, I	64.4
Kifer Road between Commercial Street and Semiconductor Drive	O, C, I	64.9
Kifer Road between Semiconductor Drive and Lawrence Expressway	O, C, I	65.9
Kifer Road between Lawrence Expressway and Corvin Drive	O, C, I	66.5
Lawrence Expressway between Tasman Drive and Sandia Avenue/Lakehaven Drive	R	72.5
Lawrence Expressway between Oakmead Parkway and Arques Avenue	H, C, temple	73.6
Lawrence Expressway between Arques Avenue and Kifer Road	O, C	74.4
Lawrence Expressway between Kifer Road and Monroe Street	R, C	75.1
Wolfe Road/Fair Oaks Avenue between Duane Avenue and Stewart Drive	R, I, park	62.7
Wolfe Road between Stewart Drive and Arques Avenue	R, C	64.6
Wolfe Road between Arques Avenue and Kifer Road	O, C, I	64.6
Wolfe Road between Kifer Road and Evelyn Avenue	R, C	67.7

Roadway Segment	Adjacent Land Use Type(s)	L_{dn} at 75 feet from Center of Near Direction of Travel (dB)
Wolfe Road between Evelyn Avenue and Reed Avenue	R	66.6
Fair Oaks Avenue between Evelyn Avenue and Old San Francisco Road/Reed Avenue	R, school	64.5
Evelyn Avenue between Sunnyvale Avenue and Fair Oaks Avenue	R, C	60.6
Evelyn Avenue between Fair Oaks Avenue and Wolfe Road	R, C	60.3
Arques Avenue between Wolfe Road and Lawrence Expressway	C, O	64.7
Central Expressway between Corvin Drive and Bowers Avenue	O, C, I	73.0

Notes: L_{dn} = day-night noise level; dB = decibels; O = office, C= commercial; I = Industrial; R = residential; H = hotel.

All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow, and does not account for shielding of any type or finite roadway adjustments. For additional details, refer to Appendix F for detailed traffic data, and traffic-noise modeling input data and output results.

Source: Data modeled by Ascent Environmental in 2020

As shown in Table 3.11-7, existing traffic noise levels range from 60 to 75 dB along the modeled roadway segments.

3.11.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

This impact analysis is based primarily on review of the analysis presented in the 2016 LSAP EIR; a review of the data provided in the Acoustical Assessment for the ISI Project (Kimley-Horn 2020), which is provided in Appendix F; and traffic volume data from the traffic analysis (Hexagon Transportation Consultants 2019).

The ISI project would generate construction and operational-source noise and vibration, including stationary and traffic-generated noise. To assess potential short-term construction-related noise and vibration impacts, sensitive receptors and their relative exposure were identified. Project-generated construction source noise and vibration levels were determined based on methodologies, reference emission levels, and usage factors from FTA's *Guide on Transit Noise and Vibration Impact Assessment* methodology (FTA 2018) and FHWA's *Roadway Construction Noise Model User's Guide* (FHWA 2006). Reference levels for noise and vibration emissions for specific equipment or activity types are well documented and the usage thereof common practice in the field of acoustics.

With respect to non-transportation noise sources (e.g., stationary) associated with project implementation, the assessment of long-term (operational-related) impacts was based on reconnaissance data, reference noise emission levels, and measured noise levels for activities and equipment associated with project operation (e.g., delivery docks, the Central Plant), and standard attenuation rates and modeling techniques.

To assess potential long-term (operation-related) noise impacts due to project-generated increases in traffic, noise levels were estimated in using calculations consistent with the Federal Highway Administration's Traffic Noise Model Version 2.5 (FHWA 2004) and project-specific traffic data (Appendix F). The analysis is based on the reference noise emission levels for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and ground attenuation factors. Truck usage and vehicle speeds on area roadways were estimated from field observations and the project-specific traffic report. The traffic noise modeling conducted does not account for any natural or human-made shielding (e.g., the presence of walls or buildings) or reflection off building surfaces.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, a noise or vibration impact would be significant if implementation of the LSAP Update and ISI project would:

- result in construction-generated noise levels that exceed the "State of California Noise Guidelines for Land Use Planning" guidelines stated in Policy SN-8.5 of the Sunnyvale General Plan (and Table 3.11-3 of this SEIR) during times of day other than those exempted by Section 16.08.030 of the Sunnyvale Municipal Code (i.e., 7:00 a.m. and 6:00 p.m. Monday to Friday, 8:00 a.m. to 5:00 p.m. on Saturday);
- result in construction-generated levels of ground vibration that exceed Caltrans's recommended standards with respect to the prevention of structural damage to buildings of 0.2 and 0.08 in/sec PPV for normal and historical buildings, respectively (as shown in Table 3.11-2) or FTA's maximum acceptable vibration standard with respect to human response of 80 VdB at nearby existing vibration-sensitive land uses (as shown in Table 3.11-1);
- result in operational-source and stationary-source noise level that exceeds 75 dB at the property line of the project site or exceeds a daytime standard of 60 dB or a nighttime standard of 50 dB at an adjacent residentially zoned property, as established by Section 19.42.030 of the Sunnyvale Municipal Code, or the State's Community Noise Exposure standards, as stipulated in City of Sunnyvale General Plan Policy SN-8.5, including a normally acceptable noise standard of 60 dB CNEL for residential land uses; and
- result in noise levels generated by transportation noise sources that exceed the Sunnyvale General Plan's incremental noise standards, as shown in Table 3.11-4; and
- result in a safety hazard or excessive noise for people residing or working in the project area if the project is located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport.

ISSUES NOT DISCUSSED FURTHER

Airport Noise

The 2016 LSAP EIR concluded that there would be no impact for airport-generated noise because the LSAP boundary is located outside of the Moffett Federal Airfield noise contours, which is the closest airport to the LSAP. The LSAP Update does not change this conclusion because the boundary expansion, which includes the ISI site, would not expand into any airport noise contours or result in the exposure of people to excessive a noise levels associated with airport activity.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.11-1: Exposure of Noise-Sensitive Receptors to Excessive Construction-Generated Noise Levels

The 2016 LSAP EIR disclosed that construction within the Plan area has the potential to expose noise-sensitive land uses to excessive noise levels and noticeable noise level increases relative to existing conditions. The ISI project and LSAP modifications could also result in the exposure of off-site noise-sensitive receptors to excessive noise levels. Implementation of adopted Mitigation Measure 3.6.4 from the 2016 LSAP EIR applies to the LSAP Update and the ISI project and would minimize levels of construction-generated noise at off-site receptors. With implementation of adopted Mitigation Measure 3.6.4, implementation of the LSAP Update would not result in a new or substantially more severe construction noise-related impact than what was addressed in the 2016 LSAP EIR and construction noise impacts associated with the LSAP Update and ISI project would be **less-than-significant**.

The adverse effect of plan-related construction noise to off-site noise-sensitive receptors was analyzed under Impact 3.6.4 in the 2016 LSAP EIR. This analysis found that, while construction is unlikely to generate noise levels at nearby

noise-sensitive receptors in excess of 60 dB L_{eq} and would not increase the ambient noise environment by 5 dB L_{eq} or more at noise-sensitive land uses in the area over extended periods of time (beyond one construction season), this impact would be significant. The analysis also concluded that construction-related noise impacts would be less than significant with implementation of Mitigation Measure 3.6.4.

Adopted LSAP Mitigation Measure 3.6.4

Subsequent projects in the LSAP shall employ site-specific noise attenuation measures during construction to reduce the generation of construction noise. These measures shall be included in a Noise Control Plan that shall be submitted for review and approval by the City of Sunnyvale Building Services Division. Measures specified in the Noise Control Plan and implemented during construction shall include, at a minimum, the following noise control strategies:

- Equipment and trucks used for construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds;
- Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dB. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dB. Quieter procedures, such as use of drills rather than impact tools, shall be used; and
- Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or include other measures.
- Noise reducing pile-driving techniques shall be employed during Project construction. These techniques shall include:
  - Installing intake and exhaust mufflers on pile-driving equipment;
  - Vibrating piles into place when feasible, and installing shrouds around the pile- driving hammer where feasible;
  - Implement "quiet" pile-driving technology (such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;
  - Use cushion blocks to dampen impact noise, if feasible based on soil conditions. Cushion blocks are blocks of material that are used with impact hammer pile drivers. They consist of blocks of material placed atop a piling during installation to minimize noise generated when driving the pile. Materials typically used for cushion blocks include wood, nylon and micarta (a composite material); and
  - At least 48 hours prior to pile-driving activities, the applicant shall notify building owners and occupants within 600 feet of the Project area of the dates, hours, and expected duration of such activities.

LSAP Update

The proposed LSAP modifications would increase the allowable housing potential within the LSAP and expand the LSAP boundary to include the ISI site. The types of land uses developed under the LSAP Update would be same as under the LSAP. The types of noise-generating construction and demolition activities would also be the same and no pile driving would be used under the LSAP Update. Also, the proximity of noise-generating construction activity to off-site noise-sensitive receptors, including existing residential land uses, would be similar. The increase in allowable housing and expansion of the LSAP boundary as part of the LSAP Update could result in the exposure of existing off-site residential land uses to construction-generated noise levels that are not substantially different in magnitude or type from those described in the 2016 LSAP Draft EIR.

Adopted LSAP Mitigation Measure 3.6.4 requires equipment and trucks used for construction to use the best available noise control techniques; impact tools (e.g., jack hammers, pavement breakers, and rock drills) to be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools; and stationary noise sources to be located as far from adjacent receptors as possible, and to be muffled and enclosed within temporary sheds, incorporate insulation barriers, or include other measures. In addition, no pile driving is anticipated for the construction of projects under the LSAP Update as the City does not typically allow pile driving in or near residential areas. With implementation of adopted Mitigation Measure 3.6.4, implementation of the LSAP Update would not result in a new or substantially more severe construction noise-related impact than what was addressed in the 2016 LSAP EIR and the impact of noise generated by the construction of land uses and facilities under the proposed LSAP Update would be **less than significant**.

ISI Project

The potential impact of noise generated by on-site construction activity during the construction of the ISI project is analyzed in an acoustical assessment prepared for the project (Kimley-Horn and Associates 2020). The types of noise-generating construction and demolition activities that would occur on the ISI project site would be like other projects in the Plan. No pile driving is proposed. The closest off-site noise-sensitive receptors are the multifamily residences located approximately 120 feet south of the South Site of the project area and across the railroad tracks. The next closest noise-sensitive receptors are single-family residences located approximately 2,000 feet west of the ISI project site. Typical construction equipment would be used, the loudest of which would be jackhammers, which generate a noise level of 88 dB at 50 feet. Assuming a 5-dB reduction provided by the 6-foot masonry wall along the south side of the South Site, this noise level would attenuate to 75 dB at the multifamily residential units located approximately 120 feet south of the South Site (Kimley-Horn Associates 2020:24–26).

Though the City has not established a standard for construction-generated noise, Section 16.08.030 of the Municipal Code limits construction activity to the hours between 7:00 a.m. and 6:00 p.m. Monday to Friday and 8:00 a.m. to 5:00 p.m. on Saturday, and prohibits construction-generated noise on Sundays or federal holidays. Because the ISI project would comply with this time-of-day requirement and implement the adopted LSAP Mitigation Measure 3.6.4, which requires multiple measures for minimizing noise levels from construction equipment, the ISI project would minimize noise exposure to off-site noise-sensitive receptors, resulting in a **less-than-significant** impact.

Mitigation Measures

Implement LSAP Mitigation Measure 3.6.4 to minimize construction-generated noise.

Impact 3.11-2: Exposure to Construction-Generated Ground Vibration

Construction of new land uses within the Plan area of the LSAP Update would not expose off-site receptors to levels of ground vibration greater than 85 VdB, which is designated by FTA as the acceptable level of vibration if there are an infrequent number of events per day. Furthermore, construction activity associated with the ISI project would not expose off-site residential land uses to excessive levels of ground vibration that would result in human annoyance or expose off-site buildings to levels of ground vibration that could result in structural damage. The LSAP Update and the ISI project would not result in a new or substantially more severe impact than what was addressed in the 2016 LSAP EIR. Therefore, this impact would be **less than significant**.

The adverse effect of ground vibration generated during plan-related construction was analyzed under Impact 3.6.3 in the 2016 LSAP EIR. This analysis determined that plan-related construction activity would not expose off-site receptors to levels of ground vibration greater than 85 VdB, which, as shown in Table 3.11-4, is designated by FTA as the acceptable level of vibration if there are an infrequent number of events per day. The analysis also explained that the types of heavy-duty equipment used for construction in the Plan area would not generate levels of ground vibration greater than 85 VdB at a distance of 50 feet and that construction would only take place during the less noise-sensitive daytime hours specified by Municipal Code Chapter 16.08.30 (i.e., 7 a.m. to 6:00 p.m. Monday through Friday, and 8:00 a.m. to 5:00 p.m. on Saturdays). For these reasons the analysis concluded that the impact of construction-generated ground vibration would be less than significant, and no mitigation would be required.

Impact 3.6.3 in the 2016 LSAP EIR also determined that land uses developed in the Plan area would not be exposed to levels of ground vibration generated by Caltrain that exceed applicable exposure standards established in the City's General Plan and Municipal Code. This topic is not discussed further because in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) __Cal.4th__ (Case No. S213478) the California Supreme Court ruled that CEQA does not require the analysis of the environment on a proposed project.

LSAP Update

The proposed LSAP modifications would increase the allowable housing potential within the LSAP and expand the LSAP boundary to include the ISI site. The types of land uses developed under the LSAP Update would be same as under the LSAP. The types of construction and demolition activities that generate ground vibration would also be the same. No pile driving, which generates higher levels of ground vibration than other typical construction activities, would occur under the LSAP Update. Also, the proximity of vibration-generating construction activity to off-site receptors would be similar. The increase in allowable housing and expansion of the LSAP boundary as part of the LSAP Update could result in the exposure of off-site residential land uses to construction-generated levels of ground vibration that are not substantially different in magnitude or type from those described in the 2016 LSAP Draft EIR. This impact would be **less than significant**.

ISI Project

The potential impact of ground vibration generated by operation and construction of the ISI project is analyzed in an acoustical assessment prepared for the project (Kimley-Horn and Associates 2020:33–34). The ISI project would not result in the long-term operation of any ground vibration–generating sources in close proximity to off-site sensitive receptors (Kimley-Horn and Associates 2020:34).

The types of ground vibration–generating construction and demolition activities that would occur on the ISI project site would be like other land uses developed in the LSAP plan area and no pile driving activities are proposed on the ISI project site. The vibration velocities that would be generated by the types of heavy construction equipment used in project construction would range from 0.003 to 0.089 in/sec PPV at 25 feet from the source of activity. The closest off-site residential receptors would be the multifamily residences located approximately 120 feet south of the South Site of the project area and across the railroad tracks. At this distance the vibration velocities would attenuate to levels no greater than 0.016 in/sec PPV, which is in the range of human perception but would not cause building damage, even to very fragile buildings. These vibrations would be temporary and short term, however, and would not create a nuisance (Kimley-Horn and Associates 2020:33–34).

The closest non-residential structures to the construction area would be a mix of office and industrial developments, which would be approximately 50 feet from the closest construction or demolition area. At this distance, maximum construction vibration levels would range from 0.001 to 0.042 inch/second PPV and would not exceed the 0.2 inch/second PPV threshold for damage to buildings (Kimley-Horn and Associates 2020:33–34).

Because exposure standards for human annoyance and structural damage would not be exceeded at off-site receptors, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.11-3: Exposure to On-Site Operational Noise Sources

The 2016 LSAP EIR did not include analysis of any on-site noise sources that would likely be part of the operation of new land uses developed under the LSAP. Because the same types of land uses would be developed under the LSAP Update EIR, implementation of the LSAP Update would not result in a new or substantially more severe noise impacts than what was addressed in the 2016 LSAP EIR. Noise-generating activities associated with operation of the ISI project, including the utility plant, mechanical building equipment, parking lot activity, and truck activity, would not expose off-site residential receptors to noise levels that exceed the daytime standard of 60 dB and nighttime standard of 50 dB established by Section 19.42.030 of the Sunnyvale Municipal Code or the normally acceptable standard of 60 dB CNEL for residential land uses that is recommended by General Plan Policy SN-8.5. For these reasons, this impact would be **less than significant**.

The 2016 LSAP EIR addressed on-site operational noise in Impact 3.6.1 and identified that noise attenuation measures in building construction and project design from any noise source and for all land uses will be determined on a project-by-project basis for compliance with City noise standards (General Plan and Section 19.42.030 of the Sunnyvale Municipal Code).

LSAP Update

The types of impacts from on-site noise sources associated with operation of land uses developed under the LSAP Update would be the same as for the original LSAP. This is because the types of land uses would be the same, as well as their distance from existing off-site residential land uses. As with the 2016 LSAP EIR, the potential noise impacts from on-site operational noise sources would need to be analyzed at the project level at the time individual projects are proposed and demonstrate compliance with City noise standards. Thus, implementation of the LSAP Update would not result in a new or substantially more severe noise impacts than what was addressed in the 2016 LSAP EIR.

ISI Project

The potential impact of noise generated by on-site noise sources during the operation of the ISI project is analyzed in an acoustical assessment prepared for the project (Kimley-Horn and Associates 2020). The types of noise-generating operational activities that would occur on the ISI project site would be similar to other commercial and office land uses in the Plan area. Operational noise sources would include the utility plant, mechanical building equipment, parking lot activity, and truck activity. These noise sources are discussed separately below.

Central Utility Plant

The Central Utility Plant would be located in rooms on the south side of the proposed parking structure in the South Site, and would be adjacent to the existing railroad tracks, as show on Figure 2-7 of this Draft SEIR. The Central Utility Plant would house chillers, heat pumps, cooling towers and an emergency generator. The emergency generator would be fully enclosed on the first level of the parking garage. Based on equipment manufacturer specifications, the chillers, heat pumps, and cooling towers at the South Site would have a combined noise level of 66 dB at 50 feet, assuming all equipment is operating simultaneously, and without an enclosure around the equipment. The solid wall enclosure surrounding the equipment would reduce these noise levels to 56 dB or less at 50 feet.

The South Site Central Utility Plant would be approximately 33 feet from the closest property line. Based on the combined noise level of 56 dB at 50 feet, the chillers, heat pumps, and cooling towers at 33 feet would generate a noise level of 60 dB and, therefore, not exceed 75 dB at the property line, which is the applicable noise standard established by Section 19.42.030 of the Sunnyvale Municipal Code (Kimley-Horn 2020:28). This noise level would attenuate to 42 dB at the property line of the nearest residentially zoned land use that is across the railroad tracks and 140 feet south of the South Site, including 5-dB of reduction provided by the 6-foot masonry wall separating the railroad tracks and the residences south of the project site (Kimley-Horn 2020:28). Therefore, noise generated by the Central Utility Plant would not exceed the City's 60-dB daytime standard or 50-dB nighttime for adjacent residential uses.

Mechanical Building Equipment

Exhaust fans would be operated at various locations on the roof of the buildings. Exhaust fans typically generate a noise level of 50 dB at 50 feet (Kimley-Horn 2020:28). Through distance alone this noise level would attenuate to 42

dB at the closest property line approximately 120 feet away (based on Kimley-Horn review of project plans) and this noise level would not exceed the daytime standard of 60 dB and nighttime standard of 50 dB established by Section 19.42.030 of the Sunnyvale Municipal Code. Therefore, noise generated by mechanical building equipment associated with operation of the ISI project would not exceed the standards set forth in the City's noise ordinance.

Parking Lot Activity

Parking activity during the peak hour at the north and South Sites of the ISI project site would generate noise levels of 50.2 dB L_{eq} and 53.9 dB L_{eq}, respectively, at 50 feet (Kimley-Horn 2020:29). These noise level estimates were estimated using a parking lot noise calculation published by the Federal Transit Administration (FTA 2018) based on trip generation rates (Hexagon Transportation Consultants 2019, *as cited in* Kimley-Horn 2020:29). Through distance alone noise generated by parking activity at the North Site would attenuate to 25.2 dB L_{eq} at the nearest off-site residences that are approximately 890 feet from the North Site; and noise generated by parking activity at the South Site would attenuate to 43.3 dB L_{eq} at the nearest off-site residences that are approximately 1,700 feet from the South Site (Kimley-Horn 2020:30). Therefore, parking activity associated with operation of the ISI project would not exceed the daytime standard of 60 dB and nighttime standard of 50 dB established by Section 19.42.030 of the Sunnyvale Municipal Code.

Truck Activity at Loading Docks

Truck deliveries would occur at both the North and South Sites of the ISI project site. The locations of loading docks are shown in Figure 2-10a, "Proposed Vehicular Ingress/Egress - ISI Site" (in Chapter 2 of this SEIR). Up to 43 truck deliveries would occur per day at the North Site and up to 160 truck deliveries would occur per day at the South Site. Noise generated by delivery trucks and loading dock activity would typically generate a noise level of 64.4 dB L_{eq} at 50 feet (Kimley-Horn 2020:30). The closest residential land uses to project-related loading dock activity would be the multifamily residential buildings south of the South Site and across the railroad tracks. These residences are located approximately 170 feet from the nearest loading dock of the surface of the project site. Through distance attenuation, as well as a 5-dB reduction provided by the existing 6-feet-tall masonry wall located along the south side of the South Site, these residences would be exposed to noise levels of approximately 48.8 dB L_{eq} (Kimley-Horn 2020:30). Therefore, loading dock activity associated with operation of the ISI project would not exceed the daytime standard of 60 dB and nighttime standard of 50 dB established by Section 19.42.030 of the Sunnyvale Municipal Code.

Summary

Noise-generating activities associated with operation of the ISI project, including the utility plant, mechanical building equipment, parking lot activity, and truck activity, would not expose off-site residential receptors to noise levels that exceed the daytime standard of 60 dB and nighttime standard of 50 dB established by Section 19.42.030 of the Sunnyvale Municipal Code. Moreover, these noise levels would not combine to exceed the 50-dB standard because they would originate from different areas of the ISI project site and the nearest off-site residence to each noise source would not be the same. In addition, noise associated with on-site operational activities would not expose off-site residences to noise levels that exceed the normally acceptable standard of 60 dB CNEL for residential land uses that is recommended by General Plan Policy SN-8.5. For these reasons, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.11-4: Increases in Traffic Noise

Vehicle trips generated by development under the LSAP Update, including the ISI project, would not result in traffic noise increases that exceed the City's incremental noise increase criteria for transportation noise sources, or expose receptors to perceptible increases in traffic noise. Thus, buildout of the LSAP Update and the ISI project would not result in a new or substantially more severe traffic noise impacts that what was addressed in the 2016 LSAP EIR. This impact would be **less than significant** for both the LSAP Update and the ISI project.

Traffic noise levels from vehicle trips associated with operation of land uses developed under the LSAP were analyzed under Impact 3.6.1 and 3.6.2 in the 2016 LSAP EIR. This analysis determined that LSAP-related vehicle trips would not expose off-site receptors to traffic noise level increases that would exceed the Sunnyvale General Plan's incremental noise increase standards, which are shown in Table 3.11-4. Impact 3.6.1 identifies that noise attenuation measures in building construction and project design from any noise source and for all land uses will be determined on a project-by-project basis for compliance with City noise standards (General Plan and Section 19.42.030 of the Sunnyvale Municipal Code).

LSAP Update and ISI Project

The LSAP Update, including the ISI project, would also result in new vehicle trips that would increase traffic volumes along affected local roadways near and around the LSAP plan area. This traffic would include passenger vehicles and delivery trucks. The traffic volume increases generated by the land uses developed under the LSAP Update, including the ISI project, would result in increases in traffic noise levels along affected roadways. Table 3.11-8 shows modelled traffic noise levels for existing conditions and with development of the LSAP Update, including the ISI project, as well as the resulting incremental increase in traffic noise levels. See Appendix F for further details on traffic-noise modeling inputs and parameters.

Table 3.11-8 Summary of Modeled Existing Traffic Noise Levels

Roadway Segment	L_{dn} at 75 feet from Center of Near Direction of Travel (dB)		Increase (dB)
	Existing Conditions	Existing-Plus-Buildout Conditions	
Kifer Road between Wolfe Road and Commercial Street	64.4	65.2	0.8
Kifer Road between Commercial Street and Semiconductor Drive	64.9	66.1	1.1
Kifer Road between Semiconductor Drive and Lawrence Expressway	65.9	66.9	1.0
Kifer Road between Lawrence Expressway and Corvin Drive	66.5	66.7	0.2
Lawrence Expressway between Tasman Drive and Sandia Avenue/Lakehaven Drive	72.5	72.6	0.1
Lawrence Expressway between Oakmead Parkway and Arques Avenue	73.6	73.7	0.2
Lawrence Expressway between Arques Avenue and Kifer Road	74.4	74.5	0.1
Lawrence Expressway between Kifer Road and Monroe Street	75.1	75.2	0.1
Wolfe Road/Fair Oaks Avenue between Duane Avenue and Stewart Drive	62.7	62.9	0.2
Wolfe Road between Stewart Drive and Arques Avenue	64.6	64.8	0.2
Wolfe Road between Arques Avenue and Kifer Road	64.6	64.8	0.2
Wolfe Road between Kifer Road and Evelyn Avenue	67.7	67.7	0.1
Wolfe Road between Evelyn Avenue and Reed Avenue	66.6	66.7	0.1
Fair Oaks Avenue between Evelyn Avenue and Old San Francisco Road/Reed Avenue	64.5	64.7	0.1
Evelyn Avenue between Sunnyvale Avenue and Fair Oaks Avenue	60.6	60.6	0.0
Evelyn Avenue between Fair Oaks Avenue and Wolfe Road	60.3	60.3	0.0
Arques Avenue between Wolfe Road and Lawrence Expressway	64.7	64.7	0.0
Central Expressway between Corvin Drive and Bowers Avenue	73.0	73.1	0.1

Notes: L_{dn} = day-night noise level; dB = decibels.

All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow, and does not account for shielding of any type or finite roadway adjustments. For additional details, refer to Appendix F for detailed traffic data, and traffic-noise modeling input data and output results.

Source: Data modeled by Ascent Environmental in 2020

As shown in Table 3.11-8, predicted increases in traffic noise levels increases associated with development under the LSAP Update, including the ISI project, would not exceed any of the Sunnyvale General Plan's incremental noise increase standards, which are shown in Table 3.11-4. Moreover, none of the traffic noise increases would be perceptible because they would not exceed 3 dB. Therefore, traffic noise levels associated with implementation of the LSAP Update and the ISI project would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

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3.12 POPULATION, EMPLOYMENT, AND HOUSING

This section provides a summary of the socioeconomic conditions described in Section 3.2, "Population and Housing," of the 2016 LSAP EIR and evaluates the potential for impacts associated with the LSAP Update and ISI project. The 2016 LSAP EIR concluded that there would be no impact associated with displacement of persons or housing (Impact 3.2-2) and a less-than-significant impact because of increases in population and housing demand (Impact 3.2-1). The adopted LSAP boundaries ultimately did not include sites with existing residential uses, except for one townhome development on Buttercup Terrace (at Willow Avenue). There are no changes proposed to the zoning or density of this site as part of the LSAP Update.

Comments submitted in response to the Notice of Preparation (see Appendix A) expressed support for increased housing options, including affordable housing, within the plan area due to proximity to employment centers and transit.

3.12.1 Regulatory Setting

The regulatory information provided on pages 3.2-3 through 3.2-5 of the 2016 LSAP EIR describes the role of the Association of Bay Area Governments (ABAG) in determining regional housing needs and preparation of the regional transportation plan and sustainable community strategy; as well as the applicable policies in the City of Sunnyvale General Plan. As indicated on page 3.2-3 of the 2016 LSAP EIR, ABAG has determined that the City of Sunnyvale had a Regional Housing Needs Assessment (RHNA) allocation of 5,452 units distributed among the following income groups: 1,640 very low income; 906 low income; 932 moderate income; and 1,974 above-moderate income units. The City's current Housing Element was adopted in December 2014 and addresses the 2015-2023 RHNA requirements. According to the City's Housing Element, there is sufficient acreage zoned at appropriate levels to allow for development of ABAG's housing allocation of 5,452 units.

Relevant updates to local regulatory setting that have been made since certification of the 2016 LSAP EIR and subsequent adoption of the LSAP are described below.

CITY OF SUNNYVALE GENERAL PLAN

Land Use and Transportation Element (LUTE) Chapter

The City's LUTE was updated in April 2017 and includes the following policies related to housing and employment:

- **Policy LT-1.2:** Minimize regional sprawl by endorsing strategically placed development density in Sunnyvale and by utilizing a regional approach to providing and preserving open space for the broader community.
- **Policy LT-1.2a:** Promote transit-oriented and mixed-use development near transit centers such as Lawrence Station.
- **Policy LT-1.3:** Contribute to a healthy jobs-to-housing ratio in the region by considering jobs, housing, transportation, and quality of life as inseparable when making planning decisions that affect any of these components.
- **Policy LT-1.4:** Coordinate with adjacent cities on local land use and transportation planning.
- **Policy LT-3.1:** Use land use planning, including mixed and higher-intensity uses, to support alternatives to the single-occupant automobile such as walking and bicycling and to attract and support high investment transit such as light rail, buses, and commuter rail.
- **Policy LT-6.2:** Limit the intrusion of incompatible uses and inappropriate development in and near residential neighborhoods, but allow transition areas at the edges of neighborhoods.
- **Policy LT-6.2a:** Where appropriate, use higher-density residential and higher-intensity uses as buffers between neighborhood commercial centers and transportation and rail corridors.

- **Policy LT-7.2:** Determine the appropriate residential density for a site by evaluating the site planning opportunities and proximity of services (such as transportation, open space, jobs, and supporting commercial and public uses).
- **Policy LT-7.3:** Encourage the development of housing options with the goal that the majority of housing is owner-occupied.
- **Policy LT-7.5:** Consider the impacts of all land use decisions on housing affordability and on the housing needs of special needs groups in Sunnyvale.
- **Policy LT-8.4:** Promote compact, mixed-use, and transit-oriented development in appropriate neighborhoods to provide opportunities for walking and biking as an alternative to auto trips.
- **Policy LT-10.2:** Support public and private efforts in and around Sunnyvale to acquire, develop, and maintain open space and recreation facilities and services for public use.
- **Policy LT-11.1:** Provide existing businesses with opportunities to grow in Sunnyvale and provide opportunities to expand into new technologies.
- **Policy LT-11.4:** Participate in regional efforts to respond to transportation and housing problems caused by economic growth in order to improve the quality of life and create a better environment for businesses to flourish.
- **Policy LT-11.4a:** Support land use policies to achieve a healthy relationship between the creation of new jobs and housing.
- **Policy LT-12.4:** Attract and retain a diversity of commercial enterprises and industrial uses to sustain and bolster the local economy and provide a range of job opportunities.
- **Policy LT-12.4a:** Promote a variety of commercial, retail, and industrial uses, including neighborhood shopping, general business, office, clean technology, and industrial/research and development.
- **Policy LT-12.4b:** Ensure that rezoning of industrial or commercial areas and sites will not significantly hurt the community's economic base.
- **Policy LT-12.5:** Encourage land uses that generate revenue while preserving a balance with other community needs, such as housing.
- **Policy LT-12.7:** Maintain an adequate supply of land zoned for office, industrial, and retail development to meet projected needs.
- **Policy LT-13.3:** Use density and design principles, such as physical transitions, between different land uses to buffer between sensitive uses and less compatible uses.
- **Policy LT-13.3a:** When making land use decisions, anticipate and avoid whenever practical the incompatibility that can arise between dissimilar uses such as the encroachment of residential uses into business areas.
- **Policy LT-13.9:** Maintain areas of Class B and C buildings to support all types of businesses and provide a complete community.
- **Policy LT-14.1:** Prepare specific area plans and special zoning tools (including, but not limited to specific plans, precise plans, design guidelines, specialized zoning, and sense of place plans) to guide change in areas that need special attention.
- **Policy LT-14.2:** Support the following adopted specialized plans and zoning tools, and update them as needed to keep up with evolving values and new challenges in the community Downtown Specific Plan, Lakeside Specific Plan, Arques Campus Specific Plan, Lawrence/101 Site Specific Plan, Precise Plan for El Camino Real, Moffett Park Specific Plan, Peery Park Specific Plan, and Lawrence Station Area Plan.

- **Policy LT-14.5:** Use the Industrial-to-Residential (ITR) combining district to help meet the community's housing needs for all ages and economic sectors and balance its use with maintaining a healthy economy and employment base. ITR areas include the Lawrence Station Area.
- **Policy LT-14.5b:** During the transition from industrial to residential uses, anticipate and monitor compatibility issues between residential and industrial uses. Identify appropriate lead departments and monitoring strategies for each compatibility issue.
- **Policy LT-14.5f:** Rezone industrial sites for conversion to residential uses only after environmental remediation sufficient to enable residential use of the sites is completed and any deed restrictions are removed from subject properties. Such sites may be counted toward RHNA obligations after environmental remediation is completed and any deed restrictions are removed.
- **Policy LT-14.7a:** Require any future study to change an area from industrial to residential to include a full evaluation of the economic and fiscal impacts of converting an industrial area to residential uses, including the potential impacts on community facilities, municipal services, and schools.
- **Policy LT-14.8b:** Establish zoning incentives, density bonuses, or other land use tools where higher development potential may be allowed based on contributions toward desired community benefits.

Housing Element

- **Policy HE-1.1:** Encourage diversity in the type, size, price and tenure of residential development in Sunnyvale, including single-family homes, townhomes, apartments, mixed-use housing, transit-oriented development and live-work housing.
- **Policy HE-1.2:** Facilitate the development of affordable housing through regulatory incentives and concessions, and/or financial assistance.
- **Policy HE-3.1:** Monitor all regulations, ordinances, departmental processing procedures and fees related to the rehabilitation and construction of housing units to assess the impact on housing costs and/or future supply.
- **Policy HE-4.1:** Provide site opportunities for development of housing that responds to diverse community needs in terms of density, tenure type, location and cost.
- **Policy HE-4.2:** Continue to direct new residential development into specific plan areas, near transit, and close to employment and activity centers.
- **Policy HE-4.6:** Provide expanded areas for higher density housing through the conversion of underutilized industrial areas to residential use, if the sites are fit for residential uses (i.e. no health hazards exist).
- **Policy HE-6.1:** Continue efforts to balance the need for additional housing with other community values, including preserving the character of established neighborhoods, high quality design, and promoting a sense of identity in each neighborhood.
- **Policy HE-6.7:** Continue to permit and encourage a mix of residential and job-producing land uses, as long as there is neighborhood compatibility and no unavoidable environmental impacts.

LAWRENCE STATION AREA PLAN

The adopted LSAP includes the following policies related to housing and employment:

- **Policy LU-P2:** Allow existing businesses to remain and prosper as legal conforming uses.
- **Policy LU-P3:** Allow transition to higher density transit-supportive uses as opportunities arise through turnover of businesses or property ownership.
- **Policy LU-P4:** Establish appropriate levels of development for employment and residential uses to ensure a balance exists in the plan area. The City Council should review the thresholds for each use type as redevelopment occurs to ensure a balance remains.

- **Policy H-P1:** Encourage a diverse mix of housing types, including ownership, rental, affordable and housing for seniors.
- **Policy H-P2:** Prioritize the provision of affordable housing in the Lawrence Station area.
- **Policy H-P3:** Provide City-based incentives to promote development of affordable housing.

3.12.2 Environmental Setting

The environmental setting relative to population and housing provided on pages 3.2-1 through 3.2-3 of the 2016 LSAP EIR is relevant to understanding the effects of the LSAP modifications. As indicated on page 3.2-1 of the 2016 LSAP EIR, there are an estimated 1,200 residential units in the original study area and an assumed residential population of 3,204 using a 2.67 persons per unit factor from California Department of Finance (DOF) 2014 data for the City. The adopted LSAP boundaries ultimately did not include the majority of these existing residential units. At the time of the 2016 adoption, the LSAP boundaries included only one existing residential site, a 16-unit townhome development on Buttercup Terrace (at Willow Avenue). There are no residences on the ISI site. In 2016, the DOF estimated that the population of the City was 148,372 people, a 1.2 percent increase from the year prior. This rate of growth is considered reflective of the fully built out nature of the City (Caneghi-Nakasako & Associates 2017). The DOF estimated that the population of the City in 2019 was 156,503 people, a 0.5 percent increase from the year prior (DOF 2020). The updated LUTE estimates a population of 174,500 persons under the City's 2035 buildout scenario (City of Sunnyvale 2017: 3-8).

Additional information about employment and jobs-housing balance is provided below.

EMPLOYMENT AND EMPLOYMENT CENTERS

Employment sectors within Santa Clara County include manufacturing; professional, scientific, and technical services; health care; retail; and educational services. Some of the largest employers are associated with the computer industry such as Adobe, Apple, and Hewlett-Packard; hospitals such as the VA Medical Center, Kaiser Permanente, and the San Jose Medical Center; space and aerotech, such as Lockheed Martin; and educational facilities such as San Jose State University and Stanford University School of Medicine. Santa Clara County and the City of Sunnyvale have been experiencing strong employment conditions (Caneghi-Nakasako & Associates 2017). As a result, the city is expected to add 16,335 jobs between 2020 and 2040 (ABAG 2018). The workforce is relatively young, well-educated, and relatively affluent. Approximately half the workforce holds college degrees (Valbridge 2017). The updated LUTE estimates a total of 123,000 jobs would be available under the City's 2035 buildout scenario, an additional 41,010 jobs from 2014 (Sunnyvale 2017: 3-8).

JOBS/HOUSING BALANCE

The jobs/housing balance is defined as the ratio of the number of jobs to the number of housing units in an area. Jobs and housing are balanced when there are an equal number of employed residents and jobs in an area, with a ratio of approximately 1.0.

Employment growth in the City has outpaced residential growth, resulting in strong demand for housing. Jobs in the City increased by more than 10,700 between 2010 and 2017, representing a 14 percent increase in employment. During the same period, the City's housing supply increased by only about 2,600 units, or 10 percent growth. These trends of housing growth falling short of job growth are also found throughout Santa Clara County (EPS 2019). As a result, much of the city's workforce commutes from outlying areas.

According to ABAG forecasts, the City is expected to add 27,230 households between 2020 and 2040 (ABAG 2018). Rent growth in the portion of the City encompassing the LSAP has been strong, even as LSAP's ZIP code area (which extends beyond the LSAP boundaries) added roughly 1,000 new multifamily units, nearly half of all the units added in the City since 2010. At present, another 1,393 housing units are either under construction or approved within or

immediately adjacent to the LSAP boundaries, but these units are expected to be absorbed very quickly given the strong demand for housing in the City and region. Strong demographic growth spurring housing demand coupled with rising rents indicates a favorable market for continued higher density multifamily development (EPS 2019).

The updated LUTE estimates a job-to-housing unit ratio of 1.69 under the City's 2035 buildout scenario, an increase from the City's 2014 job-to-housing unit ratio of 1.44 (Sunnyvale 2017: 3-8).

3.12.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The following impact analysis is based on a review of the 2016 LSAP EIR, as well as information about the current demand for housing, employment, and jobs-housing balance in the region.

THRESHOLDS OF SIGNIFICANCE

A population, employment, and housing impact is considered significant if implementation of the project would do any of the following:

- induce substantial unplanned population growth in an area, either directly or indirectly; and/or
- displace substantial numbers of existing people or homes, necessitating the construction of replacement housing elsewhere.

ISSUES NOT DISCUSSED FURTHER

Displacement of a Substantial Number of Persons or Housing

The proposed land use changes for the LSAP would support the development of increased densities and intensities of mixed uses, affordable housing, and transit-oriented development, which would increase housing supply in the City. As indicated in the 2016 LSAP EIR (Impact 3.2-2), the LSAP also includes an "Anti-Displacement" component. This avoided displacement of lower-income residents, and no upzoning or increases in allowable densities on sites currently occupied by housing would occur. The adopted LSAP boundaries ultimately did not include sites with existing residential uses, except for one townhome development on Buttercup Terrace (at Willow Avenue). There are no changes proposed to the zoning or density of this site as part of the LSAP Update. Because the adopted LSAP boundaries include only one existing residential site (at time of 2016 adoption) where no changes are proposed, subsequent projects that could be developed under the LSAP would not displace substantial numbers of housing units or people and would not necessitate the construction of replacement housing elsewhere. Therefore, no impact would occur, and this issue is not discussed further.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.12-1: Induce Substantial Unplanned Population Growth

The 2016 LSAP EIR determined buildout of residential units under the LSAP would increase the population in the plan area within the general range of planning assumptions of the City's General Plan and that additional office/R&D/industrial uses proposed under the LSAP would further increase employment opportunities in the plan area. The 2016 LSAP EIR concluded that physical environmental effects of plan area growth were addressed in the DEIR and the LSAP would not substantially or indirectly induce population growth beyond current General Plan growth assumptions, resulting in a less-than-significant impact. The LSAP Update would provide additional housing opportunities within the LSAP. These additional units would serve an existing housing shortage in the region and would be developed over time in response to market demand. The ISI project would not exceed the amount of total office/R&D development allowable under the adopted LSAP. Therefore, the ISI project would not be anticipated to generate employment opportunities that exceed the planned capacity of the LSAP or induce substantial unplanned population growth. There is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. This impact would be **less than significant**.

Impact 3.2-1 of the 2016 LSAP EIR determined buildout of residential units under the LSAP could increase the population in the plan area by approximately 5,600 people, which slightly exceeds, but was still in the general range of planning assumptions when the EIR was adopted. As indicated in the LSAP, redevelopment of individual parcels would occur incrementally and would be market-driven. The EIR also noted that LSAP growth was assumed in the overall growth anticipated in the proposed LUTE Update (adopted in April 2017). The 2016 LSAP EIR also determined the additional office/R&D/industrial uses proposed under the LSAP would further increase employment opportunities in the City and that some of the new jobs would likely be filled by those already residing in the City and the surrounding area where commute times and distances are relatively short. However, for those wishing to relocate into the City, the potential increase in housing demand in the City and the plan area, specifically, could be accommodated by the new residential units. The physical environmental effects of this growth are addressed in this Draft EIR. Therefore, the LSAP would not substantially or indirectly induce population growth beyond current General Plan growth assumptions, and the impact would be less than significant.

It should be noted that the adopted LSAP allows a flexible mix of uses at a range of densities. As such, the number of residential units and amount of non-residential space could vary considerably. To ensure that long-term development does not exceed the carrying capacity of infrastructure systems and the environment, a development threshold for office/R&D and residential units was established under the adopted LSAP. As the area approaches development thresholds, further environmental analysis would need to be conducted for subsequent development proposals before additional development can proceed.

LSAP Update

When the LSAP was adopted by the City Council in 2016, the Council requested a study to identify additional housing opportunities within the LSAP area. In 2018, as a result of the study, the Council selected a preferred LSAP alternative that would increase the incentive density allowance north of the railroad tracks and expand the area where housing may be considered to include the commercial properties at Willow Avenue and Reed Avenue, and to include industrial properties bounded by Calabazas Creek, Kifer Road, Uranium Drive, and the railroad tracks. This would expand residential capacity by an additional 3,612 units for a total allowable 5,935 units. Under an amended LSAP with higher density residential allowances, the City does not propose any change to the amount of nonresidential uses allowed under the LSAP. In line with City's existing affordable housing policies, either 12.5 percent of the for-sale units developed in the LSAP would be affordable to moderate-income (120 percent of area median income) households and 15 percent of the rental units would be affordable to low- and very low-income (80 and 50 percent of area median income, respectively) households or developers may comply with the City's affordable housing programs through in-lieu fees instead of building affordable units, subject to City Council approval (EPS 2020).

Redevelopment of individual parcels within the LSAP would occur incrementally and would be market-driven. Market transactions and achievable rents indicate that many nonresidential uses in the LSAP area continue to have high value as workplaces in the strong Silicon Valley market, while residential development currently has high development costs that constrain the ability to buy out existing workplaces to clear land for residential uses. The estimated residual land value of a project in the adopted LSAP is approximately $3.0 million per acre. The estimated residual land value of a project with the LSAP Update is approximately $3.9 million per acre. A review of available data shows nonresidential LSAP properties transacting at per acre prices well above the estimated $3.0-$4.0 million per acre value for residential development. That residual land values for residential development are lower than nonresidential building market values suggests that demand to convert existing LSAP real estate to residential will be modest in the near term (EPS 2020). The physical environmental effects of developing housing in the plan area are addressed in the 2016 LSAP EIR and in this SEIR.

As indicated above, the LUTE was updated in 2017 to include the population and employment projections in the adopted LSAP. The LSAP Update would provide housing that exceeds the projections in the City of Sunnyvale's current planning documents, including the General Plan. Similar to the adopted LSAP, these additional units would serve an existing housing shortage, would be developed over time in response to market demand, and would not induce unplanned population growth. This would be consistent with LSAP policies H-P1, H-P2, and H-P3 that identify the need to promote housing. Therefore, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. This impact would be **less than significant**.

ISI Project

As of 2019, there are 307 ISI employees working within the ISI site. At buildout, the ISI project would be designed to serve approximately 3,500 employees. There is a potential for expanded employment opportunities to induce population growth and associated demand for housing within the LSAP, the City of Sunnyvale, and greater Santa Clara County. Under the adopted LSAP, the anticipated demand for employment, housing, and retail has been balanced with the intent of creating a plan for population growth wherein employees have access to community features within the plan area and easy access to transit. The ISI project would not exceed the amount of new office/R&D development identified in the adopted LSAP. As indicated in Chapter 2, "Project Description," a total of 1.2 million gross sf of net new office/R&D development is allowable within the plan area, with 908,378 sf remaining. With implementation of the proposed ISI Corporate Campus, a remaining balance of 123,503 sf net new office/R&D development would be available under the adopted LSAP. Therefore, the ISI project would not be anticipated to generate employment opportunities that exceed the planned capacity of the LSAP or induce substantial population growth. No new significant effect would occur, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. Therefore, due to consistency with the adopted LSAP, the planned increase in residential development under the LSAP Update, and proximity to the Caltrain station, the ISI project would result in a **less-than-significant impact**.

Mitigation Measures

No mitigation is required.

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3.13 PUBLIC SERVICES AND RECREATION

This section analyzes and evaluates the new potential impacts of the LSAP Update and ISI project to affect availability, service level, and/or capacity of public services, including fire-protection services, police-protection services, parks and recreation, and public schools, and, if such an effect is determined to occur, whether new or expanded facilities would be required that could result in a potentially significant impact to the environment. Other publicly provided utility services, such as water and wastewater treatment, stormwater management, electricity, and natural-gas services, are addressed in Section 3.15, "Utilities and Service Systems."

The 2016 LSAP EIR included Section 3.11, "Public Services and Utilities," which evaluated the potential effects of the LSAP on fire protection and emergency medical services, law enforcement services, public schools, parks and recreation, water supply and infrastructure, wastewater conveyance and treatment, solid waste, and energy. The 2016 LSAP EIR concluded that there would be less-than-significant impacts related to increased demand for fire protection and emergency medical services (Impact 3.11.1.1), law enforcement (Impact 3.11.2.1), public schools (Impact 3.11.3.1), and parks and recreation facilities (Impact 3.11.4.1). No mitigation was required for these less-than-significant impacts.

No comments regarding public services and recreation were received in response to the NOP (see Appendix A).

3.13.1 Regulatory Setting

The regulatory information provided on pages 3.11-2 through 3.11-12 of the 2016 LSAP DEIR remains applicable to this analysis and includes a description of the California Fire Code; California Health and Safety Code, California Occupational Safety and Health Administration, fire hazard severity laws; City Fire Code; City Emergency Plan; Leroy F. Greene School Facilities Act of 1998 (SB 50); Quimby Act; and applicable City General Plan policies and Municipal Code requirements. Supplemental regulatory information relevant to understanding the potential impacts of the LSAP Update and ISI project on public services and recreation is provided below.

STATE

California Fire Code

The 2019 California Fire Code, which incorporates by adoption the 2018 International Fire Code, contains regulations related to construction, maintenance, and use of buildings. Topics addressed in the California Fire 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. The California Fire Code contains specialized technical regulations related to fire and life safety.

California Building Standards Code

Energy consumption of new buildings in California is regulated by State Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 2, Chapter 2-53 (Title 24). Title 24 applies to all new construction of both residential and nonresidential buildings, and regulates energy consumed for heating, cooling, ventilation, water heating, and lighting. The 2016 Building Energy Efficiency Standards have improved efficiency requirements from previous codes and the updated standards are expected to result in a statewide energy consumption reduction.

Effective January 1, 2011, CALGreen became California's first green building standards code. It is formally known as the California Green Building Standards Code, Title 24, Part 11, of the California Code of Regulations. CALGreen establishes mandatory minimum green building standards and requirements for construction and demolition (C&D) material diversion. Under Section 5.408 of the CALGreen Code, projects involving C&D activities are required to recycle and/or salvage for reuse a minimum of 65 percent of their nonhazardous C&D material. Applicable projects, such as the LSAP Update and ISI project, are required to prepare and implement a construction waste management plan.

LOCAL

City of Sunnyvale General Plan

The City's General Plan (City of Sunnyvale 2011) includes the following goals and policies which may be relevant to public services and recreation:

- **Policy OSG-1:** Establish a system of parks and public spaces connected by green corridors and linear parks that serve and connect both new residential development and new non-residential development.
- **Policy SN-3.1:** Provide rapid and timely response to all 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.

City of Sunnyvale Municipal Code

Chapter 18.10, Parks and Open Space Dedication, of the City's Municipal Code establishes, as a condition of approval of any final subdivision map or parcel map, that the subdivider must dedicate land, pay a fee in lieu thereof, or both, at the City's option, for park or recreational purposes. The current land requirement is 5.0 acres per 1,000 residents, which became effective July 1, 2014. Specific acreage requirements based on residential unit density in a subdivision vary according to the type of development. Similar requirements in Chapter 19.74 apply for rental housing projects.

The City's Fire Code is found under Title 16, Chapter 16.52 Fire Code, of the Municipal Code, and adopts by reference the 2019 California Fire Code and select appendices. The Fire Code regulates, among other things, issuance of permits where operations or business or the installation or modification of any systems regulated under the Fire Code are planned (Section 16.52.105), application and collection of applicable fire permit fees (Section 16.52.113), and installation of residential and commercial automatic sprinkler systems (Section 16.52.903).

3.13.2 Environmental Setting

The environmental setting provided on pages 3.11-1 through 3.11-11 of the 2016 LSAP DEIR remains applicable to this analysis. The following section updates the project's environmental setting since the adopted 2016 LSAP EIR and includes additional information applicable to the project's impact analysis.

FIRE PROTECTION AND LAW ENFORCEMENT

The Sunnyvale Department of Public Safety provides fully integrated public safety services including Police, Fire, and Emergency Medical Services. This model of service delivery requires each sworn officer to be fully trained in all three disciplines. Public Safety Officers (PSOs) are assigned to a specific bureau (Police, Fire or Special Operations), but can be called upon to provide cross bureau services daily. PSOs assigned to the Bureau of Police Services are deployed to emergency medical services calls requiring lifesaving measures, as well as all structure fires. Each carries specialized equipment in their patrol vehicles, which allow them to provide non-routine patrol duties such as firefighting and emergency medical services. PSOs assigned to the Bureau of Fire Services are equipped with law enforcement personal equipment and can be reassigned to a law enforcement incident as needed. The cross-functional service model extends into the Communications Center where dispatchers are trained in all three disciplines, allowing for a single point of contact and immediate assistance upon receipt of a 911 call. In addition to police and fire services, the Department provides a multitude of other services such as Fire Prevention, Animal Control, Vehicle Abatement, Crime Prevention, Neighborhood Resource Program, Records Unit and Neighborhood Preservation. These services are provided through a professional staff of over 285 full-time employees and volunteers (City of Sunnyvale 2018).

The Fire Bureau has six stations. The closest Sunnyvale Fire Bureau stations are Station #2, located at 795 E. Arques Avenue (approximately 0.5 mile west of the plan area at N. Wolfe Road) and Station #4, located at 996 South Wolfe Road, approximately 0.5 mile southwest of the plan area. The Santa Clara Fire Department has a station just north of Kifer Road at 3011 Corvin Drive, approximately 725 feet north of the project area.

The Department of Public Safety participates in an emergency medical services system that is integrated into the larger Santa Clara County Emergency Medical Services System. This system provides Basic Life Support response by Department of Public Safety resources, followed by Advanced Life Support response by the County of Santa Clara.

SCHOOLS

The plan area is in the boundaries of two school districts: the Sunnyvale School District and the Fremont Union High School District. The portion of the plan area generally between Reed Avenue on the south and Kifer Road on the north, where most of the new high-density residential development could occur under the LSAP, is in the attendance boundary of Ellis Elementary School. Students from Ellis Elementary attend Sunnyvale Middle School, both of which are in the Sunnyvale School District. In 2018-2019, the enrollment at Ellis Elementary School was 787 students (Ed-Data 2020a) and 1,211 students attended Sunnyvale Middle School (Ed-Data 2020b).

Students in this area are in the attendance boundary of Fremont High School, one of several high schools in the Fremont Union High School District. In 2018-2019, 2,081 students attended Fremont High School (Ed-Data 2020c). The enrollment capacity for Fremont High School in 2016-2017 was 2,232 students (Fremont Union High School District 2016). The Fremont Union High School District Measure K Bond program was designed to address future projected enrollment needs. The Measure K Bond program includes the construction of additional classrooms and other facilities that would increase capacity and reduce the potential for overcrowding.

The Sunnyvale School District currently levies fees of $2.34 per square foot for residential units and $0.38 per square foot for commercial/industrial office space (Sunnyvale School District 2020). The Fremont Union High School District collects fees of $1.44 per square foot for residential units and $0.23 per square foot for most commercial uses in Sunnyvale (Fremont Union High School District 2020).

RECREATION

About 765 acres, over 7 percent of the area within Sunnyvale's incorporated city limits, is devoted to park and recreation facilities owned or maintained by the City for public use, including 20 neighborhood parks (223 acres) and nine special use facilities (355 acres). The City operates 38 tennis courts, two golf courses, and four swimming pools, including the Fremont Pool constructed in cooperation with the Fremont Union High School District. The City operates 135 acres of playfields, of which 103 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 are in Sunnyvale. Because the City is largely built out, there is little additional undeveloped or vacant land that could be used to increase the acreage of public park and recreation facilities beyond 745 acres.

There are no public parks or recreational facilities in the plan area. The closest public facilities in Sunnyvale are Ponderosa Park and Fair Oaks Park. There are, however, two recently approved private parks with public access easements in the plan area: at the mixed-use project at 1120-1130 Kifer Road and at the former Calstone/Peninsula Building Materials site at 1155 Aster Avenue.

3.13.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

Evaluation of potential public service impacts are based on applicable City standards policies and a review of documents pertaining to the proposed project, including the 2016 LSAP EIR. Impacts on public services that would result from the project were identified by comparing existing service capacity and facilities against future, new, or renovated facilities, the construction of which could have physical effects on the environment.

THRESHOLDS OF SIGNIFICANCE

A public services and recreation impact is considered significant if implementation of the project would do any of the following:

- result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:
  - fire,
  - police protection,
  - schools,
  - parks, and
  - other public facilities;
- 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; and/or
- include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

ISSUES NOT DISCUSSED FURTHER

All thresholds discussed above are evaluated in this SEIR.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.13-1: Increased Demand for Fire Protection, Police Protection, and/or Emergency Medical Services

The 2016 LSAP EIR determined that buildout of the LSAP would increase demand for fire, police, and emergency services; increase staffing needs to address increased demand would be addressed through required payment of applicable City development fees by future project applicant's within the LSAP. In addition, public uses such as a police or fire stations are considered a permitted use in all LSAP land use designations and the 2017 LSAP EIR concluded that the LSAP itself would not trigger the need to construct new public service facilities. Implementation of the LSAP Update and ISI project would add additional residents and employees to the LSAP, which would increase demand for fire protection, police protection, and emergency medical services. However, the ISI project would fall within the remaining net new Office/R&D development cap allowable under the adopted LSAP; therefore, increased demand for public services associated with the ISI project were accounted for in the 2016 LSAP EIR. Applicants of subsequent development projects within the LSAP, including the ISI project, would be required to pay applicable City development fees to pay for the project's fair share of personnel and existing facilities. In addition, subsequent development projects within the LSAP area would generate increased tax revenues, which could be used to fund additional personnel and facilities. Thus, implementation of the LSAP Update and ISI project would not result in a new significant effect on public services and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Both the LSAP Update and the ISI project would result in a **less-than-significant** impact to fire protection, police protection, and emergency medical services.

Impacts 3.11.1.1 and 3.11.2.1 of the 2016 LSAP EIR evaluated whether the LSAP would increase the demand for fire protection and emergency medical services (Impact 3.11.1.1) or police protection (Impact 3.11.2.1). The analyses noted that while the City does not maintain a staffing ratio goal based directly on population or employment, additional residents, and employees in the LSAP area would increase the need for fire protection and police protection services.

Sunnyvale General Plan policies direct that a rapid and timely response be provided for all emergencies (Policy SN-3.1) and that equipment and facilities be provided and maintained to meet reasonable standards (Policy SN-5.1). Funding for these public services is derived from the City's General Fund, which is based primarily on property tax and sales tax revenues. As buildout of the LSAP occurs, there would be an increase in these revenues, which could be used to fund additional fire, police, or emergency medical operations. To address each subsequent project's proportionate share of fire protection, police protection, and emergency medical services, project applicants would pay applicable City development fees. Any additional fire or law enforcement facilities constructed by the City would be proposed by the City at the time they are needed and would undergo separate environmental review. The 2016 LSAP EIR notes that public uses such as a fire station, police station, or emergency medical facility would be allowed under the LSAP, subject to review and City approval. The impact analysis also noted that it was not expected that the LSAP itself would trigger the need to construct a new fire station, police station, or emergency medical facility. The impacts were concluded to be less than significant.

LSAP Update

Implementation of the LSAP Update would increase the allowable housing potential within the LSAP, resulting in additional new residents beyond the number anticipated in the 2016 LSAP EIR. Impacts associated with development proposed within the LSAP boundary expansion area are analyzed in detail under the ISI project component (discussed below). As discussed above, Sunnyvale General Plan policies require adequate facilities and equipment to respond to emergencies and meet reasonable standards. Any additional fire or law enforcement facilities constructed by the City would be proposed by the City at the time they are needed and would undergo separate environmental review. The 2016 LSAP EIR programmatically evaluated the construction impacts of potential public service facilities in regard to air quality, noise, and water quality (i.e., Sections 3.5, 3.6, and 3.8 of the 2016 LSAP EIR, respectively). Similar to the adopted LSAP, individual development projects under the LSAP Update would be evaluated at a project-level to make sure adequate personnel are available to serve the project. Therefore, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. Similar to the adopted LSAP, future development projects proposed under the LSAP Update would be required to adhere to Sunnyvale General Plan policies and pay City development fees. Therefore, potential impacts on fire protection, police protection, and emergency medical services would remain **less than significant** with implementation of the LSAP Update.

ISI Project

The ISI project would add additional employees to the LSAP area, which may increase fire protection, police protection, and emergency medical service demand in the area. As discussed above, the ISI project would fall within the remaining allowable net new Office/R&D development cap of the adopted LSAP; therefore, increased demand for public services associated with the ISI project were accounted for in the 2016 LSAP EIR. In addition, Sunnyvale General Plan policies require adequate facilities and equipment to respond to emergencies and meet reasonable standards, and funding for these public services is derived from the City's General Fund, which is based primarily on property tax and sales tax revenues. Implementation of the ISI project would increase City revenues, which could be used to fund additional fire, police, or emergency medical operations. Further, the ISI project applicant would pay applicable City development fees. While the ISI project would add additional employees to the area, compliance with Sunnyvale General Plan policies would ensure that there is adequate fire protection, police protection, and emergency medical services available to serve additional employees in the area. Therefore, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. The ISI project would result in **less-than-significant** impacts to fire protection, police protection, and emergency medical services.

Mitigation Measures

No mitigation is required.

Impact 3.13-2: Demand for Public Schools

The 2016 LSAP EIR determined that buildout of the LSAP could result in an increase in student enrollment in Sunnyvale schools, but that subsequent projects developed under the LSAP would be required to pay applicable development fees, which would be used by the districts to fund new or expanded facilities. Therefore, the 2016 LSAP EIR concluded impacts of the LSAP on demand for public schools would be less than significant. Updates to the adopted LSAP would add additional residents to the project area, which would generate additional students. Local school districts require that residential and commercial development pay development fees based on building area or number to be used for expansion or construction of new school facilities. The addition of 3,612 dwelling units would generate 795 elementary and middle school students and 361 high school students. Future developments under the LSAP Update would be required to pay impact fees for each additional dwelling unit in the LSAP area, as well as fees based on building area for non-residential uses. The ISI project would fall within the remaining allowable net new Office/R&D development cap of the adopted LSAP; therefore, increased demand for public services associated with the ISI project were accounted for in the 2016 LSAP EIR. Therefore, there is no new significant effect, and the impact is not more severe than the impact identified in the 2016 LSAP EIR. This impact would remain **less than significant** as identified in the 2016 LSAP EIR.

Impact 3.11.3.1 of the 2016 LSAP EIR evaluated whether the residential component of the LSAP could result in an increase in student enrollment in Sunnyvale schools. Using a student generation rate of 0.22 students per unit for elementary and middle schools and 0.1 students per unit for high school, the 2016 LSAP EIR analysis calculated that the LSAP's 2,323 units would result in 511 elementary and middle school students and 232 high school students. Elementary and middle school students would attend Ellis Elementary and Sunnyvale Middle School while high school students would attend Fremont High School. The analysis noted that enrollment capacities could be exceeded, but school capacity is not considered a physical impact under CEQA. School districts constantly monitor enrollment and development trends and would address the need for new or expanded facilities. As described in the 2016 LSAP EIR, subsequent projects developed under the LSAP would be required to pay applicable development fees, which would be used by the districts to fund new or expanded facilities. Therefore, the 2016 LSAP EIR concluded impacts of the LSAP on demand for public schools would be less than significant.

LSAP Update

The proposed LSAP Update would increase the allowable housing potential within the LSAP and expand the LSAP boundary. The allowance of 3,612 additional dwelling units within the adopted LSAP boundaries could result in approximately 795 elementary and middle school students and 361 high school students beyond the number anticipated in Impact 3.11.3.1 of the 2016 LSAP EIR. Impacts associated with development proposed within the LSAP boundary expansion area are analyzed in detail under the ISI project component (discussed below). The proposed LSAP Sense of Place Plan would function as a policy document for LSAP improvements and would require new development in the area to implement improvements and/or public amenities. As discussed above, new development is required to pay school impact fees which would be used by school districts to fund new or expanded facilities. Payment of development fees to school districts would ensure that districts have funds to build new or expanded facilities to accommodate students generated in the LSAP area. Therefore, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. Thus, the demand for public schools would remain a **less-than-significant** impact as identified in the 2016 LSAP EIR.

ISI Project

The ISI project is a corporate campus development that would fall within the remaining allowable net new Office/R&D development cap of the adopted LSAP; therefore, increased demand for public schools for this land use was accounted for in the 2016 LSAP EIR. Although the corporate campus would not be anticipated to add students to area school districts, all commercial development would be required to pay applicable development impact fees to local school districts. Therefore, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. Thus, the impact from the ISI project on demand for public schools would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.13-3: Increase Demand on Parks and Recreation Facilities

The 2016 LSAP EIR determined that the LSAP would increase demand for parks and recreational facilities but that subsequent projects within the LSAP area would be required to dedicate land, pay an in-lieu fee, or a combination of both at a ratio of 5 acres per 1,000 residents to offset impacts to parks and recreational facilities. Updates to the adopted LSAP would add additional residents to the project area, which would generate additional need for parks and recreation facilities. For housing densities in the LSAP, 0.009 acre of park dedication is required per dwelling unit. The total need within the LSAP to serve the existing and future population growth would be at least 54 acres of open space (5,935 dwelling units multiplied by 0.009 acre). Developers would be required to dedicate land, pay an in-lieu fee, or a combination of those methods to provide adequate parks and recreation facilities. The ISI project would not add dwelling units or additional residents to the LSAP area. Therefore, there is no new significant effect, and the impact is not more severe than the impact identified in the 2016 LSAP EIR. This impact would remain **less than significant** as identified in the 2016 LSAP EIR.

Impact 3.11.4.1 of the 2016 LSAP EIR evaluated whether the LSAP would increase demand for parks and recreational facilities. Based on a population of 5,622 residents in 2,323 dwelling units, the discussion noted that the LSAP would generate a demand of approximately 28 acres of park and recreational facilities, assuming 5 acres per 1,000 residents. The adopted LSAP includes approximately 32.5 to 39.0 acres of new open spaces and plazas open to the public throughout the LSAP area. The analysis noted that subsequent projects within the LSAP area would be required to dedicate land, pay an in-lieu fee, or a combination of both at a ratio of 5 acres per 1,000 residents. Finally, the analysis noted that typical environmental effects of improvements or construction of parks and recreational facilities were considered in the 2016 LSAP EIR. Overall, impacts on parks and recreational facilities would be less than significant.

LSAP Update

The proposed LSAP modifications would increase the allowable housing potential within the LSAP and expand the LSAP boundary. The allowance of 3,612 additional dwelling units within the adopted LSAP boundaries could result in approximately 8,741 additional residents beyond the number anticipated in Impact 3.11.4.1 of the 2016 DEIR. Impacts associated with development proposed within the LSAP boundary expansion area are analyzed in detail under the ISI project component (discussed below). The proposed LSAP Sense of Place Plan would function as a policy document for LSAP improvements and would require new development in the area to implement improvements and/or public amenities that may include parks and open space. As discussed above, subsequent development within the LSAP area is required to dedicate land or pay in-lieu fees at a ratio of 5 acres per 1,000 residents, or 0.009 acre of park dedication per dwelling unit. Thus, the proposed buildout of the LSAP Update would include 3,612 additional dwelling units and an estimated 8,714 new residents, equaling the need for at least 54 acres of park and recreation area. Dedication of land, payment of in-lieu fees, or a combination of these methods would ensure that there are adequate parks and recreational facilities in the LSAP area. Therefore, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. This impact would remain **less than significant** as identified in the 2016 LSAP EIR.

ISI Project

The ISI project is a corporate campus development that would fall within the remaining allowable net new Office/R&D development cap of the adopted LSAP. These activities would not add dwelling units or additional residents to the LSAP area. Therefore, the ISI project would not require dedication of land or payment of in-lieu fees for parks and recreation facilities. In addition, the ISI project proposes private onsite open space and recreational facilities for its employees as well as a publicly accessible pedestrian-bicycle path adjacent to the Caltrain right-of-way. Thus, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. The impact from the ISI project on parks and recreational facilities would be **less than significant**.

Mitigation Measures

No mitigation is required.

3.14 TRANSPORTATION

This section describes the applicable federal, State, and local transportation regulations and policies and discusses the existing roadway network and transportation facilities in the vicinity of the project. The section summarizes transportation impacts in the Lawrence Station Area Plan (LSAP) plan area, as described in the approved 2016 LSAP EIR, and evaluates the potential transportation impacts resulting from implementation of the LSAP Update and ISI project.

The 2016 LSAP EIR included Section 3.4, "Transportation and Circulation," which evaluated the potential effects of the adopted LSAP. The 2016 LSAP EIR concluded that there would be less-than-significant impacts related to transit facilities, bicycle facilities, pedestrian facilities, design hazards, and emergency access (Impacts 3.4.1, 3.4.2, 3.4.3. 3.4.4, and 3.4.5). The LSAP Draft EIR also concluded that impacts related to traffic operational impacts would be significant and unavoidable with implementation of all feasible mitigation measures. However, pursuant to Senate Bill (SB) 743, Public Resources Code (PRC) Section 21099, and California Code of Regulations (CCR) Section 15064.3(a), generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts and a project's effect on automobile delay shall no longer constitutes a significant impact under CEQA. Additionally, on June 30, 2020, Sunnyvale City Council adopted a resolution and Council Policy (Policy 1.2.8, "Transportation Analysis Policy") establishing VMT as the primary threshold of significance for analysis of transportation impacts under CEQA. Policy 1.2.8, "Transportation Analysis Policy" notes that the City will retain level of service (LOS) as an operational measurement of intersection efficiency but reiterates that a project's effect on LOS (i.e., automobile delay) is no longer considered an environmental impact under CEQA. Therefore, the transportation analysis here-in evaluates impacts using VMT and does not include level of service (LOS) analysis.

Although not addressed in this SEIR, the analysis of traffic operations (i.e., intersection and freeway LOS analysis) for the LSAP Update and ISI project where conducted by Hexagon Transportation Consultants and are included in the *Lawrence Station Area Plan Update Transportation Impact Analysis* (Hexagon Transportation Consultants 2020a) and the *Intuitive Surgical Campus Expansion Transportation Impact Analysis* (Hexagon Transportation Consultants 2020b) attached as Appendix E.

Comments received regarding transportation in response to the notice of preparation (NOP) included a request that transportation impacts to neighboring cities be analyzed, assess bicycle and pedestrian facilities in terms of their availability, assess project effects on future bike/pedestrian plans, and improvements proposed by the project. Additionally, comments were received expressing concerns with bicycle and pedestrian safety, parking, and travel patterns associated with implementation of the project. Because a project's effects on automobile delay no longer constitutes a significant impact under CEQA, comments related to automobile delay (e.g., LOS, congestion) are not addressed here-in. See Appendix A for all NOP comments received.

3.14.1 Regulatory Setting

The Federal and State regulatory setting for transportation provided on pages 3.4-18 through 3.4-21 of the 2016 LSAP EIR remain applicable to this analysis. However, an updated description of the adopted changes to the State CEQA Guidelines pursuant to SB 743 that have occurred subsequent to the approval of the 2016 LSAP EIR are described below. Additionally, since certification of the 2016 LSAP EIR, changes to the Regional and Local regulatory setting have occurred. These changes are described in detail below.

FEDERAL

There are no new federal laws or regulations addressing transportation that are relevant to the project.

STATE

Senate Bill 743

SB 743, passed in 2013, required the Governor's Office of Planning and Research (OPR) to develop new State CEQA guidelines that address traffic metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, "automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any."

In December of 2018, OPR published the most recent version of the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) which provides guidance for VMT analysis. The Office of Administrative Law approved the updated State CEQA Guidelines and lead agencies had an opt-in period until July 1, 2020 to implement the updated guidelines regarding VMT. As of July 1, 2020, implementation of CCR Section 15064.3 of the updated CEQA Guidelines apply statewide.

REGIONAL

Plan Bay Area 2040

In 2017, a limited and focused update of the region's previous integrated transportation and land use plan, Plan Bay Area, was adopted by the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). Plan Bay Area 2040 was developed by MTC and ABAG based on the California Sustainable Communities and Climate Protection Act of 2008, which requires each of the state's 18 metropolitan areas to reduce greenhouse gas emissions from cars and light trucks. Working in collaboration with cities and counties, the plan advances initiatives to support a growing economy, provide more housing and transportation choices, and reduce pollution caused by transportation. Plan Bay Area 2040 focuses growth and development in nearly 200 priority development areas (PDAs). These locations have been identified as appropriate for additional, compact development because of their proximity to public transit. The existing LSAP area is included as a PDA in Plan Bay Area 2040.

LOCAL

City of Sunnyvale Council Policy Manual

Sunnyvale City Council adopted Council Policy 1.2.8, "Transportation Analysis Policy," on June 30, 2020; thus, establishing VMT as the primary threshold of significance for analysis of transportation impacts under CEQA. This policy is designed to provide guidance in the preparation of transportation analysis for land use and transportation projects as part of the environmental review process to comply with CEQA (City of Sunnyvale 2020).

Council Policy 1.2.8 requires that all projects evaluate and disclose transportation-related environmental impacts using VMT as the primary metric, as required by CEQA. Additionally, the policy establishes LOS as an operational measurement of intersection efficiency and all land use transportation projects may be required to perform operational evaluations. However, because a project's effect on automobile delay no longer constitutes a significant impact under CEQA, the LOS analysis is included as Appendix E and is not analyzed in this SEIR.

The following policy requirements related to VMT are applicable to the project:

1. Land Use Projects. For residential and employment projects, projects will use the Countywide Average VMT as the baseline with a VMT reduction threshold set at 15% below the baseline to identify potential transportation impacts and propose mitigations.
2. Exemptions. The requirement to prepare a detailed VMT analysis applies to all projects except the following types as these projects will further the City's goals and policies and will not result in significant transportation impacts.

A. Small Infill Projects (110 daily trips or less).

B. Neighborhood-Serving Retail/Service Development uses (maximum 100,000 square feet total for entire commercial development), similar to uses permitted by right or with a Miscellaneous Planning Permit (MPP) in the C-1 (Neighborhood Business Zoning District) subject to evaluation by the Director of Community Development. Such uses not considered neighborhood-serving include auto dealerships, car wash/repair facilities, drive-thru restaurants/services, restaurants with banquet halls, hotels, and similar uses that have a regional draw.

C. City Facilities such as fire stations, parks, community centers, branch libraries.

D. Restricted Affordable Housing Projects that meet the following:

   (I) For rental developments: At least 25% of the proposed residential units dedicated as affordable to households up to 80% AMI. The developer shall meet the requirements for the City's Rental Inclusionary (SMC Ch. 19.77), and then may provide the remainder of the required units at low income.

   (II) For ownership developments: At least 25% of the proposed residential units dedicated as affordable to households up to 120% AMI. The developer shall meet the requirements for the City's Below Market Rate Ownership Inclusionary (SMC Ch. 19.67).

   (III) For either type of development: The development may utilize the State Density Bonus, however 25% of the total constructed units on site must be deed restricted. Prior to the issuance of any building permit for the project, an Affordable Housing Regulatory Agreement shall be recorded against the parcel(s) which sets rent and occupancy restrictions for fifty-five years and shall run with the land through any change of ownership.

E. Transportation Projects that reduce or do not increase VMT including, but not limited to:

   (I) Roadway maintenance, rehabilitation and safety improvements;

   (II) Installation or reconfigured traffic lanes to provide left-turns, right-turns, etc.;

   (III) Conversion of existing lanes to managed or transit lanes;

   (IV) Multimodal improvements that promote walking, bicycling and transit;

   (V) Technology projects that optimize intersection operations, and traffic metering systems, detection, cameras and other electronics designed to optimize traffic flow;

   (VII) Installation of traffic control devices and roundabouts;

   (VIII) Relocation or removal of parking; and

   (IX) Installation of publicly available alternative fuel/charging infrastructure.

F. Transit Supportive Projects (office/R&D projects with a floor area ratio of more than 75% or a residential project of at least 35 dwelling units/acre) within ½ mile of an existing major bus stop or existing stop along a high quality transit corridor that meet all of the following requirements:

   (I) Support the multimodal transportation network by facilitating access to multimodal transportation with improved pedestrian facilities, bike lanes, transit stops; does not harm or hinder access to multimodal transportation;

   (II) Does not exceed maximum parking requirements or propose higher than what is allowed per the development standards;

   (III) Is transit oriented in design:

      a. Has a walkable design that prioritizes pedestrians;

      b. Is sustainable, and compact;

c. Facilitates ease of bicycle use;

d. Is focused or centered around transit; and

(IV) Redevelopment of a site which provides at least as many affordable units as previously existed.

3. **Transportation Projects.** Project types that would likely lead to a measurable and substantial increase in vehicle travel generally include addition of through lanes on existing or new highways, including general purpose lanes, HOV lanes, peak period lanes, auxiliary lanes, or lanes through grade-separated interchanges. Transportation projects that add vehicle capacity to the roadway network will be required to analyze:

   A. Direct, indirect, and cumulative effects of the transportation project

   B. Near term and long term induced vehicle travel in total VMT

   C. Consistency with state and local greenhouse gas reduction goals

   D. Impacts on the development of multimodal transportation networks

   E. Impacts on the development of diversity of land uses

4. **Regional Projects.** For projects such as regional retail, hospitals, stadium, sports complexes, or schools that are not regulated by a Public School District or that require permits from a local jurisdiction, a net increase in total VMT may indicate a significant transportation impact.

City of Sunnyvale General Plan

The Land Use and Transportation Element (LUTE) (City of Sunnyvale 2017) of the City of Sunnyvale General Plan was adopted in April 2017 and includes the following policies related to transportation that are applicable to the project:

- **Policy LT-3.1**: Use land use planning, including mixed and higher-intensity uses, to support alternatives to the single-occupant automobile such as walking and bicycling and to attract and support high investment transit such as light rail, buses, and commuter rail.
  - **LT-3.1a**: As part of the development project review process in mixed-use and other high-intensity use areas, require that adequate transit stops or a dedicated transit lane is provided, even if bus stops are not yet located there. Ensure that off-street loading areas do not conflict with adjacent uses or impede pedestrian, bicycle, or transit access.
  - **LT-3.1b:** Establish reduced parking requirements for transit, corridor, and village mixed-use developments and for developments with comprehensive TDM programs that are consistent with the City's established goals.
- **Policy LT-3.4**: Require large employers to develop and maintain transportation demand management programs to reduce the number of vehicle trips generated by their employees.
  - **LT-3.4a**: Work with large employers to develop appropriate target trip reduction goals by company size and a system to track results and establish penalties for noncompliance.
- **Policy LT-3.5**: Follow California environmental quality act requirements, congestion management program requirements, and additional city requirements when analyzing the transportation impacts of proposed projects and assessing the need for offsetting transportation system improvements or limiting transportation demand.
  - **LT-3.5a:** Reduce peak-hour and total daily single-occupant vehicle trips by expanding the use of transportation demand management programs in the city.
- **Policy LT-3.6**: Promote modes of travel and actions that provide safe access to city streets and reduce single-occupant vehicle trips and trip lengths locally and regionally.
- **Policy LT-3.8**: Prioritize safe accommodation for all transportation users over non-transport uses. as city streets are public spaces dedicated to the movement of vehicles, bicycles, and pedestrians, facilities that meet minimum appropriate safety standards for transport uses shall be considered before non-transport uses are considered.

- Policy LT-3.11: As they become available, use multimodal measures of effectiveness to assess the transportation system in order to minimize the adverse effect of congestion. continue to use level of service (LOS) to describe congestion levels. use vehicle miles traveled analysis to describe potential environmental effects and impacts to the regional transportation system.
- Policy LT-3.14: Require roadway and signal improvements for development projects to improve multimodal transportation system efficiency.
- Policy LT-3.16: Support neighborhood traffic calming and parking policies that protect internal residential areas from citywide and regional traffic, consistent with engineering criteria, operating parameters, and resident preferences.
- Policy LT-3.22: Provide safe access to city streets for all modes of transportation. safety considerations of all transport modes shall take priority over capacity considerations of any one transport mode.
- Policy LT-3.23: Ensure that the movement of cars, trucks and transit vehicles, bicycles, and pedestrians of all ages and abilities does not divide the community. city streets are public spaces and an integral part of the community fabric.
  - LT-3.23a: Provide clear, safe, and convenient links between all modes of travel, including access to transit stations/stops and connections between work, home, commercial uses, and public/quasi-public uses.
  - LT-3.23b: Encourage the incorporation of features that enhance street public spaces, such as street trees,
- Policy LT-3.24: Ensure effective and safe traffic flows for all modes of transport through physical and operational transportation improvements.
- Policy LT-3.27: Require appropriate roadway design practice for private development consistent with city standards and the intended use of the roadway.
- Policy LT-3.30: Support regional and cross-regional transportation improvements and corridors while minimizing impacts to community form and intracity travel.
  - LT-3.30b: Continue to support First-Last-Mile transit, bicycle, and pedestrian improvements that connect to regional-serving transit.
  - LT-3.30c: Explore public and private opportunities to provide transportation and complete street improvements near regional-serving transit.

Lawrence Station Area Plan

The adopted LSAP includes the following policies related to circulation that are applicable to the project:

- CF-P1: In the residential areas south of the Caltrain tracks, retain the existing framework of streets and blocks. Improve existing streets connections to the residential areas south of the Caltrain tracks to provide safer street crossings and minor access improvements for pedestrians, bicycles, and transit users.
- CF-P2: Prioritize the provision of improved north-south access for all modes of travel between the northern and the southern portions of the Plan area.
- CF-P3: In the area north of the Caltrain tracks, establish a secondary network of north/south and east/west streets, lanes, alleys, and other dedicated public rights-of-way configured generally as a functional grid.
- CF-P4: In the area north of the Caltrain tracks, to the maximum extent feasible, establish the grid of streets and blocks at a finer grain than currently exists, with a pattern of blocks no longer than 400 feet on a side.
- CF-P5: In the area north of the Caltrain tracks, develop a Primary Loop Road (The Loop) that will provide direct north-south access to Lawrence Station from Kifer Road and the Central Expressway on both the east and west sides of the Lawrence Expressway.
- CF-P6: Locate The Loop to align with Corvin Road in the east and to intersect with Kifer Road approximately 1⁄4 to mile west of the Lawrence Expressway.

- **CF-P7**: To the extent feasible, incorporate Sonora Court in the alignment of The Loop.
- **CF-P8**: Provide direct frontage access to the Lawrence Caltrain Station along The Loop.
- **CF-P9**: In the area north of the Caltrain tracks, establish a pedestrian-friendly north-south commercial Main Street located west of the Lawrence Expressway and connecting directly between Kifer Road in the vicinity of San Ysidro Way and the existing Lawrence Station pedestrian underpass.
- **CF-P10**: To the extent possible, locate all new streets along property lines between parcels in order to minimize impacts on individual properties and building operations and to share benefits between property owners. This will also allow phased development on a parcel-by-parcel basis at the discretion and timing of property owners as they seek to redevelop their land. (See also Chapter 7: Plan Implementation).
- **CF-P11**: Redesign Kifer Road from a five-lane vehicular cross-section to a three-lane vehicular cross-section (one travel lane in each direction and a center turn lane).
- **CF-P12**: Provide a wide, landscaped pedestrian sidewalk zone, continuous Class II bicycle lanes, on-street parking and transit stops continuously along Kifer Road in the Plan area.
- **CF-P13**: Support efforts to grade-separate the Lawrence Expressway across the Plan area in order to a) reduce traffic congestion on local intersections, b) reduce the barrier to east-west movement created by the existing design of the Expressway, c) better balance vehicle access to the Lawrence Station, while minimizing conflicts with pedestrians, and d) provide direct vertical access to the Lawrence Station, and e) improve through-capacity of the Expressway itself.
- **CF-P14**: Ensure the existing mature street trees along Kifer Road and Sonora Court will not be adversely impacted by street improvement projects. Incorporate the mature trees into the landscape improvements of the street.

The adopted LSAP includes the following policies related to pedestrian facilities:

- **P-P1**: Promote walking access through new street connections
- **P-P2**: Provide two new Caltrain track crossings for pedestrians and bicyclists: one at the Calabazas Creek Trail (per study by the City of Santa Clara); the other west of Lawrence Expressway aligning with and connecting to The Loop near the western end of Sonora Court.
- **P-P3**: Facilitate pedestrian access and safety along key pedestrian corridors through pedestrian enhancements, including crosswalk enhancements, sidewalk extensions (bulbouts), and wider sidewalks.
- **P-P4**: Provide enhanced crosswalks on all legs of signalized intersections and at key pedestrian crossing locations.
- **P-P5**: Provide new pedestrian crossings, including potential mid-block crosswalks, on Reed Avenue, Kifer Road, and The Loop.
- **P-P6**: Provide sidewalk extensions (bulbouts) on all new streets, where feasible, and on select existing streets along primary pedestrian corridors.
- **P-P7**: Continue to promote the inclusion of pedestrian improvements along and across the Lawrence Expressway as the Lawrence Expressway Grade Separation (LEGS) study is implemented.
- **P-P8**: If the Lawrence Expressway is elevated or placed below grade, encourage the provision of multiple east-west connections between Sunnyvale and Santa Clara neighborhoods on each side of the expressway.
- **P-P9**: Where right of way permits, for all new sidewalks in the Plan area, provide a minimum pedestrian zone width of nine feet inclusive of a minimum paved pedestrian travel zone width of six feet and a landscaped three-foot street buffer zone.
- **P-P10**: For new sidewalks in areas of increased pedestrian activity and along all primary pedestrian corridors, provide a minimum sidewalk width of 15 feet inclusive of a minimum paved pedestrian travel zone of six feet.
- **P-P11**: Improve sidewalk gaps on Willow Avenue and Kifer Road in the Plan area.

- P-P12: Ensure that all new and improved pedestrian facilities are designed to comply with ADA standards.

The adopted LSAP includes the following policies related to bicycle facilities:

- B-P1: Require property development to provide Class I and Class II bicycle facilities to fill in the gaps in the existing and planned bicycle network.
- B-P2: Provide direct Class I and Class II bicycle connections to the future Calabazas Creek Trail from The Loop.
- B-P3: Provide direct Class I multi-use public linkages between The Loop in the northeast quadrant of the Plan area to the Calabazas Creek Trail at spacings not to exceed 400 feet.
- B-P4: Connect new neighborhood open spaces with publicly accessible streets, bicycle facilities and pedestrian linkages.
- B-P5: Install bicycle detection loops at signalized intersections.
- B-P6: Provide Class I or Class II bicycle parking per Lawrence Station Area Plan bicycle parking requirements.
- B-P7: Implement a bicycle sharing program.

The adopted LSAP includes the following policies related to transit facilities and service:

- PT-P1: Reevaluate adequacy of amenities, such as bicycle parking, seating, and shelters, at Lawrence Station as ridership numbers increase.
- PT-P2: Evaluate the requirements for new bus service as access improves, development proceeds and demand increases.
- PT-P3: Assess the potential re-routing of existing bus service to directly reach Lawrence Station.
- PT-P4: Provide bus stops with bus pull-outs, shelters, furnishings, lighting and signage along the Primary Loop Road and all other bus transit streets in the Plan area.
- PT-P5: Locate bus stops on the Primary Loop Road approximately every ¼-mile (1,300 feet).

The adopted LSAP includes the following policies related to Transportation Demand Management (TDM):

- TDM-P1: Encourage businesses and property owners to collaborate on area-wide TDM strategies for their sites in the Lawrence Station Plan area.
- TDM-P2: Achieve a daily trip reduction target of 20 percent and a peak hour trip reduction target of 30 percent for new Office/R&D development.
- TDM-P3: Achieve a peak hour trip reduction of 5% for new retail and residential development.
- TDM-P4: Include incentives for the provision of the following features as part of a TDM program for the Plan area:
    1. Provide shuttle service
    2. Provide bicycle parking and end-of-trip facilities (e.g., lockers, showers)
    3. Create marketing campaigns to discourage auto trips
    4. Offer low-cost or free transit passes to employees
    5. Dedicate carpool/vanpool parking spaces
    6. Offer cash in place of a free parking space (parking cash-out)
    7. Charge for parking
    8. GreenTrip registration.

3.14.2 Environmental Setting

This section describes the existing environmental setting, which is the baseline scenario upon which project-specific impacts are evaluated. The environmental setting for transportation includes baseline descriptions for roadway, bicycle, pedestrian, and transit facilities.

EXISTING ROADWAY NETWORK

The existing freeways and major roadways that provide regional and local access to the LSAP Update area and the ISI project site are described below.

Freeways

US Highway 101 (US 101) is an eight-lane freeway (three mixed-flow lanes and one high-occupancy vehicle (HOV) lane in each direction) that passes through Sunnyvale. Access to and from the LSAP area is provided via interchanges at Fair Oaks Avenue, Lawrence Expressway and Bowers Avenue.

I-280 is an eight-lane freeway (three mixed-flow lanes and one HOV lane in each direction) that provides regional access freeway access between the cities of San Francisco and San Jose. Access between the LSAP area I-280 is provided via its interchanges at Wolfe Road, Stevens Creek Boulevard, and Lawrence Expressway.

State Route 237 (SR 237) is a four to six-lane freeway in the vicinity of the project area that extends west to El Camino Real (Route 82) and east to I-880 in Milpitas. East of Mathilda Avenue, SR 237 has two mixed-flow lanes and one HOV lane in each direction. West of Mathilda Avenue, SR 237 has two mixed-flow lanes in each direction. SR 237 provides access to the LSAP area via interchanges at Lawrence Expressway and a partial-access interchange at Fair Oaks Avenue.

SR 85 is a six-lane freeway (two mixed-flow lanes and one HOV lane in each direction) that begins at the US 101 interchange east of Shoreline Boulevard, extends south towards San Jose and terminates at the US 101 interchange south of Silicon Valley Boulevard/Bernal Road. Access between the LSAP area and SR 85 is provided via interchanges with Fremont Avenue and El Camino Real.

Major Roadways

Roadway facilities providing local access to the LSAP Update area and the ISI project site are described below.

El Camino Real is a six-lane divided arterial that extends from Mission Street in Colma to The Alameda in Santa Clara. Within the vicinity of Sunnyvale, El Camino Real has a posted speed limit of 40 miles per hour (mph). Sidewalks are present along both sides of the roadway, and all major signalized intersections have crosswalks and pedestrian push buttons and signal heads across all legs. Bike lanes are present between Fair Oaks Avenue and Sunnyvale Avenue. On-street parking is permitted along certain segments of the roadway. El Camino Real provides regional access to the LSAP area via its interchange with Lawrence Expressway, as well as its intersections with Wolfe Road and Bowers Avenue.

Lawrence Expressway is a north-south, eight-lane expressway with a raised median and a posted speed limit of 50 mph. It begins at Saratoga Avenue in the south, crosses through Sunnyvale, and extends northward and transitions into Caribbean Drive. HOV lanes are present between Stevens Creek Boulevard and US 101. Lawrence Expressway connects with US 101 via full-access freeway interchanges. Lawrence Expressway includes sidewalks along both sides on most segments and crosswalks at signalized intersections. There are no bike lanes on Lawrence Expressway, but bikes are allowed to ride on the shoulders. On-street parking is not permitted on this roadway. Lawrence Expressway provides regional access to the LSAP area via its interchanges with SR 237, US 101, Central Expressway and I-280.

Central Expressway is an east-west, four-lane to six-lane expressway. It begins at Trimble Road in the east, crosses Sunnyvale, extends westward and transitions into Alma Street. In the vicinity of the LSAP area Central Expressway has two eastbound lanes and two westbound lanes and a posted speed limit of 50 mph. Central Expressway is mostly grade-separated within Sunnyvale except at Mary Avenue. The Mary Avenue intersection has crosswalks with pedestrian push buttons and signal heads across all legs. There are no sidewalks or bike lanes along Central

Expressway, but bikes are allowed to ride on the shoulders. On-street parking is not permitted on this roadway. Central Expressway has intersections at Mary Avenue, Oakmead Parkway, and Bowers Avenue, and interchanges at Mathilda Avenue, Fair Oaks Avenue, Wolfe Road and Lawrence Expressway.

San Tomas Expressway is a north-south, six- to eight-lane expressway with a raised median and a posted speed limit of 45 mph. It begins at Camden Avenue in the south, crosses through Santa Clara, and extends northward and transitions into Montague Expressway. HOV lanes are present between Winchester Boulevard and Central Expressway. San Tomas Expressway connects with US 101 via full access freeway interchanges. There are sidewalks on both sides of the roadway along certain segments and crosswalks at signalized intersections. There are no bike lanes on San Tomas Expressway, but bikes are allowed to ride on the shoulders. The San Tomas Aquino Creek Trail is a shared bicycle and pedestrian trail located along the west side of San Tomas Expressway. It extends from Homestead Road to Monroe Street, where it diverts to follow the San Tomas Aquino Creek. On-street parking is not permitted on this roadway. San Tomas Expressway provides regional access to the LSAP area via its interchanges with US 101 and Central Expressway.

Mary Avenue is a north-south, two-lane to six-lane roadway with a posted speed limit of 35 to 40 mph. It extends from Almanor Avenue south to Homestead Road. Mary Avenue has sidewalks and bike lanes along both sides throughout Sunnyvale. Intersections with major roadways have crosswalks, pedestrian push buttons, and signal heads. On-street parking is generally permitted along the roadway segments within the residential neighborhood. Mary Avenue provides regional access to the LSAP area via its intersection with Central Expressway.

Mathilda Avenue/Sunnyvale-Saratoga Road is a north-south, six-lane roadway with a posted speed limit of 35 to 45 mph. It extends from E. Caribbean Drive (north of US 237) south past El Camino Real, transitions to Sunnyvale-Saratoga Road and extends south into Cupertino and Saratoga. There are sidewalks on both sides of the street for the whole length of the roadway with crosswalks, pedestrian push buttons, and signal heads at all major intersections. Bike lanes are generally present along Mathilda Avenue north of Iowa Avenue. Bike lanes are present along Mathilda Avenue/Sunnyvale- Saratoga Road south of El Camino Real. On-street parking is permitted along certain segments of the roadway. Mathilda Avenue provides regional access to the LSAP area via its interchanges with US 101 and Central Expressway and its intersections with Remington Drive and El Camino Real.

Sunnyvale Avenue is a north-south, two-lane roadway with a posted speed limit of 30 mph. It extends from E. Maude Avenue south to El Camino Real. Sunnyvale Road has sidewalks on both sides of the roadway through all segments with crosswalks, pedestrian push buttons, and signal heads at all major intersections. Bike lanes are present along Sunnyvale Avenue south of Evelyn Avenue. On-street parking is permitted along certain segments of the roadway.

Fair Oaks Avenue is a north-south, four-lane to six-lane roadway with a posted speed limit of 30 mph. It extends from SR 237 to El Camino Real and transitions into Remington Drive. Sidewalks exist on both sides for most of the segments along with crosswalks, pedestrian push buttons, and signal heads at all major intersections. Bike lanes are present along Fair Oaks Avenue between Evelyn Avenue and Kifer Road, as well as south of Old San Francisco Road. On-street parking is generally permitted north of Old San Francisco Road. Fair Oaks Avenue provides regional access to the LSAP area via its interchanges with SR 237, US 101 and Central Expressway.

Wolfe Road is a four-lane to six-lane, north-south arterial that begins north at N. Fair Oaks Avenue, and extends south into the City of Cupertino, ending at Stevens Creek Boulevard (its transition point into Miller Avenue). Wolfe Road has a posted speed limit of 35 mph in the study area. Wolfe Road includes sidewalks along most segments on both directions of travel and crosswalks at signalized intersections. Bike routes or lanes are present along Wolfe Road for its entirety. On-street parking is permitted along only certain segments of the roadway. Wolfe Road provides regional access to the LSAP area via its interchanges with Central Expressway and I-280.

Bowers Avenue is a four-lane to six-lane, north-south arterial with a posted speed limit of 35 to 40 mph. It begins as Kiely Boulevard south of El Camino Real and transitions into Great America Parkway at US 101. Bowers Avenue includes sidewalks along both directions of travel and crosswalks at signalized intersections. Bike routes or lanes are present along both directions of Bowers Avenue as well. On-street parking is permitted between Chromite Drive and Donovan Avenue. Bowers Avenue provides regional access to the LSAP area via its interchange with US 101 and intersection with Central Expressway.

Arques Avenue is a two-lane to four-lane roadway with a posted speed limit of 35 mph in the project vicinity. Arques Avenue begins at Stowell Avenue in the west and extends east past San Tomas Expressway and transitions into Scott Boulevard. Arques Avenue connects with Central Expressway via a westbound on-ramp and an eastbound off-ramp. Arques Avenue connects with Lawrence Expressway via a traffic signal. Sidewalks are present along both sides of the street between Wolfe Road and Lawrence Expressway and along the north side between Fair Oaks Avenue and Wolfe Road. Bike lanes are provided east of Fair Oaks Avenue.

Kifer Road is a four-lane roadway within the project vicinity with a posted speed limit of 40 mph. Kifer Road begins at Fair Oaks Avenue in the west and extends east towards Bowers Avenue, where it transitions into Walsh Avenue. Kifer Road has a center two-way left-turn median along the entirety of the roadway. On-street parking is prohibited on both sides of Kifer Road within the project vicinity. In the LSAP area, Kifer Road includes sidewalks along some segments of the roadway and crosswalks at the nearby signalized intersections. Bike lanes are provided on both sides of Kifer Road between Fair Oaks Avenue and Lawrence Expressway and between Corvin Drive and Uranium Drive. Bike lanes are present on the south side of Kifer Road between the Costco Driveway and Corvin Drive, mainly due to construction on the north side. Kifer Road provides direct access to the ISI project site.

Reed Avenue/Monroe Street is a two-lane to four-lane roadway with a posted speed limit of 35 mph in the project vicinity. Reed Avenue/Monroe Street begins west at Wolfe Road as Reed Avenue and extends southeast towards its terminus at Tisch Way in the City of San Jose. Reed Avenue is within the City of Sunnyvale, and transitions to Monroe Street in the City of Santa Clara at its intersection with Lawrence Expressway (Sunnyvale-Santa Clara city boundary). Reed Avenue/Monroe Street has a center two-way left-turn lane that runs along the entirety of the roadway. In the LSAP area, on-street parking is permitted on the north side of Reed Avenue between Wolfe Road and Sitka Terrace, along portions of both sides between Evelyn Avenue and Timberpine Avenue, and along the south side between Timberpine Avenue and Willow Avenue. On Monroe Street, on-street parking is permitted on both sides east of Nobili Avenue. Sidewalks are present along both sides of the street. Bike lanes are provided on both sides of Reed Avenue between Sunnyvale Avenue and Lawrence Expressway and on the north side of Monroe Street between Lawrence Expressway and Nobili Avenue.

Evelyn Avenue is a two-lane to four-lane roadway that begins west at Castro Street in the City of Mountain View and extends east to its terminal at Reed Avenue in the City of Sunnyvale. Within Sunnyvale, Evelyn Avenue generally includes two travel lanes and a center two-way left-turn lane and has a posted speed limit of 30 mph in the study area. Evelyn Avenue includes sidewalks and bicycle lanes on both directions of travel and crosswalks at signalized intersections. On-street parking is permitted along most segments of this roadway.

Remington Drive is an east-west, two-lane to four-lane roadway with a posted speed limit of 35 mph that begins west at S Bernardo Avenue and ends at El Camino Real before transitioning into Fair Oaks Avenue. It has bike lanes and sidewalks along both directions of the roadway on all segments and has crosswalks, pedestrian push buttons, and signal heads at major intersections. On-street parking is permitted west of Sunnyvale-Saratoga Road.

Fremont Avenue is an east-west, two-lane to six-lane roadway with a posted speed limit of 30 mph that begins west along Foothill Expressway in Los Altos and ends as it joins El Camino Real. It has bike lanes along the full length of the roadway. There are sidewalks on both sides of the roadway along some segments and there are crosswalks, pedestrian push buttons, and signal heads at major intersections. On-street parking is not permitted on this roadway. Fremont Avenue provides regional access to the LSAP area via its interchange with SR 85.

TRANSIT SYSTEM

Existing transit services in the vicinity of the LSAP Update area and the ISI project site are provided by Caltrain, Valley Transportation Authority (VTA), and Altamont Corridor Express. Bus routes within one-half mile of the LSAP Update boundary are described in Table 3.14-1 and shown on Figure 3.14-1.

Source: Image produced and provided by the Valley Transit Authority in 2019

Figure 3.14-1 Transit

Table 3.14-1 Bus Service Within One-Half Mile of Project Area

Route	Route Description	Headways	Weekday Service Span
Local Route 20	Sunnyvale Transit Center to Milpitas Transit Center	Weekday Peak: 15 min Weekday Off-Peak: 30 min	5:30 a.m. - 8:30 p.m.
Local Route 21	Palo Alto Transit Center to Santa Clara Transit Center	30 min	5:30 a.m. - 10:00 p.m.
Frequent Route 57	Old Ironsides Station to West Valley Community College	15 min	5:30 a.m. - 11:00 p.m.
ACE Gray Line	Kifer/Oakmead Village to Great America ACE Amtrak Station	60 min	6:15 a.m. - 9:45 a.m. 3:20 p.m. - 6:40 p.m.
Mission College Shuttle	Lawrence Caltrain Station to Mission area office buildings	30 - 75 min	6:20 a.m. - 9:45 a.m. 3:20 p.m. - 6:40 p.m.
Bowers/Walsh Shuttle	Lawrence Caltrain Station to Bowers area office buildings	35 - 80 min	7:15 a.m. - 9:55 a.m. 3:15 p.m. - 6:45 p.m.

Source: Hexagon Transportation Consultants 2020a

Caltrain

Commuter rail service between San Francisco and Gilroy is provided by Caltrain. The Lawrence Caltrain Station is located within the project area beneath the Lawrence Expressway overcrossing between Reed Avenue and Kifer Road. This station provides Caltrain service with approximately 20- to 30-minute headways during the weekday a.m. and p.m. commute hours, and 60-minute headways during weekday midday and night hours as well as on weekends. The Lawrence Caltrain Station provides service for only Local and Limited-Stop trains; thus, the Baby-Bullet train does not stop at the Lawrence Caltrain Station. As shown in Table 3.14-1 above, public Caltrain shuttles (i.e., Mission College and Bowers/Walsh shuttles) provide service at the Lawrence Caltrain Station. These shuttles are funded jointly by the Bay Area Air Quality Management District, the Peninsula Corridor Joint Powers Board, and private employers. Additionally, Caltrain is in the process of implementing the Caltrain Modernization Program (CalMod) which includes electrification and other projects that will upgrade the performance, efficiency, capacity, safety and reliability of Caltrain's service. It is estimated that CalMod will result in faster and more frequent service which will enable Caltrain to increase capacity by approximately 30 percent (Caltrain 2020).

BICYCLE SYSTEM

Bicycle facilities are designated according to the following three classifications in the City of Sunnyvale:

- A Class I bicycle facility is a shared use path completely separated from motor vehicle traffic used by people for walking and biking. These facilities are comfortable for people of all ages and abilities and are typically located immediately adjacent and parallel to a roadway or in its own independent right-of-way, such as within a park or along a body of water.
- Class II bicycle facilities are dedicated bicycle lanes separated from adjacent vehicular travel lanes by painted white line delineating these bicycle lanes.
- Class IIb bicycle facilities are dedicated bicycle lanes separated from vehicle traffic by a painted buffer. The buffer provides additional comfort for users by providing space from motor vehicles or parked cars.
- Class III bicycle facilities are typically referred to as bicycle routes, where bicyclists share the street with vehicular traffic. While they do not have striped lanes, they often have bicycle route marking signs to guide bicyclists through the area. Bicycle routes are considered to be a comfortable facility for more confident bicyclists. These bicycle facilities are recommended when space for a bike lane may not be feasible.

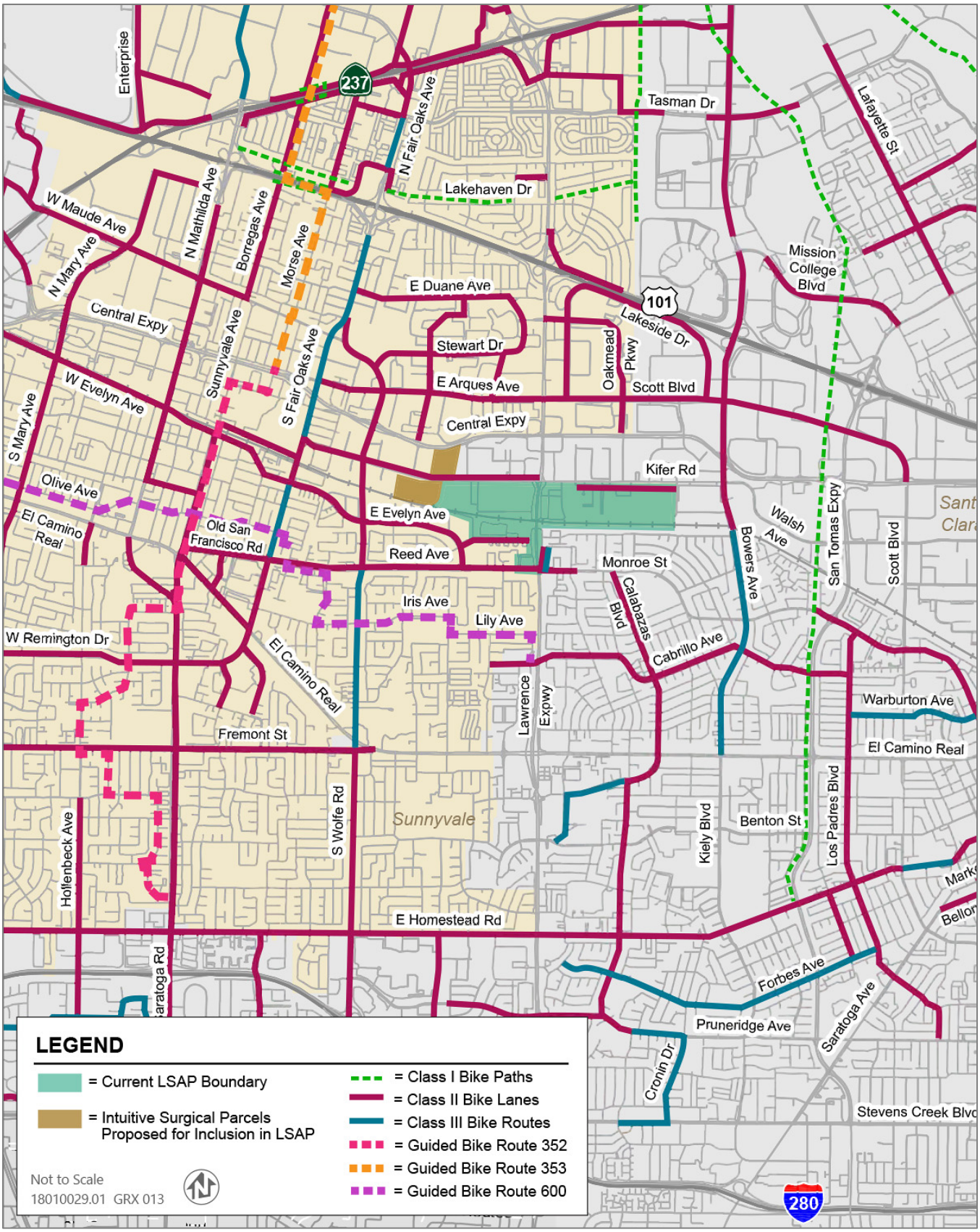
- Class IIIb bicycle facilities are bicycle boulevards and are typically located along calm, local streets where bicyclists have priority but share roadway space with motor vehicles. These facilities have shared roadway bicycle markings on the pavement as well as traffic calming features such as speed humps and traffic diverters keep these streets more comfortable for bicyclists. Additionally, they are considered a comfortable facility for bicyclists with wider range of abilities.
- Class IV bicycle facilities are on-street bikeway separated from motor vehicle traffic by a curb, median, planters, parking delineators, or other physical barriers.

Bicycle facilities in the vicinity of the project area include Class II bike lanes and Class III bike routes. The existing bicycle facilities in the project area are shown on Figure 3.14-2. The following bicycle lanes exist within the immediate vicinity of the LSAP area:

- Kifer Road between Fair Oaks Avenue and Lawrence Expressway, and between the Costco Driveway and Uranium Drive;
- Fair Oaks Avenue between Evelyn Avenue and Kifer Road;
- Evelyn Avenue between the west City boundary and Reed Avenue;
- Reed Avenue/Old San Francisco Road between Sunnyvale Avenue and Lawrence Expressway;
- Wolfe Road between Reed Avenue and Fair Oaks Avenue;
- Arques Avenue/Scott Boulevard between Central Expressway and Fair Oaks Avenue;
- Oakmead Parkway between Lawrence Expressway and Central Expressway;
- Stewart Drive between Duane Avenue and Wolfe Road;
- Duane Avenue between Fair Oaks Boulevard and AMD Place;
- DeGuigne Drive/Commercial Street between Duane Avenue and Central Expressway;
- Bowers Avenue between Great America Parkway and Chromite Drive; and
- Aster Avenue between Evelyn Avenue and Willow Avenue.

Bike routes are present along Wolfe Road between Fremont Avenue and Reed Avenue, on Fair Oaks Avenue between Tasman Drive and Weddell Drive, between Ahwanee Avenue to Kifer Road, between Evelyn Avenue to Old San Francisco Road, and on Bowers Avenue between El Camino Real and Chromite Drive. According to the 2018 City of Sunnyvale Bike Map, there are three guided bike routes within the City. Each guided route is briefly described below and shown in Figure 3.14-2:

- Bike Route 352 is generally a north-south bike route that extends north from the southern City limits into the Moffett Park area. North of El Camino Real, this bike route travels along Sunnyvale Avenue until Evelyn Avenue and transitions into Bike Route 353 (described below). South of El Camino Real, this bike route follows local roadways west of Sunnyvale providing access to Fremont High School and Nimitz Elementary School.
- Bike Route 353 is generally a north-south bike route that extends north from the southern City limits into the Moffett Park area. South of Evelyn Avenue this route transitions into Bike Route 352 (described above). North of Evelyn Avenue, this route travels mostly along Morse Avenue south of US 101 and along Borregas Avenue north of US 101. Bike Route 353 provides access to Bishop Elementary School and Columbia Middle School.
- Bike Route 600 is generally an east-west bike route that extends east from the intersection of Bernardo Avenue and El Camino Real and ends east at Poinciana Drive. This route travels parallel and north of El Camino Real along local residential roadways (e.g., Olive Avenue, Gail Avenue, Iris Avenue and Lily Avenue). This route provides access to the Civic Center, Ellis Elementary School, Braly Elementary School and Ponderosa Elementary School.



Source: Image produced and provided by Hexagon Transportation Consultants in 2020

Figure 3.14-2 Bike Facilities

Segments of Kifer Road east Lawrence Expressway are missing bicycle facilities. Additionally, San Zeno Way, Lawrence Station Road, and Willow Avenue do not provide bicycle facilities, which would otherwise connect the Lawrence Caltrain Station to the surrounding areas.

PEDESTRIAN SYSTEM

Within the LSAP area, sidewalks and crosswalks are present along most sections of existing roadways. Locations in the vicinity of the project area where sidewalks and crosswalks are missing are shown on Figure 3.14-3. Along Kifer Road, which a major roadway bisecting the LSAP Update area and fronting the ISI project site, sidewalks are mostly missing on both sides of the street west of the LSAP Update boundary and adjacent to the ISI project site, and on the north side near Corvin Drive (within the City of Santa Clara's jurisdiction). Sidewalks are also missing along certain segments of Corvin Drive (in the City of Santa Clara), Oakmead Parkway, Arques Avenue, the north side on Aster Avenue, and fronting the Greystar (1120 Kifer Road) development, the Lawrence Station Development construction site (in the City of Santa Clara), and the Nuevo construction site (in the City of Santa Clara). Pedestrian crosswalks and signal heads are present at the nearby signalized intersections. Existing sidewalks along Kifer Road are generally six feet wide. According to the City's current General Plan LUTE, Kifer Road, which is considered a Commercial/Industrial Corridor, should be improved to provide sidewalks with a width of 11 feet; and thus, current sidewalk widths along Kifer Road do not comply with these General Plan design standards.

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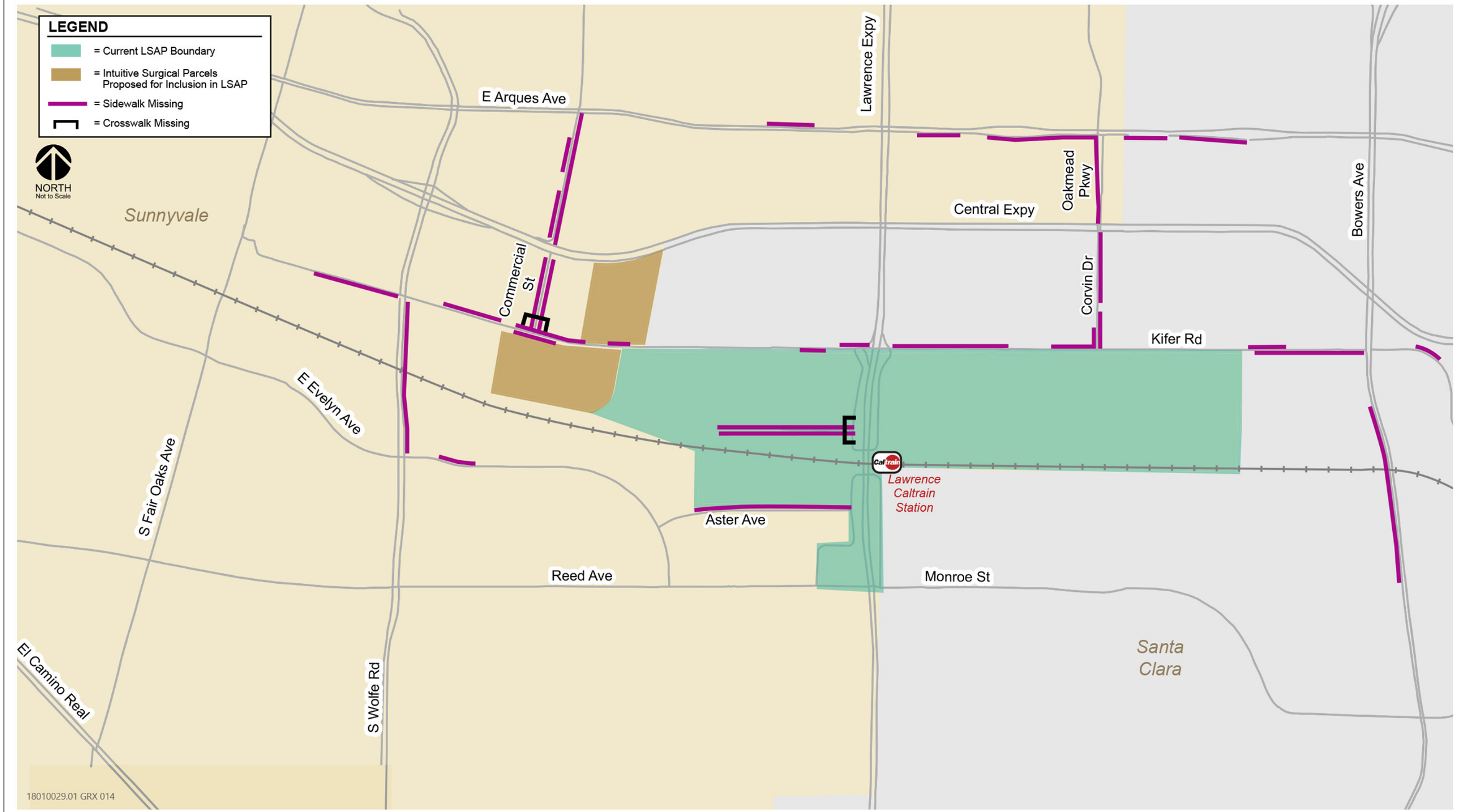


Source: Image produced and provided by Hexagon Transportation Consultants in 2020

Figure 3.14-3 Existing Pedestrian Facilities

3.14.3 Environmental Impacts and Mitigation Measures

This section describes the analysis techniques, assumptions, and results used to identify potential significant impacts of the project on the transportation system. Transportation and circulation impacts are described and assessed, and mitigation measures are recommended for impacts identified as significant or potentially significant.

METHODOLOGY

VMT Methodology

State CEQA Guidelines Section 15064.3 was added December 28, 2018, to address the determination of significance for transportation impacts. The new guideline requires that the analysis is based on VMT instead of congestion (such as LOS). The change in the focus of transportation analysis is the result of legislation (SB 743) and is intended to shift the emphasis from congestion to, among other things, reducing greenhouse gas emissions, promoting a diversity of land uses, and developing multimodal transportation networks. Pursuant to CEQA Guidelines Section 15064.3(c), this change in analysis is mandated to be used beginning July 1, 2020. Therefore, VMT is included in the analysis of this SEIR.

The City of Sunnyvale has developed and adopted VMT guidelines and thresholds (i.e., Council Policy 1.2.8) to meet the State requirements set by SB 743 and address CEQA Guidelines Section 15064.3. Therefore, the VMT analysis here-in primarily relies on the guidance provided in Council Policy 1.2.8 and CEQA Guidelines Section 15064.3, and is supplemented with information from the OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR 2018).

State CEQA Guidelines Section 15064.3(b) identifies four criteria for analyzing the transportation impacts of a project. To determine how the project should be considered, each of the criteria is discussed below.

Section 15064.3(b)(1) addresses land use projects. The LSAP is a land use plan that was prepared to guide future development of the area surrounding the Lawrence Caltrain Station. The LSAP Update includes modifications that would establish the Lawrence Station Sense of Place Plan, increase the housing potential within the LSAP, and expand the LSAP boundary. Therefore, the LSAP Update and the projects regulated under the LSAP Update would generally be considered "land use projects." The ISI project would be one such land use project. Section 15064.3(b)(1) describes that projects with specified proximity to "major" or "high quality" transit should be presumed to cause a less than significant transportation impact. As defined in PRC Section 21064.3, a "major transit stop" means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. PRC Section 21155(b) defines a high-quality transit corridor as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. Additionally, Section 15064.3(b)(1) also describes that projects resulting in a decrease VMT in the project area as compared to existing conditions should also be presumed to have a less than significant effect.

Section 15064.3(b)(2) addresses transportation projects. As described above, the LSAP Update and ISI project would generally be considered land use projects. However, the LSAP Update and ISI project both would include transportation improvements (e.g., Lawrence Station Sense of Place Plan) which would be required to be analyzed as they relate to their impact on VMT. Section 15064.3(b)(2) describes that transportation projects that reduce, or have no impact on VMT should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, a lead agency may tier from that analysis as provided in Section 15152.

Section 15064.3(b)(3), Qualitative Analysis, states that if existing models or methods are not available to estimate the VMT for the particular project being considered, a lead agency may analyze the project's VMT qualitatively. Additionally, this section notes that for many projects, a qualitative analysis of construction traffic may be appropriate.

Section 15064.3(b)(4), Methodology, explains that the lead agency, (in this case, City of Sunnyvale) has discretion to choose the most appropriate methodology to evaluate VMT subject to other applicable standards, such as CEQA Guidelines Section 15151 (standards of adequacy for EIR analyses).

Sunnyvale Council Policy 1.2.8, adopted on June 30, 2020, defines the requirements for VMT analysis by project type, the criteria under which projects are presumed to result in a less than significant VMT impact and are not required to analyze it, and the thresholds of significance for determining VMT-based transportation impacts under CEQA. As detailed in Council Policy 1.2.8, the VMT analysis for residential and employment projects shall use the Countywide Average VMT as the baseline, and the VMT significance threshold shall be set at 15 percent below the baseline to identify potential transportation impacts and any resulting mitigation. The LSAP Update and the projects regulated under the LSAP Update (including the ISI project) would generally be considered "residential and employment projects."

Additionally, Council Policy 1.2.8 includes a set of criteria under which conforming projects are assumed to be exempt from preparing a detailed VMT analysis. By virtue of conforming to the exemption criteria a project would further the City's goals and policies and would be presumed to result in a less-than-significant impact to VMT. The exemption criteria states that small infill projects generating or attracting fewer than 110 trips per day are assumed to cause a less-than-significant transportation impact. This specific exemption criterion is consistent with the guidance in the *Technical Advisory on Evaluating Transportation Impacts* published by OPR which notes that projects generating or attracting fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact, absent substantial evidence indicating otherwise. Therefore, individual projects under the LSAP Update likely generating fewer than 110 trips per day would result in a less-than-significant VMT impact. However, the change in VMT associated with the LSAP Update considers the changes to the plan as a whole. Additionally, as detailed in the *Intuitive Surgical Campus Expansion Transportation Impact Analysis* (see Appendix E), the ISI project would generate greater than 110 trips per day. Therefore, the City of Sunnyvale 110 trip per day exemption criterion would not apply to the VMT analysis of the LSAP Update or the ISI project.

As detailed in State CEQA Guidelines Section 15064.3(b)(1) and Section 2, "Exemptions," of Council Policy 1.2.8, "Transportation Analysis Policy," projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should generally be presumed to cause a less than significant transportation impact. Additionally, this exemption criterion is generally consistent with the guidance in the OPR *Technical Advisory on Evaluating Transportation Impacts* which states that projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should generally be presumed to cause a less than significant transportation impact. Council Policy 1.2.8 provides additional guidance and requirements that a project must meet to utilize this exemption. Those requirements include that the project must either be an office/R&D project with a floor area ratio of more than 75 percent or a residential project of at least 35 dwelling units/acre. Additionally, the project must conform to the following requirements:

- support the multimodal transportation network by facilitating access to multimodal transportation with improved pedestrian facilities, bike lanes, transit stops; does not harm or hinder access to multimodal transportation;
- does not exceed maximum parking requirements or propose higher than what is allowed per the development standards;
- is transit oriented in design:
    a. has a walkable design that prioritizes pedestrians;
    b. is sustainable, and compact;
    c. facilitates ease of bicycle use;
    d. is focused or centered around transit; and
- redevelopment of a site which provides at least as many affordable units as previously existed.

Council Policy 1.2.8 also provides guidance on analyzing the effects of transportation projects on VMT, and states that projects types that would likely lead to a substantial or measurable increase in vehicle travel generally include the addition of through lanes on existing or new highways (including general purpose lanes), HOV lanes, peak period lanes, auxiliary lanes, and lanes through grade-separated interchanges. Per Council Policy 1.2.8, transportation projects that would add vehicle capacity to the roadway network are required to provide a detailed analysis of VMT impacts. Section 2, "Exemptions," of Council Policy 1.2.8, "Transportation Analysis Policy," details the types of transportation projects presumed to reduce or not increase VMT which include the following:

- roadway maintenance, rehabilitation and safety improvements;
- installation or reconfigured traffic lanes to provide left-turns, right-turns, etc.;
- conversion of existing lanes to managed or transit lanes;
- multimodal improvements that promote walking, bicycling and transit;
- technology projects that optimize intersection operations, and traffic metering systems, detection, cameras and other electronics designed to optimize traffic flow;
- installation of traffic control devices and roundabouts;
- relocation or removal of parking; and
- installation of publicly available alternative fuel/charging infrastructure.

THRESHOLDS OF SIGNIFICANCE

The significance criteria used to evaluate project impacts on transportation under CEQA are based on Appendix G of the State CEQA Guidelines, State CEQA Guidelines Section 15064.3, and Sunnyvale Council Policy 1.2.8.

VMT

An impact on VMT would be significant if implementation of the project would:

- conflict or be inconsistent with CEQA Guidelines Section 15064.3(b).

Transit Facilities

An impact on transit facilities would be significant if implementation of the project would:

- disrupt existing or planned transit facilities;
- generate increased transit demand unable to be accommodated by existing or planned and programmed transit services; or
- conflict with a program, plan, ordinance, or policy addressing transit facilities.

Bicycle Facilities

An impact on bicycle facilities would be significant if implementation of the project would:

- disrupt or eliminate existing or planned bicycle facilities;
- creates demand for bicycle facilities unable to be accommodated by existing or planned and programmed bicycle facilities; or
- conflict with a program, plan, ordinance, or policy addressing bicycle facilities.

Pedestrian Facilities

An impact on pedestrian facilities would be significant if implementation of the project would:

- disrupt or eliminate existing or planned pedestrian facilities;

- creates demand for pedestrian facilities unable to be accommodated by existing or planned and programmed pedestrian facilities; or
- conflict with a program, plan, ordinance, or policy addressing pedestrian facilities.

Transportation Hazards Related to a Geometric Design Feature or Incompatible Uses

An impact on transportation hazards would be significant if implementation of the project would:

- substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Emergency Access

An impact on emergency access would be significant if implementation of the project would:

- result in inadequate emergency access.

Temporary Construction Impacts

Temporary transportation construction impacts would be significant if implementation of the project would:

- result in a temporary but prolonged impact related to lane closures, the need for temporary signals, emergency vehicles access, or traffic hazards to vehicles, bicyclists, and pedestrians.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.14-1: Conflict or be Inconsistent with CEQA Guidelines Section 15064.3(b)

The 2016 LSAP EIR did not include an impact analysis or significance determination related to VMT as it was not required under CEQA at the time. However, the 2016 LSAP EIR did disclose the results of a VMT assessment which determined that implementation of the LSAP would result in a net increase in total VMT as compared to existing conditions but a lower citywide VMT per capita as compared to citywide existing and 2035 no-project scenarios. Similar to the LSAP area analyzed in the 2016 LSAP EIR, the entirety of the LSAP Update area (which includes the ISI project site) would conform to the criteria set forth in Council Policy 1.2.8, "Transportation Analysis Policy," for the presumption of a less-than-significant VMT impact due to a project's transit supportive nature and its proximity to a high-quality transit corridor and/or major transit stop. Therefore, implementation of the LSAP Update and ISI project would result in no new significant effect to VMT and the impact is not more severe than what the impact in the 2016 LSAP EIR would have been, if analyzed. Therefore, the LSAP Update and ISI project would result in a **less-than-significant** impact to VMT.

An assessment of the change in VMT under existing and 2035 conditions was disclosed as part of the 2016 LSAP EIR. This assessment determined that implementation of the LSAP would result in a net increase in total VMT as compared to existing conditions. However, the assessment also determined that implementation of the LSAP would result in a lower citywide VMT per capita as compared to citywide existing and 2035 no-project scenarios. However, a VMT impact analysis consistent with the requirements of PRC Section 21099, and CCR Section 15064.3(a) was not conducted because it was not required under CEQA at the time; and thus, no significance conclusion related to VMT was provided in the 2016 LSAP EIR.

LSAP Update

Land Use Projects

The LSAP Update would result in the additional development potential of 3,612 new housing units, expand the adopted LSAP boundary, and establish the Lawrence Station Sense of Place Plan that would create design standards and guidelines for enhanced transit, pedestrian, bicycle and automobile circulation specific to the LSAP.

The stated purpose of the LSAP is to promote greater use of the existing major transit stop of Lawrence Caltrain Station and guide the development of a diverse neighborhood of employment, residential, retail, other support services and open space. The area covered by the adopted LSAP is generally defined by a one-half-mile radius from the Lawrence Caltrain Station.

Although the LSAP Update would include expansion of the adopted plan area boundary to include three sites (containing four parcels) located adjacent to and west/ northwest of the adopted LSAP boundary, every parcel within the expanded plan area boundary would still be located within one-half mile of a major transit stop (i.e., Lawrence Caltrain Station) or a high-quality transit corridor (i.e., VTA Routes 20 and 57). Figure 3.14-4 shows the major transit stop and high-quality transit corridor buffers in the vicinity of the LSAP Update area. As described in "Methodology," above, Council Policy 1.2.8 requires that a project meet the following criteria to presume a less-than-significant VMT impact for a project based on proximity to a major transit stop or high-quality transit corridor:

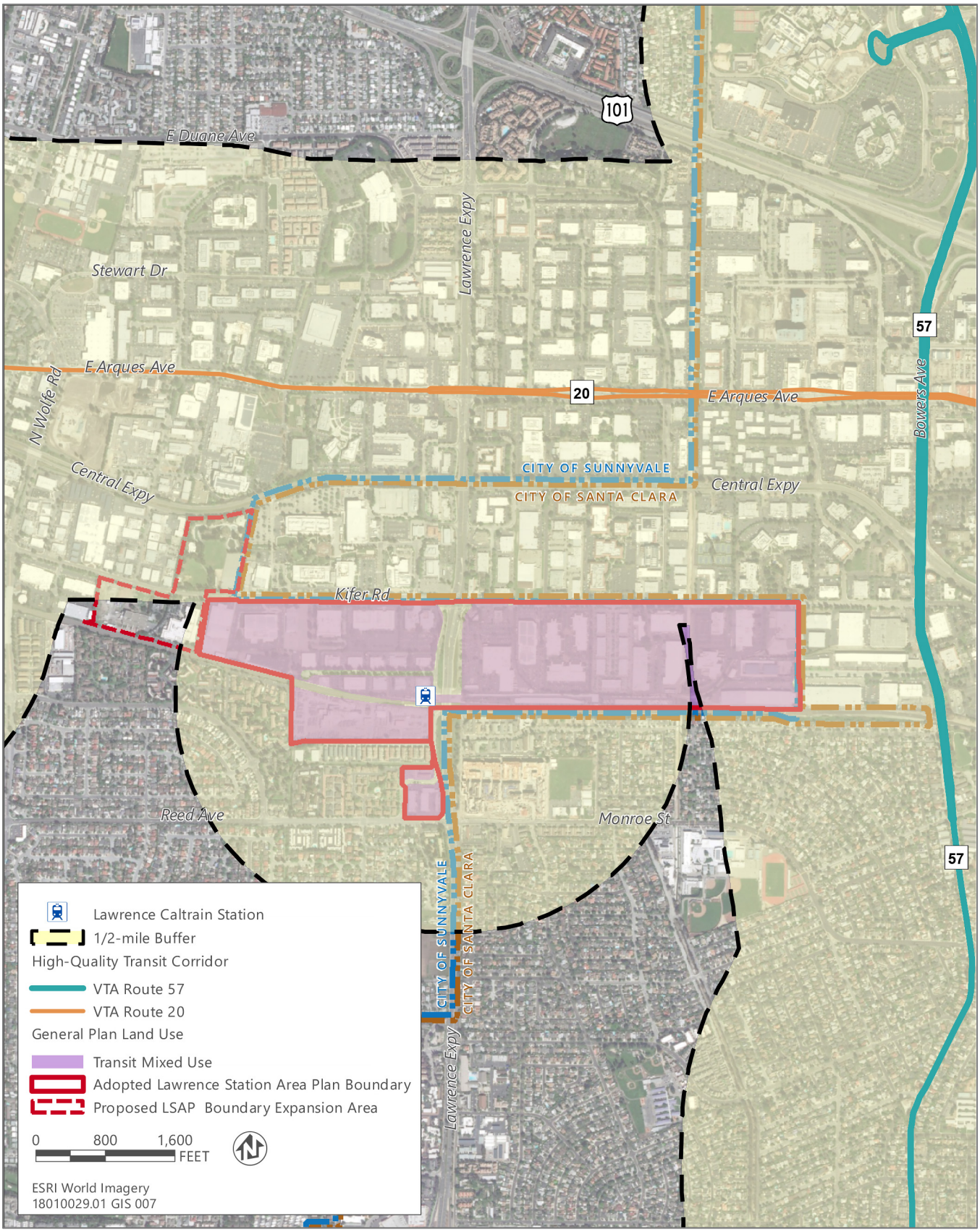
- support the multimodal transportation network by facilitating access to multimodal transportation with improved pedestrian facilities, bike lanes, transit stops; does not harm or hinder access to multimodal transportation.
- does not exceed maximum parking requirements or propose higher than what is allowed per the development standards;
- is transit oriented in design:
    a. has a walkable design that prioritizes pedestrians;
    b. is sustainable, and compact;
    c. facilitates ease of bicycle use;
    d. is focused or centered around transit; and
- redevelopment of a site which provides at least as many affordable units as previously existed.

As described in Chapter 2, "Project Description," and shown in Tables 2-6 and 2-7 of that section, the LSAP Update would include rezoning of parcels within the adopted LSAP boundary and the proposed expanded LSAP Update boundary which would increase the FAR allowance. Additionally, the adopted LSAP is an incentive-based plan that provides development incentives (in the form of density bonuses) that would allow property owners to develop their properties beyond the minimum required densities in exchange for providing mixed-use development, street rights-of-way and enhancements, access easements, public open space, additional affordable housing, and other features that advance the goals of the Plan (City of Sunnyvale 2016).

The LSAP Update would include the creation of the Lawrence Station Sense of Place Plan which would identify enhanced transit, pedestrian, bicycle, and automobile circulation improvements and develop associated design standards and guidelines. The Lawrence Station Sense of Place Plan would require new development to implement public street improvements, including a loop road, rail crossings (if determined to be feasible), sidewalks, curb ramps, the addition and removal of on-street parking, new pathways, intersection improvements, buffered bicycle lanes, Class I shared-use paved paths, bus stop improvements along Kifer Road, lighting, wayfinding signage, and other public amenities. Therefore, the LSAP Update would support the multimodal transportation network by facilitating access to multimodal transportation with improved pedestrian facilities, bike lanes, transit stops; and would not harm or hinder access to multimodal transportation.

The adopted LSAP sets parking requirements for land uses within the plan area. The previously existing City parking requirements and the adopted LSAP parking requirements are shown in Table 3.14-2.

As shown in Table 3.14-2, the parking requirements in the adopted LSAP were reduced or were not changed for each land use category as compared to the City of Sunnyvale Municipal Code parking requirements. The LSAP Update does not propose any changes to the parking requirements within the adopted LSAP, and does not require more parking than that which is required by the City for the same land use categories outside of the LSAP plan boundaries. Therefore, the LSAP Update would not exceed maximum parking requirements or propose higher parking requirements than what is allowed per the development standards.



Source: data downloaded from Valley Transportation Authority in 2020

Figure 3.14-4 Boundary Expansion

Table 3.14-2 LSAP Plan Area Parking Requirements

Land Use Category	Previous City Requirements[1]	Adopted LSAP Parking Requirement
Residential	1.5-2.4 per unit (depending on unit size and type of parking)	1.0-2.0 per unit[2,3]
General Retail	2.0- 5.5 per 1,000 sf	2.0-4.0 per 1,000 sf [3,4]
Office, Industrial, and R&D	2.0 - 4.0 per 1,000 sf	2.0-4.0 per 1,000 sf [3,4]

1. City of Sunnyvale Municipal Code

2. Apply the following further adjustments for senior and affordable housing as appropriate:

   * Senior housing: multiply by 0.5.

   * Affordable housing: multiply proportion of housing units that is deed-restricted by 0.5-0.75 depending on population car ownership characteristics.

3. Allow for further reductions where parking demand management strategies are added to the supply on a case-by-case basis, as described in the Parking Management Section and as listed below:

   - Allow additional parking requirement reductions if parking is unbundled from property costs.
   - Allow shared parking credit for utilizing ULI methodology.
   - Allow for on-street parking supply to count towards requirements.

4. Allow for further reductions in parking requirements for employers who commit to implementing Transportation Demand Management (TDM) programs. Reduction rates should be based on calculated % alternative mode share to single occupancy vehicles (walking, biking, shuttle, transit, carpools/vanpools).

Source: Adapted from Lawrence Station Area Plan, City of Sunnyvale 2016

The density and mix of land uses, and the transit accessibly around which the LSAP was designed to promote aligns with the three statutory goals contained in SB 743 and the stated purpose of Council Policy 1.2.8 of reducing GHG emissions, increasing multimodal transportation networks, and facilitating mixed use development. The increase in housing density associated with implementation of the LSAP Update would serve to further enhance the transit-oriented nature of the LSAP plan area by locating a greater number of residents in a mixed-use environment, and in close proximity to the Lawrence Caltrain Station and high-quality transit corridors. Therefore, the LSAP Update is transit-oriented in nature.

Adopted LSAP policies H-P2 and H-P3 prioritize the provision of affordable housing and provides City-based incentives to promote development of affordable housing, respectively. Additionally, to avoid displacement of existing lower-income residents, no upzoning or increases in allowable densities on sites currently occupied by housing will occur (City of Sunnyvale 2016). The LSAP Update will not result in any changes to the goal, policies, or intent of the adopted LSAP as it relates to affordable housing. Therefore, the LSAP Update would not result in fewer affordable units than that which was proposed for the adopted LSAP.

Transportation Projects

As detailed above, the LSAP Update would include the creation of the Lawrence Station Sense of Place Plan which would require new development to implement public street improvements, including a loop road, rail crossings (if determined to be feasible), sidewalks, curb ramps, the addition and removal of on-street parking, new pathways, intersection improvements, buffered bicycle lanes, Class I shared-use paved paths, bus stop improvements along Kifer Road, lighting, wayfinding signage, and other public amenities.

As described in State CEQA Guidelines Section 15064.3(b)(2), transportation projects that reduce, or have no impact on, VMT should be presumed to cause a less than significant transportation impact. Additionally, as detailed in the Council Policy 1.2.8 and in the "Methodology" section above, multimodal improvements that promote walking, bicycling and transit generally reduce VMT; and thus, are presumed to cause a less-than-significant impact on transportation. Therefore, because the transportation projects included in the Lawrence Station Sense of Place Plan were developed to enhance transit, pedestrian, and bicycle facilities and connectivity in the project area they would not result in a substantial or measurable increase in VMT. Additionally, the roadway improvements (i.e., loop road, intersection improvements) would all be implemented with the intent of improving access to the Lawrence Caltrain

Station, improving multimodal safety, and enhancing the overall transit-oriented nature of the project area. Therefore, as detailed in the "Methodology" section and Council Policy 1.2.8, these types of roadway improvements would not result in a substantial or measurable increase in VMT.

Although a project's effect on LOS is no longer considered an impact under CEQA, Council Policy 1.2.8 may require LOS operational analysis as part of the planning process to ensure intersection and roadway efficiency, and to comply with the Congestion Management Program. Hexagon Transportation Consultants conducted the LOS operational analysis for the LSAP Update which is included in the *Lawrence Station Area Plan Update Transportation Impact Analysis* (Hexagon Transportation Consultants 2020a) and attached as Appendix E of this SEIR. The LOS operational analysis identified potential improvements to address LOS deficiencies resulting from implementation of the LSAP Update. The specific improvements that would be implemented by the City based on the LOS operational analysis are not known at this time; however, subsequent development projects proposed after adoption of the LSAP Update would be required to identify potential improvements to address LOS deficiencies resulting from implementation of the project and pay a fair share contribution and/or construct needed improvements as a condition of approval. The potential improvements identified in the *Lawrence Station Area Plan Update Transportation Impact Analysis* primarily consist of the installation or reconfiguration of traffic lanes to provide for new turn lanes, signal timing and phasing improvements to optimize intersection operations and traffic flow, and multimodal improvements that promote walking, bicycling, and transit. As detailed in the "Methodology" section and Council Policy 1.2.8, these types of roadway improvements would not result in a substantial or measurable increase in VMT; and thus, would not result in a substantial or measurable increase in VMT.

For the reasons detailed above, implementation of the LSAP Update would result in no new significant effect to VMT and the impact is not more severe than what the impact in the 2016 LSAP EIR would have been, if analyzed. Therefore, the LSAP Update would result in a **less-than-significant** impact to VMT.

ISI Project

The ISI project would be located within one-half mile of a high-quality transit corridor (i.e., VTA Route 20) and a major transit stop (i.e., Lawrence Caltrain Station). Figure 3.14-4 shows the major transit stop and high-quality transit corridor buffers in the vicinity of the project. Additionally, as described in "Methodology," above, Council Policy 1.2.8 requires that a project meet the following criteria to presume a less-than-significant VMT impact for a project based on proximity to a major transit stop or high-quality transit corridor:

- office/R&D projects with a floor area ratio of more than 75 percent or a residential project of at least 35 dwelling units/acre;
- support the multimodal transportation network by facilitating access to multimodal transportation with improved pedestrian facilities, bike lanes, transit stops; does not harm or hinder access to multimodal transportation.
- does not exceed maximum parking requirements or propose higher than what is allowed per the development standards;
- is transit oriented in design:
    a. has a walkable design that prioritizes pedestrians;
    b. is sustainable, and compact;
    c. facilitates ease of bicycle use;
    d. is focused or centered around transit; and
- redevelopment of a site which provides at least as many affordable units as previously existed.

The ISI project proposes a higher total FAR allowance than the 35 percent FAR allowed on the ISI site as currently zoned. Additionally, the proposed ISI project's FAR would be consistent with the maximum possible FAR in the LSAP, with 53 percent FAR on the North Site and 100 percent FAR on the South Site. The FAR of the ISI project as a whole would be 77 percent. Therefore, the ISI project FAR would be greater than 75 percent.

The ISI project would include multimodal frontage improvements along both the north and south project site. The ISI project would also provide new multimodal path along the south and west boundaries of the South Site which would then be extended to the Lawrence Caltrain Station with the buildout of the LSAP. Additionally, the ISI project would provide a free daily shuttle service between the project site and the Lawrence Caltrain Station. Additionally, the ISI project would include 59 bicycle parking spaces including 44 spaces in an on-site covered bicycle parking structure on the north site and 139 bicycle parking spaces including 104 spaces in an on-site covered bicycle parking structure on the south site. Therefore, the ISI project would support the multimodal transportation network by facilitating access to multimodal transportation with improved pedestrian facilities and bike lanes; and would not harm or hinder access to multimodal transportation.

The LSAP Update would include expansion of the LSAP boundary to include the ISI project site. Therefore, the ISI project would be subject to the LSAP and the associated parking requirements. The ISI project would be designated as an Office, Industrial, and R&D land use; and thus, as shown in Table 3.14-2, would be subject to the same parking requirements as defined by the City of Sunnyvale Municipal Code (i.e., 2.0 to 4.0 parking spaces per 1,000 sf). As detailed in Chapter 2, "Project Description," the ISI project would consist of approximately 1.038 million gross sf of net new floor area, serve up to 3,500 employees, and provide 2,550 vehicle parking spaces for employees. This would provide approximately 2.46 employee vehicle parking spaces per 1,000 sf of Office/R&D. Therefore, the ISI project would not provide a greater number of parking spaces than what is allowed by the City of Sunnyvale Municipal Code.

The increase in density associated with implementation of the ISI project would serve to further enhance the transit-oriented nature of the LSAP plan area by locating a greater number of employees in a mixed-use environment, and in close proximity to the Lawrence Caltrain Station and high-quality transit corridors. Additionally, as detailed above, the ISI project would enhance the bicycle and pedestrian facilities in the area and connect to the Lawrence Caltrain Station. Therefore, the ISI project is transit-oriented in nature.

Additionally, the ISI project is a corporate campus redevelopment project; and thus, does not include any housing and would not have an effect on affordable residential units.

For the reasons detailed above, the ISI project would conform to the criteria set forth in Council Policy 1.2.8 for the presumption of a less-than-significant VMT impact because of a project's proximity to a high-quality transit corridor or major transit stop.

Transportation Projects

Although a project's effect on LOS is no longer considered an impact under CEQA, Council Policy 1.2.8 may require LOS operational analysis as part of the planning process to ensure intersection and roadway efficiency, and to comply with the Congestion Management Program. Hexagon Transportation Consultants conducted the LOS operational analysis for the LSAP Update which is included in the *Intuitive Surgical Campus Expansion Transportation Impact Analysis* (Hexagon Transportation Consultants 2020b) attached as Appendix E. The LOS operational analysis identified potential improvements to address LOS deficiencies resulting from implementation of the ISI project. The specific improvements that will be required by the City based on the LOS operational analysis are not known at this time; however, payment of a fair share contribution and/or construction of the identified improvements would be included as a condition of approval for the ISI project. The potential improvements identified in the *Intuitive Surgical Campus Expansion Transportation Impact Analysis* primarily consist of TDM strategies, fair share contributions to planned and programmed improvements, the installation or reconfiguration of traffic lanes to provide for new turn lanes, and the installation of new traffic signals. As detailed in the "Methodology" section and Council Policy 1.2.8, these types of roadway improvements would not result in a substantial or measurable increase in VMT; and thus, would not result in a substantial or measurable increase in VMT.

Therefore, implementation of the ISI project would result in no new significant effect and the impact is not more severe than what the impact in the 2016 LSAP EIR would have been, if analyzed. Therefore, the ISI project would result in a **less-than-significant** impact to VMT.

Mitigation Measures

No mitigation is required.

Impact 3.14-2: Disrupt Existing or Planned Transit Facilities or Conflict with a Program, Plan, Ordinance, or Policy Addressing Transit Facilities

The 2016 LSAP EIR concluded that implementation of the LSAP would result in a less-than-significant impact to transit facilities because the demand generated by subsequent projects developed under the LSAP would be accommodated by transit services and facilities in the area, and traffic operations within the LSAP area would not adversely impact transit travel times. Neither the LSAP Update or the ISI project would disrupt any existing or planned transit facilities or conflict with a program, plan, ordinance, or policy addressing these facilities. Additionally, any demand for transit facilities generated by the LSAP Update or ISI project would be satisfied by the proposed Caltrain electrification project and transit improvements identified in the LSAP. Thus, there is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Both the LSAP Update and the ISI project would result in a **less-than-significant** impact to transit facilities.

Impact 3.4.1 of the 2016 LSAP EIR evaluated the potential for impacts to transit facilities. The 2016 LSAP EIR concluded that project implementation would result in a less-than-significant impact to transit facilities because subsequent projects developed under the LSAP would be accommodated by transit services and facilities in the area, and traffic operations within the LSAP area would not adversely impact transit travel times.

LSAP Update

A variety of transit providers and services are located in the vicinity of the project area. As shown on Table 3.14-1 in Section 3.14.2, "Environmental Setting," VTA operates routes 20, 21, and 57 within one-half mile of the LSAP Update boundary. Additionally, the ACE Gray Shuttle serves and operates within the project area. The following two public Caltrain shuttles, which are funded through public-private partnerships, provide service at the Lawrence Caltrain Station:

- **Bowers-Walsh Shuttle** provides service between the Lawrence Caltrain Station and the Bowers/Walsh area office buildings during weekday commute periods.
- **Mission College Shuttle** provides service between the Lawrence Caltrain Station and Mission Area office buildings during weekday commute periods.

The Lawrence Caltrain Station, located beneath the Lawrence Expressway overcrossing between Reed Avenue and Kifer Road, provides Caltrain service with approximately 20- to 30-minute headways during the weekday a.m. and p.m. commute hours and 60-minute headways during weekday midday and night hours as well as on weekends.

The LSAP Update would establish the Lawrence Station Sense of Place Plan, increase the housing potential within the LSAP, and expand the LSAP boundary. Buildout of the Lawrence Station Sense of Place Plan and they additional housing potential would occur within the boundaries of the adopted LSAP analyzed in the 2016 LSAP EIR.

The expansion of the LSAP boundary to include the ISI project site would not result in a change to the maximum nonresidential development capacity within the adopted LSAP; and thus, would not result in an increase in demand for transit facilities above that which was analyzed in the 2016 LSAP EIR.

As detailed in Impact 3.14-1, the Lawrence Station Sense of Place Plan would require new development in the area to implement a variety of transit, pedestrian, bicycle, and automobile circulation improvements and develop associated design standards and guidelines. The conceptual plan for the Lawrence Station Sense of Place Plan is provided in Figure 2-4 of Chapter 2, "Project Description." As shown in Figure 2-4, the Lawrence Station Sense of Place Plan would be focused on improving bicycle, pedestrian, and transit connections and circulation to and from the Lawrence Caltrain Station. Therefore, the incorporation of the Lawrence Station Sense of Place Plan into the LSAP Update would enhance connectivity and access to existing transit, namely the Lawrence Caltrain Station and improve transit facilities.

However, the LSAP Update would result in the additional development potential of 3,612 new housing units within the plan area. The potential increase in new housing units and nearby residents is anticipated to generate additional demand for transit facilities and service that did not exist; and thus, was not analyzed under the adopted 2016 LSAP EIR. However, as detailed in the *Lawrence Station Area Plan Update Draft Transportation Impact Analysis,* the CalMod project would enable Caltrain to provide more frequent train service at the Lawrence Caltrain station. Caltrain predicts

an initial capacity increase of over 30 percent with implementation of CalMod. Therefore, it is expected that the CalMod project would accommodate the potential increase in transit ridership generated by the LSAP Update. Additionally, adopted LSAP policies PT-P1 through PT-P5 would result in the monitoring, enhancement, and expansion of transit facilities to satisfy the increase in demand associated with the development of the LSAP plan area.

In summary, implementation of the LSAP Update would enhance, not disrupt existing or planned transit facilities. Additionally, the project would not conflict with a program, plan, ordinance, or policy addressing transit facilities. The increase in transit demand generated by the project would be accommodated by existing and potential future transit services as required by the LSAP Update and the increased transit capacity provided by the CalMod project. Therefore, no new significant effect would occur, and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The LSAP Update would result in a **less-than-significant** impact to transit facilities.

ISI Project

As detailed in Impact 3.14.1 above, the ISI project site is located within one-half mile of a high-quality transit corridor (i.e., VTA Route 20) and a major transit stop (i.e., Lawrence Caltrain Station). Figure 3.14-4 shows the major transit stop and high-quality transit corridor buffers in the vicinity of the project. There is also one ACE shuttle that has a bus stop within a quarter mile of the project site.

There is no existing continuous pedestrian path between the ISI project site and the Lawrence Caltrain Station. However, the ISI project would include multimodal frontage improvements on Kifer Road along both the north and south project site. The ISI project would also provide new multimodal path along the south and west boundaries of the South Site which would then be extended to the Lawrence Caltrain Station with the buildout of the LSAP. Additionally, the ISI project would provide a free daily shuttle service between the project site and the Lawrence Caltrain Station.

The ISI project would likely increase the demand for transit in the area, primarily on Caltrain. The CalMod project is anticipated to increase initial capacity by over 30 percent and would enable Caltrain to provide more frequent train service at the Lawrence Caltrain station. Therefore, the CalMod project would accommodate the potential increase in transit demand generated by the ISI project.

Therefore, the ISI project does not disrupt any existing or planned transit facilities and would not conflict with a program, plan, ordinance, or policy addressing these facilities. Additionally, any demand for transit facilities generated by the ISI project would be satisfied by the proposed Caltrain electrification project. There is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The ISI project would result in a **less-than-significant** impact to transit facilities.

Mitigation Measures

No mitigation is required.

Impact 3.14-3: Disrupt Existing or Planned Bicycle Facilities or Conflict with a Program, Plan, Ordinance, or Policy Addressing Bicycle Facilities

The 2016 LSAP EIR concluded that project implementation would result in a less-than-significant impact to bicycle facilities because although subsequent projects developed under the LSAP would increase the demand for bicycle facilities, the provision of new bicycle facilities required under the LSAP would thereby satisfy that demand. Both the LSAP Update and the ISI project would enhance, not disrupt any existing or planned bicycle facilities and would not conflict with a program, plan, ordinance, or policy addressing bicycle facilities. Additionally, any new demand for bicycle facilities generated the LSAP Update or the ISI project would be satisfied by the multimodal improvements required of new development based on adopted LSAP policies and the proposed Sense of Place Plan. Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The LSAP Update and the ISI project would both result in a **less-than-significant** impact to bicycle facilities.

Impact 3.4.2 of the 2016 LSAP EIR evaluated the potential for impacts to bicycle facilities. The 2016 LSAP EIR concluded that project implementation would result in a less-than-significant impact to bicycle facilities because

although subsequent projects developed under the LSAP would increase the demand for bicycle facilities, the provision of new bicycle facilities required under the LSAP would thereby satisfy that demand.

LSAP Update

The proposed LSAP Update would establish the Lawrence Station Sense of Place Plan, increase the housing potential within the LSAP, and expand the LSAP boundary. Buildout of the Lawrence Station Sense of Place Plan and additional housing potential would occur within the boundaries of the adopted LSAP analyzed in the 2016 LSAP EIR.

The expansion of the LSAP boundary to include the ISI site would not result in a change to the maximum nonresidential development capacity within the adopted LSAP; and thus, would not result in an increase in demand for bicycle facilities above that which was analyzed in the 2016 LSAP EIR.

As detailed in Impact 3.14-1 above, the Lawrence Station Sense of Place Plan would require new development in the area to implement a variety of transit, pedestrian, bicycle, and automobile circulation improvements and develop associated design standards and guidelines. The conceptual plan for the Lawrence Station Sense of Place Plan is provided in Figure 2-4 of Chapter 2, "Project Description." Improvements associated with enhancing bicycle facilities, connectivity, and safety could include buffered bicycle lanes, Class I shared-use paved paths, removal of on-street parking, and grade-separated bicycle and pedestrian crossing. Therefore, the incorporation of the Lawrence Station Sense of Place Plan into the LSAP Update would improve bicycle facilities within the plan area and provide additional bicycle capacity. Additionally, the Lawrence Station Sense of Place Plan would not conflict with the policies concerning bicycle facilities within the adopted LSAP and would provide increased connectivity consistent with adopted plans and policies.

However, the LSAP Update would result in the additional development potential of 3,612 new housing units within the plan area. The potential for the increase of new housing units could generate demand for bicycle facilities that did not exist under the adopted LSAP. However, implementation of the adopted LSAP bicycle improvements, policies, and requirements; combined with the improvements proposed in the Lawrence Station Sense of Place Plan would accommodate the increased demand for bicycle facilities associated with this potential increase in housing units and residents.

In summary, the LSAP Update would enhance, not disrupt any existing or planned bicycle facilities and would not conflict with a program, plan, ordinance, or policy addressing bicycle facilities. Additionally, any new demand for bicycle facilities generated by the increase in housing density associated with the LSAP Update would be satisfied by the multimodal improvements required of new development based on adopted LSAP policies and the proposed Sense of Place Plan.

Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The LSAP Update would result in a **less-than-significant** impact to bicycle facilities.

ISI Project

In the immediate vicinity of the ISI project site, bike lanes are present on Kifer Road, Evelyn Avenue, Reed Avenue/Old San Francisco Road, Wolfe Road, and Arques Avenue. However, the ISI project site is located within an industrial area, and nearby streets carry high traffic volumes. Additionally, the ISI project is expected to generate bicycle trips between the ISI project site and the Lawrence Caltrain Station between which there are currently no continuous bicycle facilities.

The proposed bicycle and pedestrian circulation plan for the ISI project is shown on Figure 2-10b in Section 2.4.2, "ISI Project." The South Site would include the construction a publicly accessible Class I shared-use path and private pedestrian and bicycle pathways. The Class I shared-use path proposed for the ISI project would ultimately connect the project site to the Lawrence Caltrain Station as buildout of the LSAP and the associated pedestrian-bicycle path occurs. Additionally, the ISI project would include 59 bicycle parking spaces including 44 spaces in an on-site covered bicycle parking structure on the north site and 139 bicycle parking spaces including 104 spaces in an on-site covered bicycle parking structure on the south site. Finally, the proposed bicycle facility improvements detailed above would not conflict with the requirements of the LSAP Update Sense of Space Plan.

Therefore, the ISI project would enhance, not disrupt any existing or planned bicycle facilities and would not conflict with a program, plan, ordinance, or policy addressing these facilities. Additionally, any demand for bicycle facilities generated by the ISI project would be satisfied by the bicycle improvements proposed for the project site. There is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The ISI project would result in a **less-than-significant** impact to bicycle facilities.

Mitigation Measures

No mitigation is required.

Impact 3.14-4: Disrupt Existing or Planned Pedestrian Facilities or Conflict with a Program, Plan, Ordinance, or Policy Addressing Pedestrian Facilities

The 2016 LSAP EIR concluded that project implementation would result in a less-than-significant impact to pedestrian facilities because although subsequent projects developed under the LSAP would increase the demand for pedestrian facilities, the provision of new pedestrian facilities required under the LSAP would thereby satisfy that demand. The LSAP Update and ISI project would enhance, not disrupt any existing or planned pedestrian facilities and any demand for pedestrian facilities generated by the LSAP Update and ISI project would be satisfied by the multimodal improvements required of new development based on adopted LSAP policies and the proposed Sense of Place Plan. Additionally, the LSAP Update and ISI project would not conflict with a program, plan, ordinance, or policy addressing pedestrian facilities. Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The LSAP Update and the ISI project would both result in a **less-than-significant** impact to pedestrian facilities.

Impact 3.4.3 of the 2016 LSAP EIR evaluated the potential for impacts to pedestrian facilities. The 2016 LSAP EIR concluded that project implementation would result in a less-than-significant impact to pedestrian facilities because although subsequent projects developed under the LSAP would increase the demand for pedestrian facilities, the provision of new pedestrian facilities required under the LSAP would thereby satisfy that demand.

LSAP Update

As described in Impact 3.14-3, the LSAP Update would establish the Lawrence Station Sense of Place Plan, increase the housing potential within the LSAP, and expand the LSAP boundary. The expansion of the LSAP boundary to include the ISI project site would not result in a change to the maximum nonresidential development capacity within the adopted LSAP; and thus, would not result in an increase in demand for pedestrian facilities above that which was analyzed in the 2016 LSAP EIR.

As detailed in Impact 3.14-1 above, the Lawrence Station Sense of Place Plan would require new development in the area to implement a variety of transit, pedestrian, bicycle, and automobile circulation improvements and develop associated design standards and guidelines. The conceptual plan for the Lawrence Station Sense of Place Plan is provided in Figure 2-4 of Chapter 2, "Project Description." Improvements associated with enhancing pedestrian facilities, connectivity, and safety could include rail crossings (if determined to be feasible), sidewalks, curb ramps, Class I shared-use paved paths, pathways, and grade-separated bicycle and pedestrian crossings. Therefore, the incorporation of the Lawrence Station Sense of Place Plan into the LSAP Update would enhance pedestrian facilities and overall connectivity within the plan area; and thus, provide additional pedestrian capacity. Additionally, the Lawrence Station Sense of Place Plan would not conflict with the policies concerning pedestrian facilities within the adopted LSAP and would provide enhanced connectivity consistent with adopted plans and policies.

However, the LSAP Update would result in the additional development potential of 3,612 new housing units within the plan area which could generate additional demand for pedestrian facilities that did not exist; and thus, was not analyzed under the 2016 LSAP EIR. However, implementation of the adopted LSAP pedestrian improvements, policies, and requirements, combined with those of the Lawrence Station Sense of Place Plan included in the LSAP Update, would provide adequate pedestrian facilities to accommodate the project-generated increase in demand.

In summary, the LSAP Update would enhance, not disrupt any existing or planned pedestrian facilities and would not conflict with a program, plan, ordinance, or policy addressing these facilities. Additionally, any demand for pedestrian facilities generated by the LSAP Update would be satisfied by the multimodal improvements required of new development based on adopted LSAP policies and the proposed Sense of Place Plan.

Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The LSAP Update would result in a **less-than-significant** impact to pedestrian facilities.

ISI Project

The proposed bicycle and pedestrian circulation plan for the ISI project is shown on Figure 2-8b in Section 2.4.2, "ISI Project." The ISI project would include the construction of continuous sidewalks along the Kifer Road project frontages. As currently proposed, detached sidewalks would be provided along the streets fronting the South Site. Detached sidewalks provide barriers between pedestrians and roadway traffic and would improve pedestrian comfort and safety. Additionally, the ISI project would provide crosswalks at all legs of the Commercial Street and Kifer Road intersection and the north, east, and west legs of the proposed signalized driveway. Crosswalks are also proposed along Kifer Road at the two visitor driveways and at various locations within the ISI project site.

The ISI project is expected to generate pedestrian walking trips between the project site and the nearby Lawrence Caltrain Station. As part of the ISI project, a new Class I shared-use path would be provided along the south and west boundaries of the South Site. As buildout of the LSAP occurs with installation of sidewalks on Sonora Court and the Class I shared use is completed, it would provide a direct and continuous pedestrian connection between the ISI project site and the Lawrence Caltrain Station.

The ISI project would provide various on-site services to reduce daily trips, including food service, food vending, postage and mail services, onsite ATM, and onsite dry cleaning and laundry. The ISI project would also provide a fitness center, jogging paths, and private recreational facilities. Therefore, outside of trips to and from the Caltrain station, the ISI project is expected to generate minimal pedestrian traffic to the surrounding area.

Additional pedestrian facilities included as part of the ISI project includes a private pedestrian bridge spanning Kifer Road and connecting the North Site to the South Site. This would provide a safe way for employees to access both buildings, without impacting traffic on Kifer Road. Finally, the proposed pedestrian improvements detailed above would be required to conform to City design standards and would not conflict with the requirements of the LSAP Update Sense of Space Plan or the City of Sunnyvale General Plan LUTE.

In summary, the ISI project would enhance, not disrupt any existing or planned pedestrian facilities. Additionally, any demand for pedestrian facilities generated by the ISI project would be satisfied by the multimodal improvements proposed for the project site, and the sidewalks planned along the Kifer Road frontage would meet the requirements of the General Plan LUTE for Commercial/Industrial Corridors.

Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The ISI project would result in a **less-than-significant** impact to pedestrian facilities.

Mitigation Measures

No mitigation is required.

Impact 3.14-5: Substantially Increase Hazards Because of a Geometric Design Feature or Incompatible Uses

The 2016 LSAP EIR concluded that project implementation would result in a less-than-significant impact to transportation hazards because all roadway and pedestrian/bicycle facilities would be designed in accordance with City standards, and the project would not result in a substantial increase in conflicts between different travel modes (e.g., bicycle, pedestrians, rail, and vehicular traffic). All new roadway, bicycle, pedestrian, and transit infrastructure improvements under the LSAP Update and the ISI project would improve multimodal circulation and access and minimize the potential for pedestrian/bicycle and vehicle conflicts. Additionally, these improvements would be subject to and designed in accordance with City design and safety standards. Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Both the LSAP Update and the ISI project would result in a **less-than-significant** impact to transportation hazards.

Impact 3.4.4 of the 2016 LSAP EIR evaluated the potential for the project to increase hazards because of a design feature or incompatible uses. The 2016 LSAP EIR concluded that project implementation would result in a less-than-significant impact to transportation hazards because all roadway and pedestrian/bicycle facilities would be designed in accordance with City standards, and the project would not result in a substantial increase in conflicts between different travel modes (e.g., bicycle, pedestrians, rail, and vehicular traffic).

LSAP Update

As described in Impact 3.4.4 of the 2016 LSAP EIR, the LSAP incorporates a "complete streets" approach for circulation planning that accommodates all travel modes. The adopted LSAP contains circulation network improvements to provide improved access throughout the plan area to minimize the potential for pedestrian/bicycle and vehicle conflicts; and thus, improve overall safety for all users.

The Lawrence Station Sense of Place Plan would require new development in the area to implement a variety of additional transit, pedestrian, bicycle, and automobile circulation improvements and develop associated design standards and guidelines. These improvements include, but are not limited to, rail crossings (if determined to be feasible), sidewalks, curb ramps, new bicycle facilities, and grade-separated bicycle and pedestrian crossings. The design standards in the Lawrence Station Sense of Place Plan would ensure that the new improvements associated with the LSAP Update would be developed in accordance with industry accepted engineering and design practices. Additionally, consistent with the adopted LSAP, all new roadway, bicycle, pedestrian, and transit infrastructure improvements under the LSAP Update would be subject to and designed in accordance with City design and safety standards.

Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The LSAP Update would result in a **less-than-significant** impact to transportation hazards.

ISI Project

As described in Section 2.4.2, "ISI Project," the ISI project includes multiple options for vehicular, bicycle, and pedestrian access (Figure 2-10a and 2-10b). Roadway access would be provided via Kifer Road with an employee driveway at the southeast corner of the North Site and a visitor driveway located near the north building entrance and visitor parking area. Additionally, the ISI project would be required to fulfill certain requirements of the proposed Lawrence Station Sense of Place Plan which could include the following improvements:

- A new landscaped 10-foot-wide median on Kifer Road that includes left turn pockets for existing and proposed driveways.
- Frontage improvements along Kifer Road, including new sidewalks, street trees, street lighting, and restriping on Kifer Road to accommodate 5-foot bike lanes and 1.5-foot striped buffer.
- A new east-west publicly accessible Class I shared-use path adjacent to the Caltrain right-of-way and South Site. The path would include directional signage to the Station.
- Installation of gateway signage would be included within the new Kifer Road median and/or on the ISI Site.
- Improvements to a bus stop located in front of the South Site, including design consistent with VTA and Americans with Disabilities Act (ADA) standards.

All new roadway, bicycle, pedestrian, and transit infrastructure improvements under the ISI project would be subject to and designed in accordance with City design and safety standards. Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The ISI project would result in a **less-than-significant** impact to transportation hazards.

Mitigation Measures

No mitigation is required.

Impact 3.14-6: Result in Inadequate Emergency Access

The 2016 LSAP EIR concluded that implementation of the LSAP would result in a less-than-significant impact to emergency access because all roadway improvements proposed within the LSAP would not adversely affect emergency access. Consistent with the adopted LSAP, emergency access for any future developments under the LSAP Update, including the ISI project, would be subject to review by the City of Sunnyvale and responsible emergency service agencies; and thus, would be designed to meet all City of Sunnyvale emergency access and design standards. Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR The LSAP Update and the ISI project would result in a **less-than-significant** impact to emergency access.

Impact 3.4.5 of the 2016 LSAP EIR evaluated the potential for the project to result in inadequate emergency access. The 2016 LSAP EIR concluded that project implementation would result in a less-than-significant impact to emergency access because all roadway improvements proposed in the LSAP would not adversely affect emergency access.

LSAP Update

As described in the Impact 3.4.4 of the 2016 LSAP EIR, the adopted LSAP includes a number of roadway network improvements that would provide improved access throughout the plan area. These improvements include, but are not limited to, The Loop road, extending Sonora Court to both Kifer Road and the east side of the Lawrence Expressway Overcrossing. Such improvements, along new secondary streets, would provide improved circulation; and thus, improved emergency access throughout the plan area. The LSAP Update does not include any roadway projects not analyzed in the Impact 3.4.4 of the 2016 LSAP EIR.

The LSAP Update's Lawrence Station Sense of Place Plan would require new development in the area to implement a variety of transit, pedestrian, bicycle, and automobile circulation improvements and develop associated design standards and guidelines. The conceptual plan for the Lawrence Station Sense of Place Plan is provided in Figure 2-4 in Chapter 2, "Project Description." These improvements would include a loop road, rail crossings (if determined to be feasible), sidewalks, curb ramps, the addition and removal of on-street parking, new pathways, intersection improvements, buffered bicycle lanes, Class I shared-use paths, bus stop improvements along Kifer Road, lighting, wayfinding signage, and other public amenities. Therefore, implementation of the Lawrence Station Sense of Place Plan would enhance circulation in the plan area and would not adversely affect emergency access.

Additionally, consistent with the adopted LSAP, emergency access for any future developments under the LSAP Update would be subject to review by the City of Sunnyvale and responsible emergency service agencies; thus, ensuring the project would be designed to meet all City of Sunnyvale emergency access and design standards.

Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The LSAP Update would result in a **less-than-significant** impact to emergency access.

ISI Project

The ISI project site is located within an existing suburban area close to emergency services and would provide additional vehicular access points. As detailed in the *Intuitive Surgical Campus Expansion Transportation Impact Analysis* (see Appendix E), all drive aisles on the project site are at least 20 feet wide; and thus, would provide adequate emergency vehicle access and circulation per City standards. Additionally, emergency access would be subject to review by the City of Sunnyvale and responsible emergency service agencies; thus, ensuring the project would be designed to meet all City of Sunnyvale emergency access and design standards. Therefore, adequate emergency access would be provided and

there is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The ISI project would result in a **less-than-significant** impact to emergency access.

Mitigation Measures

No mitigation is required.

Impact 3.14-7: Result in a Temporary but Prolonged Construction-related Impact to Transportation Facilities

Temporary construction-related impacts to transportation facilities were not analyzed in the 2016 LSAP EIR as it was assumed that they would be addressed on the project level. Similar to the 2016 LSAP EIR, this SEIR addresses the LSAP Update at the program-level and assumes temporary construction-related impacts to transportation facilities that may occur with buildout of projects under the LSAP Update would be addressed on a project-by-project basis. The general character, intensity, and location of potential construction-related transportation impacts of projects developed in the plan area under the LSAP Update would be similar to that of the adopted LSAP. Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. A project-level analysis of the ISI project is provided in this SEIR; therefore, the potential effects of ISI project-generated construction activities on transportation facilities are the focus of this impact. Construction activities associated with the ISI project could potentially result in temporary but prolonged impacts including, but not limited to, road, lane, bicycle lane, and sidewalk closures. Therefore, the ISI project could result in a new significant impact that was not analyzed in the 2016 LSAP EIR. Construction-related transportation impacts resulting from the ISI project would result in a **potentially significant** impact.

Temporary construction-related impacts to transportation facilities were not analyzed in the 2016 LSAP EIR.

LSAP Update

Similar to the 2016 LSAP EIR, this SEIR addresses the LSAP Update at the program-level and assumes temporary construction-related impacts to transportation facilities that may occur with buildout of projects under the LSAP Update would be addressed on a project-by-project basis. The general character, intensity, and location of potential construction-related transportation impacts of projects developed in the plan area under the LSAP Update would be similar to that of the adopted LSAP. Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the 2016 LSAP EIR. The LSAP Update would result in **less-than-significant** construction-related transportation impact.

ISI Project

As detailed in Section 2, "Project Description," offsite utility improvements would include upgrading existing fire hydrants along the north sidewalk of Kifer Road and potentially upgrading existing street lighting along Kifer Road pending photometric analysis results. However, as detailed in Appendix E, the ISI project would require offsite roadway and intersection improvements to reduce operational deficiency along study area roadway facilities. Additionally, the ISI project would likely include construction, redesign, and alteration of existing vehicular and multimodal access points to the project site. Therefore, during construction of the site access improvements and the offsite transportation facility improvements, disruptions to the transportation network in the vicinity of the project site could occur, including the possibility of temporary lane closures, street closures, sidewalk closures, and bikeway closures.

As described above, construction would occur adjacent to and within the public roadway right-of-way; thus, it would likely require temporary lane closures and could result in unexpected slowing of vehicular traffic if not properly planned and managed. The hauling of heavy machinery (e.g., bulldozers, excavators) and operation of large trucks associated with construction activities could necessitate travel along roadways not designated as truck routes and could potentially cause damage to the roadbed.

A construction management plan will be required by the City of Sunnyvale and the City of Sunnyvale would determine the construction truck routes. The duration of construction, number of trucks, truck routing, number of employees, truck idling, lane closures, and a variety of other construction-related activities are unknown at this time. Construction transportation impacts would be localized and temporary; however, ISI project construction activities

could potentially result in temporary but prolonged impacts. Therefore, the ISI project could result in a new significant effect that was not analyzed in the 2016 LSAP EIR. The ISI project would result in a **potentially significant** construction-related transportation impact.

Mitigation Measures

Mitigation Measure 3.14-7: Prepare and Implement a Temporary Traffic Control Plan for the ISI Project

Before construction or issuance of building permits, the developer or the construction contractor for the ISI project shall prepare a temporary traffic control plan (TTC) to the satisfaction of the City of Sunnyvale Division of Transportation and Traffic and subject to review by all affected agencies. The TTC shall include all information required on the City of Sunnyvale TTC Checklist and conform to the TTC Guidelines of the City of Sunnyvale. At a minimum, the plan shall include the following elements:

- provide vicinity map including all streets within the work zone properly labeled with names, posted speed limits and north arrow;
- provide existing roadway lane and bike lane configuration and sidewalks where applicable including dimensions;
- description of proposed work zone;
- description of detours and/or lane closures (pedestrians, bicyclists, vehicular);
- description of no parking zone or parking restrictions;
- provide appropriate tapers and lengths, signs, and spacing;
- provide appropriate channelization devices and spacing;
- description of buffers;
- provide work hours/work days;
- dimensions of above elements and requirements per latest CA—MUTCD Part 6 and City of Sunnyvale's SOP for bike lane closures;
- provide proposed speed limit changes if applicable;
- description of bus stops, signalized and non-signalized intersection impacted by the work;
- show plan to address pedestrians, bicycle and ADA requirement throughout the work zone per CA-MUTCD Part 6 and City of Sunnyvale's SOP for Bike lane closures;
- indicate if phasing or staging is requested and duration of each;
- description of trucks, including number and size of trucks per day, expected arrival/departure times, truck circulation patterns;
- provide all staging areas on the project site; and
- ensure that the contractor has obtained and read the City of Sunnyvale's TTC Guidelines and City of Sunnyvale's SOP for bike lane closures; and
- ensure traffic impacts are localized and temporary.

Significance after Mitigation

Implementation of Mitigation Measure 3.14-7 would require the developer or the construction contractor of the ISI project to prepare and implement a TTC consistent with the most recent CA-MUTCD, Part 6: Temporary Traffic Control and City of Sunnyvale TTC guidelines, and that meets with the approval of the City of Sunnyvale Division of Transportation and Traffic. Thus, Mitigation Measure 3.14-7 would reduce the temporary impact to the degree feasible. Additionally, construction traffic impacts would be localized and temporary. For these reasons, construction traffic impacts of the ISI project would be **less than significant** with implementation of Mitigation Measure 3.14-7.

3.15 UTILITIES AND SERVICE SYSTEMS

This section analyzes and evaluates the new potential impacts related to the availability of utility and infrastructure systems (water, wastewater, stormwater, solid waste, electricity, and natural gas) to serve the LSAP Update and ISI project. If such an effect is determined to occur, whether new or expanded facilities would be required that could result in a potentially significant impact to the environment.

The 2016 LSAP EIR included Section 3.11, "Public Services and Utilities," which evaluated the potential effects of the LSAP on water, wastewater, solid waste, electricity, and natural gas. The issue of stormwater was discussed in Section 3.8, "Hydrology and Water Quality." The 2016 LSAP EIR concluded that there would be less-than-significant impacts related to increased demand for water supply (Impact 3.11.5.1), water supply infrastructure (Impact 3.11.5.2), exceedance of wastewater requirements (Impact 3.11.6.1), wastewater conveyance and treatment (Impact 3.11.6.2), stormwater (Impact 3.8.1), increased solid waste disposal (Impact 3.11.7.1) and increased demand for electricity and natural gas (Impact 3.11.8.1). No mitigation was required for these less-than-significant impacts.

No comments regarding utilities and service systems were received in response to the NOP (see Appendix A).

3.15.1 Regulatory Setting

The regulatory information provided on pages 3.11-21 through 3.11-47 of the 2016 LSAP DEIR remains applicable to this analysis and includes a description of the Safe Drinking Water Act; California Water Plan; Urban Water Management Plan; Senate Bill 610 (SB 610); Assembly Bill 901 (AB 901); Water Conservation Act of 2009; Clean Water Act; State Water Resources Control Board's (SWRCB's) Recycled Water Policy; Title 22 criteria; San Francisco Bay Regional Water Quality Control Board's (RWQCB's) Municipal Regional Stormwater Permit (MRP); California Integrated Waste Management Act; SB 1016; AB 341; AB 1826; and applicable City General Plan policies and Municipal Code requirements. Supplemental regulatory information relevant to understanding the potential impacts of the LSAP Update and ISI project on utilities and service systems is provided below.

STATE

Water Supply and Service

Urban Water Management Plan

In 1983, the California Legislature enacted the Urban Water Management Planning Act (UWMPA) (California Water Code Sections 10610–10656). The UWMPA states that every urban water supplier that provides water to 3,000 or more customers, or that provides more than 3,000 acre-feet (af) of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. This effort includes the adoption of an Urban Water Management Plan (UWMP) by every urban-water supplier and an update of the plan every 5 years on or before December 31, of every year ending in a five or zero. The UWMPA has been amended several times since 1983 with the most recent amendment occurring with Senate Bill (SB) 318 in 2004. The UWMPA and SB 610, described below, are interrelated; the UWMP is typically relied upon to meet the requirements for SB 610. The City of Sunnyvale adopted its 2015 UWMP on June 21, 2016 (City of Sunnyvale 2016a).

Senate Bill 610

SB 610, codified in California Water Code Section 10910(c)(2), makes changes to the UWMPA to require additional information in UWMPs if groundwater is identified as a source available to the supplier. Required information includes a copy of any groundwater management plan adopted by the supplier, a copy of the adjudication order or decree for adjudicated basins, and if nonadjudicated, whether the basin has been identified as being overdrafted or projected to be overdrafted in the most current DWR publication regarding that basin. If the basin is in overdraft, the plan must include current efforts to eliminate any long-term overdraft. A key provision in SB 610 requires that any

project subject to CEQA supplied with water from a public water system be provided a specific water supply assessment (WSA), except as specified in the law. Water supply assessments are required under SB 610 for projects that include 500 units of residential development, projects that would demand an amount of water equivalent to or greater than the water required by a project with 500 dwelling units, or projects that would increase the number of the public water system's existing service connections by 10 percent. The water demand for the LSAP was evaluated in a WSA prepared in November 2015 for the Sunnyvale General Plan Draft Land Use and Transportation Element (LUTE) (City of Sunnyvale 2015). A WSA was prepared in June 2020 for the LSAP Update and ISI project (City of Sunnyvale 2020a).

Water Conservation Act of 2009

SB x7-7, the Water Conservation Act of 2009, requires the State to achieve a 20 percent reduction in urban per capita water use by December 31, 2020. The responsibility for this conservation falls to local water agencies, which must increase water use efficiency through promotion of water conservation standards that are consistent with the California Urban Water Conservation Council's best management practices. Each urban retail water supplier was also required to develop urban water use targets and an interim urban water use target by July 1, 2011, based on the alternative methods set out in the 2009 act. The agencies must meet those targets by the 2020 deadline. The act also requires each agency to monitor its progress toward its targets, achieving a 10 percent reduction by 2015. These requirements and the City of Sunnyvale's specific compliance plan are outlined in the City's 2015 UWMP. The City's calculated per capita water use target for 2020 is 139 gallons per day per capita (City of Sunnyvale 2016a:5-4). During the 2018 and 2019 calendar years, the per capita water use was 108 gallons per day, or 22 percent below the target.

Wastewater

Recycled Water Policy

To establish uniform requirements for the use of recycled water, the State Water Resources Control Board (SWRCB) adopted a statewide Recycled Water Policy on February 3, 2009. The policy's purpose is to increase the use of recycled water from municipal wastewater sources that meets the definition in Water Code Section 13050(n) in a manner that implements State and federal water quality laws. The policy describes permitting criteria intended to streamline the permitting of the vast majority of recycled water projects. The intent of this streamlined permit process is to expedite the implementation of recycled water projects in a manner that implements State and federal water quality laws while allowing the Regional Water Quality Control Boards (RWQCBs) to focus on projects that require substantial regulatory review due to unique site-specific conditions.

Department of Public Health

The California Department of Public Health (formerly the Department of Health Services) is responsible for establishing criteria to protect public health in association with recycled water use. The criteria issued by this department are found in the California Code of Regulations, Title 22, Division 4, Chapter 3, entitled Water Recycling Criteria. Commonly referred to as Title 22 Criteria, the criteria contain treatment and effluent quality requirements that vary based on the proposed type of water reuse. Title 22 sets bacteriological water quality standards on the basis of the expected degree of public contact with recycled water. For water reuse applications with a high potential for the public to come into contact with the reclaimed water, Title 22 requires disinfected tertiary treatment. For applications with a lower potential for public contact, Title 22 requires three levels of secondary treatment, basically differing by the amount of disinfectant required.

Title 22 also specifies the reliability and redundancy for each recycled water treatment and use operation. Treatment plant design must allow for efficiency and convenience in operation and maintenance and provide the highest possible degree of treatment under varying circumstances. For recycled water piping, the department has requirements for preventing backflow of recycled water into the public water system and for avoiding cross-connection between the recycled and potable water systems. The Department of Public Health does not have enforcement authority for the Title 22 criteria; instead, the RWQCBs enforce the criteria through enforcement of their permits containing the applicable criteria.

Solid Waste

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (AB 939) requires each California city and county to reduce the volume of waste it disposes by 50 percent by the year 2000 and continue to remain at 50 percent or higher for each subsequent year through source reduction, recycling, and composting. As of 2011, Sunnyvale's diversion rate was 66 percent.

SB 1016

SB 1016 updated the local jurisdiction diversion requirements in 2006 and the State now uses a per capita factor for actual disposal as a measurement to evaluate program effectiveness in meeting AB 939 requirements. AB 939 generally requires each California city and county to adopt and implement a Source Reduction and Recycling Element that describes in detail how the jurisdiction plans to meet AB 939's waste diversion goals. In 1990, Sunnyvale was the first city in California to adopt its Source Reduction and Recycling Element in compliance with AB 939. Sunnyvale has a per capita disposal target of 5.0 pounds per day per resident and 8.3 pounds per day per employee. Disposal rates in the city have been trending lower since 2007, with 2018 rates of 3.2 pounds per person per day for residents and 5.3 pounds per person per day for employment (CalRecycle 2020a).

The City of Sunnyvale's Building Division requires applicants to obtain a demolition permit for removal of entire buildings and structures before the start of any demolition activities. As part of the demolition permitting process, applicants are required to follow a list of general requirements based on the California Green Building Code and the Sunnyvale Municipal Code. A portion of the requirements includes consideration of deconstructing (i.e., building dismantling) and/or salvage of reusable building materials to minimize the amount of demolition materials disposed of at landfills.

Electricity and Natural Gas

California Building Energy Efficiency Standards

In general, the California Building Energy Efficiency Standards require the design of building shells and building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The California Energy Commission adopted changes to the 2013 Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 6 (also known as the California Energy Code) and associated administrative regulations in Part 1 (collectively referred to here as the standards). The current standards took effect January 1, 2020 and are known as the 2019 Building Energy Efficiency Standards. The standards offer builders better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses. Energy-efficient buildings require less electricity, and increased energy efficiency reduces fossil fuel consumption.

California Green Building Standards

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code was adopted in 2019 and went into effect January 1, 2020.

LOCAL

Water Supply and Service

City of Sunnyvale General Plan

The City's General Plan (City of Sunnyvale 2011) includes the following goals and policies which may be relevant to water supply and service:

- **Policy EM-1.1**: Manage water supply to meet demands for potable water through the effective use of water supply agreements.
- **Policy EM-2.1**: Lower overall water demand through the effective use of water conservation programs in the residential, commercial, industrial and landscaping arenas.

City of Sunnyvale Green Building Program

On May 7, 2019, the Sunnyvale City Council revised the green building standards for new construction, additions, and remodels of buildings. Incentives are offered for projects that exceed the minimum green building standards and are offered to encourage project applicants and developers to provide additional green building features. Mixed-use projects are required to meet the appropriate Build It Green standard for the residential portion and Leadership in Energy and Environmental Design (LEED) for the nonresidential portion. These measures include efficient irrigation systems, insulation of hot water pipes, and water-efficient fixtures.

City of Sunnyvale Climate Action Playbook

The City of Sunnyvale adopted the Climate Action Playbook (Playbook) on August 13, 2019. The Playbook builds upon the City's previous Climate Action Plan (CAP 1.0) in 2014. Through implementation of measures in the CAP 1.0, the City calculated a 12 percent decrease below 1990 emissions levels in 2016. In 2018, the City emitted 720,000 metric tons of carbon dioxide equivalent ($MTCO_2e$), which represents a 28 percent reduction from 1990 levels (City of Sunnyvale 2020c). To support compliance with the State's long-term climate change reduction goals, the City must achieve an interim target of a 56 percent reduction below 1990 levels by 2030 (SB 32) with the goal of meeting the State's target of 80 percent below 1990 emissions by 2050 (EO S-3-05). The Playbook includes a Game Plan 2020 which contains the "next moves" for the City and contains 46 actions that are planned for implementation over three years (2019–2022). Several Playbook next moves are directly applicable to land use development projects.

The following strategies and plays contained in the City's Playbook are relevant to the project:

- **Strategy 1:** Promoting Clean Electricity
  - Play 1.1: Promote 100 percent clean electricity
  - Play 1.2: Increase local solar photovoltaics
  - Play 1.3: Increase distributed electricity storage
- **Strategy 2:** Decarbonizing Buildings
  - Play 2.3: Achieve all-electric new construction
- **Strategy 3:** Decarbonizing Transportation & Sustainable Land Use
  - Play 3.1: Increase opportunities for and encourage development of mixed-use sites to reduce vehicle miles per person
  - Play 3.2: Increase transportation options and support shared mobility
  - Play 3.3: Increase zero-emission vehicles

- Strategy 4: Managing Resources Sustainably
  - Play 4.1: Achieve Zero Waste goals for solid waste
  - Play 4.2: Ensure resilience of water supply
  - Play 4.3: Enhance natural carbon sequestration capacity
  - Play 4.4: Promote awareness of sustainable goods and services

Sunnyvale Municipal Code

The City of Sunnyvale Municipal Code (SMC), organized by Title, Chapter, and Section, contains all regulations for the City. Code requirements relevant to the project, include:

- Chapter 12.34, Water Conservation Restrictions. This chapter establishes regulations for identifying and restricting nonessential water uses throughout the city which, if allowed, would otherwise result in water waste. Section 12.34.020 defines nonessential water uses and prohibits ongoing broken or defective plumbing, sprinklers, or irrigation systems; using of potable water in a manner that results in or allows the flooding of any premises; using a hose that is not equipped with an automatic shutoff valve (i.e., spray nozzle); using potable water to wash sidewalks, driveways, or patios; or using potable water to irrigate any outdoor landscaping are more than 15 minutes per day per station.
- Chapter 19.37, Landscaping, Irrigation and Useable Open Space. This chapter includes regulations that establish, among other things, water efficiency design requirements that require landscaped areas be designed to achieve water efficiency. For example, Section 19.37.050 requires that efficiency be achieved by either minimizing the amount of turf installed or by establishing a water budget that the project must adhere to, which is determined by a formula that considers a plant factor obtained by the water use classification of landscape species (WUCOLS), which establishes the water needs of plants by plant type. Additionally, Section 19.37.110 establishes irrigation system design requirements to prohibit water waste from inefficient irrigation design. Irrigation design requirements include establishing hydrozones by separating valves to accommodate the various water needs of plant material; installation of low volume irrigation or drip-irrigation for trees and shrubs, mulched areas, and areas with slopes greater than 10 percent or areas less than eight feet in width; installation of irrigation controllers and automatic shut-off sensors that will suspend irrigation during unfavorable weather conditions, such as rain; and irrigation only between the hours of 8:00 p.m. and 10:00 a.m. In addition, Section 19.37.120 requires that all landscape plans be reviewed and permitted by the director of community development to ensure the design complies with this SMC.

Wastewater

City of Sunnyvale Municipal Code

Title 12, Water and Sewers, of the Sunnyvale Municipal Code regulates wastewater in the city. Specifically, Chapter 12.40 establishes requirements for wastewater capacity allocation, including initial allocations and baseline limits, monitoring of wastewater flows, need for wastewater capacity evaluations, and declarations of restrictions.

Stormwater

Municipal Regional Permit

The City of Sunnyvale is one of 76 co-permittees listed under a regional Municipal Regional Stormwater Permit (MRP) for the San Francisco Bay (Order No. R2-2015-0049) administered by the San Francisco Bay RWQCB. The MRP regulates discharges from municipal separate storm drain systems into waterways under each co-permittee's jurisdiction. The Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPP) assists the co-permittees in implementing the provisions of this permit.

The MRP defines which projects must comply with the design standards. New and redevelopment projects that create or replace 10,000 square feet or more of impervious surface are subject to MRP Provision C3. Those projects must provide permanent/post-construction treatment controls for stormwater according to specific calculations. If the

redevelopment results in an alteration of more than 50 percent of the existing impervious surfaces, permanent BMPs must be implemented to treat runoff from the entire project site. The City of Sunnyvale has developed a Stormwater Quality BMP Guidance Manual for New and Redevelopment Projects to ensure compliance with the MRP requirements.

Low Impact Design (LID)

SCVURPP has published a C.3 Stormwater Handbook that assists developers in meeting local municipal and State regulations through the use of low impact design (LID) strategies. The goal of LID is to reduce runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover, and then infiltrating, storing, detaining, and/or biotreating stormwater close to the source. LID uses principles such as preserving and re-creating natural landscape features and minimizing imperviousness to create a functional and appealing site drainage that treats stormwater as a resource rather than a waste product. MRP Provision C.3.c requires source control and landscaping that minimizes irrigation and runoff and promotes surface infiltration. A regulated project must implement at least one of the design strategies identified in the MRP (e.g., minimizing impervious surfaces and/or directing roof runoff into cisterns). Each regulated project must identify how much stormwater must be treated, and the project is required to treat 100 percent of the amount of that runoff (e.g., using infiltration or biotreatment techniques).

City of Sunnyvale General Plan

The City's General Plan (City of Sunnyvale 2011) includes the following goals and policies which may be relevant to stormwater:

- **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 define 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.

Sunnyvale Urban Runoff Management Plan

Sunnyvale has developed an Urban Runoff Management Plan (URMP) to reduce, control, or otherwise manage pollutant sources in discharges to the storm drain system. City of Sunnyvale departments have adopted BMPs and standard operating procedures to reduce the presence of pollutants in stormwater discharges to the maximum extent practicable. The Sunnyvale URMP focuses on prevention of illicit connection/illegal dumping, quality of industrial and commercial discharges, and minimizing impacts from new development and construction activities. The City implements BMPs for maintaining street and roads, storm drains, and water utilities and preventing stormwater pollution. The City also provides public education and outreach activities related to the prevention of discharges of pollutants such as pesticides, copper, mercury, and other wastes that may have an impact on water quality. Sunnyvale also implements Hydrograph Modification Management Plan Program requirements (MRP Provision C.3f.i) to ensure that post-project runoff does not exceed estimated pre-project rates, durations, and volumes from a project.

Sunnyvale Green Stormwater Infrastructure Plan

In September 2019, Sunnyvale adopted its Green Stormwater Infrastructure Plan (GSI) which is designed to reduce the impact of urban development on waterways. GSI features mimic nature, and use plants, soils, and/or pervious surfaces to collect and treat stormwater, allowing it to soak into the ground and be filtered by soil. This reduces the quantity of water and pollutants flowing into local creeks and San Francisco Bay. Development of the GSI Plan is required by the City's Municipal Regional Stormwater NPDES Permit.

The GSI Plan describes the City's methodology to identify and prioritize areas for implementing GSI, and estimates targets for the extent of the City's area that will be addressed by GSI through 2040. The Plan includes maps of the City's prioritized areas and potential project opportunities and lays out the City's GSI implementation strategy. Key elements of the strategy include coordination with GSI regulations for private development and opportunities in adjacent public rights-of-way; identification of GSI opportunities in capital projects; and aligning GSI goals and policies with other City planning documents to achieve multiple benefits and provide safer, sustainable, and attractive public streetscapes. The Plan contains guidance and standards for GSI project design and construction and describes how the City will track and map constructed GSI projects and make the information available to the public. Lastly, it explains existing legal mechanisms to implement the GSI Plan, and identifies potential sources of funding for the design, construction, and maintenance of GSI projects. (City of Sunnyvale 2019)

Sunnyvale Municipal Code

Chapter 12.60 of the Sunnyvale Municipal Code provides regulations and give legal effect to certain requirements of the NPDES permit issued to Sunnyvale. This chapter includes:

- Discharge prohibitions to the storm water conveyance system;
- Requirements for storm water pollution prevention and the development of Storm Water 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 storm water treatment BMPs 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; and
- Penalties for failure to comply with provisions of the chapter.

Sunnyvale Zoning Code

Chapter 19.37 of the Sunnyvale Zoning Code seeks to ensure that adequate landscaped areas and usable open space are provided where applicable for all zoning districts; to promote the conservation and efficient use of water and to prevent the waste of this valuable resource; and to promote water conservation as one component of sustainable building practices. Under Section 19.37.040 generally requires a minimum of 20 percent landscaping for each developed parcel.

Solid Waste

City of Sunnyvale General Plan

The Environmental Management – Solid Waste subchapter of the General Plan contains the following policies that are relevant to the LSAP's impacts on solid waste facilities.

- **Policy EM-14.1**: Reduce generation of solid waste by providing source reduction programs and promoting reduction behavior.
- **Policy EM-14.2**: Maximize diversion of solid waste from disposal by use of demand management techniques, providing and promoting recycling programs and encouraging private sector recycling.

Zero Waste Strategic Plan: A Quantifiable Approach

In 2008, the City adopted a Zero Waste Policy to preserve the natural environment by encouraging waste reduction. The Zero Waste Policy led to the adoption of a Zero Waste Strategic Plan in 2013. The Zero Waste Strategic Plan sets quantifiable goals that emphasize waste reduction, encourage sustainable consumerism, and conserve natural resources. The Zero Waste Strategic Plan guides waste management policy decisions to increase diversion to 75

percent by the year 2020 and 90 percent by 2030. The primary focus of the Zero Waste Strategic Plan is on diverting organics (especially food waste) from disposal. It also emphasizes source controls (i.e., bans) on problematic materials such as single-use carryout bags and water bottles and expanded polystyrene foam food containers. The Zero Waste Strategic Plan discusses increased capture of divertible materials by source-separated collection programs, enhanced use of the Sunnyvale Materials Recovery and Transfer Station (SMaRT Station®), and the possible application of new "conversion" technologies, including dry anaerobic digestion, to the Sunnyvale waste stream, either on their own or in cooperation with nearby cities. However, implementation of most conversion technologies is not possible under current State laws and policies.

Sunnyvale Municipal Code

The City of Sunnyvale Municipal Code (SMC), organized by Title, Chapter, and Section, contains all regulations for the City. Code requirements relevant to the project, include:

- Chapter 8.16, Solid Waste Management and Recycling. This chapter sets forth terms and conditions for residential and commercial solid waste and recycling services throughout the City of Sunnyvale. Under Section 8.16.040, all solid waste produced or accumulated on all premises shall be disposed of or removed at least once a week. Under Section 8.16.120, under most circumstances removal shall be completed only by a disposal service operator to whom a franchise or license to do so has been granted by the City. The City has one such operator.
- Chapter 19.38, Required Facilities. This chapter includes regulations for the types of facilities that the owner or occupant of land or buildings is required to provide in the City of Sunnyvale. Section 19.38.30 establishes direction for ensuring adequate and accessible recycling and solid waste facilities to serve residential and industrial sites.

Electricity and Natural Gas

City of Sunnyvale Climate Action Playbook

The City of Sunnyvale adopted the Climate Action Playbook (Playbook) on August 13, 2019. The Playbook builds upon the City's previous Climate Action Plan (CAP 1.0) in 2014. The following strategies and plays contained in the City's Playbook are relevant to the project's demand for electricity and natural gas:

- **Strategy 1:** Promoting Clean Electricity
  - Play 1.1: Promote 100 percent clean electricity
  - Play 1.2: Increase local solar photovoltaics
  - Play 1.3: Increase distributed electricity storage
- **Strategy 2:** Decarbonizing Buildings
  - Play 2.3: Achieve all-electric new construction
- **Strategy 3:** Decarbonizing Transportation & Sustainable Land Use
  - Play 3.1: Increase opportunities for and encourage development of mixed-use sites to reduce vehicle miles per person
  - Play 3.2: Increase transportation options and support shared mobility
  - Play 3.3: Increase zero-emission vehicles

3.15.2 Environmental Setting

The environmental setting provided on pages 3.11-14 through 3.11-46 of the 2016 LSAP DEIR remains applicable to this analysis. The following section updates the project's environmental setting since the adopted 2016 LSAP EIR and includes additional information applicable to the project's impact analysis.

Public utilities in the project area are provided by various entities, as identified in Table 3.15-1 and discussed in detail below.

Table 3.15-1 Utilities Providers for the Project Area

Utility	Agency/Provider
Water Supply	City of Sunnyvale
Wastewater Collection and Conveyance	City of Sunnyvale
Wastewater Treatment	City of Sunnyvale
Stormwater Conveyance	City of Sunnyvale
Solid Waste Collection	Specialty Solid Waste and Recycling
Electrical Service	Pacific Gas and Electric Company (PG&E)
Natural Gas	Pacific Gas and Electric Company (PG&E)

Source: Data compiled by Ascent Environmental in 2020

WATER SUPPLY AND SERVICE

The water demand for the adopted LSAP was evaluated in a WSA prepared in November 2015 for the Sunnyvale General Plan Draft Land Use and Transportation Element (LUTE) (City of Sunnyvale 2015). A WSA was prepared in June 2020 for the LSAP Update and ISI project (City of Sunnyvale 2020a). Unless otherwise noted, the information about existing and planned supplies, historic and future demand, and supply reliability presented in this section is taken from the 2020 WSA.

Current Water Supply Sources

The City obtains its potable water supply from three sources: purchased surface water from the San Francisco Public Utilities Commission (SFPUC), purchased treated surface water from Valley Water (formerly known as the Santa Clara Valley Water District), and groundwater from six City-owned and operated wells. The City maintains one additional well on stand-by for emergency use. Most of the City's potable water supply is obtained from SFPUC and Valley Water, approximately 54 percent and 40 percent from each respectively. Approximately 1 percent of the City's water supply is obtained from groundwater wells and the remaining 5 percent comes from non-potable recycled water provided by the City's Water Pollution Control Plant (WPCP or Plant) (City of Sunnyvale 2016a).

San Francisco Public Utilities Commission

The City obtains water from the City and County of San Francisco's Regional Water System (RWS) that is operated by SFPUC. This water supply is predominantly from the Sierra Nevada, delivered through the Hetch Hetchy aqueducts but also includes treated water produced by the SFPUC from its local watersheds and facilities in Alameda and San Mateo Counties. SFPUC uses reservoir storage to ensure the reliability of its sources. In accordance with the 2009 Water Supply Agreement and the most recent amendment, the SFPUC provides 14,100 acre-feet per year (AFY) to the City. While the Water Supply Agreement and Water Supply Contract expire in 2034, SFPUC is still obligated to provide water to its customers indefinitely (City of Sunnyvale 2016a).

The amount of imported water available to the SFPUC's retail and wholesale customers is constrained by hydrology, physical facilities, and the institutional parameters that allocate the water supply of the Tuolumne River. Due to these constraints, the SFPUC is very dependent on reservoir storage to ensure ongoing reliability of its water supplies.

The SFPUC serves its retail and wholesale water demands with an integrated operation of local Bay Area water production and imported water from Hetch Hetchy. The local watershed facilities are operated to capture local

runoff. The business relationship between the SFPUC and its wholesale customers is largely defined by the "Water Supply Agreement between the City and County of San Francisco and Wholesale Customers in Alameda County, San Mateo County and Santa Clara County" (Agreement) entered into in July 2009 and set to expire in 2034. This 25-year Agreement replaced the Settlement Agreement and Master Water Sales Contract that expired in June 2009. The Agreement addresses the rate-making methodology used by the SFPUC in setting wholesale water rates for its customers in addition to addressing water supply and water shortages for the RWS.

The Agreement is supplemented by an individual Water Supply Contract between SFPUC and each individual retailer, also entered into in July 2009. These contracts also expire in 25 years. The City of Sunnyvale has an Individual Supply Guarantee (ISG) of 12.58 MGD (or approximately 14,100-acre feet per year) (City of Sunnyvale 2016b:3.11-14). Although the Agreement and accompanying Water Supply Contract expire in 2034, the ISG (which quantifies San Francisco's obligation to supply water to its individual wholesale customers) survives their expiration and continues indefinitely. The Sunnyvale contract also includes a minimum purchase amount of 8.93 MGD (10,003 AFY), which Sunnyvale agrees to buy, regardless of whether sales drop below this level.

As previously stated, the Agreement provides for a 184 million gallon per day (MGD, expressed on an annual average basis) Supply Assurance to the SFPUC's wholesale customers. This Assurance is subject to reduction, to the extent and for the period made necessary by reason of water shortage, due to drought, emergencies, or by malfunctioning or rehabilitation of the regional water system. The Agreement does not guarantee that San Francisco will meet peak daily or hourly customer demands when their annual usage exceeds the Supply Assurance. The SFPUC's wholesale customers have agreed to the allocation of the 184 MGD Supply Assurance among themselves, with each entity's share of the Supply Assurance set forth in the Agreement.

The Water Shortage Allocation Plan between the SFPUC and its wholesale customers, adopted as part of the Agreement in July 2009, addresses shortages of up to 20 percent of system-wide use. The Tier 1 Shortage Plan allocates water from the RWS between San Francisco retail and the wholesale customers during system-wide shortages of 20 percent or less. The Agreement also anticipated a Tier 2 Shortage Plan adopted by the wholesale customers which would allocate the available water from the RWS among the wholesale customers. The Tier 2 agreement was completed and approved by all the wholesale customers in March 2011.

SFPUC deliveries to the City reached a maximum of 12,675 AFY in 2008. The 2018-19 deliveries were 10,087 AF, and the 2019-20 deliveries were 10,451 AF.

Valley Water

Valley Water, previously known as Santa Clara Valley Water District (SCVWD), supplies the City of Sunnyvale treated surface water through an entitlement of the imported Central Valley Project (CVP) water and the State Water Project (SWP) water, in combination with water from local reservoirs. The City receives water from Valley Water under an existing agreement that became effective in 1981 and expires in 2051. Valley Water's imported water is conveyed through the Sacramento-San Joaquin Delta then pumped and delivered to the county through three main pipelines: the South Bay Aqueduct, which carries water from the SWP, and the Santa Clara and Pacheco Conduits, which bring water from the federal CVP.

Valley Water has a contract for 100,000 AFY from the SWP, and nearly all of this supply is used for municipal and industrial (M&I) needs. The CVP contract amount is 152,500 AFY. However, the actual amount of water delivered is typically significantly less than these contractual amounts and depends on hydrology, conveyance limitations, and environmental regulations. On a long-term average basis, 83 percent of the CVP supply is delivered for M&I use, and 17 percent is delivered for irrigation use. Actual deliveries from imported sources vary significantly depending on hydrology, regulatory constraints to protect water quality as well as fish and wildlife, and other factors. Valley Water routinely acquires supplemental imported water to meet the county's needs from the water transfer market, water exchanges, and groundwater banking activities. Local runoff is captured in local reservoirs for recharge into the groundwater basin or treatment at one of Valley Water's three water treatment plants. The total storage capacity of the District reservoirs is approximately 170,000 AF without the Department of Safety of Dams (DSOD) restrictions. Water stored in local reservoirs provides up to 25 percent of Santa Clara county's water supply. Reservoir operations are coordinated with imported Bay-Delta water received from the SWP and the CVP.

The quantity of water available to the City is based upon a requested 3-year delivery schedule submitted by the City and approved by Valley Water. The request for each year in the 3-year delivery schedule may not be less than 95 percent of the maximum amount requested in the 3-year period. Valley Water deliveries to the City reached a maximum of 13,577 AFY in 1999. The 2018-19 deliveries were 8,173 AF, and the 2019-20 deliveries were 8,914 AF. The 2020-2021 fiscal year contract amount is 8,800 AF. Per the City's 2015 UWMP, the City plans to increase water supply from Valley Water in years ahead to meet the increase in demands.

City of Sunnyvale

The City owns, operates, and maintains six wells for regular use and one well on stand-by for emergencies. The wells supplement imported water supplies from SFPUC and Valley Water during peak demand periods (e.g., summer months) and as needed for emergencies. Valley Water manages two groundwater subbasins, the Santa Clara Subbasin and the Llagas Subbasin. The basins are subject to conjunctive use management and are pumped more in drier years and then replenished (or recharged) during wet years and average years. Conjunctive use methods prevent overdraft, land subsidence, and saltwater intrusions of the subbasins. The groundwater subbasins are managed under guidance from Valley Water and in accordance with the 2016 Groundwater Management Plan (GWMP). The 2015 Sunnyvale UWMP identifies the City's safe yield for groundwater extraction is 8,000 AFY. Historical groundwater pumping volume between 2011 and 2019 ranges from 92 AFY to 2,064 AFY (City of Sunnyvale 2020a:Table 3-1).

The City's recycled water program provides irrigation for City parks, golf courses, and landscaping areas. The City-owned recycled water system includes the WPCP pump station, the San Lucar tank and pump station, the Sunnyvale Golf Course pump station, and approximately 18 miles of recycled water pipelines ranging in diameter from 6- to 36-inch. The long-term goal of the City as stated in the 2000 Recycled Water Master Plan is to reuse 100 percent of all wastewater generated from the WPCP to reduce all flows to the bay (City of Sunnyvale 2020a:3-2).

Future Water Supply Sources and Reliability

Table 3-2 shows the projected water supplies for the City through the year 2040.

Table 3.15-2 City Water Supplies (AFY)

Supply Source	Year				
	2020	2025	2030	2035	2040
SFPUC Purchased Water	11,124	12,266	12,266	12,266	12,266
Valley Water Purchased Water	10,642	11,202	11,762	12,614	12,726
Local Groundwater Wells	448	336	336	336	336
Recycled Water	1,456	1,568	1,680	1,680	1,680
Total	**23,670**	**25,372**	**26,044**	**26,896**	**27,008**

Source: 2015 Sunnyvale UWMP Table 6-2 and Table 7-4

The extent of imported water from SFPUC is dependent on water supply of the Tuolumne River, which is constrained by hydrology, physical facilities, and the institutional parameters. In October 2008, the SFPUC adopted the Water System Improvement Program (WSIP) to improve the water delivery and water supply reliability of the RWS. Relevant goals of the WSIP related to water supply are: meet average annual water demand of 265 millions of gallons per day (MGD) from the SFPUC watersheds for retail and wholesale customers during non-drought years for system demands, meet dry-year delivery needs through 2018 while limiting rationing to a maximum 20 percent system-wide reduction in water service during extended droughts; diversify water supply options during non-drought and drought periods; and improve use of new water sources and drought management, including groundwater, recycled water, conservation, and transfers. As part of the adoption of the WSIP, the SFPUC adopted the Interim Supply Limitation (ISL). The ISL limits water sales from the RWS to an annual average of 265 MGD through 2018. The SFPUC has analyzed past system yields to identify periods with single and multiple dry-years. The SFPUC has translated these dry-year projections into reductions to the total 184 MGD water supply available to the Bay Area Water Supply and Conservation Agency (BAWSCA). The City is a member of BAWSCA (City of Sunnyvale 2016a).

The 2015 Santa Clara Valley Water District UWMP recognized climate change, droughts, local fisheries operations, invasive species damage, earthquake, environmental regulations, and reduced groundwater production as threats to water supply reliability (Valley Water 2016a). Valley Water supplies have previously been affected by changes in regulatory requirements, and additional requirements are anticipated in the future. Locally, the greatest impact of regulations has been on instream recharge operations. However, future droughts represent the primary threat to Valley Water's water supply (Valley Water 2016a).

Modeling conducted for Valley Water's Water Supply Master Plan 2040 (Master Plan) indicates shortages during droughts in all demand years, with shortages increasing in severity and frequency as demands increase and Delta-conveyed supplies decrease. By 2040, without new supplies or conservation savings, shortages could occur in about 40 percent of years. The Master Plan identifies that 2040 available water supplies would range from 250,000 AFY to 399,000 AFY depending on the water year that could result in water supply shortfalls as high as 140,000 AFY during extended drought conditions (Valley Water 2019).

To improve the reliability of water supplies, the Master Plan includes the Valley Water's Ensure Sustainability water supply strategy that consists of securing existing supplies and infrastructure; increasing water conservation and water reuse; and optimizing the use of existing supplies and infrastructure. Implementation of projects identified in the Master Plan would provide a reliable water supply that would meet 2040 demands during a non-drought year. During drought conditions, water supplies would be sufficient to meet 100 percent of demand during the first five years of drought and more than 90 percent in the last year. (Valley Water 2019)

Groundwater is managed under guidance from Valley Water and in accordance with the 2016 GWMP (Valley Water 2016b). The goals are the 2016 GWMP area to manage and optimize groundwater supply reliability and minimalize land subsidence and to protect groundwater from contamination and saltwater intrusion. Groundwater well pumping may be adjusted slightly in the future to meet future water demands during drought years and emergencies. Countywide water supplies are generally sufficient to meet demands in normal years through 2040, but significant shortages may occur during multiple dry years without additional investments. Total natural groundwater recharge assumed for total Valley Water supplies consists of 61,000 AFY long term average and 47,000 AFY during a crucial drought (City of Sunnyvale 2020a:3-4).

The City has experienced a slight decrease in WPCP influent from 2010-2015 but anticipates a conservative level of 13.2 MGD for plant influent over the next 25 years. The 2013 Feasibility Study identified four recycled water system pipeline alignments. Four alignment/connection types were developed and include: Wolfe Road main, main loop, potential recycled water alignments, and infill connections. The City plans to build the alignments in four Phases as part of their Capital Improvement Program. Completion of the pipeline improvements would provide additional recycled water to the City of Sunnyvale (City of Sunnyvale 2016a).

Projected Water Demands and Future Water Supply

Tables 3.15-3, 3.15-4, and 3.15-5 identify project water demands as well as the proposed Downtown Specific Plan Amendments Project water demands on City water supplies under normal, single dry, multiple dry year conditions between 2020 and 2040.

Table 3.15-3 City Water Supplies vs. Water Demands With Project – Normal Year (AFY)

Supply Source	Year				
	2020	2025	2030	2035	2040
SFPUC Purchased Water[1]	12,141	13,283	13,283	13,283	13,283
Valley Water Purchased Water[2]	10,642	11,202	11,762	12,614	12,726
Local Groundwater Wells[2]	448	336	336	336	336
Recycled Water[2]	1,456	1,568	1,680	1,680	1,680
Supply Total	**24,687**	**26,389**	**27,061**	**27,913**	**28,025**
City Water Demands[3]	23,670	25,372	26,044	26,896	27,008
Downtown Specific Plan Amendment Water Demand[4]	329	329	329	329	329

Supply Source	Year				
	2020	2025	2030	2035	2040
Project Water Demand	688	688	688	688	688
Water Demand Total	**24,687**	**26,389**	**27,061**	**27,913**	**28,025**
Difference	**0**	**0**	**0**	**0**	**0**

1. SFPUC supply increases as necessary to meet City demands up to the City total right of 14,100 AFY.

2. Water supplies based on 2015 Sunnyvale UWMP Table 6-2 and Table 7-4 and does not reflect the maximum supply available.

3. Water demands based on 2015 Sunnyvale UWMP and projected water demand for 2040 based on UWMP rate of annual water demand increase between 2030 and 2035.

4. Downtown Specific Plan Amendment Project Water Supply Assessment (Schaaf & Wheeler 2019)

Source: 2015 Sunnyvale UWMP Table 6-2 and Table 7-4 (City of Sunnyvale 2016a) as cited by City of Sunnyvale 2020a.

Table 3.15-4 City Water Supplies vs. Water Demands With Project – Single Dry Year (AFY)

Supply Source	Year				
	2020	2025	2030	2035	2040
SFPUC Purchased Water[1]	12,141	13,283	13,283	13,283	13,395
Valley Water Purchased Water[2]	10,642	11,202	11,762	12,614	12,614
Local Groundwater Wells[2]	448	336	336	336	336
Recycled Water[2]	1,456	1,568	1,680	1,680	1,680
Supply Total	**24,687**	**26,389**	**27,061**	**27,913**	**28,025**
City Water Demands[3]	23,670	25,372	26,044	26,896	27,008
Downtown Specific Plan Amendments Water Demand[4]	329	329	329	329	329
Project Water Demand	688	688	688	688	688
Water Demand Total	**24,687**	**26,389**	**27,061**	**27,913**	**28,025**
Difference	**0**	**0**	**0**	**0**	**0**

1. SFPUC supply increases as necessary to meet City demands up to the City total right of 14,100 AFY.

2. Water supplies based on 2015 Sunnyvale UWMP Table 6-2 and Table 7-5 and does not reflect the maximum supply available. Water supplies from Valley Water for 2040 were assumed to not change from 2035 supplies.

3. Water demands based on 2015 Sunnyvale UWMP and projected water demand for 2040 based on UWMP rate of annual water demand increase between 2030 and 2035.

4. Downtown Specific Plan Amendment Project Water Supply Assessment (Schaaf & Wheeler 2019)

Source: 2015 Sunnyvale UWMP Table 7-5 (City of Sunnyvale 2016a) as cited by City of Sunnyvale 2020a.

Water Supply Infrastructure

The City of Sunnyvale owns, operates, and maintains a water distribution system that provides retail potable and non-potable water service to a majority of the residents and businesses within the city limits (California Water Service Company provides retail potable water service to pocket areas in the city). The City's potable water distribution system is a closed network consisting of three different pressure zones. The conveyance system extends over 300 miles, with pipe diameters ranging from 4 to 36 inches. There are ten potable water storage reservoirs at five different locations throughout the city with a total storage capacity of 27.5 million gallons. The City has one recycled water reservoir with a storage capacity of two million gallons. The City also has distribution system interties to the cities of Cupertino, Mountain View, and Santa Clara and to the California Water Service Company through service connections located within city boundaries that are reserved for use in case of an emergency (City of Sunnyvale 2015). Over 80 percent of the distribution and trunk lines in the city were installed in the 1960s and are nearing the end of their estimated 50-year service life, so rehabilitation and/or replacement is needed to minimize the need for emergency repairs.

Table 3.15-5 City Water Supplies vs. Water Demands With Project – Multiple Dry Year (AFY)

Supply Source	Year														
	2020			2025			2030			2035			2040		
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
SFPUC Purchased Water[1]	12,141	9,812	9,812	13,283	9,812	9,812	13,283	9,812	9,812	13,283	9,812	9,812	13,395	9,812	9,812
Valley Water Purchased Water[2]	10,642	10,200	10,200	11,202	10,200	10,200	11,762	10,200	10,200	12,614	10,200	10,200	12,614	10,200	10,200
Local Groundwater Wells[3]	448	3,538	3,855	336	4,921	5,033	336	5,539	5,710	336	6,244	6,266	336	6,360	6,387
Recycled Water[2]	1,456	1,478	1,501	1,568	1,590	1,613	1,680	1,680	1,680	1,680	1,680	1,680	1,680	1,680	1,680
Supply Total	**24,687**	**25,028**	**25,368**	**26,389**	**26,523**	**26,658**	**27,061**	**27,231**	**27,402**	**27,913**	**27,936**	**27,958**	**28,025**	**28,052**	**28,079**
City Water Demands[4]	23,670	24,011	24,351	25,372	25,506	25,641	26,044	26,214	26,385	26,896	26,919	26,941	27,008	27,035	27,062
Downtown Specific Plan Amendments Water Demand[5]	329	329	329	329	329	329	329	329	329	329	329	329	329	329	329
Project Water Demand	688	688	688	688	688	688	688	688	688	688	688	688	688	688	688
Water Demand Total	**24,687**	**25,028**	**25,368**	**26,389**	**26,523**	**26,658**	**27,061**	**27,231**	**27,402**	**27,913**	**27,936**	**27,958**	**28,025**	**28,052**	**28,079**
Difference	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

1. SFPUC supply increases as necessary to meet City demands up to the City total right of 14,100 AFY.

2. Water supplies based on 2015 Sunnyvale UWMP Table 6-2 and Table 7-5 and does not reflect the maximum supply available. Water supplies from Valley Water for 2040 were assumed to not change from 2035 supplies. Groundwater

3. The 2015 Sunnyvale UWMP identifies the City's safe yield for groundwater extraction is 8,000 AFY.

4. Water demands based on 2015 Sunnyvale UWMP and projected water demand for 2040 based on UWMP rate of annual water demand increase between 2030 and 2035.

5. Downtown Specific Plan Amendments Project Water Supply Assessment (Schaaf & Wheeler 2019)

Source: 2015 Sunnyvale UWMP Table 7-5 (City of Sunnyvale 2016a) as cited by City of Sunnyvale 2020a.

Many of the distribution lines to and within the LSAP area are 8 to 10 inches in diameter and pressures are between approximately 75 pounds per square inch (psi) and 90 psi. As in the city as a whole, these lines are mostly located within public street rights-of-way. Areas characterized by commercial uses with interconnected parking areas and no internal public streets have very little public water distribution infrastructure. The San Lucar Storage Tank and Pump Stations, which are part of the City's recycled water system, are located approximately 800 feet west of the ISI project area, directly east of Wolfe Road and directly north of the Caltrain tracks. The Wolfe-Evelyn Storage Tank and Pump Station, which are part of the City's potable water system, are located approximately one half-mile southwest of the project site.

WASTEWATER

City of Sunnyvale Wastewater Facilities

The City owns and operates the Donald M. Sommers Water Pollution Control Plant (WPCP) located at 1444 Borregas Avenue, Sunnyvale. The WPCP provides treatment of wastewater from residential, commercial, and industrial sources from 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 (City of Sunnyvale 2011:7-15). The City adopted its 2020 Sewer System Management Plan in May 2020 (City of Sunnyvale 2020b).

Water Pollution Control Plant

The WPCP uses advanced secondary treatment consisting of the following processes: primary treatment (sedimentation); secondary treatment (biological oxidation); and advanced secondary treatment (filtration and disinfection). These processes provide treatment to a level that meets or exceeds National Pollutant Discharge Elimination System (NPDES) discharge requirements. The amount and quality of this effluent is regulated by the San Francisco Bay RWQCB under Order No. R-2020-0002 (NPDES permit CA0037621). The permitted average dry weather flow (ADWF) design capacity of the WPCP is 29.5 mgd. Peak wet weather design capacity is 40 mgd. Approximately 10 percent of the WPCP flow is treated to a higher level to meet the requirements for disinfected tertiary recycled water as specified in Title 22 of the California Code of Regulations and then delivered to customers for non-potable uses, primarily irrigation. The City operates a separate distribution network of pipelines in the northern portion of the city solely for the distribution of recycled water (City of Sunnyvale 2011).

The amount of influent wastewater handled by the WPCP varies with the time of day and with the seasonal changes in demand. In 2019, the ADWF was approximately 12.8 mgd. As discussed in the 2016 LSAP EIR, the WPCP is currently operating at approximately 50 percent of its capacity, as projections made in 1983 before upgrades to the plant in 1984 anticipated higher levels of industrial land uses and wastewater flows than have been realized. The City anticipates a steady level of 13.2 mgd for plant influent over the next 25 years as a conservative estimate; however, a 10-year trend (2006-2015) indicates that wastewater flows could decline despite population increases and a net influx of daytime workforce (City of Sunnyvale 2016a:6-8). In addition, changes in water conservation efforts in response to Governor Brown's Executive Order enacted April 1, 2015, will also likely continue to influence wastewater flows to the WPCP. This trend of water conservation is expected to continue; however, California's climate has historically alternated between wet and drought conditions, and some communities have seen a post-drought rebound in water consumption and wastewater generation during wet period. Flows are not expected to increase to levels that would approach the plant's current capacity in the foreseeable future (City of Sunnyvale 2011). The City estimates there would be 17.44 mgd of wastewater flows under existing General Plan buildout conditions (City of Sunnyvale 2016b:3.11-31)

In 2016, the City adopted the Water Pollution Control Plant Master Plan (Master Plan) for the Sunnyvale Clean Water Program to serve as a long-term guide for replacing the WPCP's facilities and operations. The purpose of the Master Plan is to ensure that the WPCP can meet changing regulations, treat existing and projected wastewater flows reliably and cost-effectively, and increase recycled water production (City of Sunnyvale 2016c). As a result of the rebuild, the influent flow design capacity is projected to decrease to 19.5 mgd for average dry weather flows (ADWF), while retaining a design capacity of 40 mgd for peak wet weather flows (PWWF) (City of Sunnyvale 2016b:3.11-31).

Wastewater Conveyance Infrastructure

The City's sanitary sewer collection system consists of 310 miles (294 miles in the City limits and 16 miles in the Rancho Rinconada portion of Cupertino) of gravity sewers, sewer lift (pump) stations, and over 2 miles of sewer force mains. The sewer mains range in size from 6 to 42 inches in diameter. The City's Wastewater Master Plan effort identified capacity deficiencies at several locations in the collection system (City of Sunnyvale 2020b:52). The City is currently evaluating, verifying, and updating the hydraulic model to reflect existing and future flows, up to and including "build-out" flows based on population and land use projections contained in City planning documents. This work will result in recommendations for addressing existing and future capacity deficiencies. The resulting projects will be incorporated into the City's Capital Improvement Program (City of Sunnyvale 2020b:52).

Wastewater Pretreatment Program

Industrial and commercial facilities are regulated through discharge permits, best management practices (BMPs), and routine inspection and monitoring. Discharge permits contain specific requirements and limits for the concentration of pollutants in wastewater discharges. On average, the pretreatment program has 40 active industrial wastewater discharge permits issued to significant industrial users. Additionally, hundreds of commercial facilities are regulated through the application of BMPs tailored to specific activities commonly found in commercial businesses. When implemented, the BMPs reduce or eliminate the introduction of pollutants into the sanitary sewer. By regulating the disposal of industrial wastewater into the sanitary sewer, the pretreatment program seeks to prevent the introduction of pollutants that could interfere with the operation of the WPCP, cause damage to the sewer system, compromise public health or worker safety, or pass through the WPCP to the San Francisco Bay (City of Sunnyvale 2011:7-18).

Plan Area Wastewater Collection Facilities

The existing sewer collection system in the vicinity of the LSAP area consists of sewer mains that vary in size from 6 inches to 27 inches and a single lift station on Kifer Road located at the crossing over Calabazas Creek (BKF 2020a:15). The sewer system within the LSAP boundary consists of a single drainage area that generally drains by gravity and ultimately drains to the 27-inch sewer main in Lawrence Expressway (BKF 2020a:15). Wastewater flows from south to north through the trunk main in Lawrence Expressway to the WPCP. That trunk main is fed by a series of smaller public mains and private laterals. The conveyance facilities consist of gravity pipelines made predominantly of vitrified clay (VCP), but mains are also constructed of various other materials including polyvinyl chloride (PVC), high density polyethylene, reinforced concrete, ductile iron, and cast iron.

The 2016 LSAP EIR estimated baseline wastewater generation for the LSAP area to be approximately 0.35 mgd. The northeast quadrant of the plan area is characterized by commercial uses with interconnected parking areas with no internal public streets. As such, there is very little public wastewater collection infrastructure in this area.

STORMWATER

Stormwater Drainage System

Local storm drainage facilities in Sunnyvale are owned by the City and maintained by the Environmental Services Department. The local system discharges into a regional system, under the jurisdiction of Valley Water, which conveys storm runoff to the San Francisco Bay.

Valley Water facilities in the plan area are the El Camino Storm Drain Channel (ECSDC) and Calabazas Creek. From the residential neighborhood located in the LSAP area's southwest quadrant, the ECSDC flows northward and then eastward, running along the Caltrain tracks southern edge before connecting to Calabazas Creek, approximately one-half mile east of the Lawrence Station. Calabazas Creek flows from south to north through the eastern part of the LSAP area through a concrete-lined channel, connecting into the San Tomas Aquino Creek, which empties into Guadalupe Slough approximately 3 miles north of the El Camino Storm Drain Channel confluence (City of Sunnyvale 2016b:3.8-2).

The LSAP Update and ISI project areas consist of parcels with a diverse mix of uses ranging from residential to commercial and industrial, but the majority of the plan area is developed land with a high percentage of impervious surfaces. Stormwater runoff drains directly into the City's storm drain infrastructure with little or no retention to reduce flows or treatment to remove pollutants (City of Sunnyvale 2016b:3.8-2).

SOLID WASTE

The City contracts with Specialty Solid Waste and Recycling to provide solid waste collection services to the 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 for shipment to markets. The SMaRT Station is currently (2015-2021) operated by Bay Counties Waste Services and also serves the cities of Mountain View and Palo Alto. The SMaRT Station is permitted to receive 1,500 tons of solid waste (including source-separated materials) per day (CalRecycle 2020b). In 2018-2019, the station processed approximately 1,000 tons per day and 260,000 tons annually (SMaRT Partners 2020). Recyclable materials and compostable organics are diverted by the materials recovery facility, and the unrecycled portion of the waste stream is transferred to the Kirby Canyon Landfill, located in San Jose. Source-separated yard trimmings are also prepared for shipment to composting markets. During the 2018-2019 service year, the SMaRT Station successfully diverted 107,464 tons of solid waste from Kirby Canyon (SMaRT Partners 2020). The unused capacity of the station is available, at an appropriate price, to public or private collection of solid waste within the city and operation of the SMaRT Station.

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. If, in the future, Waste Management of California closed the Kirby Canyon Landfill, Waste Management would be required to provide Sunnyvale disposal capacity at an alternative disposal site. This agreement is valid through 2031. As of July 2015, Kirby Canyon Landfill has a remaining capacity of 16,191,600 cubic yards (CalRecycle 2020c). In 2018, the City disposed of approximately 92,241 tons of solid waste, of which approximately 79,761 tons were transported to the Kirby Canyon Landfill (CalRecycle 2020d). In addition to the Kirby Canyon Landfill, approximately 9,500 tons were disposed of at the Monterey Peninsula Landfill, with the remainder transported to other disposal sites around the state (CalRecycle 2020d).

Table 3.15-6 summarizes the permitted daily capacity, estimated remaining capacity, and estimated closure dates for a selection of disposal facilities in the region.

Table 3.15-6 Solid Waste Disposal Facilities

Facility	Permitted Daily Throughput (tons/day)	Permitted Capacity (CY)	Estimated Remaining Capacity (CY)	Estimated Closure Date
SMaRT Station[1]	1,500	N/A	N/A	N/A
Kirby Canyon Landfill	2,600	36,400,000	16,191,600	2059
Monterey Peninsula Landfill	3,500	49,700,000	48,560,000	2107
Guadalupe Sanitary Landfill	1,300	28,600,000	11,055,000	2048
Newby Island Sanitary Landfill	4,000	57,500,000	21,200,000	2041
Zanker Material Processing Facility (Landfill)	350	64,000	64,000	2025

Sources: SMaRT Partners 2020; CalRecycle 2020c, 2020e, 2020f, 2020g, 2020h.

ELECTRICITY AND NATURAL GAS

The Pacific Gas and Electric Company (PG&E) provides electrical and natural gas services to Sunnyvale through State-regulated public utility contracts. Electricity and natural gas service is available to locations where housing units could be developed. The City's ongoing development review process includes a review and comment opportunity for privately owned utility companies, including PG&E, to allow informed input from each utility company on all development proposals. The input facilitates a detailed review of all projects by service purveyors to assess the potential demands for utility services on a project-by-project basis. PG&E's ability to provide its services concurrently with each project is evaluated during the development review process. The utility company is bound by contract to update the systems to meet any additional demand. PG&E's Electric and Gas Rules 15 and 16 provide guidelines for the extension of distribution lines necessary to furnish permanent services to customers. PG&E also outlines responsibilities for installation and extension allowances, as well as financial contributions by project applicants.

3.15.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

Evaluation of potential utility and service system impacts are based on applicable City standards policies and a review of documents pertaining to the proposed project, including the 2016 LSAP EIR. Impacts on utilities and service systems that would result from the project were identified by comparing existing service capacity and facilities against future, new, or renovated facilities, the construction of which could have physical effects on the environment.

Water Supply and Service

Evaluation of potential water supply impacts was based on the WSA prepared in accordance with SB 610 for the LSAP Update and ISI project. The WSA is included in Appendix G. The capacity of the City's water distribution infrastructure was evaluated during development of the LSAP and the results of that evaluation were incorporated into the infrastructure impact studies prepared for the LSAP Update (BKF 2020a) and ISI project (BKF 2020b).

Wastewater Treatment and Disposal

Impacts related to wastewater conveyance and treatment capacity were evaluated based on the information contained in infrastructure impact studies prepared by BKF Engineers for the LSAP Update (BKF 2020a) and ISI project (BKF 2020b). These studies are included as Appendix H and Appendix I, respectively, in this SEIR. Evaluation of potential impacts on wastewater facilities and services was based on the difference between wastewater generation information presented in the 2016 LSAP EIR and the anticipated wastewater that would be generated by the LSAP Update and ISI project.

Stormwater

Impacts related to stormwater were evaluated were evaluated by comparing the stormwater drainage needs as discussed in the 2016 LSAP EIR and comparing whether there would be additional need for stormwater facilities with implementation of the LSAP Update and ISI project. The infrastructure impact studies prepared for the LSAP Update (BKF 2020a) and ISI project (BKF 2020b) evaluate whether these changes would require additional stormwater facilities.

Solid Waste

Information on landfill disposal data, capacity, and disposal rates were obtained from CalRecycle databases. The analysis in the 2016 LSAP EIR assumed the following per capita rates: 3.4 pounds per person per day for residents and 5.8 pounds per person per day for employment uses, and a conversion rate of 0.22 tons of uncompacted solid waste per cubic yard (City of Sunnyvale 2016:b:3.11-41). For the additional residents that would be generated by the LSAP Update, a rate of 3.2 pounds per person per day has been used, consistent with 2018 data (CalRecycle 2020a).

Electricity and Natural Gas

The impact analysis focuses on whether the LSAP Update or ISI project would demand additional electricity and whether the LSAP Update would demand additional natural gas service such that there could be environmental effects from new facilities that may be needed. Use of natural gas for operation of the ISI project is not proposed.

THRESHOLDS OF SIGNIFICANCE

A utilities and service systems impact is considered significant if implementation of the project would do any of the following:

- have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years

- require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects
- result in a determination by the wastewater treatment provider that 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
- comply with federal, State, and local management and reduction statutes and regulations related to solid waste.

ISSUES NOT DISCUSSED FURTHER

All thresholds discussed above are evaluated in this SEIR.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.15-1: Increased Demand for Water Supply

The 2016 LSAP EIR determined that buildout of the LSAP would increase water demand by 814 AFY, which could be met by existing City water supplies. A WSA was prepared for the LSAP Update and ISI project. The WSA calculated the increase in water demand that would be realized with implementation of the LSAP Update, which was calculated to be an additional 688 AFY from increased residential development potential for a total LSAP demand of 1,501 AFY. The WSA evaluated whether the City's existing supplies would have the capacity and reliability to meet the additional demand. The WSA demonstrates that the City has adequate water supply to accommodate the additional residential units of the LSAP Update under normal, single dry, multiple dry year conditions between 2020 and 2040. Thus, implementation of the LSAP Update and ISI project would not result in a new significant effect related to water supply and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Both the LSAP Update and the ISI project would result in a **less-than-significant** impact to water supply.

Impact 3.11.5.1 of the 2016 LSAP EIR evaluated whether the LSAP would increase demand for water such that new water supply entitlements or expansion of existing supplies would be needed. The analysis noted that while implementation of the LSAP would result in a potable water demand of 814 AFY, the LSAP included policies intended to maximize the use of recycled water when it becomes available. The discussion presented a comparison of City water supply and demand with the addition of the demand from buildout of the LSAP. Because sufficient water supplies would be available to served existing water demand plus demand from the LSAP area, the impact was concluded to be less than significant, and no mitigation was required.

LSAP Update

Implementation of the LSAP Update would increase the allowable housing potential within the LSAP, resulting in additional new residents beyond the number anticipated in the 2016 LSAP EIR. The WSA prepared for the LSAP Update and ISI project calculated the increase in water demand associated with the LSAP Update and ISI project. The additional water demand for the LSAP Project as compared with the demand identified in the 2016 LSAP EIR is shown in Table 3.15-7.

As shown in Table 3.15-7, the LSAP Update would increase water demand to 1,501 AFY, an increase of 688 AFY over the 813 AFY assumed in the 2016 LSAP EIR. Tables 3.15-3, 3.15-4, and 3.15-5 identify project water demands as well as the proposed Downtown Specific Plan Amendment Project water demands on City water supplies under normal, single dry, multiple dry year conditions between 2020 and 2040. Under all scenarios, the City has adequate water supply to accommodate the increase in demand from the LSAP Update. Therefore, potential impacts related to increased demand for water supply would remain **less than significant** with implementation of the LSAP Update.

Table 3.15-7 Comparison of Adopted Lawrence Station Area Plan to the Proposed Project Water Demands

Project	Land Use Type		Water Demand Factors[1]		Water Demands AFY[2]		Total
	New Residential Dwelling units	New I/O/C[3] Square feet	Residential (gpd/du)[4]	I/O/C (gpd/ksf)[5]	Residential	I/O/C	
2016 Adopted LSAP	2,323	1,225,600	170	270	442	371	813
LSAP Update[6]	5,935	1,225,600	170	270	1,130	371	1,501
Increase	3,612	—	—	—	688	—	688

1. Water demand factors from Table 3-2 of the LUTE WSA (City of Sunnyvale 2015)
2. Acre-feet per year
3. Industrial, office and R&D, and commercial uses
4. Gallons per day per dwelling unit
5. Gallons per day per thousand square feet of use
6. ISI project water demands are factored in the allocated square footage under the adopted LSAP.

Source: City of Sunnyvale 2020a:Table 2-1.

ISI Project

The ISI project would fall within the remaining allowable net new Office/R&D development cap of the adopted LSAP; therefore, increased demand for water associated with the ISI project was accounted for in the 2016 LSAP EIR. Therefore, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. The ISI project would result in **less-than-significant** impacts to water supply.

Mitigation Measures

No mitigation is required.

Impact 3.15-2: Extension or Construction of New Water Supply Infrastructure

The 2016 LSAP EIR determined that development under the LSAP could require additional water supply infrastructure to meet anticipated water demand. The discussion also noted that the potential environmental effects associated with water supply infrastructure improvements needed to serve new development in the LSAP area were evaluated programmatically in the technical analyses of the 2016 LSAP EIR. Infrastructure impact studies were prepared for the LSAP Update and ISI project to determine whether either would require improvements to the existing water supply infrastructure to serve the project. The studies concluded that existing infrastructure would be sufficient to serve both the LSAP Update and the ISI project, and that no improvements would be needed. Thus, implementation of the LSAP Update and ISI project would not result in a new significant effect related to water supply infrastructure and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Both the LSAP Update and the ISI project would result in a **less-than-significant** impact to water supply infrastructure.

Impact 3.11.5.2 of the 2016 LSAP EIR evaluated whether future development under the LSAP would require extensions of water distribution facilities, the construction of which could result in environmental effects. The analysis noted that distribution mains and other infrastructure would be needed to serve new development, particularly north of the Caltrain tracks. New distribution mains and other infrastructure would be located within roadways. The discussion also noted that the potential environmental effects associated with water supply infrastructure improvements needed to serve new development in the LSAP area were evaluated programmatically in the technical analyses of the 2016 LSAP EIR. The analysis concluded that implementation of the LSAP would not require major infrastructure that could result in physical impacts outside of the LSAP area. The impact was concluded to be less than significant, and no mitigation was required.

LSAP Update

Implementation of the LSAP Update would increase the allowable housing potential within the LSAP, resulting in additional new residents beyond the number anticipated in the 2016 LSAP EIR. As discussed in Impact 3.15-1 above,

the increase in housing units would result in an increase in demand for water supply. The infrastructure impact study prepared for the LSAP Update calculated the additional water demand from the LSAP Update and evaluated whether any infrastructure improvements would be needed. The infrastructure study concluded that the existing potable water supply system was sufficient to meet the maximum daily demand plus required fire flows and no improvements are required to meet projected demand flows under the LSAP Update (BKF 2020a:7). Therefore, potential impacts related to extension or construction of new water supply infrastructure would remain **less than significant** with implementation of the LSAP Update.

ISI Project

As discussed in Impact 3.15-1, the ISI project would fall within the remaining allowable net new Office/R&D development cap of the adopted LSAP; therefore, increased demand for water associated with the ISI project were accounted for in the 2016 LSAP EIR. The infrastructure impact study prepared for the ISI project evaluated the water system requirements to serve the ISI project and concluded that the existing potable water supply system was sufficient to meet the maximum daily demand plus required fire flows and no improvements are required to meet projected demand flows under the ISI project (BKF 2020b:10). Therefore, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. The ISI project would result in **less-than-significant** impacts to water supply infrastructure.

Mitigation Measures

No mitigation is required.

Impact 3.15-3: Exceedance of Waste Discharge Requirements

The 2016 LSAP EIR determined that buildout of the LSAP would increase wastewater flows to the WPCP, but that the additional wastewater would be of a similar quality as existing wastewater treated at the WPCP. The LSAP Update would increase the number of residential units, which would increase the volume of wastewater requiring treatment. The constituents of the additional wastewater would be substantially similar to existing wastewater, so the WPCP would not be required to treat for constituents not normally found in household wastewater. The ISI project would not increase wastewater volumes and would include uses already evaluated in the 2016 LSAP EIR. Thus, implementation of the LSAP Update and ISI project would not result in a new significant effect related to waste discharge requirements and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Both the LSAP Update and the ISI project would result in a **less-than-significant** impact to waste discharge requirements.

Impact 3.11.6.1 of the 2016 LSAP EIR evaluated whether subsequent projects under the LSAP would cause an exceedance of waste discharge requirements. The analysis noted that while subsequent projects in the LSAP area would increase wastewater flows, the constituents of such increased volumes would be similar to those found in existing wastewater flows. The discussion also evaluated whether the increased wastewater volume would exceed the design flow capacity of the WPCP. The analysis concluded that implementation of the LSAP would not exceed the WPCP's existing permit requirements. Further, the analysis concluded that the quality of the additional wastewater would be consistent with existing wastewater quality. The impact was concluded to be less than significant, and no mitigation was required.

LSAP Update

Implementation of the LSAP Update would increase the allowable housing potential within the LSAP, resulting in additional new residents beyond the number anticipated in the 2016 LSAP EIR. An increase in housing units and residents would equate to an increase in wastewater that would be conveyed to City facilities for treatment. The additional wastewater generated by the additional housing units would be similar in quality as existing wastewater currently treated at the WCPC. While the quantity would be increased, there would not be any constituents that are not presently found in household wastewater. Because the additional wastewater generated by the LSAP Update would be consistent with existing wastewater quality, potential impacts related to wastewater discharge requirements would remain **less than significant** with implementation of the LSAP Update.

ISI Project

The ISI project would fall within the remaining allowable net new Office/R&D development cap of the adopted LSAP; therefore, increased wastewater associated with the ISI project waste accounted for in the 2016 LSAP EIR. Therefore, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. The ISI project would result in **less-than-significant** impacts related to wastewater discharge requirements.

Mitigation Measures

No mitigation is required.

Impact 3.15-4: Impacts to Wastewater Conveyance and Treatment Capacity

The 2016 LSAP EIR determined that buildout of the LSAP would increase the volume of wastewater that would need to be conveyed through City infrastructure and treated at the WPCP. The analysis concluded that the WPCP had sufficient capacity to serve flows from the LSAP area and that while some conveyance lines may require upgrade, potential environmental effects of such construction had been evaluated in the technical sections of the 2016 LSAP EIR. Implementation of the LSAP Update would increase wastewater flows from the LSAP area, but the WPCP has sufficient capacity to accommodate the additional volume. The infrastructure impact study prepared for the LSAP Update identified three pipe segments that would require upgrades to accommodate the increased flows from the LSAP Update. These segments are located within the LSAP area and potential environmental effects of these upgrades were evaluated in the technical sections of the 2016 LSAP EIR. Thus, implementation of the LSAP Update and ISI project would not result in a new significant effect related to wastewater conveyance and treatment and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Both the LSAP Update and the ISI project would result in a **less-than-significant** impact to wastewater conveyance and treatment.

Impact 3.11.6.2 of the 2016 LSAP EIR evaluated whether wastewater generated by implementation of the LSAP would require improvements to wastewater infrastructure or treatment facilities. The analysis noted that the LSAP would increase wastewater flows, but those flows would be well within the capacity of the WPCP. The discussion estimated existing wastewater flows from the LSAP area to be 0.35 mgd and calculated that the addition of housing units in the LSAP area would add 0.62 mgd. At that time, the WPCP estimated flows were approximately 11.4 mgd. With the addition of the 0.62 mgd from implementation of the LSAP, total daily flow to the WPCP was estimated to be approximately 12 mgd. The WPCP has a permitted flow capacity of 29.5 mgd (City of Sunnyvale 2016c). Thus, the WPCP had adequate capacity to accommodate the additional wastewater generated by the LSAP.

LSAP Goal U-G2 requires that each development area be provided with a public sewer main capable of conveying flows to the WPCP. The discussion in Impact 3.11.6.2 acknowledged that upgrades may be required to meet Goal U-G2. Potential physical environmental impacts that could be associated with the construction of upgraded wastewater conveyance facilities within the LSAP area were programmatically evaluated in the technical analyses of the 2016 LSAP EIR. Finally, the discussion noted that any potential upgrades to wastewater infrastructure are addressed programmatically by existing City water quality control measures, construction traffic control requirements, and construction-related air quality mitigation measures MM 3.5.3a and MM 3.5.2b in the 2016 LSAP EIR. Because there is adequate capacity at the WPCP to accommodate flows from the LSAP area and potential infrastructure upgrades have been programmatically evaluated, the impact was concluded to be less than significant, and no mitigation was required.

LSAP Update

Implementation of the LSAP Update would increase the allowable housing potential within the LSAP, resulting in additional new residents beyond the number anticipated in the 2016 LSAP EIR. An increase in housing units and residents would equate to an increase in wastewater that would be conveyed to City facilities for treatment. The infrastructure impact study that was prepared for the LSAP Update calculated that the additional housing units would generate approximately 0.96 mgd of wastewater (BKF 2020a:15). As discussed above, the WPCP has a maximum permitted capacity for flows of 29.5 mgd while estimated flows to the WPCP including the adopted LSAP would total

12 mgd (City of Sunnyvale 2016a:3.11-35). With the addition of the 0.96 mgd from the LSAP Update, daily flows to the WPCP would still be well below permitted capacity.

The infrastructure study also evaluated the existing wastewater collection system and calculated whether upgrades would be required to serve the LSAP Update. The study concluded that while the Kifer Lift Station has enough capacity to serve the LSAP Update, three pipes did not meet the design criteria and would require upgrades (BKF 2020a:22). Based on existing flow and pipe data, implementation of the LSAP Update would require the following pipe updates: upsizing the existing 10-inch VCP sewer main in San Zeno Way to a 12-inch PVC sewer main; upsizing the existing 10-inch VCP sewer main at the intersection of Willow Avenue and Aster Avenue to an 18-inch PVC sewer main; and upsizing the existing 27-inch VCP sewer main in Lawrence Expressway to a 30-inch PVC sewer main (BKF 2020a:22). The locations requiring upgrades are within roadways in the LSAP area (see Figure 3.15-1). These improvements would be subject to adopted LSAP mitigation measures including MM 3.3.5 requiring a construction traffic control plan, MMs 3.5.3a and 3.5.3b requiring compliance with BAAQMD measures to reduce air pollutant emissions during construction, and MM 3.6.4 regarding construction noise. Construction of infrastructure would also be required to comply with Chapter 12.60 of the Sunnyvale Municipal Code to reduce potential construction impacts related to stormwater quality. Because the WPCP has adequate capacity to treat the additional wastewater that would be generated by the LSAP Update and needed improvements have been evaluated for potential environmental effects, there would be no new significant effect and the effect is not more severe than the impact identified in the 2016 LSAP EIR. Potential impacts related to wastewater conveyance and treatment would remain **less than significant** with implementation of the LSAP Update.

ISI Project

The ISI project would fall within the remaining allowable net new Office/R&D development cap of the adopted LSAP; therefore, the need for wastewater conveyance and treatment associated with the ISI project was accounted for in the 2016 LSAP EIR. The infrastructure study prepared for the ISI project confirmed that no upgrades would be needed to the existing wastewater system to serve the ISI project (BKF 2020b:18). Therefore, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. The ISI project would result in **less-than-significant** impacts to wastewater conveyance and treatment.

Mitigation Measures

No mitigation is required.

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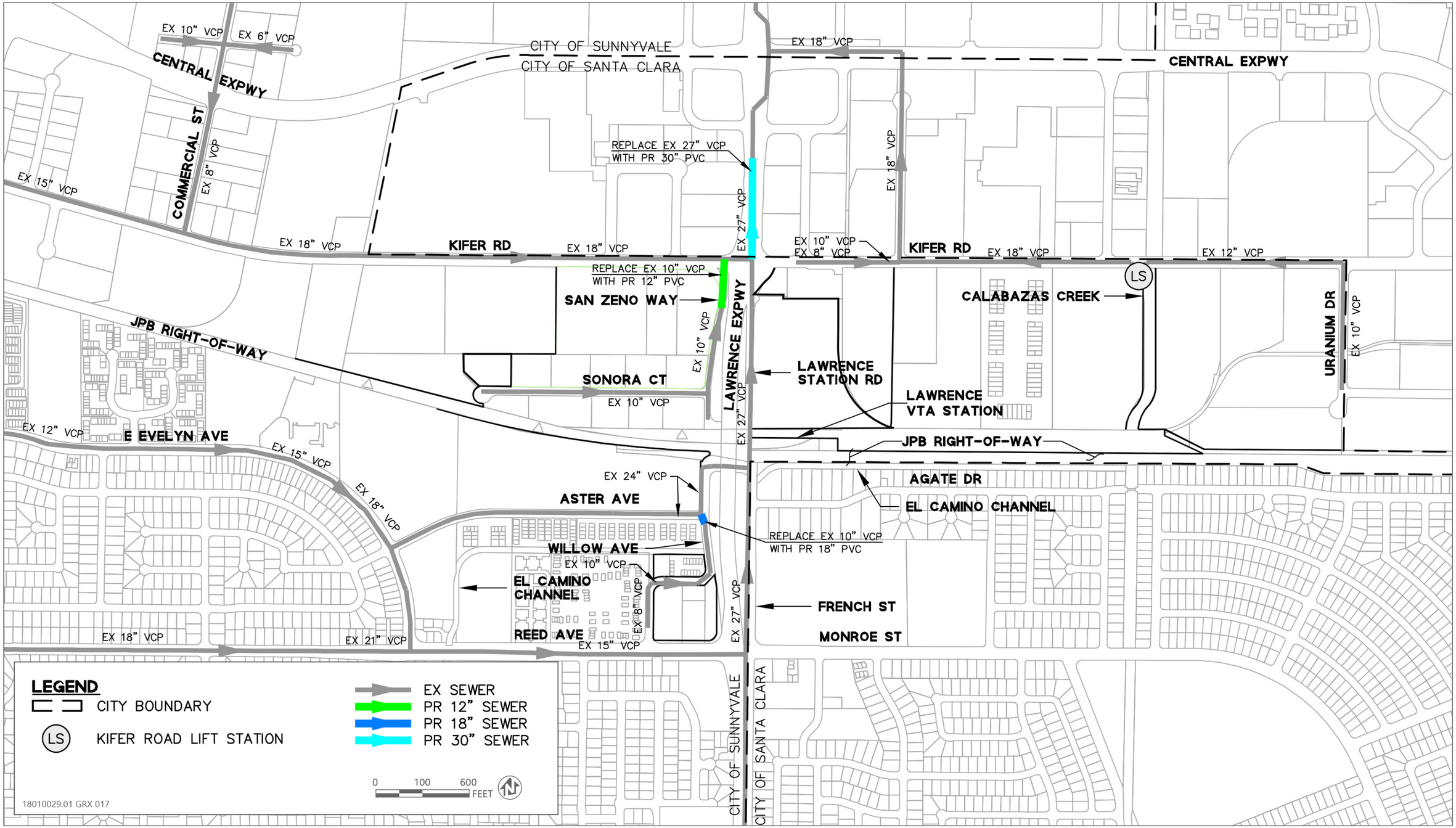

Source: Image produced by BKF Engineers in 2020

Figure 3.15-1 Proposed Sewer Upgrades

Impact 3.15-5: Impacts to Stormwater Facilities

The 2016 LSAP EIR noted that development and redevelopment activities in the LSAP area must comply with MRP Provision C3 and City requirements for a minimum of 20 percent landscaping when creating or replacing impervious surfaces of more than 10,000 square feet. Because implementation of the LSAP would likely increase the landscaping in the LSAP area, which would allow for greater infiltration and less runoff in the storm drain system, this impact was determined to be less than significant. While implementation of the LSAP Update would increase the number of housing units in the LSAP area, such development would be required to comply with MRP Provision C3 and the City's landscaping requirement. Likewise, implementation of the ISI project would be subject to these same requirements, thus ensuring that while the ISI project would add impervious surfaces to the LSAP area, the redevelopment of the site would likely result in an increase of infiltration opportunities and stormwater runoff would not increase. As discussed in Chapter 2, "Project Description," the ISI project will use biofiltration planters and rain gardens to treat stormwater and will maintain the same drainage runoff as the existing condition. Thus, implementation of the LSAP Update and ISI project would not result in a new significant effect related to stormwater and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Both the LSAP Update and the ISI project would result in a **less-than-significant** impact related to stormwater.

Impact 3.8.1 of the 2016 LSAP EIR evaluated potential water quality impacts from project operation. The analysis included evaluation of whether implementation of the LSAP would result in changes to existing drainage patterns or stormwater runoff. The discussion noted that the project site was largely built out with impervious surfaces and that stormwater runoff flow to local storm drains that discharge to a regional system under the jurisdiction of Valley Water, which conveys storm runoff to the San Francisco Bay. The impact analysis noted that development under the LSAP would not be expected to increase impervious surfaces in the area because any project that would create or replace more than 10,000 square feet of impervious surface must comply with MRP Provision C.3 and the City's requirement for a minimum of 20 percent landscaped surfaces. A regulated project must implement at least one of the design strategies identified in the MRP (e.g., minimizing impervious surfaces and/or directing roof runoff into cisterns). Each regulated project must identify how much stormwater must be treated, and the project is required to treat 100 percent of the amount of that runoff (e.g., using infiltration or biotreatment techniques). Because development and redevelopment under the LSAP would be subject to these requirements, it was concluded that the LSAP would not increase impervious surfaces in the area and would therefore not increase the volume of stormwater coming from the site. This impact was concluded to be less than significant, and no mitigation was required.

LSAP Update

Implementation of the LSAP Update would increase the allowable housing potential within the LSAP, resulting in additional new housing units beyond the number anticipated in the 2016 LSAP EIR. The infrastructure impact study prepared for the LSAP Update evaluated whether the increased housing could generate runoff in excess of pre-project conditions. Potential changes in drainage patterns and stormwater runoff water quality are a function of the rate and amount of stormwater generated and whether there is a substantial change in land use. As described in the 2016 LSAP EIR and Impact 3.10-1 of this Draft SEIR, land within the adopted LSAP is largely built out with impervious surfaces, and runoff from the plan area flows to storm drains that discharge to the ECSDC or Calabazas Creek. The infrastructure study noted that existing development in the LSAP area does not meet the requirement for at least 20 percent landscaping (BKF 2020a:25). Because development and redevelopment within the LSAP area must meet the requirement for a minimum of 20 percent landscaping, the LSAP Update would not be expected to increase stormwater runoff to the existing storm drain system (BKF 2020a:25). Therefore, there is no new significant effect on stormwater facilities and the effect is not more severe than the impact identified in the 2016 LSAP EIR. The LSAP Update would result in **less-than-significant** impacts related to stormwater.

ISI Project

The ISI project would modify the boundary of the LSAP area to include the ISI project site. The ISI project site will utilize biofiltration planters and rain gardens to treat stormwater from impervious surfaces which primarily include roof, roadways, and surface parking runoff, in compliance with comply with MRP Provision C3. The biofiltration areas

are sized to treat the "first flush" of rain, and overflow drains convey excess runoff to the City stormwater system on Kifer Road. The stormwater management plan for the ISI project proposes to maintain the same drainage runoff as the existing condition so as not to contribute additional runoff to adjacent sites and would connect with existing storm drainage infrastructure. Consistent with the adopted LSAP and as described under Impact 3.10-1 of this Draft SEIR, operational stormwater runoff and urban runoff from the project site would be required to comply with the City's Urban Runoff Management Plan, MRP Provision C.3 requirements and consistent with the City's General Plan policies (i.e., Policy EM-8.6, EM-10.1, and EM-10.3) and LSAP policies U-P1 through U-P4. The ISI project would also be required to comply with Chapter 12.60, Stormwater Management, of the Sunnyvale Municipal Code as well as implement best management practices (BMPs) for the prevention of erosion and the control of loose soil and sediment. The infrastructure impact study prepared for the ISI project confirmed that the project would not increase stormwater runoff to the existing storm drain system (BKF 2020b:19). Therefore, there is no new significant effect on stormwater facilities and the effect is not more severe than the impact identified in the 2016 LSAP EIR. The ISI project would result in **less-than-significant** impacts related to stormwater.

Mitigation Measures

No mitigation is required.

Impact 3.15-6: Increased Solid Waste Disposal

The 2016 LSAP EIR determined that buildout of the LSAP would require disposal of 19.6 tons per day or 32,500 cubic yards per year. Because there was adequate capacity at the SMaRT Station, Kirby Canyon Landfill, and Monterey Peninsula Landfill, impacts were determined to be less than significant. Implementation of the LSAP Update would add 8,741 new residents to the LSAP area. Based on current solid waste generation rates, the additional population would generate an additional 14 tons of waste per day, or 23,227 cubic yards annually. Adequate capacity exists at the SMaRT Station, Kirby Canyon Landfill, and Monterey Peninsula Landfill to serve both the LSAP area with implementation of the LSAP Update. The ISI project would fall within the remaining allowable net new Office/R&D development cap of the adopted LSAP, so no additional demand for solid waste disposal would be generated. Thus, implementation of the LSAP Update and ISI project would not result in a new significant effect related to solid waste disposal and the impact is not more severe than the impact identified in the 2016 LSAP EIR. Both the LSAP Update and the ISI project would result in a **less-than-significant** impact to solid waste disposal.

Impact 3.11.7.1 of the 2016 LSAP EIR evaluated whether the LSAP would generate increased amounts of solid waste that would need to be recycled or disposed of in landfills. The analysis calculated that the LSAP area would generate a total of 19.4 tons per day of solid waste. This represents approximately 2 percent of the SMaRT Station's current throughput or 1.3 percent of its maximum throughput. The analysis calculated that the LSAP area would generate 5,110 tons per year, or 23,337 cubic yards of solid waste that would be disposed of at the Kirby Canyon Landfill or Monterey Peninsula Landfill. The analysis discussed the remaining capacity of the landfills and concluded that there is adequate capacity to serve the LSAP area. In addition, Sunnyvale continues to strive to reduce solid waste and historically met or exceeded goals for waste diversion. Given the sufficient capacity of solid waste facilities combined with the City's efforts to reduce waste generation, the impact was concluded to be less than significant, and no mitigation was required.

LSAP Update

Implementation of the LSAP Update would increase the allowable housing potential within the LSAP, resulting in 8,741 additional new residents beyond the number anticipated in the 2016 LSAP EIR. The waste generation rate for the additional new residents would be 3.2 pounds per day per person, consistent with CalRecycle data (CalRecycle 2020a). With the addition of 8,741 new residents, the LSAP Update would generate approximately 14 tons of solid waste per day.

As discussed in Section 3.15.2, "Environmental Setting," the SMaRT Station is permitted to receive 1,500 tons of solid waste per day (CalRecycle 2020b). In 2018-2019, the station processed approximately 1,000 tons per day and 260,000 tons annually (SMaRT Partners 2020). Combining the projected 19.6 tons per day from the original LSAP plus the additional 14 tons per day from the LSAP Update, total LSAP solid waste would be 33.6 tons per day, which

represents approximately two percent of the SMaRT Station's daily capacity, or nearly seven percent of the Station's available daily capacity beyond existing throughput.

On an annual basis, assuming 0.22 tons per cubic yard, the LSAP Update would generate 5,110 tons, or 23,227 cubic yards annually. Combined with the 32,500 cubic yards expected annually from the LSAP (City of Sunnyvale 2016b:3.11-42), total annual solid waste would be 55,727 cubic yards. Given the remaining capacities of the Kirby Canyon Landfill and Monterey Peninsula Landfill (see Table 3.15-6), the total annual solid waste from the LSAP and the LSAP Update would represent 0.3 percent and 0.1 percent of remaining capacity, respectively.

While the LSAP Update would increase solid waste generation in the City, there is adequate capacity at the SMaRT Station, Kirby Canyon Landfill, and Monterey Peninsula Landfill to accommodate the total generated. Therefore, potential impacts related to increased solid waste disposal would remain **less than significant** with implementation of the LSAP Update.

ISI Project

The ISI project would fall within the remaining allowable net new Office/R&D development cap of the adopted LSAP; therefore, the increased demand for solid waste disposal associated with the ISI project was accounted for in the 2016 LSAP EIR. Therefore, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. The ISI project would result in **less-than-significant** impacts to solid waste disposal.

Mitigation Measures

No mitigation is required.

Impact 3.15-7: Increased Demand for Electricity and Natural Gas Infrastructure

Impact 3.11.8.1 of the 2016 LSAP EIR evaluated whether the LSAP would require additional infrastructure for electricity or natural gas, the construction of which could result in environmental impacts. PG&E is required by the California Public Utilities Commission to update the existing system to meet any additional demand. Any electrical or natural gas distribution lines, substations, transmission lines, delivery facilities, and easements would be subject to CEQA review by PG&E. PG&E builds new infrastructure on an as-needed basis. The analysis concluded that because specific facilities, if any, that would be required to serve the LSAP area cannot be identified with any certainty, the impacts would be speculative and did not require evaluation in the 2016 LSAP EIR. While implementation of the LSAP Update would add new residential units to the LSAP area, the potential environmental impacts of PG&E providing electricity and natural gas to the new dwelling units under the LSAP Update cannot be known and are speculative. The ISI project would fall within the remaining allowable net development cap of the adopted LSAP; therefore, it would not increase demand for electricity and use of natural gas for operation of the ISI project is not proposed. Both the LSAP Update and the ISI project would result in a **less-than-significant** impact on demand for electricity and natural gas.

Impact 3.11.8.1 of the 2016 LSAP EIR evaluated whether the LSAP would require additional infrastructure for electricity or natural gas, the construction of which could result in environmental impacts. The discussion noted that PG&E provides these services to Sunnyvale and would provide service to future development resulting from implementation of the LSAP. PG&E is required by the California Public Utilities Commission to update the existing system to meet any additional demand. Any electrical or natural gas distribution lines, substations, transmission lines, delivery facilities, and easements would be subject to CEQA review by PG&E. PG&E builds new infrastructure on an as-needed basis. It is expected that much of the distribution infrastructure for the LSAP area would be co-located with other underground utilities. The analysis concluded that because specific facilities, if any, that would be required to serve the LSAP area cannot be identified with any certainty, the impacts would be speculative and did not require evaluation in the 2016 LSAP EIR.

LSAP Update

Implementation of the LSAP Update would increase the allowable housing potential within the LSAP, resulting in additional new residents beyond the number anticipated in the 2016 LSAP EIR. As discussed above, PG&E currently serves the electricity and natural gas needs in the LSAP area and is required to meet any additional demand in its

service area. Figures 2.10a and 2.10b in Chapter 2, "Project Description," show the existing electrical and natural gas lines in the vicinity, as well as proposed additional lines and trenches. The potential environmental impacts of PG&E providing such service cannot be known and are speculative. Therefore, the potential environmental impacts of PG&E providing electricity and natural gas to the new dwelling units under the LSAP Update cannot be known and are speculative.

ISI Project

Use of natural gas for operation of the ISI project is not proposed. The ISI project would fall within the remaining allowable net new Office/R&D development cap of the adopted LSAP; therefore, it would not increase demand for electricity. As noted above, there is electrical infrastructure adjacent to the project and would not require any off-site improvements. Therefore, there is no new significant effect, and the effect is not more severe than the impact identified in the 2016 LSAP EIR. The ISI project would result in **less-than-significant** impacts related to electricity and natural gas.

Mitigation Measures

No mitigation is required.

4 CUMULATIVE IMPACTS

4.1 INTRODUCTION TO THE CUMULATIVE ANALYSIS

This Draft Subsequent Environmental Impact Report (SEIR) provides an analysis of cumulative impacts of the proposed modifications to the Lawrence Station Area Plan (LSAP) (LSAP Update) and the proposed Intuitive Surgical Corporate Campus (ISI project), as required by Section 15130 of the State CEQA Guidelines. The goal of such an exercise is twofold: first, to determine whether the overall long-term impacts of all such projects would be cumulatively significant, and second, to determine whether the incremental contribution to any such cumulatively significant impacts of the LSAP Update/ISI project would be "cumulatively considerable" (and thus significant). (See State CEQA Guidelines Sections 15130[a]–[b], Section 15355[b], Section 15064[h], and Section 15065[c] and *Communities for a Better Environment v. California Resources Agency* [2002] 103 Cal. App. 4th 98, 120.) In other words, the required analysis intends first to create a broad context in which to assess cumulative impacts, viewed on a geographic scale beyond the project site itself, and then to determine whether the project's incremental contribution to any significant cumulative impacts from all projects is itself significant (i.e., "cumulatively considerable").

Cumulative impacts are defined in State CEQA Guidelines Section 15355 as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." A cumulative impact occurs from "the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects." Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (State CEQA Guidelines Section 15355[b]).

4.2 CUMULATIVE IMPACT ANALYSIS METHODOLOGY

Consistent with State CEQA Guidelines Section 15130, the discussion of cumulative impacts in this Draft SEIR focuses on significant and potentially significant cumulative impacts. Section 15130(b) of the State CEQA Guidelines provides, in part, the following:

> [t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

A proposed project is considered to have a significant cumulative effect if:

- the cumulative effects of development without the project are not significant and the project's additional impact is substantial enough, when added to the cumulative effects, to result in a significant impact, or
- the cumulative effects of development without the project are already significant and the project contributes measurably to the effect.

The term "measurably" is subject to interpretation. The standards used herein to determine measurability are that the impact must be noticeable to a reasonable person or must exceed an established threshold of significance (defined throughout the resource sections in Chapter 3 of this Draft SEIR). This cumulative analysis also assumes that all mitigation measures identified in Chapter 3 to mitigate project impacts are adopted and implemented.

The State CEQA Guidelines (Section 15130) identify two basic methods for establishing the cumulative environment in which the project is to be considered: the use of a list of past, present, and probable future projects or the use of adopted projections from a general plan, other regional planning document, or a certified EIR for such a planning document.

The cumulative impact analysis provided in this chapter evaluates whether the proposed LSAP Update and ISI project could result in potentially new cumulatively considerable impacts or an increase in the severity of previously identified cumulative impacts that were identified in the 2016 LSAP EIR pursuant to State CEQA Guidelines Section 15162(b).

4.2.1 Geographic Scope

The geographic area that may be affected by the LSAP Update/ISI project and is appropriate for a cumulative impact analysis varies depending on the environmental resource topic, as presented in Table 4-1.

Table 4-1 Geographic Scope of Cumulative Impacts

Resource Topic	Geographic Area
Aesthetics	Adopted LSAP; ISI project site, and surrounding public viewsheds
Air Quality	Region (pollutant emissions that affect the air basin), immediate project vicinity (pollutant emissions that are highly localized)
Cultural and Tribal Cultural Resources	Adopted LSAP, ISI project site, cities of Sunnyvale and Santa Clara, and surrounding areas in Santa Clara County
Biological Resources	Greater project area vicinity
Energy	Region and immediate project vicinity
Geology and Soils	Region (geologic setting) and project vicinity (local geology and topography, faults and seismicity, soils, subsidence, and paleontological resources)
Greenhouse Gas Emissions and Climate Change	Global/Statewide
Hazards and Hazardous Materials	Immediate project vicinity
Hydrology and Water Quality	Santa Clara Basin watersheds in which Sunnyvale is located
Land Use and Planning	City and Region
Noise and Vibration	Adopted LSAP; ISI project site, and immediate vicinity
Population, Employment, and Housing	City (population); Santa Clara County and City (employment); and City (housing)
Public Services and Recreation	Local service areas (e.g., Sunnyvale School District and the Fremont Union High School District; Sunnyvale Police and Fire Bureaus; and City of Sunnyvale's Parks Department service area boundary.
Transportation	City and planning area
Utilities and Service Systems	Local service areas

Source: Compiled by Ascent Environmental in 2020

4.3 CUMULATIVE SETTING

4.3.1 Regional Planning Environment

Adopted and Proposed Local and Regional Plans

The 2011 Sunnyvale General Plan, including the Land Use and Transportation Element (LUTE) Update adopted in 2017, is the City's overall long-term blueprint for the community's vision of future growth and includes goals, policies and programs that guide local decision-making to advance that vision for growth. The planning area for the General Plan includes both land within City boundaries (22.8 square miles) and a sphere of influence that includes a portion of the adjacent Moffett Federal Airfield. The LUTE includes the 2016 LSAP.

Proposed local plans that are considered part of the cumulative setting for this Draft SEIR include the El Camino Real Precise Plan Update, the Downtown Specific Plan Amendments Update (adopted August 2020), and the proposed Moffett Park Specific Plan Update. Regional land use plans associated with the cities of Cupertino (including the

Apple Campus 2 expansion), Santa Clara, Los Altos, and Mountain View are also considered. The cumulative setting also considers regional growth and background traffic volumes and patterns on State and regional roadways. Additionally, physical conditions in the region pertinent to each environmental issue area are considered in the cumulative setting. Those topics are discussed in Sections 4.4, below. This list is not all-inclusive for each environmental issue area and not all of the local and regional plans listed above are used for cumulative analysis for each resource area. For instances where applicable plans are referenced for a specific issue area, please refer to Section 4.4, below.

4.3.2 Proposed Projects in the City

The cumulative setting and analysis considers proposed projects in the City over the past two years that are:

- under review,
- approved by the City Council,
- approved by the Planning Commission, or
- under construction.

Table 4-2 briefly summarizes reasonably foreseeable projects in the City with the potential to contribute to the cumulative condition. It is located at the end of this chapter.

4.4 ANALYSIS OF CUMULATIVE IMPACTS

As indicated above, CEQA requires that an EIR include an assessment of the cumulative impacts that could be associated with project implementation. This assessment involves examining project-related effects on the environment in the context of similar effects that have been caused by past or existing projects, as well as the anticipated effects of future projects. An EIR must discuss the cumulative impacts of a project when its incremental effect will be cumulatively considerable. Although project-related impacts may be individually minor, the cumulative effects of these impacts, in combination with the impacts of other projects, could be significant under CEQA and must be addressed (CEQA Guidelines, Section 15130[a]). Section 15130(a)(3) states that an EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. Section 15130(b) indicates that the level of detail of the cumulative analysis need not be as great as for the project impact analyses; that it should reflect the severity of the impacts and their likelihood of occurrence; and that it should be focused, practical, and reasonable.

The following sections contain a discussion of the cumulative effects anticipated from implementation of the LSAP Update and ISI project, together with related projects and planned development, for each of the environmental issue areas evaluated in this Draft SEIR. The analysis herein analyzes whether, after implementation of mitigation measures that minimize environmental effects, the residual impacts of the project would result in potentially new cumulatively considerable impacts or an increase in the severity of previously identified cumulative impacts that were identified in the 2016 LSAP EIR. Where the project would so contribute, additional mitigation is recommended where feasible.

4.4.1 Aesthetics

The geographic context for cumulative impacts related to aesthetics is confined to those areas that would be visible in the landscape in the vicinity of the project. For a project to contribute to a cumulative impact with respect to visual resources or aesthetics, the project would need to be visible within the same views or viewshed as other contributing projects, with the combination of multiple projects within the views creating an adverse visual effect. The 2016 adopted LSAP EIR determined buildout of the LSAP would not result in a significant contribution to the cumulative conversion of open space or illumination of the night sky (Sunnyvale 2016:3.12-16).

Aesthetic impacts related to visual character and quality impacts and light and glare identified for the proposed project are summarized below. As discussed in Section 3.1, "Aesthetics," of this Draft SEIR, buildout of the project would not result in impacts on scenic vistas or scenic resources (scenic roadways and highways) and would therefore not combine to create considerable changes and cumulative effects on visual resources. Therefore, impacts related to scenic vistas or scenic resources are not discussed further.

Impact 4-1: Contribute to Cumulative Visual Character Impacts

Impact 3.12.4 of the 2016 LSAP EIR evaluated whether buildout of the LSAP would result in a significant contribution to the cumulative conversion of open space or illumination of the night sky. The EIR determined this impact would be less than cumulatively considerable because the LSAP would be implemented in an already urbanized area, in compliance with the LSAP's design guidelines to ensure buildout would complement existing developed conditions, and in compliance with the City's adopted development standards and design guidelines to promote quality design, building materials, and landscaping applicable to development and redevelopment in the plan area.

LSAP Update and ISI Project

As identified in Impact 3.1-1 of this Draft SEIR, the project would result in a less-than-significant visual character impact because increased development potential under the LSAP Update and redevelopment of the ISI site into a corporate campus would be subject to LSAP policies, urban design guidelines, other applicable City design standards, and Chapter 19.35 of the Sunnyvale Municipal Code that address community character and shadow impacts consistent with the City's vision identified in the LSAP and General Plan. The project would also include the adoption of the proposed Lawrence Station Sense of Place Plan that would provide streetscape enhancements, parks, and open space to improve the community character and visual quality of the area. Buildout under the LSAP Update and redevelopment of the ISI site would not further expand the urban footprint of the City. The project would have minimal impact on visual resources and aesthetics because the project area is already urbanized and all development would be required to comply with the policies, design guidelines, design standards, and Sense of Place Plan described above. Thus, the project would not result in a new or greater contribution to cumulative visual character or quality impacts beyond what was identified in the 2016 LSAP EIR. This impact **would remain less than cumulatively considerable.**

Mitigation Measures

No mitigation is required.

Impact 4-2: Contribute to Cumulative Light and Glare Impacts

Impact 3.12.4 of the 2016 LSAP EIR evaluated whether buildout of the LSAP would result in a significant contribution to the cumulative illumination of the night sky. The EIR determined this impact would be less than cumulatively considerable because buildout of the LSAP would occur in an already urbanized area, in compliance with the LSAP's design guidelines to ensure buildout would complement existing developed conditions, and in compliance with the City's existing lighting regulations.

LSAP Update and ISI Project

As identified in Impact 3.1-2 of this Draft SEIR, potential impacts related to light and glare would be reduced to less than significant because development of the project would be required to comply with City and LSAP-specific lighting and glare requirements. Because light sources from buildout of the LSAP Update and ISI project would be consistent with the type and intensity of existing lighting sources, the existing, ambient condition would not substantially change. Implementation of the project would create new nighttime lighting compared to existing conditions; however, new lighting and/or glare would be comparable and consistent with surrounding uses and the project would be required to undergo design review with the City to confirm it complies with LSAP and City design requirements. Given the developed nature of the area, buildout of the project, in combination with surrounding uses and projects planned or currently under construction, would not result in substantial adverse impacts related to light and glare. Implementation of the project and other projects within the site vicinity would be required to adhere to the City of Sunnyvale Municipal Code and design guidelines that would prevent any excess light and/or glare illumination and offset any lighting/glare

impacts. Therefore, the project would not result in a new or greater contribution to cumulative effects of light and glare beyond what was identified in the 2016 LSAP EIR. This impact **would remain less than cumulatively considerable**.

Mitigation Measures

No mitigation is required.

4.4.2 Air Quality

The geographic context for cumulative impacts related to air quality is regional for criteria air pollutant and ozone precursors and includes the San Francisco Bay Area Air Basin (SFBAAB), and the context is local for toxic air contaminants and odors. Emissions of criteria air pollutants and precursors from industrial sources, area sources, and mobile sources in the basin have contributed to exceedances of the National Ambient Air Quality Standard for ozone and fine particulate matter ($PM_{2.5}$) and the California Ambient Air Quality Standards for ozone, respirable particulate matter (PM_{10}), and $PM_{2.5}$.

Impact 4-3: Cumulative Air Quality Impacts

Impact 3.5.8 of the 2016 adopted LSAP EIR (Sunnyvale 2016: 3.5-42) determined buildout of the LSAP, in combination with cumulative development in the SFBAAB, would result in a cumulatively considerable net increase of criteria air pollutants for which the air basin is designated nonattainment. Although the 2016 LSAP EIR required implementation of adopted Mitigation Measure 3.5.3a-b (i.e. measures to reduce construction-generated air pollutants from development under the LSAP), it could not be guaranteed that construction of subsequent projects allowed under the LSAP would generate air pollutant emissions below Bay Area Quality Management District (BAAQMD) significance thresholds due to the programmatic and conceptual nature of the proposed project and uncertainties related to future subsequent projects. Therefore, the impact **is considered cumulatively considerable and significant and unavoidable**.

<u>LSAP Update and ISI Project</u>

Long-Term Operational Air Quality

Long-term operations of the LSAP Update and ISI project would result in emissions from area (landscape maintenance equipment, cleaning products, and architectural coating), energy (natural gas), and mobile (vehicle trips) sources. The LSAP Update would be consistent with the latest Clean Air Plan and the projected vehicle miles traveled (VMT) would result in a lower percent increase than the projected population. Because the LSAP Update would not violate applicable thresholds, the LSAP Update would not cumulatively contribute to non-attainment designations of the SFBAAB. In addition, the ISI project would not exceed BAAQMD's thresholds of significance and **would not cumulatively contribute** to a non-attainment status of the SFBAAB.

Construction-Related Air Quality

As discussed in Impact 3.2-1 of this Draft SEIR, buildout of the LSAP Update and ISI project would be subject to adopted LSAP Mitigation Measures 3.5.3a and 3.5.3b The LSAP Update would not result in a substantial increase in daily construction activities because the anticipated construction schedule of subsequent developments would not result in substantially greater daily construction emissions than what was analyzed in the 2016 LSAP EIR. However, the specific construction activities under future individual projects proposed under the LSAP Update are currently unknown to determine whether the mitigation measures would fully mitigate this temporary impact below BAAQMD thresholds. In addition, implementation of the ISI project would result in project-generated emissions of reactive organic gases, nitrogen oxide (NO_X), PM_{10}, and $PM_{2.5}$ from construction phase activity, material and equipment delivery trips, worker commute trips, and other miscellaneous activities (e.g., application of architectural coatings). As described in Impact 3.2-1, buildout of the LSAP Update and ISI project would require adopted Mitigation Measures 3.5.3a and 3.5.3b, with the addition of Mitigation Measure 3.2-1 to reduce construction-level NO_X; however, it is unknown whether Mitigation Measure 3.2-1 would fully reduce emissions below BAAQMD thresholds. Therefore, with the implementation of adopted Mitigation Measures 3.5.3a and 3.5.3b and the addition of Mitigation Measure 3.2-1,

the LSAP Update and ISI project would result in a significant and unavoidable impact to air quality and these impacts would not be new or substantially more significant than the impacts identified in the 2016 LSAP EIR.

Projects that emit criteria air pollutants in exceedance of BAAQMD's thresholds would contribute to the regional degradation of air quality within the SFBAAB, while exacerbating health risk, and would be considered cumulatively considerable. Because the LSAP Update and ISI project would contribute to the potential cumulative impact related to criteria pollutant emissions during construction, the LSAP Update and ISI project **would be considered cumulatively considerable and significant and unavoidable** and would not result in a new or greater contribution to cumulative air quality impact beyond what was identified in the 2016 LSAP EIR.

Mitigation Measures

For the LSAP Update component, implementation of adopted LSAP Mitigation Measure 3.5.3a and 3.5.3b are required. However, it is currently unknown the extent of construction that may occur at any specific period of time to determine whether the mitigation measures would fully mitigate this temporary impact below BAAQMD thresholds. For the ISI project component, the use of high-performance renewable diesel (HPRD) can reduce NO_X emissions by approximately 10 percent and PM_{10} exhaust emissions by approximately 30 percent (CalEPA 2013). However, with the application of renewable diesel fuel use, ISI project construction would still remain above the NO_X threshold (i.e., 54 pounds per day [lb/day]). Because the use of HPRD would not reduce NO_X emissions below 54 lb/day, the ISI project would contribute to a nonattainment designation of ozone and could potentially result in an adverse health impact to receptors. Therefore, with the implementation of adopted Mitigation Measures 3.5.3a and 3.5.3b and the addition of Mitigation Measure 3.2-1, the LSAP Update and ISI project **would remain cumulatively considerable and significant and unavoidable.**

4.4.3 Cultural and Tribal Cultural Resources

The cumulative context for the archaeological resources and tribal cultural resources (TCRs) analysis considers a broad regional system of which the resources are a part. The cumulative context for archaeological resources and TCRs for this project includes the project region (i.e., project area, the cities of Sunnyvale and Santa Clara, and the county of Santa Clara) and the various tribes contacted during Assembly Bill 52 Native American consultation, as described in Section 3.3, "Cultural and Tribal Cultural Resources," of this SEIR. Because all significant cultural resources are unique and nonrenewable members of finite classes, meaning there are a limited number of significant cultural resources, all adverse effects erode a dwindling resource base. The loss of any one archaeological site could affect the scientific value of others in a region because these resources are best understood in the context of the entirety of the cultural system of which they are a part. The cultural system is represented archaeologically by the total inventory of all sites and other cultural remains in the region. As a result, a meaningful approach to preserving and managing cultural resources must focus on the likely distribution of cultural resources, rather than on a single project or parcel boundary.

Impact 4.4: Cumulative Impacts on Cultural and Tribal Cultural Resources

Impact 3.10.3 of the 2016 adopted LSAP EIR (Sunnyvale 2016: 3.10-11) determined buildout of the LSAP, in combination with other development projects in the surrounding region, could result in a cumulative loss of previously undiscovered cultural resources in the region. However, the 2016 adopted LSAP EIR concluded the LSAP's contribution to this potential impact would be less than cumulatively considerable because each development proposal under the LSAP would undergo further environmental review of project-specific impacts prior to City approval and would be required to comply with Health and Safety Code Section 7050.5(b) and implementation of Mitigation Measure 3.10.2 to ensure that, if cultural resources or human remains are discovered during construction, impacts would be properly mitigated.

LSAP Update and ISI Project

Implementation of the LSAP Update and ISI project, in combination with other past, present, and probable future development within the project region, would involve ground-disturbing activities that could result in discovery of or damage to previously undiscovered archaeological resources and TCRs, as defined in State CEQA Guidelines Section

15064.5 and Public Resources Code (PRC) Section 21074, respectively, within the cumulative context. Proper planning and appropriate mitigation can help to capture and preserve knowledge of such resources and can provide opportunities for increasing our understanding of cultures and past environmental conditions by recording data about sites discovered and preserving artifacts found. Federal, State, and local laws are also in place that protect these resources in most instances. Even so, it is not always feasible to protect these resources, particularly when preservation in place would make projects infeasible, and for this reason the cumulative effects of past, present, and probable future projects could result in a potentially significant cumulative impact on cultural resources. However, compliance with existing federal and State regulations, as well as implementation of adopted LSAP Mitigation Measure 3.10.2, would ensure that the project's contribution would not be cumulatively considerable by requiring grading and construction work to cease with subsequent evaluation and treatment in the event of an accidental find of a potential resource.

Compliance with California Health and Safety Code Section 7050.5 and PRC Sections 21080.3.2, and 21084.3(a), as well as implementation of adopted LSAP Mitigation Measure 3.10.2, would ensure that treatment and disposition of unique archaeological resources are handled by a professional archaeologist, qualified under the Secretary of the Interior's Professional Qualification Standards, and TCRs, including human remains, occurs in a manner consistent with the California Native American Heritage Commission guidance. As a result, the project's contribution to cumulative impacts related to archaeological and tribal cultural resources **would be less than cumulatively considerable** and would not be new or substantially more significant than the cumulative cultural resources identified in the 2016 LSAP EIR.

Mitigation Measures

Implementation of adopted LSAP Mitigation Measure 3.10.2 is required to address this impact.

4.4.4 Biological Resources

The geographic context for cumulative impacts related to biological resources is the greater project vicinity, including adjacent migration and movement corridors such as the San Francisco Bay. The LSAP is surrounded by urban and residential development and the ISI site is surrounded by industrial development with residential development south of Caltrain tracks. The majority of the greater project vicinity is developed and development projects within the project vicinity primarily involve development on land that has been previously developed within the context of a highly developed region (see Table 4-2). This condition has resulted in a significant and cumulative loss of natural habitat and special-status plant and wildlife species in the region.

As discussed in Section 3.5, "Biological Resources," of this Draft SEIR, implementation of the LSAP Update and ISI project would not result in impacts on State or federally protected wetlands, wildlife movement and nursery sites, riparian habitat or other sensitive natural communities, conflict with adopted habitat conservation plan (HCP) or other conservation plan, or bird collisions with buildings and therefore would not combine to create considerable changes to and cumulative effects on biological resources. Therefore, cumulative impacts on State or federally protected wetlands, wildlife movement and nursery sites, riparian habitat, or other sensitive natural communities, related to conflict with adopted HCP or other conservation plan, or bird collisions with buildings are not discussed further.

Impact 4.5: Contribute to Cumulative Impacts on Biological Resources

Impact 3.9.11 of the 2016 adopted LSAP EIR (Sunnyvale 2016: 3.9-21) determined buildout of the LSAP, in combination with other development projects in the surrounding region, would result in a less than cumulatively considerable contribution on biological resources because buildout of the LSAP would occur in an already urbanized area containing low-quality habitat and would be required to implement Mitigation Measures 3.9.1 through 3.9.3. It should be noted that the Corn Palace property (i.e., agricultural land) was included in the LSAP study area analyzed in the 2016 LSAP EIR but was not included within the adopted boundaries of the LSAP. Because the Corn Palace property was not included within the adopted boundaries of the LSAP and suitable nesting habitat for burrowing owl are not located at the ISI site, impacts to nesting burrowing owls would be less than significant for the LSAP Update and ISI project and adopted Mitigation Measure 3.9.1 (i.e., burrowing owl surveys) would not be relevant to the project.

Adopted LSAP Mitigation Measure 3.9.2 requires a survey for bats be conducted before tree removal or building demolition, avoidance of maternity roosts during the roosting season, and exclusion of bats from roosts. Adopted LSAP Mitigation Measure 3.9.3 requires work be performed outside of the nesting season and preconstruction nest surveys and non-disturbance buffers around any nests.

LSAP Update and ISI Project

Implementation of the LSAP Update and ISI project, in combination with other past, present, and probable future development within the greater project vicinity, would contribute to cumulative impacts on special-status species and common species through increased development and disturbance created by human activities. As described in Impact 3.5-1 of this Draft SEIR, implementation of the LSAP Update and ISI project would result in a less than significant impact to special-status bats with required implementation of adopted LSAP Mitigation Measure 3.9.2 and a less than significant impact to nesting raptors and other migratory birds with required implementation of adopted LSAP Mitigation Measure 3.9.3. In addition, the loss of protected trees may occur with development in the surrounding area. Similar to the proposed project, the loss of protected trees would be addressed by following existing LSAP Policy OSP-6, Guideline STP-UDG6 and City Municipal Code Chapter 19.94. Thus, the project would not result in a new or greater contribution to cumulative biological resources beyond what was identified in the 2016 LSAP EIR. This impact **would remain less than cumulatively considerable.**

Mitigation Measures

Implementation of adopted LSAP Mitigation Measure 3.9.2 and 3.9.3 is required to address this impact.

4.4.5 Energy

The geographic area considered for cumulative impacts related to energy use is the Silicon Valley Clean Energy (SVCE) and Pacific Gas and Electric Company (PG&E) service area. The City of Sunnyvale as well as the cities of Campbell, Cupertino, Gilroy, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Morgan Hill, Mountain View, Saratoga, and unincorporated Santa Clara County are members of SVCE, which serves as the Community Choice Aggregation for its member jurisdictions. SVCE works in partnership with PG&E to deliver GHG-efficient electricity to customers within its member jurisdictions. Consistent with State law, all electricity customers in the City of Sunnyvale were automatically enrolled in SVCE; however, customers can choose to opt out and be served by PG&E. According to the Sunnyvale Climate Action Plan Biennial Progress Report released in 2019, 98 percent of residential and commercial accounts received clean electricity from SVCE and 100 percent of City facilities were powered by renewable energy (City of Sunnyvale 2018). Currently, all power supplied by SVCE is carbon-free. PG&E supplies natural gas service to the City of Sunnyvale through State-regulated public utility contacts.

Impact 4.6: Contribute to Cumulative Energy Impacts

Impact 3.11.8.1 of the 2016 LSAP EIR determined that buildout of the LSAP, in combination with other development projects in the surrounding region, would result in a less than cumulatively considerable contribution to wasteful, inefficient, or unnecessary use of energy. Because the LSAP is subject to the latest building efficiency standards, Renewable Portfolio Standards, reduction in VMT due to the nearby Caltrain, and use of efficient energy infrastructure, the project's contribution to energy impacts **would be less than cumulatively considerable** (City of Sunnyvale 2016: 3.11-48 and -49).

LSAP Update and ISI Project

As identified in Impact 3.5-1 of this SEIR, buildout under the LSAP Update would be required to comply with the latest building energy efficiency standards and the ISI project would be built to meet 2019 Building Title 24 Building Energy Standards and is proposing to achieve LEED Gold certification. As described in Impact 3.5-2, both the LSAP Update and ISI project would consist of infill development and be built in close proximity to a transit station, which will reduce transportation-related energy demand compared to building in locations not close to high quality transit. Implementation of the LSAP Update and ISI project would increase energy demands from existing conditions; however, development would be required to comply with applicable Building Energy Efficiency Standards and Renewable Portfolio Standards. Currently planned and approved projects identified in Table 4-2 would also receive electricity and

natural gas service and result in consumption of energy related to transportation (i.e., gasoline and diesel consumption for passenger vehicles, trucks, buses, and other vehicles) and construction. Similar to the proposed project, other projects anticipated in the region would be required to implement energy efficiency measures in accordance with the California Energy Code to reduce energy demand from buildings and would likely implement transportation demand management considerations to reduce vehicle trips and miles traveled, which would reduce fuel consumption. Because implementing the project would not result in the wasteful or inefficient use of energy and would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency, the project's contribution to cumulative energy-related impacts **would be less than cumulatively considerable** and would not result in a new or greater contribution to cumulative energy impacts beyond what was identified in the 2016 LSAP EIR.

Mitigation Measures

No mitigation is required.

4.4.6 Geology and Soils

Impacts related to geology and soils are not cumulative in nature. For example, impacts related to seismic shaking, erosion and loss of topsoil, and expansive soils relate only to project structures or the individual project site. However, paleontological resources can be thought of as areawide resources, and their loss at multiple sites may result in a cumulative impact. The geographic setting for cumulative effects on paleontological resources is the project vicinity.

As discussed in Section 3.6, "Geology and Soils," of this Draft SEIR, implementation of the LSAP Update and ISI project would not result in a significant impact related to seismic hazards, erosion and loss of topsoil, development on unstable or expansive soils, or wastewater disposal systems and are not discussed further.

Impact 4-7: Contribute to Cumulative Disturbance to or Loss of Paleontological Resources

Impact 3.7.6 of the 2016 adopted LSAP EIR (Sunnyvale 2016: 3.7-12) determined buildout of the LSAP, in combination with other development projects in the surrounding region, would result in a less than cumulatively considerable impact on paleontological resources after implementation of Mitigation Measure 3.7.4 (i.e., require projects within the LSAP to follow specific steps when a fossil is discovered during construction activities).

LSAP Update and ISI Project

Implementation of the ISI project and subsequent development under the LSAP Update, in combination with other projects in the vicinity, would result in construction and ground disturbance. Some projects may include excavation of previously undisturbed sediments that may contain unique paleontological resources. As discussed in Impact 3.6-1, the underlying geology of the ISI site consists of basin and alluvial deposits that have the potential to contain fossils; therefore, inadvertent damage or destruction during excavation and grading activities during construction of the LSAP boundary expansion area for the ISI project could further reduce this finite resource base. Grading and excavation activities resulting from buildout of the LSAP Update and the ISI project would be required to comply with adopted LSAP Mitigation Measure 3.7.4 to ensure that excavation of any discovered fossils are completed in a manner that preserves potential paleontological resources and would offset the project's contribution to cumulative paleontological resources. Thus, the project's contribution to substantial effects related to disturbance to or loss of unique paleontological resources, sites, or unique geologic features **would not be cumulatively considerable** and would not result in a new or greater contribution to cumulative paleontological resources beyond what was identified in the 2016 LSAP EIR.

Mitigation Measures

Implementation of adopted LSAP Mitigation Measure 3.7.4 is required to address this impact.

4.4.7 Greenhouse Gas Emissions and Climate Change

Climate change is a global problem. Greenhouse gases (GHGs) are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas most pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any GHG molecule depends on multiple variables and cannot be determined with any certainty, it is understood that more carbon dioxide (CO_2) is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO_2 emissions, approximately 55 percent are estimated to be sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remain stored in the atmosphere (IPCC 2013:467).

No single project alone would measurably contribute to an incremental change in the global average temperature or to global or local climates or microclimates. From the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

Impact 4-8: Contribute to Cumulative Impacts Related to Greenhouse Gas Emissions and Climate Change

Impact 3.13.1 of the 2016 LSAP EIR evaluated whether buildout of the LSAP would conflict with an applicable plan adopted for the purpose of reducing GHG emissions. The EIR determined this impact would be less than cumulatively considerable because future development projects under the LSAP would be required to comply with the City of Sunnyvale Climate Action Plan (City CAP) and the project was estimated to generate GHG emissions below the carbon dioxide equivalents (CO_2e) per service population per year targets contained in the CAP (Sunnyvale 2016: 3.13-16 – 3.13-21).

LSAP Update and ISI Project

The discussions of GHG emissions generated by the LSAP Update and ISI project construction and operation under Impact 3.7-1 in Section 3.7, "Greenhouse Gas Emissions and Climate Change," is inherently a cumulative impact discussion. GHG emissions from one project cannot, on their own, result in changes in climatic conditions; therefore, the emissions from one project must be considered in the context of their contribution to cumulative global emissions, which is a significant cumulative impact. Because the LSAP Update includes the expansion of the LSAP boundary designated for the construction and operation of the ISI project, the total net emissions from the ISI project are a subset of the total LSAP Update emissions and the ISI project emissions are evaluated in the LSAP Update's net emissions analysis and are not compared to a project-level GHG emission threshold. As such, the ISI project would not exceed the City's updated GHG efficiency metric threshold of 1.27 metric tons of carbon dioxide equivalent per year per service population and demonstrates consistency with the City's 2019 Climate Action Playbook to meet updated City and State targets. Therefore, the ISI project would not result in a new or substantially more severe impact to GHG and climate change beyond what was identified in the 2016 LSAP EIR. The LSAP Update and ISI project **would be less than cumulatively considerable** contribution to GHG and climate change.

Mitigation Measures

No mitigation is required.

4.4.8 Hazards and Hazardous Materials

The cumulative setting for hazards and hazardous materials includes buildout of the adopted LSAP, Downtown Specific Plan Amendment, El Camino Real Corridor Specific Plan, Moffett Park Specific Plan, Peery Park Specific Plan, regional growth, and City projects identified in Table 4-2. Most hazards and hazardous material impacts as described in CEQA Appendix G are generally site-specific and not cumulative by nature, as impacts generally vary by land use, site characteristics, and site history. In the cumulative condition, development of the City may result in increased use of potentially hazardous materials. Facilities that use hazardous materials would be required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases. The storage, use, disposal, and transport of hazardous materials are extensively regulated by various federal, State, and local agencies; therefore, construction companies and businesses that would handle any hazardous substances would be required by law to implement and comply with these hazardous materials regulations. Development of the City would increase the extent of population that would need to be accommodated for emergency response and evacuation.

As discussed in Section 3.8, "Hazards and Hazardous Materials," implementing the LSAP Update and ISI project would have no impact related to location within an airport land use plan, location of hazardous materials within 0.25 mile of a school, or a wildfire risk. Therefore, implementation of the project would not combine with other related projects to create cumulative impact under these impact areas and these issues are not discussed further.

Impact 4-9: Contribute to Cumulative Impacts Related to Creation of a Hazard through the Routine Transport, Use, or Disposal of Hazardous Materials, Including Reasonably Foreseeable Upset or Accidents during Construction and Operation

Impact 3.3.7 of the 2016 LSAP Draft EIR (page 3.3-15) evaluated whether buildout of the LSAP would contribute to an increase in the routine use, storage, and transport of hazardous materials. The 2016 LSAP EIR concluded that compliance with all federal, State, and local regulations related to the transport, use, disposal, and management of hazardous materials during construction and operation would ensure the proposed project's contribution to risk of hazardous materials releases, either through routine use or upset/accidental conditions, **would be less than cumulatively considerable.**

LSAP Update and ISI Project

As described in Impacts 3.8-1 and 3.8-2 of this Draft SEIR, construction and operation of the LSAP Update and ISI project would result in an increase in hazardous materials used, stored, and transported in the area. However, these activities are subject to local, State, and federal regulations that would offset potential impacts through containment, storage, and disposal standards designed to protect public health and environment. Similar to the LSAP Update and ISI project, other projects in the region would also be required to comply with all applicable federal, State, and local regulations related to the transport, use, disposal, and accidental release of hazardous materials during construction and operation. Thus, the project's contribution to substantial effects related to routine transport, use, or disposal of hazardous materials, including reasonably foreseeable upset or accidents during construction or operation **would be less than cumulatively considerable** and would not result in a new or greater contribution to cumulative hazards or hazardous materials beyond what was identified in the 2016 LSAP EIR.

Mitigation Measures

No mitigation is required.

Impact 4-10: Contribute to Cumulative Impacts Related to Encountering Contamination on Areas with Known Hazardous Materials.

Impact 3.3.7 of the 2016 LSAP EIR evaluated whether buildout of the LSAP would result in a significant contribution to project development on contaminated sites. Subsequent projects that could be developed under the LSAP would be required to provide evidence to the City that discovered contamination is remediated and/or controlled in a manner that would not pose a risk to human health or the environment and consistent with Mitigation Measure 3.3.3. Thus, the 2016 EIR concluded the project's contribution **would be less than cumulatively considerable**.

LSAP Update and ISI Project

As described in Impacts 3.8-4 of this Draft SEIR, buildout of the LSAP Update and ISI project would be subject to Mitigation Measure 3.8-1, which was adapted from adopted LSAP Mitigation Measure 3.3.3, to include some minor modifications and clarifications. It should be noted that adopted Mitigation Measure 3.3.3 shall be replaced by Mitigation Measure 3.8-1 to remove reference to LSAP subareas/study areas that are not relevant to the adopted LSAP and to clarify that discharge of any groundwater removed from a construction site will be subject to NPDES requirements. Mitigation Measure 3.8-1 requires preparation of a Phase 1 ESA and/or Phase II ESA/Subsurface Investigation, to determine the lateral and vertical extent of contamination and appropriate remediation to be completed before City issuance of a building permit for a development. Environmental Site Assessments and Subsurface Investigations have been performed for the ISI project area and identify known recognized environmental conditions that could be encountered during construction. Implementation of Mitigation Measure 3.8-1 would also be required during project-level review of subsequent developments under the LSAP to ensure impacts associated with disturbance of known or suspected hazardous contamination is remediated. Implementation of the LSAP Update and ISI project would not result in a new significant effect and the impact would not be more severe than the impact identified in the 2016 LSAP EIR. Thus, the project's contribution to substantial effects related to encountering contamination on areas with known hazardous materials **would not be cumulatively considerable**. No new or greater contribution to cumulative hazards or hazardous materials beyond what was identified in the 2016 LSAP EIR would occur.

Mitigation Measures

Implementation of Mitigation Measure 3.8-1 is required to address this impact.

Impact 4-11: Contribute to Cumulative Impacts Related to Interference with an Adopted Emergency Response or Emergency Evacuation Plan.

Impact 3.3.8 of the 2016 LSAP EIR evaluated whether buildout of the LSAP would result in a significant contribution to interference with adopted emergency response or emergency evacuation plans, LSAP-related activities may result in the need for temporary traffic lane closures or narrowing, which could affect emergency response or evacuation routes. Mitigation Measure 3.3.5 of the 2016 LSAP EIR requires the preparation of a Construction Traffic Control Plan before issuance of a permit for a specific development project or before approving a City-initiated roadway improvement if there is the potential to affect traffic conditions that could impair or inhibit emergency response or evacuation. The 2016 LSAP EIR concluded that implementation of Mitigation Measure 3.3.5 would reduce the LSAP's contribution to a **less than cumulatively considerable level**.

LSAP Update and ISI Project

Impact 3.8-5 of this SEIR determined that buildout of the LSAP Update and ISI project could temporarily affect roadways due to the movement of heavy equipment, worker vehicle parking, and materials delivery and storage. Adopted LSAP Mitigation Measure 3.3.5 requires that the City ensure final approved plans for the ISI project and private development projects under the LSAP Update specify the requirement, as appropriate, to implement a construction traffic control plan that ensures adequate emergency access routes to and from the area and no adequate emergency response time. Implementation of adopted LSAP Mitigation Measure 3.3.5 would reduce the impact to a less-than-significant level. Therefore, the LSAP Update and ISI project contribution to potential cumulative impacts related to emergency response and emergency evacuation plans **would not be cumulatively considerable**. No new or greater contribution to cumulative hazards or hazardous materials beyond what was identified in the 2016 LSAP EIR would occur.

Mitigation Measures

Implementation of adopted LSAP Mitigation Measure 3.3.5 is required to address this impact.

4.4.9 Hydrology and Water Quality

The geographic context for hydrology and water quality effects consist of four Santa Clara Basin watersheds in which Sunnyvale is located (Sunnyvale West, Sunnyvale East, Calabazas Creek, and Stevens Creek).

As discussed in Section 3.9 of this Draft SEIR, the project area is located outside of the inundation area for Stevens Creek Reservoir and is not considered to be at risk of inundation in the event of a dam failure. The project is also not in an area subject to flooding from levee failure or sea level rise. Therefore, the project is not subject to dam or levee failure or sea level rise and is not evaluated further in this section. The plan area is located over 3 miles from the San Francisco Bay; therefore, the area is not likely to be impacted by seiches and tsunamis. No steep, erodible slopes are located in or near the project area and consequently mudflows and landslides do not present as hazards for the project. Therefore, impacts related to seiche, tsunami, or mudflow are not discussed further. The ISI project site is not located within a flood hazard zone (see Figure 3.9-1 of the Draft SEIR). As discussed in Impact 3.8.3 of the 2016 LSAP EIR, some locations within the adopted LSAP are within Federal Emergency Management Agency–designated 100-year flood hazard zone. However, the proposed LSAP Update does not propose additional residential units or changes to zoning within 100-year flood hazard zone locations of the LSAP. Therefore, impacts related to flood hazard are not discussed further.

Impact 4-12: Contribute to Cumulative Water Quality or Groundwater Recharge Impacts

Impact 3.8.4 of the 2016 LSAP EIR determined development associated with the proposed LSAP, in combination with cumulative development, could result in cumulative water quality and drainage impacts. Because implementation of Mitigation Measure 3.8.3 would ensure all development in Zone AO locations address and offset LSAP changes in flood conditions and flows, the LSAP would not generate either a substantial increase in flows or additional volumes of urban runoff containing pollutants that, when combined with cumulative projects, would result in a cumulative impact. Therefore, the 2016 LSAP EIR concluded water quality and drainage impacts **would be less than cumulatively considerable**.

LSAP Update and ISI Project

As identified in Impact 3.8-1 and 3.8-2 of this Draft SEIR, construction and operation of the ISI project and subsequent development projects under the LSAP Update would be required to comply with State and local regulations that would minimize the potential for construction and operational water quality impacts and project implementation is not expected to substantially prohibit groundwater recharge. Similar to the project, all future development in the City would be required to comply with the Sunnyvale Municipal Code Chapter 12.60, the State's General Construction NPDES permit, and MRP Provision C.3 requirements for post-construction urban runoff. Development projects in nearby cities that contribute stormwater flows to the Santa Clara Basin watersheds are also required to comply with construction site runoff controls and MRP Provision C.3 requirements. Thus, implementation of the LSAP Update and ISI project would not result in a new significant cumulative effect, and the cumulative impact would not be more severe than the impact identified in the 2016 LSAP EIR and the project's contribution to cumulative water quality or groundwater recharge impacts **would be less than cumulatively considerable**.

Mitigation Measures

No mitigation is required.

4.4.10 Land Use and Planning

The geographic context for cumulative impacts related to land use consists of the City of Sunnyvale and the region. Land use impacts are typically isolated to a jurisdiction, except where land uses may interact or conflict with adjacent jurisdictions. As described under cumulative setting for land use in Section 3.1.4 of the 2016 LSAP EIR, expected population and employment growth in the region would result in further urbanization of land uses at the regional level. Plan Bay Area is a long-range integrated transportation and land-use/housing strategy through 2040 for the San Francisco Bay Area that was approved jointly in 2013 by Association of Bay Area Governments Executive Board and the Metropolitan Transportation Commission. The plan includes the region's Sustainable Communities Strategy (SCS) and the 2040 Regional Transportation Plan and represents the next iteration of a planning process that has

been in place for decades. The SCS has identified alternative growth strategies for the region to accommodate this growth. One such strategy calls for population and employment growth to be directed to urban areas, in close proximity to regional transportation nodes and job centers. Increased growth is projected for downtown San Jose and at Santa Clara Valley Transportation Authority and Caltrain stations in the cities of Palo Alto, Mountain View, Santa Clara, Sunnyvale, and Milpitas.

As discussed in Section 3.10 of this Draft SEIR, the potential for conflict with a Habitat Conservation Plan or Natural Community Conservation Plan impact was addressed in Impact 3.1.3 of the of the 2016 LSAP EIR. The EIR determined that because the planning area for the Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan does not include Sunnyvale, no impact would occur. In addition, this threshold is no longer a part of the CEQA Appendix G thresholds for land use and planning. Therefore, no further discussion is required.

Impact 4-13: Contribute to Cumulative Impacts Related to Physically Dividing an Established Community, Conflicts with a Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect

Impact 3.1.5 of the 2016 adopted LSAP EIR analyzed whether buildout of the LSAP would contribute to cumulative land use impacts associated with the division of an established community or conflicts with land use plans and regulations that provide environmental protection. The EIR determined urban growth that would occur in the City as a result of LSAP buildout would be generally consistent with the region's SCS in that growth would be focused in a change area that is already urbanized, located in close proximity to transit, and can accommodate additional residential and employee populations without adversely affecting sensitive natural resources. Furthermore, the project would increase the density of Sunnyvale within its City limits and would encourage transit-oriented development. As identified under Impacts 3.1.1 through 3.1.4 of the 2016 LSAP EIR, buildout of the LSAP would not conflict with any applicable land use plans, policies, or regulations and would not divide any established communities. Similarly, the project would not add to any existing physical divisions of communities. The LSAP as a whole would ensure a regional approach to land use and transportation planning in the City and improve regional connections. Therefore, the 2016 LSAP EIR concluded that LSAP buildout **would have a less than cumulatively considerable contribution** to regional land use impacts.

LSAP Update and ISI Project

Impact 3.10-1 of the Draft SEIR determined implementation of the LSAP Update and ISI project would not result in land use changes or development that would physically divide an established community because construction of physical features that would impair mobility or propose the closure of an existing street are not proposed. In addition, Impact 3.10-2 of this Draft SEIR concluded the LSAP modifications, including the ISI project, would not conflict with applicable adopted land use plans, policies, or regulations because the modifications would require approval from the City for amendments to the City's General Plan, Zoning Code, and LSAP, and the LSAP modifications would ensure integration and compatibility of new development with the City's sustainable growth vision, resulting in further integration of the LSAP into the City as a whole. Past, present, and future probable projects in the region would also be required to comply with existing land use plans, policies, and regulations. Implementation of the LSAP Update and ISI project would not result in a new significant cumulative effect, and the cumulative impact would not be more severe than the impact identified in the 2016 LSAP EIR. The LSAP Update and ISI project land use changes **would be less than cumulatively considerable**.

Mitigation Measures

No mitigation is required.

4.4.11 Noise and Vibration

The geographic context for cumulative impacts related to noise is the LSAP, ISI site, and vicinity.

As described in the "Issues Not Discussed Further" section in Section 3.11, "Noise and Vibration," of this Draft SEIR, the 2016 LSAP EIR concluded that there would be no impact for airport-generated noise because the LSAP boundary is

located outside of the Moffett Federal Airfield noise contours, which is the closest airport to the LSAP. The LSAP Update does not change this conclusion because the boundary expansion, which includes the ISI site, would not expand into any airport noise contours or result in the exposure of people to excessive a noise levels associated with airport activity. Therefore, the impact is not discussed further.

Impact 4-14: Contribute to Cumulative Traffic Noise

Impact 3.11-4 Cumulative traffic noise levels from vehicle trips associated with operation of land uses developed under the LSAP and other projects in the vicinity were analyzed under Impact 3.6.5 in the 2016 LSAP EIR. The analysis determined that vehicle trips generated by the LSAP Update, including the ISI project, would not result in cumulatively considerable traffic noise increases along effected roadway segments and, therefore, that the contribution of the LSAP to cumulative traffic noise impacts **would be less than cumulatively considerable**.

LSAP Update and ISI Project

As described in Impact 3.11-4 of this Draft SEIR, vehicle trips generated by development under the LSAP Update, including the ISI project, would not result in traffic noise increases that exceed the City's incremental noise increase criteria for transportation noise sources, or expose receptors to perceptible increases in traffic noise. Under cumulative conditions, traffic noise level increases associated with buildout of the LSAP Update, including the ISI project, would not exceed any of the Sunnyvale General Plan's incremental noise increase standards. Moreover, the contribution to cumulative noise levels by the vehicle trips generated by the LSAP Update, including the ISI project, would not be perceptible because they would not exceed 3 decibels. Table 4-3 shows modelled traffic noise levels under cumulative conditions with and without implementation of the LSAP Update, including the ISI project, as well as the resulting incremental increase in traffic noise levels. See Appendix F for further details on traffic-noise modeling inputs and parameters.

Table 4-3 Summary of Modeled Existing Traffic Noise Levels under Cumulative Conditions

Roadway Segment	Adjacent Land Use Type(s)	Ldn at 75 feet from Center of Near Direction of Travel (dB) under Cumulative Conditions		Increase (dB)
		Without Implementation of LSAP Update and ISI Project	With Implementation of LSAP Update and ISI Project	
Kifer Road between Wolfe Road and Commercial Street	O, C, I	67.9	68.6	0.7
Kifer Road between Commercial Street and Semiconductor Drive	O, C, I	67.6	68.3	0.7
Kifer Road between Semiconductor Drive and Lawrence Expressway	O, C, I	67.7	67.8	0.1
Kifer Road between Lawrence Expressway and Corvin Drive	O, C, I	68.0	69.0	1.0
Lawrence Expressway between Tasman Drive and Sandia Avenue/Lakehaven Drive	R	74.9	74.9	0.0
Lawrence Expressway between Oakmead Parkway and Arques Avenue	H, C, temple	75.9	75.9	0.1
Lawrence Expressway between Arques Avenue and Kifer Road	O, C	76.5	76.6	0.1
Lawrence Expressway between Kifer Road and Monroe Street	R, C	76.7	76.8	0.1
Wolfe Road/Fair Oaks Avenue between Duane Avenue and Stewart Drive	R, I, park	64.9	65.1	0.3
Wolfe Road between Stewart Drive and Arques Avenue	R, C	66.8	67.1	0.2

Roadway Segment	Adjacent Land Use Type(s)	Ldn at 75 feet from Center of Near Direction of Travel (dB) under Cumulative Conditions		Increase (dB)
		Without Implementation of LSAP Update and ISI Project	With Implementation of LSAP Update and ISI Project	
Wolfe Road between Arques Avenue and Kifer Road	O, C, I	68.3	68.6	0.2
Wolfe Road between Kifer Road and Evelyn Avenue	R, C	69.6	69.6	0.0
Wolfe Road between Evelyn Avenue and Reed Avenue	R	68.9	69.0	0.0
Fair Oaks Avenue between Evelyn Avenue and Old San Francisco Road/Reed Avenue	R, school	65.7	65.7	0.0
Evelyn Avenue between Sunnyvale Avenue and Fair Oaks Avenue	R, C	61.9	62.0	0.0
Evelyn Avenue between Fair Oaks Avenue and Wolfe Road	R, C	61.7	61.7	0.0
Arques Avenue between Wolfe Road and Lawrence Expressway	C, O	69.0	69.2	0.1
Central Expressway between Corvin Drive and Bowers Avenue	O, C, I	74.8	75.0	0.2

Notes: L_{dn} = day-night noise level; dB = decibels; O = office, C= commercial; I = Industrial; R = residential; H = hotel.

All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow, and does not account for shielding of any type or finite roadway adjustments. For additional details, refer to Appendix F for detailed traffic data, and traffic-noise modeling input data and output results.

Source: Data modeled by Ascent Environmental in 2020

Some of the cumulative traffic noise levels with and without implementation of the LSAP Update and ISI project, as shown in Table 4-3, would exceed the applicable "conditionally acceptable" L_{dn} standards established in the City's General Plan for the adjacent land use types, which are shown in Table 3.11-3 (see Section 3.11, "Noise and Vibration," of this Draft SEIR). Where this occurs, traffic noise would be a cumulative impact. Nonetheless, as shown in Table 4-3, predicted increases in traffic noise level increases associated with buildout of the LSAP Update, including the ISI project, would not exceed any of the Sunnyvale General Plan's incremental noise increase standards, which are shown in Table 3.11-4 (see Section 3.11, "Noise and Vibration," of this Draft SEIR). Moreover, the contribution to cumulative noise levels by the vehicle trips generated by the LSAP Update, including the ISI project, would not be perceptible because they would not exceed 3 decibels. Therefore, the LSAP Update and the ISI project would not result in a new or substantially more severe cumulative traffic noise impact than what was identified in the 2016 LSAP EIR, and traffic noise levels associated with implementation of the LSAP Update and the ISI project **would be less than cumulatively considerable**.

Mitigation Measures

No mitigation is required.

4.4.12 Population, Employment, and Housing

The geographic context for cumulative impacts related to population, employment, and housing are confined to the City for housing and population and to Santa Clara County for employment.

As discussed in Section 3.12, "Population, Employment, and Housing," of this Draft SEIR, the proposed land use changes for the LSAP Update would support the development of increased densities and intensities of mixed uses, affordable housing, and transit-oriented development, which would increase housing supply in the City. As indicated in Impact 3.2-2 of the 2016 LSAP EIR, the LSAP also includes an "Anti-Displacement" component. This avoided

displacement of lower-income residents, and no upzoning or increases in allowable densities on sites currently occupied by housing would occur. The adopted LSAP boundaries ultimately did not include sites with existing residential uses, except for one townhome development on Buttercup Terrace (at Willow Avenue). There are no changes proposed to the zoning or density of this site as part of the LSAP Update. Because the adopted LSAP boundaries include only one existing residential site (at the time of 2016 adoption) where no changes are proposed, subsequent projects that could be developed under the LSAP Update would not displace substantial numbers of housing units or people and would not necessitate the construction of replacement housing elsewhere. Therefore, **no impact would occur**, and this issue is not discussed further.

Impact 4-15: Contribute to Cumulative Inducement of Unplanned Growth

Impact 3.2.4 of the 2016 LSAP EIR (Sunnyvale 2016: 3.2-9) determined cumulative development could result in displacement of substantial numbers of housing or persons, but that the LSAP does not include proposed changes in land use or zoning that would directly or indirectly result in such displacement. Therefore, the 2016 EIR concluded the impact **would be less than cumulatively considerable**.

LSAP Update and ISI Project

As described in Impact 3.12-1, the LSAP Update would provide additional housing opportunities within the LSAP (i.e., an additional 3,612 units) that would serve an existing housing shortage in the region and would be developed over time in response to market demand. In addition, the ISI project would not exceed the amount of total office/R&D development allowable under the adopted LSAP. Therefore, the ISI project would not be anticipated to generate employment opportunities that exceed the planned capacity of the LSAP or induce substantial unplanned population growth.

Between 2020 and 2040, the City of Sunnyvale is expected to add 27,230 households (ABAG 2018). With the LSAP Update, there would be 5,935 housing units allowable within the LSAP area, which represents approximately 22 percent of the anticipated housing growth in the City between 2020 and 2040. Similarly, the City is expected to add 16,335 jobs between 2020 and 2040 (ABAG 2018). The proposed ISI corporate campus would be designed to serve approximately 3,500 employees, or 21 percent of these jobs (assuming, conservatively, that all of the ISI jobs are new). By providing a mechanism to plan for future growth in the plan area, the LSAP minimizes the potential for population growth that exceeds the capacity of the area or the resources of the City. Although the ISI project would increase the employment opportunities in the plan area and potentially induce additional demand for housing, the ISI project remains within the assumptions of LSAP's adopted office/R&D (on a per square foot basis).

The LSAP Update and ISI project do not include proposed changes in land use or zoning that would directly or indirectly result in displacement of substantial numbers of housing or persons. Through the proposed update, the LSAP would include the flexibility, pending market conditions, to respond to the demand for housing and office/R&D space in the City and the region overall. As indicated above, the LSAP could accommodate up to 22 percent of the anticipated housing growth in the City through 2040. This responsiveness to existing and forecast demand would not induce population growth beyond that planned for and considered in local and regional documents and implementation of the LSAP Update and ISI project would not result in a new or substantially more severe cumulative impact than what was identified in the 2016 LSAP EIR. Although cumulative development in Sunnyvale, including the project, would result in a cumulative increase in population and housing in Sunnyvale, the project's contribution to unplanned population growth **would be less than cumulatively considerable**.

Mitigation Measures

No mitigation is required.

4.4.13 Public Services and Recreation

The geographic context for cumulative impacts related to public services and recreation includes the service area boundaries of the Sunnyvale Department of Public Safety's Fire Bureau and Police Bureau, attendance boundaries for the Sunnyvale School District, Santa Clara Unified School District, and Fremont Union High School District, City of Sunnyvale's Parks Department service area boundary.

Impact 4-16: Contribute to Cumulative Impacts on Public Services and Recreation

Impact 3.11.1.2 of the 2016 LSAP EIR evaluated the cumulative demand for fire protection and emergency medical services and concluded that the LSAP project's contribution would be less than cumulatively considerable. Impact 3.11.2.2 of the 2016 LSAP EIR evaluated the cumulative demand for law enforcement services and concluded that the cumulative demand for law enforcement services would be geographically limited and the LSAP's contribution would be less than cumulatively considerable. Impact 3.11.3.2 of the 2016 LSAP EIR evaluated cumulative demand for public schools and concluded that development impact fees and Measure K Bond funds would allow school districts to renovate or build new facilities as enrollment numbers warrant. Impact 3.11.4.2 of the 2016 LSAP EIR evaluated the cumulative demand for parks and recreation facilities and concluded existing park and recreation facilities would be sufficient to accommodate the LSAP population increase in addition to other cumulative development under the current General Plan and the draft LUTE because projects would be required to comply with Quimby Act and the City's park land provision requirements. The LSAP would also provide plazas and open space that would be available to the public and could offset some of the increased demand attributable to the LSAP.

LSAP Update and ISI Project

As described in Impact 3.13-1 of this Draft SEIR, buildout of the LSAP Update and ISI project would result in a less than significant impact to public services because applicants of subsequent development projects under the LSAP Update would be required to pay applicable City development fees to pay for the project's fair share of fire, police, and emergency medical service personnel and existing facilities. In addition, subsequent development projects within the LSAP area would generate increased tax revenues, which could be used to fund additional personnel and facilities. The ISI project would fall within the remaining net new Office/R&D development cap allowable under the adopted LSAP; therefore, increased demand for public services associated with the ISI project were accounted for in the 2016 LSAP EIR. Regarding demands for public schools, Impact 3.13-2 of this Draft SEIR concluded future developments under the LSAP Update would be required to pay impact fees for each additional dwelling unit in the LSAP area, as well as fees based on building area for non-residential uses. Additionally, the ISI project would fall within the remaining allowable net new Office/R&D development cap of the adopted LSAP. Increased demand on parks and recreational facilities was addressed in Impact 3.13-3 of this Draft SEIR and determined that buildout of the LSAP Update and ISI project would result in less than significant impact because subsequent projects within the LSAP area would be required to dedicate land, pay an in-lieu fee, or a combination of both to offset impacts to parks and recreational facilities and the ISI project would not add dwelling units or additional residents to the LSAP area. Implementation of the project (i.e., LSAP Update and ISI project components), in combination with other past, present, and probable future development within the project region, would involve new development that would generate new residents and students in the area. However, compliance with Sunnyvale General Plan policies regarding public safety service, payment of applicable development fees, and dedication of land or payment of in-lieu parks fees would ensure that the project's contribution to public service and recreation demands would be less than cumulatively considerable by requiring new development to provide funding or dedication of land toward new or expanded public services. Therefore, implementation of the LSAP Update and ISI project would not result in a new or substantially more severe cumulative impact than what was identified in the 2016 LSAP EIR.

Mitigation Measures

No mitigation is required.

4.4.14 Transportation

The geographic context for cumulative impacts related to transportation is the City and the planning area.

Impact 4-17: Contribute to Cumulative Impacts on Vehicle Miles Traveled

An assessment of the change in VMT under existing and 2035 conditions was disclosed as part of the 2016 LSAP EIR. This assessment determined that implementation of the LSAP would result in a net increase in total VMT as compared to existing conditions. However, the assessment also determined that implementation of the LSAP would result in a lower citywide VMT per capita as compared to citywide existing and 2035 no-project scenarios. However, a

VMT impact analysis consistent with the requirements of PRC Section 21099, and CCR Section 15064.3(a) was not conducted because it was not required under CEQA at the time; and thus, no significance conclusion related to VMT was provided in the 2016 LSAP EIR.

LSAP Update and ISI Project

As detailed in Impact 3.14-1 of this Draft SEIR, the vehicle miles traveled (VMT) analysis applies the exemption criteria detailed in Council Policy 1.2.8, "Transportation Analysis Policy," for the presumption of a less-than-significant VMT impact. As stated in Council Policy 1.2.8, a project's conformance with the exemption criteria demonstrates that it will further the City's goals and policies and will not result in significant VMT impacts. The presumption of a less-than-significant VMT impact is based on the transit supportive nature of the LSAP Update (which includes the ISI project) and the proximity to a high-quality transit corridor and/or major transit stop. Neither the design or location of the LSAP Update area or ISI project would change in the cumulative scenario; and thus, the presumption of a less-than-significant VMT impact would apply to the cumulative scenario and the discussion of VMT impacts associated with the project for Impact 3.14-1 is inherently a cumulative impact analysis. As detailed in Impact 3.14-1, the LSAP Update area (which includes the ISI project site) would conform to the criteria set forth in Council Policy 1.2.8, "Transportation Analysis Policy," for the presumption of a less-than-significant VMT impact. Therefore, implementation of the LSAP Update and ISI project would result in no new significant effect to VMT, and the impact would not be more severe than what the impact in the 2016 LSAP EIR would have been, if analyzed. Thus, the project's contribution to substantial effects related to VMT **would be less than cumulatively considerable**.

Mitigation Measures

No mitigation is required.

Impact 4-18: Contribute to Cumulative Impacts on Transit, Bicycle, and Pedestrian Facilities

Cumulative impacts to transportation facilities were not analyzed in the 2016 LSAP EIR. Impact 3.4.1 of the 2016 LSAP EIR concluded that buildout of the LSAP would result in a less-than-significant impact to transit facilities because subsequent projects developed under the LSAP would be accommodated by transit services and facilities in the area, and traffic operations within the LSAP area would not adversely impact transit travel times. Impact 3.4.2 of the 2016 LSAP EIR concluded that project implementation would result in a less-than-significant impact to bicycle facilities because although subsequent projects developed under the LSAP would increase the demand for bicycle facilities, the provision of new bicycle facilities required under the LSAP would thereby satisfy that demand. Impact 3.4.3 of the 2016 LSAP EIR concluded that project implementation would result in a less-than-significant impact to pedestrian facilities because although subsequent projects developed under the LSAP would increase the demand for pedestrian facilities, the provision of new pedestrian facilities required under the LSAP would thereby satisfy that demand.

LSAP Update and ISI Project

As discussed in Impacts 3.14-2, 3.14-3, and 3.14-4 of this Draft SEIR, neither the LSAP Update or the ISI project would disrupt any existing or planned transit, bicycle, or pedestrian facilities or conflict with a program, plan, ordinance, or policy addressing these facilities. Additionally, any demand for transit, bicycle, and pedestrian facilities generated by the LSAP Update or ISI project would be satisfied by project related improvements and other planned improvements in the vicinity (e.g., Caltrain electrification project). Thus, there would be no new significant effects, the impacts would not be more severe than the impacts identified in the 2016 LSAP EIR, and both the LSAP Update and the ISI project would result in a less-than-significant impact to transit, bicycle, and pedestrian facilities. Thus, the project's impacts related to transit, bicycle, and pedestrian facilities **would be less than cumulatively considerable**.

Mitigation Measures

No mitigation is required.

Impact 4-19: Contribute to Cumulative Construction-Related Transportation Impacts

Temporary construction-related cumulative impacts to transportation facilities were not analyzed in the 2016 LSAP EIR. Cumulative impacts from project-generated construction effects on transportation may result if other future planned construction activities were to take place close to a project site and cumulatively combine to exacerbate the construction-related transportation impacts of the project.

LSAP Update

As discussed in Impact 3.14-7 of this Draft SEIR, the general character, intensity, and location of potential construction-related transportation impacts of projects developed in the plan area under the LSAP Update would be similar to that of the adopted LSAP. Additionally, this SEIR assumes temporary construction-related impacts to transportation facilities that may occur with buildout of projects under the LSAP Update would be addressed on a project-by-project basis. Therefore, if a specific project developed in the plan area under the LSAP Update were anticipated to result in significant temporary construction-related impacts, mitigation to reduce the temporary impact to the degree feasible would be implemented. Therefore, there would be no new significant effect, and the impact would not be more severe than the impact identified in the 2016 LSAP EIR.

However, if construction of projects in the plan area under the LSAP Update were to occur simultaneously with one or more nearby projects, the construction-related transportation impacts of these projects may combine to exacerbate construction-related transportation impacts from the project and create a significant cumulative impact. However, temporary construction-related impacts to transportation facilities would be addressed on a project-by-project basis and as needed, mitigation would be implemented to reduce the temporary impact to the degree feasible. Therefore, construction of projects developed in the plan area under the LSAP Update and their contribution to substantial effects related to VMT **would be less than cumulatively considerable**.

ISI Project

As discussed in Impact 3.14-7 of this Draft SEIR, construction of the ISI project could potentially result in temporary but prolonged transportation impacts including, but not limited to, road, lane, bicycle lane, and sidewalk closures. Therefore, the ISI project could result in a new significant impact that was not analyzed in the 2016 LSAP EIR.

If construction of the ISI project were to occur simultaneously with one or more nearby projects, the construction-related transportation impacts of these projects may combine to exacerbate construction-related transportation impacts from the project and create a significant cumulative impact. Implementation of Mitigation Measure 3.14-7 would require that a temporary traffic control plan be completed and implemented for the ISI project. Implementation of Mitigation Measure 3.14-7 would reduce the temporary impact to the degree feasible. Additionally, construction traffic impacts would be localized and temporary. As a result, with the implementation of Mitigation Measure 3.14-7, the ISI project's contribution to cumulative impacts **would be less than cumulatively considerable**.

Mitigation Measures

Implementation of Mitigation Measure 3.14-7 is required for the ISI project to address this impact.

4.4.15 Utilities and Service Systems

The geographic context for cumulative impacts related to utilities and service systems includes the planning area and assumptions of the water supply assessment (WSA) prepared for the LSAP Update and ISI project, as included in Appendix G of this SEIR (water supply); the City's wastewater collection system and Water Pollution Control Plant (wastewater services); and the City of Sunnyvale and jurisdictions that use the region's landfill facilities (solid waste services).

Impact 4-20: Contribute to Cumulative Water Supply Impacts

The 2016 LSAP EIR noted that the City was working on an update to the LUTE of the General Plan, which assumes a 2035 planning horizon. While the LUTE had not been approved and the Draft EIR for the LUTE had not yet been completed at that time, the cumulative analysis in the 2016 LSAP EIR assumed the 2035 development assumptions. The use of the 2035 assumptions was appropriate for the 2016 LSAP EIR because the LUTE's growth assumptions

accounted for additional mixed-use residential/commercial growth in key transit-oriented areas, which also assumed growth associated with the LSAP. Impact 3.11.5.3 of the 2016 LSAP EIR evaluated the potential cumulative impacts related to water supply and the LSAP's contribution to that cumulative impact. The analysis noted that future water demands would be met through San Francisco Public Utilities Commission, Santa Clara Valley Water District, groundwater, and recycled water supplies. The analysis concluded that existing water supplies would be sufficient to accommodate all projected growth through 2035 and the LSAP's contribution to cumulative water supply impacts **would be less than cumulatively considerable**.

LSAP Update and ISI Project

Implementation of the LSAP Update would increase the allowable housing potential within the LSAP, resulting in additional new residents beyond the number anticipated in the 2016 LSAP EIR. The WSA prepared for the proposed LSAP Update and ISI project calculated the increased water demand from the LSAP Update and ISI project. The WSA concluded that existing supplies would be sufficient to serve the project's demand and all existing and projected development under normal, single dry year, and multiple dry year conditions (see Tables 3.15-3 through 3.15-5 of this Draft SEIR). The ISI project would fall within the remaining allowable net new Office/R&D development cap of the adopted LSAP; therefore, increased demand for water associated with the ISI project was accounted for in the 2016 LSAP EIR. Thus, the LSAP Update and ISI project's contribution **would be less than cumulatively considerable**, and the impacts would not be more severe than the impacts identified in the 2016 LSAP EIR.

Mitigation Measures

No mitigation is required.

Impact 4-21: Contribute to Cumulative Impacts Related to Water Supply Infrastructure

Impact 3.11.5.4 of the 2016 LSAP EIR evaluated the potential cumulative impacts related to water supply infrastructure and the LSAP's contribution to that cumulative impact. The analysis noted that future water demands would not require new or additional water supplies, and as such, major improvements to water supply infrastructure would not be necessary. While minor improvements may be needed to serve individual projects, they would be site-specific and would be subject to CEQA evaluation in conjunction with the project. Because existing supplies would be sufficient to serve the City's existing and future water demand, no major improvements to the water supply infrastructure would be needed and the LSAP's contribution to cumulative water supply infrastructure impacts would be less than cumulatively considerable.

LSAP Update and ISI Project

Implementation of the LSAP Update would increase the allowable housing potential within the LSAP, resulting in additional new residents beyond the number anticipated in the 2016 LSAP EIR. As discussed in Impact 3.15-1 of this Draft EIR, the City's existing water supply would be sufficient to accommodate the additional growth of the LSAP Update. As such, no major improvements to existing water supply infrastructure would be needed (see Impact 3,15-2 of this Draft SEIR). The ISI project would fall within the remaining allowable net new Office/R&D development capacity of the adopted LSAP; therefore, increased demand for water associated with the ISI project was accounted for in the 2016 LSAP EIR and no major infrastructure would be needed to serve the ISI project. The LSAP Update and ISI project's contribution **would be less than cumulatively considerable**, and the impacts would not be more severe than the impacts identified in the 2016 LSAP EIR.

Mitigation Measures

No mitigation is required.

Impact 4-22: Contribute to Cumulative Impacts on Wastewater Services

Impact 3.11.6.3 of the 2016 LSAP EIR evaluated the potential cumulative impacts related to wastewater service and the LSAP's contribution to that cumulative impact. The analysis noted that future wastewater flows from the LSAP area and other contributors to the City's Water Pollution Control Plant (WPCP) would be within the current capacity of 29.5 million gallons per day (mgd) of average dry weather flow (ADWF). The analysis also noted that implementation

of the WPCP Master Plan would reduce the facility's capacity to 19.5 mgd ADWF, but that there would be adequate capacity to serve the LSAP area once capacity is reduced. The analysis concluded that flows to the WPCP, including those from the LSAP area, would be within the anticipated reduced capacity of the WPCP and the LSAP's contribution to cumulative wastewater service impacts would be less than cumulatively considerable.

Impact 3.15-4 of this Draft SEIR determined Implementation of the LSAP Update would increase wastewater flows from the LSAP area, but the WPCP has sufficient capacity to accommodate the additional volume. The infrastructure impact study prepared for the LSAP Update identified three pipe segments that would require upgrades to accommodate the increased flows from the LSAP Update. These segments are located within the LSAP area and potential environmental effects of these upgrades were evaluated in the technical sections of the 2016 LSAP EIR. In addition, the ISI project would fall within the remaining allowable net new Office/R&D development capacity of the adopted LSAP; therefore, the need for wastewater conveyance and treatment associated with the ISI project was accounted for in the 2016 LSAP EIR and an infrastructure study prepared for the ISI project confirmed that no upgrades would be needed to the existing wastewater system to serve the ISI project (BKF 2020b:18).

LSAP Update

Implementation of the LSAP Update would increase the allowable housing potential within the LSAP, resulting in additional new residents beyond the number anticipated in the 2016 LSAP EIR. An increase in housing units and residents would equate to an increase in wastewater that would be conveyed to City facilities for treatment. The projected wastewater flows for the WPCP in 2035 is 19.5 mgd of ADWF (City of Sunnyvale 2019:300). Projected flows were based on historic and existing flow data and population and growth assumptions in the City's LUTE. The WPCP's future planned, permitted capacity (19.5 mgd of ADWF) is equivalent to the projected 2035 ADWF (19.5 mgd), therefore, there would not be available capacity to treat development that was not included in the population and growth assumptions of the City's LUTE. The LSAP Update would result in a net increase in wastewater compared to what was assumed for the LSAP site in the City's LUTE and WPCP Master Plan. Therefore, there would not be sufficient planned capacity at the WPCP to treat wastewater for existing and planned development and buildout of the LSAP Update. The City will be updating the WPCP Master Plan in the near future to include sufficient treatment capacity for existing and planned development and additional growth, including the City's amended Downtown Specific Plan and the LSAP Update, and subsequent environmental review for the WPCP Master Plan update shall be completed by the City. The specific design and improvements needed are unknown at this time. Therefore, it is speculative to evaluate the environmental impacts of those undetermined improvements at this time. Because there would not be sufficient planned capacity at the WPCP to treat wastewater for existing and planned development plus the LSAP Update, the cumulative impact to wastewater treatment **would be cumulatively considerable and significant and unavoidable**. This would result in a more severe cumulative impact than what was identified in the 2016 LSAP EIR.

ISI Project

The ISI project would fall within the remaining allowable net new Office/R&D development capacity of the adopted LSAP; therefore, the need for wastewater conveyance and treatment associated with the ISI project was accounted for in the 2016 LSAP EIR. Thus, the ISI project's contribution **would be less than cumulatively considerable** and would not result in a new or substantially more severe cumulative impact than what was identified in the 2016 LSAP EIR.

Mitigation Measures

No mitigation is required.

Impact 4-23: Contribute to Cumulative Impacts to Stormwater Facilities

Impact 3.8.4 of the 2016 LSAP EIR evaluated the potential cumulative impacts related to stormwater drainage and the LSAP's contribution. The analysis noted that the majority of the stormwater flows generated in the watershed are runoff from impervious surfaces. In addition, the analysis notes that all development in the LSAP area and elsewhere in Sunnyvale would be required to comply with Municipal Regional Stormwater Permit (MRP) Provision C.3 and the City's requirement for a minimum of 20 percent landscaped surfaces. The analysis concluded that because the LSAP would not generate a substantial increase in flows or additional volumes of urban runoff, the LSAP's contribution to cumulative stormwater impacts would be less than cumulatively considerable.

LSAP Update and ISI Project

Implementation of the LSAP Update would increase the allowable housing potential within the LSAP, resulting in additional new residents beyond the number anticipated in the 2016 LSAP EIR. As noted in Impact 3.15-5 of this Draft SEIR, the LSAP Update would not be expected to increase stormwater runoff to the existing storm drain system. The ISI project site will utilize biofiltration planters and rain gardens to treat stormwater from impervious surfaces which primarily include roof, roadways, and surface parking runoff, in compliance with MRP Provision C3. The infrastructure impact study prepared for the ISI project confirmed that the project would not increase stormwater runoff to the existing storm drain system (BKF 2020a:19). Therefore, the LSAP Update and ISI project's contribution to cumulative stormwater drainage impacts **would be less than cumulatively considerable**, and the impacts would not be more severe than the impacts identified in the 2016 LSAP EIR.

Mitigation Measures

No mitigation is required.

Impact 4-24: Contribute to Cumulative Solid Waste Impacts

Impact 3.11.7.3 of the 2016 LSAP EIR evaluated the potential cumulative impacts related to solid waste and the LSAP's contribution to that cumulative impact. The analysis noted that regional landfill facilities would have adequate capacity to serve buildout of the draft LUTE as well as development under the LSAP. Therefore, the analysis concluded that the LSAP's contribution to cumulative solid waste impacts **would be less than cumulatively considerable**.

LSAP Update and ISI Project

Implementation of the LSAP Update would increase the allowable housing potential within the LSAP, resulting in 8,741 additional new residents beyond the number anticipated in the 2016 LSAP EIR. As calculated in Impact 3.15-6 of this Draft SEIR, the LSAP Update would generate 5,110 tons, or 23,227 cubic yards of solid waste annually. Because the waste facilities that serve the LSAP area also serve multiple jurisdictions and the project-level analysis considered overall capacity at multiple facilities, the LSAP Update's contribution to solid waste impacts would be less than cumulatively considerable. The ISI project would fall within the remaining allowable net new Office/R&D development capacity of the adopted LSAP; therefore, the increased demand for solid waste disposal associated with the ISI project was accounted for in the 2016 LSAP EIR. Therefore, the LSAP Update and ISI project's contribution **would be less than cumulatively considerable**, and the impacts would not be more severe than the impacts identified in the 2016 LSAP EIR.

Mitigation Measures

No mitigation is required.

Table 4-2 City Project List Final

Project Type	Address	Description	Planning Permit Type	Permit Status
Commercial	100 Altair Way (former 150 Aries Way)	Allow a new seven-story office building totaling 134,324 square feet with underground parking. The project would replace the existing residential/commercial building and the existing downtown post office. Related to the proposed downtown specific plan amendments and EIR (2017-8047). Pending review and approval of the DSP Amendment.	GPA RZ SDP	Approved. Permit expires on 10/12/2022.
Commercial	1040 Sunnyvale-Saratoga Rd.	Construct a new 3,180-square-foot convenience store and trash enclosure for an existing fueling station.	SDP	Approved. Permit expires on 6/9/2021.
Commercial	1060 Stewart Dr.	Demolish seven (120,399 square feet) of the nine (293,455 square feet) existing mini-storage buildings; construct two 4-story mini-warehouse buildings (170,016 square feet and 147,376 square feet, total new 317,392 square feet), resulting in a total of 490,448 square feet for the entire site (net new 196,993 square feet), resulting in 43.4% Lot Coverage and 166% FAR for the public storage (self-storage) use.	ER UP	Approved. Permit expires on 9/23/2021.
Commercial	1100 N. Mathilda Ave.	Addition, demolition, renovation to an existing 173-room hotel to result in a 358-room hotel (remove 85 rooms, save and renovate 88 rooms, construct new 270 rooms; net new 185 rooms) and 18,021 square feet of meeting areas, 7,313 square feet of Food and Bev, and 8,241 square feet of spa use with 256,180-square-foot gross floor area that is served by 296 parking spaces (203 spaces in a 3-level parking structure) and associated site improvements.	ER SDP	Building permit plan check. Permit expires on 1/28/2022.
Commercial	1101 Elko Dr.	Allow a 51 unit room hotel and Variance from front setback requirement.	UP VAR ER	Under construction
Commercial	1120 Innovation Way	Moffett Park Major Special Development Permit for the redevelopment of a former fire station site to a new 7-story, 113,550-square-foot hotel with 180 rooms including a 4,500-square-foot restaurant area.	SDP	Building permit plan check. Permit exercised.
Commercial	1206 Oakmead Parkway	Allow a 211-room hotel (Courtyard by Marriott).	SDP	Pending Approval
Commercial	1213 W El Camino Real	Rebuild 1,450-square-foot one-story fire damaged motel building and add 430 square feet to the side and rear to the new building, resulting in 1,880 square feet.	SDP	Pending Approval
Commercial	1235 Bordeaux Dr.	Major Moffett Park Special Development Permit to demolish an existing 41,832-square-foot one-story industrial building and construct two new hotels on the same site: 8-story, 164-room AC Hotel and 8-story, 186-room Courtyard Marriott Hotel with a detached three-and-a-half level, above grade parking structure. Miscellaneous Plan Permit #2017-7587 proposes minor architectural changes for the hotels and parking garage and associated height increase, room count distribution (reflected in above numbers), lot coverage increase to 45%, and various landscaping changes.	SDP ER	Under Construction
Commercial	1265 Lawrence Station Rd.	Demolish a 240-square-foot kiosk and construct a 1,386-square-foot convenience store with sale of beer and wine at the existing Chevron gas station.	UP	Building permit plan check. Permit expires on 9/11/2021.
Commercial	1296 Lawrence Station Rd.	Redevelop a 48,352-square-foot industrial property. Demolish one existing office building and construction one new 6-story hotel building totaling 105,553 square feet and 44.3% lot coverage, with 80 parking spaces.	UP	Approved. Permit expires on 8/25/2022.

Project Type	Address	Description	Planning Permit Type	Permit Status
Commercial	1300 Sunnyvale-Saratoga Rd.	Remove existing fueling canopy and kiosk at the Shell gasoline station, and construct a new 3,155-square-foot convenience store, 206-square-foot quick service restaurant (QSR), storage, and a 2,744-square-foot canopy over the fueling area.	SDP	Pending Approval
Commercial	247 Commercial St.	Construct two hotels totaling 265 rooms and an underground parking structure.	UP PM ER	Pending Approval
Commercial	250 E. Java Dr.	Major Moffett Park Special Development Permit for a new 5-story hotel with 180 guest rooms and 6,000 square feet of ground floor retail.	SDP ER	Pending Approval
Commercial	590 W. El Camino Real	Demolish an existing auto repair and sales facility and allow an 85-room hotel.	SDP ER	Building permit issued. Permit exercised.
Commercial	755 S. Bernardo Ave.	Operate a 120-child preschool and after school care within an existing office building.	SDP	Tenant improvements under construction
Commercial	830 E. El Camino Real	Demolish an existing single story restaurant (Crazy Buffet) and construct a new 127-unit, four-story hotel with underground parking garage on a 2.56-acre parcel.	SDP ER	Under Construction
Commercial	840 E. El Camino Real	Combine two commercial properties and construct an approximately 10,350-square-foot single-story multi-tenant commercial building (retail, office and restaurant uses) with surface parking.	ER PM SDP	Project completed on 1/5/2021
Commercial	861 E. El Camino Real	Allow a 162-room hotel (Hampton Inn), including underground parking	SDP VAR	Under Construction
Commercial	898 E. Fremont Ave.	Demolish and reconstruct an existing gas service station and add a new 3,725-square-foot building consisting of a 2,398-square-foot convenience store and 1,327-square-foot restaurant tenant and associated site improvements.	ER SDP	Pending Approval
Commercial	898 W. El Camino Real	Expand the Toyota Dealership (1,470 square feet on the 1st floor and 1,640 square feet on the 2nd floor) and modify the exterior facade.	SDP	Building permit plan check. Permit expires on 3/11/2022.
Commercial	928 W. El Camino Real	Demolish a portion of an existing 7,016-square-foot auto repair/body shop building, including a 399-square-foot mezzanine, and construct a 8,172-square-foot addition for a total floor area of 10,742 square feet for a Toyota Pre-Owned Vehicle Reconditioning Service Center.	PLR SDP	Approved. Permit expires on 2/24/2023.
Industrial	480 S. Mathilda Ave	Construct a new three-story, 128,546-square-foot office building and an underground parking structure.	SDP DA	Pending Approval
Industrial	1050 Kifer Rd.	Redevelop a 21.7-acre site (Intuitive Surgical), including construction of two new four-story office/R&D buildings and two parking structures resulting in 755,144 square feet and 80% Floor Area Ratio (FAR). Project includes retention of an existing one-story building and a multi-use trail and is located within the future Lawrence Station Area Plan.	UP ER	Phase I completed on 1/13/2021. Phase II permit expires on 1/13/2023.
Industrial	1081 Innovation Way	Allow a new 2.43 million-square-foot office campus with 70% FAR development in a MP-TOD Zoning District. (Juniper Networks).	SDP	Permit Exercised
Industrial	1102 W. Evelyn Ave.	Demolish an existing 3,420-square-foot one-story building and construct a 4,873-square-foot one-story industrial building with a 9,746-square-foot basement.	DR	Pending Approval
Industrial	111 W. Evelyn Ave.	4-story office building totaling 62,450 square feet with underground parking. Related to the proposed downtown specific plan amendments and EIR (2017-8047).	DA SDP	Pending Approval

Project Type	Address	Description	Planning Permit Type	Permit Status
Industrial	1152 Bordeaux Dr.	Major Moffett Park Design Review Application for 1.77 million square feet of office with parking structures and amenities building.	SDP GPA RZ ER	Project completed on 5/21/2020.
Industrial	1194 N. Mathilda Ave.	Allow a new 248,259-square-foot, 5-story office/ R & D building over a 3-level parking structure attached to the building (including one-level of underground basement parking. Project includes reconfiguration of existing surface parking lot.	SDP ER	Permit expired.
Industrial	1230 Oakmead Pkwy.	Site and building modifications to an existing office building resulting in 23,874 net new square footage (47% FAR).	SDP	Under Construction
Industrial	1260 N. Mathilda Ave.	Construct a new 60,862-square-foot office and manufacturing building at an existing JSR Micro site.	DR	Permit expired.
Industrial	1389 Moffett Park Dr.	Major Moffett Park Design Review Permit for a new four-story 123,595-square-foot office building and associated site improvements resulting in a 47% FAR.	SDP	Building permit plan check. Permit expires on 9/9/2021.
Industrial	1390 Borregas Ave	Minor Moffett Park SDP to construct a mechanical facility for Google, including three buildings that house mechanical and auxiliary equipment and four water storage tanks.	SDP	Building permit issued. Permit expires on 10/16/2021.
Industrial	160 Gibraltar Ct., 1265 Borregas, 1190 Borregas Ave., and 1196 Borregas Ave.	Consider a Major Moffett Park Design Review and Minor Moffett Park Special Development Permit for the demolition of existing buildings and the redevelopment of 4 parcels. Phase 1 includes a 5-story 182,500-square-foot building (1265 Borregas Ave), a lot line adjustment with the 160 Gibraltar Ct. parcel, and demolition of the buildings at 1190 and 1196 Borregas Ave for surface parking spaces and open space to serve 1265 Borregas Ave. Phase 2 includes the demolition of the existing building at 160 Gibraltar Ct. and the development of an open space area.	DR ER PM	Under Construction
Industrial	212 Gibraltar Dr.	Redevelop eight parcels with four, two-story buildings to be used for office and R&D totaling 400,199 square feet and 48% FAR.	DR	Under Construction
Industrial	265 Sobrante Way	Allow a 4-story office/R&D building with a detached parking structure, resulting in 120,740 square feet and 79% floor area ratio. Project is within the Peery Park District.	ER UP	Project completed on 2/25/2021.
Industrial	275 N. Mathilda Ave.	Redevelop three industrial properties totaling 3.54 acres. Demolish three existing commercial/office/R&D buildings (totaling 51,075 square feet) and construct a new four-story office/R&D building totaling 123,000 square feet and 79% floor area ratio (FAR). Project also includes a new four-and-a-half level, above-ground parking structure.	Plan Review	Building permit issued. Permit expires on 1/28/2022.
Industrial	360 Caribbean Dr.	Major Moffett Park Special Development Permit for the redevelopment of a 40.5 acre site for two new 5-story R&D office buildings totaling 1,041,890 square feet including a 4-level parking structure resulting in 59% FAR. The existing 710,381 square feet of office & manufacturing buildings will be demolished.	SDP	Building permit plan check. Permit expires on 5/12/2022.
Industrial	840 W. California Ave.	Redevelop a portion of the existing office park by demolishing four (4) existing buildings (197,077 square feet) and constructing a new building of 277,444 square feet. The net new office area is 80,367 square feet, including 2,500 square feet of office retail/amenity program.	ER PLR	Pending Approval
Industrial	411 N. Pastoria Ave.	Construct a 17,727-square-foot addition to an existing industrial building.	PLR	Pending Approval

Project Type	Address	Description	Planning Permit Type	Permit Status
Industrial	445 N. Mary Ave.	Construct a new 4-story office building, 4.5-level parking structure and associated site work and landscaping to an existing campus consisting of two 4-story office buildings and one 2-level parking deck. The project will result in 100% FAR.	ER UP	Under Construction
Industrial	589 W. Java Dr.	Yahoo! campus expansion to add a new, 6-story 315,000-square-foot office building, 24,000-square-foot special use amenities building and one parking structure.	SDP	Permit Exercised
Industrial	610 N. Mary Ave.	Peery Park Plan Review Permit to allow the demolition of 28 existing office/industrial buildings totaling 768,665 square feet & construction of nine three-story & three four-story office buildings totaling 1,471,400 square feet; a one-story & two two-story amenity buildings totaling 40,000 square feet; a four-level, & three six-level above-grade parking structures; an east-west private street with public access; abandonment of Maude Ct; pedestrian and bicycle routes; & site and offsite improvements. Tentative Map to allow 28 exist lots to be merged into 7 lots.	ER TM PLR	10 of 12 buildings completed. One building in building permit plan check, the other has not been submitted.
Industrial	615 N. Mathilda Ave.	Redevelop 8 parcels by combining the site into one site and construct two new 4-story office R&D buildings with a total of 330,353 square feet (includes 13,988-square-foot amenities area) resulting in 100% FAR and serviced by a new 5-level parking garage. The project is located in the PPSP.	PLR	Under Construction
Industrial	623 N. Pastoria Ave	Construct a three-story, 52,755-square-foot office/R&D building and an underground parking structure.	PLR	Approved. Permit expires on 1/22/2022.
Industrial	684 W. Maude Ave.	Peery Park Plan Review Permit to construct a 174,545-square-foot, four-story corporate/research and development (R&D) office building and a 6-level parking structure on a 4.01-acre site resulting in a total of 100% FAR.	ER UP TM	Project completed on 1/7/2021.
Industrial	810 W. Maude Ave.	Phase 2 of the W. Maude Ave Campus project to construct two 4-story R&D office buildings of approximately 162,000 each and a 5-level parking structure. An existing approximately 58,188-square-foot building is to be retained. A total of approximately 382,188 square feet and 85% FAR is requested.	ER UP	Building permit plan check. Permit expires on 12/4/2021.
Industrial	888 Ross Drive	Redevelop the site with 391,131 square feet of office and R&D buildings (2-five story buildings, 100% FAR) and five level parking structure.. Net new area: 252,968 square feet.	ER PLR	Approved. Permit expires on 11/17/2022.
Industrial	899 Kifer Rd.	Allow a General Plan Amendment for an Industrial Intensification Designation and Rezoning from MS to MS/100% FAR.	ER GPA RZ	Pending Approval
Industrial	901 Kifer Rd.	Redevelop nine industrial properties totaling 6.88 acres. Demolish nine existing industrial/office/R&D buildings (totaling 117,812 square feet) and construct a new four-story, office/R&D building totaling 172,740 square feet and 45% floor area ratio (FAR). The existing 161,800-square-foot office/R&D building at 899 Kifer Road would remain. A parcel map is also proposed to merge ten existing lots into one.	DR ER PM	Under Construction
Industrial	932 Kifer Rd	Redevelop three industrial properties totaling 32.4 acres. Demolish two existing industrial/office/R&D buildings and three accessory structures and construct two new three-story office/R&D/manufacturing buildings totaling 1.211 million square feet and 86% total floor area ratio (FAR). Project also includes a five-level, above ground parking structure; an 11,000-square-foot detached amenity building; and two central utility plants totaling 19,000 square feet. A Vesting Tentative Parcel map is also proposed to merge four existing lots into two.	PM SDP	Pending Approval

Project Type	Address	Description	Planning Permit Type	Permit Status
Mixed Use	102 E. Fremont Ave	Redevelop an existing commercial center by demolishing 19,582 square feet of existing commercial space, constructing 35 residential condominium units, and constructing a new standalone 8,048-square-foot commercial building.		Pending Approval
Mixed Use	1100 and 1124 W. El Camino Real	Mixed-use development with 88 flats, 5 single-family homes, and 30,345 square feet of commercial space.	ER SDP TM	Pending Approval
Mixed Use	1120 Kifer Rd.	Redevelop a 7.99-acre industrial property with mixed-use, including 7,400 square feet of retail and 520 apartment units (Greystar).	PM SDP	Project completed on 1/26/2021.
Mixed Use	1155 Aster Ave.	Redevelop a 16.82-acre property. Demolish seven existing industrial buildings, two commercial buildings, and construct a new mixed-use project. Project consists of a 4-to-5-story apartment/commercial building with wrapped above-grade parking structure; (2) 2-to-7-story condo buildings above podium parking structures; and (20) 2-to-3-story townhome buildings with individual unit garages. Residential: 741 total units (412 rental /329 ownership) at a density of 44 du/ac. Commercial: 1,500 square feet on the ground floor of the apt bldg. Publicly-Accessible, Privately-Owned Open Space: 2.3 acres.	ER SDP TM	Building permit plan check. Permit expires on 2/11/2022.
Mixed Use	1250 Lakeside Dr.	Allow two new buildings: 1) a 6-story, 263 room hotel with an attached 3,000-square-foot restaurant and an attached 3-level above grade parking structure, and 2) 5-story, 250 unit apartment building over a 2-level podium parking garage. Includes an amendment to the Lakeside Specific Plan.	ER SDP SP	Residential building under construction. Hotel in building permit plan check.
Mixed Use	166 E. Fremont Ave	Redevelopment of a portion of an existing shopping center (Fremont Corners) into a mixed-use Village Center with 12,066 square feet of commercial space and 50, 4-story townhomes with associated parking and common public open space.	SDP TM	Pending Approval
Mixed Use	200 S. Taaffe St.	Allow a mixed use development including two 12-story residential buildings with 479 units and 30,000 square feet of retail use in DSP Block 3.	SDP, TM	Approved. Permit expires on 1/11/2023.
Mixed Use	200 W. Washington Ave.	Construct two seven-story office buildings with approximately 499,800 square feet and ground floor retail space with approximately 50,900 square feet of retail, 22,105 square feet of flex space, and 37,415 square feet of shared services and two levels of below grade parking.	SDP	Approved. Permit expires on 3/29/2023.
Mixed Use	300 S. Mathilda Ave.	Allow a new six story office building with ground floor retail, one level of below grade parking, two levels of above ground parking with four levels of office above parking.	SDP	Pending Approval
Mixed Use	311 S. Mathilda Ave.	Redevelop commercial site (Denny's) into a five-story mixed-use building consisting of 5,000 square feet of restaurant floor area (Denny's) and 75 residential units (rental apartments) utilizing the State Density Bonus and City's Green Building Incentive for density bonus.	ER SDP TM	Under Construction
Mixed Use	365 S. Mathilda Ave.	Construct 89 affordable housing (VL and L income units - 25% for developmentally disabled persons) and one (1) manager unit in Downtown Specific Plan Block 15 with private community serving space on 1.25 ac (6 City owned properties.)	ER PM SDP	Approved. Permit expires on 4/27/2022,

Project Type	Address	Description	Planning Permit Type	Permit Status
Mixed Use	510 S. Mathilda Ave.	Allow a 54-unit residential apartment building with 10,000 square feet of ground floor commercial and installation of associated site improvements on a 0.72 acre lot.	ER PM SDP	Pending Approval
Mixed Use	520 Almanor Ave.	Peery Park Plan Review Permit to construct a 207,620-square-foot, four-story corporate/research and development (R&D) office building and a 7-level, partially underground parking structure with attached ground floor retail of up to 4,000 square feet on a 4.4-acre site resulting in a total of 110% FAR. The project includes outdoor dining/recreation areas and a pedestrian/bicycle path for public use.	PLR ER	Project completed on 4/29/2021.
Mixed Use	675 Almanor Ave.	Allow a 150,651-square-foot four-story office/R&D building and a detached five-level and partial underground parking structure, resulting in 100% FAR and located within the Peery Park Specific Plan area. The project includes a 2,500-square-foot retail space on the ground floor.	ER UP	Project completed on 3/5/2021.
Mixed Use	803 W. El Camino Real	Construct 49 residential units (40 apartments + 9 single family homes) 5,662 square feet of commercial, and a 51 room expansion of the Grand Hotel.	ER SDP TM	Under Construction
Mixed Use	871 and 895 E. Fremont Ave.	Redevelop a 5.49-acre site with 138 residential units (39 townhomes and 99 apartments) plus 6,934 square feet of retail/office use with surface and underground parking. Project involves Rezoning of 895 E. Fremont Ave. from C-1/ECR to R-3/ECR and preparation of an Environmental Impact Report (EIR).	RZ ER SDP TM	Building permit plan check. Permit exercised.
Other	521 E. Weddell Dr.	Allow a 50-student day care center (2 to 5 years old) with 6 staff members at the Sunnyvale International Church.	UP	Building permit plan check. Permit expires on 7/8/2022.
Other	824 San Aleso Ave.	Consider the location of a high school for 400 students (Summit School). Project includes interior and exterior improvements of an existing industrial building for an educational use, and the installation of a tri-level mechanical lift parking structure in the rear (22 parking spaces). Project is within the Peery Park Specific Plan Neighborhood Transition Subdistrict.	ER UP	Project completed on 10/14/2020.
Public Facilities	456 W. Olive Ave.	Civic Center Modernization Plan Project	Other Permit Type	Under Construction
Public Facilities	581-583 E. Fremont Ave.	Redevelop a 2.31-acre property with PF Zoning Designation. Demolish two existing religious institution buildings (Trinity United Methodist Church) and construct new two-to-three-story, 90-unit residential care facility for elderly (50 assisted living units and 40 memory care units) with 120 beds, above a level of underground parking, totaling 78,019 square feet and 77% floor area ratio (FAR) (No medical clinic is proposed as part of this application).	UP	Building permit plan check. Permit expires on 12/9/22.
Residential	915 De Guigne Dr.	Demolish existing manufacturing buildings and construct 450 townhouse units.	SDP TM ER	Project completed on 10/15/2019.
Residential	1 AMD Place	Redevelop a site to construct 1,074 dwelling units (130 townhomes, 887 mid-rise apartments, 57 walk up apartments) including extension of a public street, and dedication of a 6.5 acre public park.	ER RZ SDP PLR TM	Under Construction
Residential	1005 E. Homestead Rd.	TM - Subdivide one lot into two and construct two new single family homes. SDP - Demolish an existing single-family home and construct two new two-story single family homes resulting in 3,234 square feet (2,830-square-foot living area with 404-square-foot garage [45.5% - Unit #1])	TM SDP	Building permit issued. Permit expires on 10/30/22.

Project Type	Address	Description	Planning Permit Type	Permit Status
		and 3,367 square feet (2,966-square-foot living area with 401-square-foot garage [46% - Unit #2]) and 45.75% overall floor area ratio (FAR). Two-lot subdivision with the property line going between the two homes.		
Residential	1008 E. El Camino Real	Rezone the property at 1314-1320 Poplar Ave. from R-1/ECR (Low Density Residential/Precise Plan for El Camino Real) to C-2/ECR (Highway Business Commercial/Precise Plan for El Camino Real) and redevelop former mobile home park (Conversion Impact Report certified and closure approved in January 2016) and existing duplex property comprising a project site of 2.1 acres into a 108-unit, 5-story mixed income (20% of units will be affordable to very low income households) rental housing complex with associated site improvements.	ER RZ SDP	Under Construction
Residential	1023 N. Fair Oaks Ave.	Demolish an existing approximately 7,600-square-foot restaurant and redevelop the site with 14 three-story townhomes.	ER SDP TM	Project completed on 9/9/2020.
Residential	333 W. Iowa Ave	Construct 75 new apartment units and podium parking structure at CityLine Phase I.	ER SDP TM	Under Construction
Residential	1111 Karlstad Dr.	Develop 18 three-story townhomes in the Tasman Crossing Industrial to Residential area. Project includes demolition of the existing industrial building, site improvements and a Vesting Tentative Map to subdivide the existing lot into 18 lots and 3 common lots.	ER SDP TM MPP	Under Construction
Residential	1136 Northumberland Dr.	To allow subdivision of one lot into two and construct two new single family homes with 43.5% and 44.9% FARs.	DR PM VAR	Under Construction
Residential	1139 Karlstad Dr.	Redevelop a 4.97-acre vacant property. Construct 135 townhome units at a density of 27 du/acre. The project consists of nine three-story and eight four-story buildings.	SDP TM	Pending Approval
Residential	1142 Dahlia Ct.	Develop 8.8-acre site (agricultural land aka Corn Palace) with 58 single family homes which includes: Tentative Map to subdivide the site into 60 lots (incl a 2 ac. public park lot, a private street and 58 single family home lots); Special Development Permit to construct 58 single family homes and associated improvements.	ER SDP TM	Building permit plan check. Permit expires on 3/11/2022.
Residential	1162 Sunnyvale-Saratoga Rd.	Redevelop an existing 11-unit apartment complex into 23 condominium units.	ER TM UP VAR	Pending Approval
Residential	1178 Sonora Ct.	Redevelop a 1.26-acre industrial property within the Lawrence Station Area Plan (LSAP). Demolish an existing 19,440-square-foot one-story industrial building and construct 177 apartment units (175 affordable units and two managers' units) with a density of 141 du/acre. The project consists of one seven-story building, including two levels of an above-ground podium parking structure.	SDP	Pending Approval
Residential	1202 Kifer Rd.	Redevelop a mixed-use property in the Lawrence Station Area Plan. Demolition of an existing office building and the construction of 28 apartment units in a 7-story building.	ER SDP	Pending Approval
Residential	1268 Poplar Ave.	Subdivide one lot into three lots and the construct three two-story single-family residences.	PM DR	Under Construction
Residential	160 Persian Dr.	Allow an 18-unit attached townhomes and associated vesting Tentative Map.	SDP TM	Project completed on 6/22/2020.

Project Type	Address	Description	Planning Permit Type	Permit Status
Residential	18771 E. Homestead Rd.	Request a 5-lot subdivision and development of 5 new single family homes on a 0.80 acre lot.	SDP TM	Building permit plan check. Permit expires on 11/26/2021.
Residential	210 and 214 W. Ahwanee Ave.	Updated Application - To consider a 24 unit condos in four 4-story buildings at 32 du/ac density in a 36 du/ac density zone (R-4/PD) with several deviations from development standards. Original Application made in 2018:14 unit multi-family 4-story condominiums with basement parking garage.	SDP	Approved. Permit expires on 8/10/2022.
Residential	220 Carroll St.	Redevelop two single-family properties totaling 0.58 acres. Demolish two single-family homes and construct 16 townhome units, resulting in a total of 16 units and a density of 26 du/acre. The project consists of two three-story buildings.	SDP	Building permit plan check. Permit expires on 12/14/2022.
Residential	245 W. Weddell Dr.	Redevelop an existing 62-unit affordable housing development which consists of demolition of one apartment building with 32 apartment units and construction of a new six-story, 93-unit building, and rehabilitating an existing apartment building with 30 affordable apartment units resulting in a total of 123 units.	ER SDP	Pending Approval
Residential	255 W. Maude Ave.	Allow 12 townhome-style condo units over a fully enclosed garage. The existing 12-unit apartment complex will be demolished.	DR ER PR TM	Pending Approval
Residential	258 W. California Ave.	Subdivide a 9,247-square-foot lot into two lots (3,887- and 5,360-square-foot lots) and construct two new two-story single family homes.	TM UP DR	Pending Approval
Residential	305 Beemer Ave.	Construct two new 2-story single family homes exceeding 45% FAR on proposed subdivided lots.	DR TM UP	Under Construction
Residential	331 Beemer Ave.	Subdivide one lot into two lots (flag lot configuration), and build two new single-family homes over 45% FAR. Includes demolition of existing single-family home.	DR PM UP	Building permit plan check. Permit expires on 2/25/2022.
Residential	364 Beemer Ave.	Vesting Parcel Map to create 2 SFH lots with an easement for driveway. Also for 2 new two-story single-family homes resulting in 2,000 square feet (1,600-square-foot living area and 400-square-foot garage for the front lot, 1,620-square-foot living area, and 380 square feet for the back lot) and 55% floor area ratio. There is an existing home to be demolished.	PM	Pending Approval
Residential	365 Beemer Ave.	Subdivide one lot into two lots and a Use Permit for one single family home.	PM UP	Project completed on 6/8/2020.
Residential	370 San Aleso Ave.	Redevelop existing industrial site with 18 duets and 47 townhomes for a total of 65 residential units.	ER PLR	Building permit plan check. Permit expires on 8/27/2021.
Residential	421 E. Washington Ave.	Subdivide existing 8,147-square-foot lot to two lots. Demolish an existing single-family home and build two new two-story, single-family, 2,411-square-foot homes with 4,074 square feet each.	TM SDP	Building permit plan check. Permit expires on 10/28/2022.

Project Type	Address	Description	Planning Permit Type	Permit Status
Residential	444 Old San Francisco Rd.	Construct 19-unit, one 4-story apartment building; existing single family home to be removed.	SDP	Pending Approval
Residential	475 N. Fair Oaks Ave.	Redevelop a 35,903-square-foot lot multi-family property. Demolish 2 single family homes, a rectory, 2 accessory structures and construct 2 structures with resulting in a total of 18 townhomes and has a density of 22 du/acre. The project consists of 3-story buildings.	SDP	Building permit plan check. Permit expires on 7/28/2022.
Residential	505 E. Mc Kinley Ave.	UP - Demolish an existing single-family home and construct two single-family homes resulting in 2,080 square feet (1,680-square-foot living space and 400-square-foot garage) and 52% FAR for Unit 1 and resulting in 1,920 square feet (1,520-square-foot living space and 400-square-foot garage) and 58% FAR for Unit 2. TM- Subdivide one lot into two and construct of two new single family homes.	TM UP	Under Construction
Residential	606 W. McKinley Ave	Create two lots and construct two two-story single-family homes resulting in 2,247 square feet (1,847-square-foot living space and 400-square-foot garage) and 52% FAR for Unit 1 and resulting in 2,337 square feet (1,937-square-foot living space and 400-square-foot garage) and 54% FAR for Unit 2.	PM UP	Building permit plan check. Permit expires on 5/26/2022.
Residential	617 E. Evelyn Ave.	Redevelop the Blue Bonnett Mobile Home Park (54-units) to a 62-unit townhouse development with associated site improvements (net increase of eight units).	ER SDP TM	Under Construction
Residential	655 S. Fair Oaks Ave.	Add 158 units to an existing 766 unit apartment community (Spruce Apartments).	ER SDP	Pending Approval
Residential	664 W McKinley Ave	To allow a two-lot subdivision of a R-2 property and two new two-story single family residences (Lot 1: 2,062 square feet including 412.8-square-foot garage and 56.9% FAR and Lot 2: 1,867.6 square feet including 410-square-foot garage and 51.5% FAR).	UP DR PM	Pending Approval
Residential	669 Old San Francisco Rd.	Allow a 6-unit, thee-story townhouse development.	SDP TM	Building permit plan check. Permit expires on 10/30/2021.
Residential	688 Morse Ave.	Allow three new three-story town homes and Parcel Map for three lots and one common lot.	PM UP	Pending Approval
Residential	718 E. Homestead Rd.	Subdivide one lot into two lots and construct two detached single-family homes with 54.9% FAR on each lot.	PM	Building permit plan check. Permit expires on 11/26/2021.
Residential	728, 740, 750, 760 and 814 San Aleso Ave.	Redevelop industrial property into 118 multi-family units, including 96 townhome condominiums and 22 duets) within the Peery Park Specific Plan.	ER SDP TM	Under construction
Residential	838 Azure St.	Develop four new single family homes. Two single family homes are proposed to be demolished as part of the application.	TM SDP	Permit expired
Residential	925 S. Wolfe Rd.	Demolish 130 apartment units (The Landmark) on a 5.35-acre lot and construct 128 condominium units (net loss 2 units) and subdivide one lot into 19 parcels.	UP TM ER	Building permit plan check. Permit expires on 10/14/22.

Source: compiled by Ascent using City of Sunnyvale data at https://sunnyvale.ca.gov/business/projects/devreports.htm

Note: This table lists new development that has occurred within the City in the last 2 years (July 2018-July 2020). This list does not include home additions, individual single-family homes, or tenant improvements.

UP = Use Permit

SDP = Special Development Permit

PM = Parcel Map (4 or fewer lots)

VAR = Variance

TM = Tentative Map

GPI = General Plan Amendment Initiation

GPA = General Plan Amendment Application

RAP = Resource Allocation Permit

DA = Development Agreement

PLR = Plan Review

ER = Environmental Review

PR = Preliminary Review

CC = City Council

PC = Planning Commission

PRC = Project Review Committee

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5 ALTERNATIVES

5.1 INTRODUCTION

CCR Section 15126.6(a) (State CEQA Guidelines) requires EIRs to describe:

> a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a range of potentially feasible alternatives that will avoid or substantially lessen the significant adverse impacts of a project, and foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.

This section of the State CEQA Guidelines also provides guidance regarding what the alternatives analysis should consider. Subsection (b) further states the purpose of the alternatives analysis is as follows:

> Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The State CEQA Guidelines require that the EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative must be discussed, but in less detail than the significant effects of the project as proposed (CCR Section 15126.6[d]).

The State CEQA Guidelines further require that the "no project" alternative be considered (CCR Section 15126.6[e]). The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving a proposed project with the impacts of not approving the proposed project. If the no project alternative is the environmentally superior alternative, CEQA requires that the EIR "shall also identify an environmentally superior alternative among the other alternatives" (CCR Section 15126[e][2]).

In defining "feasibility" (e.g., "feasibly attain most of the basic objectives of the project"), CCR Section 15126.6(f)(1) states, in part:

> 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). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In determining what alternatives should be considered in the EIR, it is important to consider the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency's decision-making body—here, the City of Sunnyvale. (See PRC Sections 21081.5 and 21081[a] [3].)

5.2 CONSIDERATIONS FOR SELECTION OF ALTERNATIVES

5.2.1 Attainment of Project Objectives

As described above, one factor that must be considered in selection of alternatives is the ability of a specific alternative to attain most of the basic objectives of the project (CCR Section 15126.6[a]). Chapter 2, "Project Description," articulates the following LSAP Update and ISI project objectives:

LSAP Modifications (Housing Study/Boundary Expansion)

- Expand housing opportunities within the LSAP area to help address housing needs of the City.
- Provide for additional opportunities for higher intensity residential development near the Caltrain Lawrence Station that is environmentally, economically, and socially sustainable.
- Implement a Sense of Place Plan that will improve connectivity, wayfinding, and the aesthetic character of the LSAP area.
- Expand the LSAP boundary to the west for a comprehensive planning approach for the Kifer Road corridor; to accommodate future nonresidential development; and obtain needed community benefits that are identified in the LSAP.
- Update the plan to improve the readability and consistency of the existing document, and make revisions that comply with changes in State law and City codes since the original plan adoption.
- Make Zoning Code text amendments to reflect changes in building heights, land uses, floor area ratios, densities, and other associated development standards associated with increased housing potential in the LSAP and an expanded boundary to the west.
- Revise the LSAP Development Incentives Program to reallocate incentive points and add to the list of community benefits.

ISI Redevelopment Project

- Create an innovative campus that unifies ISI's workforce in connected buildings to promote creativity and collaboration, and to reduce daily trips between existing ISI buildings and the new campus.
- Construct a project that accommodates ISI's existing needs in proximity to its existing employment base, and allows for its long-term continued presence in the City.
- Fulfill the LSAP goals of increasing transit ridership and promoting economic, social, and environmental sustainability through integrated design and development of a sustainable campus in proximity to the Station.
- Promote transit and active commute modes through thoughtful site planning coupled with a robust Transportation Demand Management (TDM) program to reduce daily vehicle trips. The TDM program will provide amenities such as employee shuttle services between ISI buildings and public transit, extensive bicycle parking, showers and lockers, free Caltrain Go Passes, rideshare matching services, flexible work schedule programs and dedicated carpool spaces.
- Provide onsite amenities to promote ISI employee's health and well-being, reduce daily vehicle trips, and create a strong sense of place.
- Create a campus design that reflects ISI's innovative technology.
- Develop the campus over time in response to ISI's needs.
- Achieve the appropriate security and privacy required for the invention and manufacture of new surgical products and technologies by limiting public access to certain areas within the new campus.

5.2.2 Environmental Impacts of the Project

Sections 3.1 through 3.15 and Chapter 4 of this Draft SEIR address the environmental impacts of implementation of the proposed LSAP Update and ISI project. Potentially feasible alternatives were developed with consideration of avoiding or lessening the impacts of the LSAP Update and ISI project not addressed in the 2016 LSAP EIR, as identified in Chapters 3 and 4 of this Draft SEIR and summarized below. If an environmental issue area analyzed in this Draft SEIR is not addressed below, it is because no new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR were identified for that issue area.

AIR QUALITY

- Expanded development potential under the LSAP Update in combination of the ISI project would contribute to cumulative air quality impacts from construction-related activities associated with nitrogen oxides (NO_X), emissions. Mitigation (adopted LSAP Mitigation Measure 3.5.3a and 3.5.3b and Mitigation Measure 3.2-1) has been identified to reduce the extent of this impact. However, implementing the mitigation measures would not completely offset this impact. Therefore, the impact would be **cumulatively considerable and significant and unavoidable** (see Impact 4-1).

TRANSPORTATION

- Construction activities associated with the ISI project could potentially result in temporary but prolonged impacts including, but not limited to, road, lane, bicycle lane, and sidewalk closures. Therefore, the ISI project could result in a new significant impact that was not analyzed in the 2016 LSAP EIR. Mitigation (Mitigation Measure 3.14-7) has been identified to reduce this impact to **less than significant** (see Impact 3.14-7).

5.3 ALTERNATIVES CONSIDERED BUT NOT EVALUATED FURTHER

As described above, State CEQA Guidelines Section 15126.6(c) provides that the range of potential alternatives for the project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. Alternatives that fail to meet the fundamental project purpose need not be addressed in detail in an EIR (*In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1165–1167).

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by lead agency decision maker(s). (See PRC Section 21081[a][3].) At the time of action on the project, the decision maker(s) may consider evidence beyond that found in this EIR in addressing such determinations. The decision maker(s), for example, may conclude that a particular alternative is infeasible (i.e., undesirable) from a policy standpoint and may reject an alternative on that basis provided that the decision maker(s) adopt a finding, supported by substantial evidence, to that effect, and provided that such a finding reflects a reasonable balancing of the relevant economic, environmental, social, and other considerations supported by substantial evidence (*City of Del Mar v. City of San Diego* [1982] 133 Cal.App.3d 401, 417; *California Native Plant Society v. City of Santa Cruz* [2009] 177 Cal.App.4th 957, 998).

The EIR should also identify any alternatives that were considered by the lead agency but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency's determination.

The following alternative was considered by the City of Sunnyvale but is not evaluated further in this Draft SEIR.

5.3.1 Off-Site Alternative

This alternative would relocate the LSAP Update development potential into one of the other City's Land Use and Transportation Element (LUTE) designated transit mixed use, corridor mixed use, or village mixed use plan areas (LUTE Figure 3-11). This alternative was rejected because it would not meet any of the project objectives associated with expanding housing and development opportunities associated with the ISI project in the LSAP area and the Caltrain Lawrence Station. Thus, this alternative was not evaluated further.

5.4 ALTERNATIVES SELECTED FOR DETAILED ANALYSIS

The following alternatives evaluated in this Draft SEIR:

- Alternative 1: No Project Alternative assumes that the existing LSAP and its boundaries remain as adopted in 2016. The ISI project site would not be incorporated into the LSAP area and would not be constructed as proposed.
- Alternative 2: Reduced Development Alternative A assumes a maximum development potential of 1,764 additional housing units within the LSAP, which would consist of increasing achievable densities (with incentives) at existing Mixed Use (MXD-I) and Mixed Use (MXD-II) zoned properties only from 68 to 100 dwelling units per acre (du/ac). In this alternative, the LSAP development capacity would increase from 2,323 units to 4,087 units. This alternative assumes an expansion of the LSAP area boundary to include the ISI project and construction of the project as proposed.
- Alternative 3: Reduced Development Alternative B assumes a maximum development potential of 1,075 additional housing units within the LSAP, which would consist of expanding the boundaries of where housing is allowed by rezoning the existing Industrial and Service (M-S/LSAP) and Office/Retail (O-R) zoned properties to allow residential uses with achievable densities of 54 du/ac with incentives. In this alternative, the LSAP development capacity would increase from 2,323 to 3,398 units. This alternative assumes an expansion of the LSAP area boundary to include the ISI project and construction of the project as proposed.

Further details on these alternatives, and an evaluation of their environmental effects relative to those of the proposed project, are provided below. For purposes of comparison with the other action alternatives, conclusions for each technical area are characterized as "impacts" that are greater, similar, or less to describe conditions that are worse than, similar to, or better than those of the proposed project.

5.4.1 Alternative 1: No Project Alternative

Under Alternative 1, the No Project Alternative, no actions would be taken. The LSAP would remain in effect as it was adopted by the City in 2016. The ISI project site would not be incorporated into the LSAP area and would not be constructed as proposed. The ISI project site would retain its current zoning of Industrial and Service (M-S) and General Industrial (M-3) that would allow future development of the site for similar uses but would be required to meet the floor area ratios set forth in Table 19.32.020 of the City Municipal Code. These existing floor area ratios would not allow for the extent of development proposed under the ISI project.

AESTHETICS

Under this alternative the extent of development potential would be reduced and there would be no alteration of the visual character, nighttime lighting, and glare in the LSAP area and ISI project site beyond what was evaluated in the 2016 LSAP EIR and the 2017 LUTE EIR. The LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Thus, impacts under the No Project Alternative would be similar to those that would occur under the project. (*Similar*)

AIR QUALITY

Because the No Project Alternative would not expand planned residential development potential in the LSAP area, this alternative would not generate additional operation-related air emissions beyond what was evaluated in the 2016 LSAP EIR. By comparison, the LSAP Update would further contribute to cumulative air quality impacts from expanded residential development potential (see Table 3.2-7 and 3.2-8). Thus, impacts under the No Project Alternative would be less than those that would occur under the project. (*Less*)

CULTURAL AND TRIBAL CULTURAL RESOURCES

The No Project Alternative would involve land disturbance from planned development that could result in the disturbance, destruction, or alteration of any known or as-yet-undiscovered/unrecorded archaeological resources, tribal cultural resources, human remains, and paleontological resources as evaluated in the 2016 LSAP EIR and 2017 LUTE EIR. This extent of anticipated land disturbance from planned development would be the same under the LSAP Update and ISI project because there would be no change in the overall development footprint of the area. As addressed in Section 3.3, "Cultural and Tribal Cultural Resources," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, cultural resource impacts under the No Project Alternative would be similar to those that would occur under the project. (*Similar*)

BIOLOGICAL RESOURCES

The No Project Alternative would involve land disturbance from planned development that could result impacts to special status species, nesting bird and raptors as evaluated in the 2016 LSAP EIR and 2017 LUTE EIR. This extent of anticipated land disturbance from planned development would be the same under the LSAP Update and ISI project because there would be no change in the overall development footprint of the area. As addressed in Section 3.4, "Biological Resources," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, biological resource impacts under the No Project Alternative would be similar to those that would occur under the project. (*Similar*)

ENERGY

Because the No Project Alternative would not expand planned residential development potential in the LSAP area, this alternative would not create additional energy demands beyond what was evaluated in the 2016 LSAP EIR. By comparison, the LSAP Update would expand energy demands from expanded residential development potential (see Table 3.5-1). While there would be an energy demand increase, the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR because it would comply with energy efficiency standards (e.g., Title 24 Building Energy Efficiency Standards and the City's Playbook). Thus, impacts under the No Project Alternative would be less than those that would occur under the project. (*Less*)

GEOLOGY AND SOILS

The No Project Alternative would involve land disturbance from planned development that could result impacts to paleontological resources as evaluated in the 2016 LSAP EIR and 2017 LUTE EIR. This extent of anticipated land disturbance from planned development would be the same under the LSAP Update and ISI project because there would be no change in the overall development footprint of the area. As addressed in Section 3.6, "Geology and Soils," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, geologic resource impacts under the No Project Alternative would be similar to those that would occur under the project. (*Similar*)

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Because the No Project Alternative would not expand planned residential development potential in the LSAP area, this alternative would not create additional greenhouse gas (GHG) emissions beyond what was evaluated in the 2016 LSAP EIR. By comparison, the LSAP Update would increase total GHG emissions from expanded residential development potential (see Table 3.7-4). While there would be an increase in GHG emissions the LSAP Update would be more GHG efficient and would be within the service population threshold derived from the City's Playbook. Thus, impacts under the No Project Alternative would be less than those that would occur under the project. (*Less*)

HAZARDS AND HAZARDOUS MATERIALS

The No Project Alternative would involve land use activities (e.g., construction and operation of uses) from planned development that could result in hazard impacts as evaluated in the 2016 LSAP EIR and 2017 LUTE EIR. This extent of anticipated land use from planned development would be the same under the LSAP Update and ISI project because there would be no change in development footprint. As addressed in Section 3.8, "Hazards and Hazardous Materials," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, hazard impacts under the No Project Alternative would be similar to those that would occur under the project. (*Similar*)

HYDROLOGY AND WATER QUALITY

The No Project Alternative would involve land disturbance from planned development that could result impacts to water quality and groundwater impacts as evaluated in the 2016 LSAP EIR and 2017 LUTE EIR. This extent of anticipated land disturbance from planned development would be the same under the LSAP Update and ISI project because there would be no change in the overall development footprint of the area. As addressed in Section 3.9, "Hydrology and Water Quality," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, hydrology and water quality impacts under the No Project Alternative would be similar to those that would occur under the project. (*Similar*)

LAND USE AND PLANNING

The No Project Alternative would involve planned development consistent with the adopted LSAP and General Plan. The LSAP Update and ISI project would require changes to land use designations in the LSAP boundary expansion area/ISI site, rezoning of several parcels and various text amendments for changes in development standards associated with some of the existing LSAP zoning districts, removal of one and the addition of four new LSAP zoning districts, and the addition of new land use goals and policies associated with the LSAP Update and changes in City policies and standards since the 2016 LSAP adoption. While these would be amendments to the LSAP, General Plan, and City zoning, the LSAP Update and ISI project, the project would be consistent with the City's goals for sustainable growth and concentration of new development within LUTE designated plan areas. As addressed in Section 3.10, "Land Use and Planning," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, land use impacts under the No Project Alternative would be similar to those that would occur under the project. (*Similar*)

NOISE AND VIBRATION

Because the No Project Alternative would not expand planned residential development potential in the LSAP area, this alternative would not create or expand noise sources beyond what was evaluated in the 2016 LSAP EIR. By comparison, the LSAP Update would expand residential development potential that could increase traffic noise. As identified in Chapter 4, "Cumulative Impacts," this increase in traffic noise would not be substantial and would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact

from the 2016 LSAP EIR. Thus, impacts under the No Project Alternative would be similar to those that would occur under the project. (*Similar*)

POPULATION, EMPLOYMENT, AND HOUSING

Because the No Project Alternative would not expand planned residential development potential in the LSAP area, this alternative would not create additional population and housing beyond what was evaluated in the 2016 LSAP EIR. By comparison, the LSAP Update would expand residential development potential of the LSAP area. These additional units would serve an existing housing shortage in the region and would be developed over time in response to market demand. In addition, the LSAP Update would improve the jobs-housing balance in the LSAP area. These benefits would not occur under the No Project Alternative. Thus, impacts under the No Project Alternative would be greater than those that would occur under the project. (*Greater*)

PUBLIC SERVICES AND RECREATION

The No Project Alternative would involve land use activities from planned development that would increase the demand for public services as evaluated in the 2016 LSAP EIR and 2017 LUTE EIR. This extent of anticipated land use from planned development would be the same under the LSAP Update and ISI project because there would be no change in overall development footprint of the area. As addressed in Section 3.13, "Public Services and Recreation," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, hazard impacts under the No Project Alternative would be similar to those that would occur under the project. (*Similar*)

TRANSPORTATION

Because the No Project Alternative would not expand planned residential development potential in the LSAP area, this alternative would not result in new transportation impacts beyond what was evaluated in the 2016 LSAP EIR. By comparison, the LSAP Update would expand residential development potential that could increase transportation use in the LSAP area as well as total vehicle miles traveled (VMT). As identified in Section 3.14, "Transportation," the only new significant (but mitigable) impact identified was construction traffic impacts for the ISI project. This project-level impact also occurs from subsequent development under the No Project Alternative. Thus, impacts under the No Project Alternative would be less than those that would occur under the project. (*Less*)

UTILITIES AND SERVICE SYSTEMS

The No Project Alternative would involve land uses from planned development that would increase the demand for water, wastewater, drainage, and solid waste services as evaluated in the 2016 LSAP EIR and 2017 LUTE EIR. This extent of development would increase from the expanded residential development potential under the LSAP Update. As addressed in Section 3.15, "Utilities and Service Systems," the LSAP Update would include sewer pipeline improvements to address existing and anticipated capacity issues that are not addressed in the 2016 LSAP (No Project Alternative). The LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, impacts under the No Project Alternative would be greater to those that would occur under the project as it would not address existing sewer conveyance issues. (*Greater*)

5.4.2 Alternative 2: Reduced Development Alternative A

Under Alternative 2, the proposed LSAP Update would be modified to provide a maximum development potential of 1,764 additional housing units within the LSAP, which would consist of increasing achievable densities (with incentives) at existing MXD-I and MXD-II zoned properties only from 68 to 100 du/ac. In this alternative, the LSAP development capacity would increase from 2,323 units to 4,087 units. This alternative assumes an expansion of the

LSAP area boundary to include the ISI project and construction of the project as proposed. All other aspects of the LSAP Update (amendments to LSAP and zoning, Lawrence Station Sense of Place Plan, and sewer impact fee for sewer conveyance impacts) would remain as proposed by the project. This alternative was considered by the City Council at the LSAP preferred land use alternative hearing on June 26, 2018, but was not selected as the preferred land use alternative because it would result in fewer housing units.

AESTHETICS

Under Alternative 2 the extent of residential development potential would be reduced as compared to the project but would result in a similar extent of development of the LSAP area. The LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Thus, impacts under Alternative 2 would be similar to those that would occur under the project. (*Similar*)

AIR QUALITY

Alternative 2 would result in less residential development potential in the LSAP area as the proposed LSAP Update and would result in reduced operation-related air emissions beyond what was evaluated in the 2016 LSAP EIR. Thus, impacts under Alternative 2 would be less than those that would occur under the project. (*Less*)

CULTURAL AND TRIBAL CULTURAL RESOURCES

Alternative 2 would involve land disturbance from planned development that could result in the disturbance, destruction, or alteration of any known or as-yet-undiscovered/unrecorded archaeological resources, tribal cultural resources, human remains, and paleontological resources to the same extent as the LSAP Update and ISI project because there would be no change in the overall development footprint of the area. As addressed in Section 3.3, "Cultural and Tribal Cultural Resources," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, cultural resource impacts under Alternative 2 would be similar to those that would occur under the project. (*Similar*)

BIOLOGICAL RESOURCES

This alternative would involve land disturbance from planned development that could result impacts to special status species, nesting bird and raptors similar to the proposed LSAP Update and ISI project because the extent of anticipated land disturbance from planned development would be the same (no change in the overall development footprint of the area). As addressed in Section 3.4, "Biological Resources," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, biological resource impacts under Alternative 2 would be similar to those that would occur under the project. (*Similar*)

ENERGY

Because Alternative 2 would not expand planned residential development potential in the LSAP area to the extent of the proposed LSAP Update, this alternative would have reduced energy demands. The LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR because it would comply with energy efficiency standards (e.g., Title 24 Building Energy Efficiency Standards and the City's Playbook). Thus, impacts under Alternative 2 would be less than those that would occur under the project. (*Less*)

GEOLOGY AND SOILS

This alternative would involve land disturbance from planned development that could result impacts to paleontological resources similar to the proposed LSAP Update and ISI project because the extent of anticipated land disturbance from planned development would be the same. As addressed in Section 3.6, "Geology and Soils," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, geologic resource impacts under Alternative 2 would be similar to those that would occur under the project. (*Similar*)

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Because Alternative 2 would not expand planned residential development potential in the LSAP area to the extent of the proposed LSAP Update, this alternative would result in less GHG emissions than the LSAP Update. Thus, impacts under Alternative 2 would be less than those that would occur under the project. (*Less*)

HAZARDS AND HAZARDOUS MATERIALS

Alternative 2 would involve the same land use activities (e.g., construction and operation of uses) from planned development that would occur under the LSAP Update and ISI project. As addressed in Section 3.8, "Hazards and Hazardous Materials," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, hazard impacts under Alternative 2 would be similar to those that would occur under the project. (*Similar*)

HYDROLOGY AND WATER QUALITY

Alternative 2 would involve the same land disturbance from planned development that would occur under the LSAP Update and ISI project because there would be no change in the overall development footprint of the area. As addressed in Section 3.9, "Hydrology and Water Quality," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, hydrology and water quality impacts under Alternative 2 would be similar to those that would occur under the project. (*Similar*)

LAND USE AND PLANNING

Alternative 2 and the proposed LSAP Update and ISI project would both require changes to land use designations in the LSAP boundary expansion area/ISI site, rezoning of several parcels and various text amendments for changes in development standards associated with some of the existing LSAP zoning districts, and the addition of new land use goals and policies associated with the LSAP Update and changes in City policies and standards since the 2016 LSAP adoption. While these would be amendments to the LSAP, General Plan, and City zoning, the LSAP Update and ISI project, the project would be consistent with the City's goals for sustainable growth and concentration of new development within LUTE designated plan areas. As addressed in Section 3.10, "Land Use and Planning," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, land use impacts under Alternative 2 would be similar to those that would occur under the project. (*Similar*)

NOISE AND VIBRATION

Because Alternative 2 would not expand planned residential development potential in the LSAP area to the extent of the proposed LSAP Update, this alternative would have less potential to increase traffic noise. As identified in Section 3.11, "Noise and Vibration," and Chapter 4, "Cumulative Impacts," this increase in traffic noise by the proposed LSAP Update and ISI project would not be substantial and would not result in any new significant impacts or a substantial

increase in severity of a previously identified significant impact from the 2016 LSAP EIR. While Alternative 2 would reduce these traffic noise impacts further, it would not result in a perceptible change in noise conditions (i.e., a 3 dB change in noise levels is necessary for the human ear to perceive a change in noise) Thus, impacts under Alternative 2 would be similar to those that would occur under the project. (*Similar*)

POPULATION, EMPLOYMENT, AND HOUSING

Alternative 2 and the proposed LSAP Update would both expand residential development potential of the LSAP area. These additional units would serve an existing housing shortage in the region and would be developed over time in response to market demand. However, the proposed LSAP Update would provide 1,848 more housing units than Alternative 2 and would be more effective in addressing housing needs. In addition, the LSAP Update would result in greater benefits related to the jobs-housing balance in the LSAP area. Thus, impacts under Alternative 2 would be greater than those that would occur under the project. (*Greater*)

PUBLIC SERVICES AND RECREATION

Alternative 2 would involve the same land use activities from planned development that would occur under the LSAP Update and ISI project. As addressed in Section 3.13, "Public Services and Recreation," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, hazard impacts under Alternative 2 would be similar to those that would occur under the project. (*Similar*)

TRANSPORTATION

Because Alternative 2 would not expand planned residential development potential in the LSAP area to the extent of the proposed LSAP Update, this alternative would generate fewer vehicle trips and total VMT than the proposed LSAP Update. As identified in Section 3.14, "Transportation," the only new significant (but mitigable) impact identified was construction traffic impacts for the ISI project. This project-level impact also occurs under Alternative 2. Thus, impacts under Alternative 2 would be less than those that would occur under the project. (*Less*)

UTILITIES AND SERVICE SYSTEMS

Because Alternative 2 would not expand planned residential development potential in the LSAP area to the extent of the proposed LSAP Update, this alternative would generate lower utility demands (water supply, wastewater service, and solid waste service) than the proposed LSAP Update. As addressed in Section 3.15, "Utilities and Service Systems," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, impacts under Alternative 2 would be less than those that would occur under the project. (*Less*)

5.4.3 Alternative 3: Reduced Development Alternative B

Under Alternative 3, the proposed LSAP Update would be modified to provide a maximum development potential of 1,075 additional housing units within the LSAP, which would consist of expanding the boundaries of where housing is allowed by rezoning the existing M-S/LSAP and O-R zoned properties to allow residential uses with achievable densities of 54 du/ac with incentives. In this alternative, the LSAP development capacity would increase from 2,323 to 3,398 units. This alternative assumes an expansion of the LSAP area boundary to include the ISI project and construction of the project as proposed. All other aspects of the LSAP Update (amendments to LSAP and zoning, Lawrence Station Sense of Place Plan, and sewer impact fee for sewer conveyance impacts) would remain as proposed by the project. This alternative was presented to the City Council at the LSAP preferred land use alternative hearing on June 26, 2018, but was not considered as the preferred land use alternative because it would result in fewer housing units.

AESTHETICS

Under Alternative 3 the extent of residential development potential would be reduced as compared to the project but would result in a similar extent of development of the LSAP area. The LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Thus, impacts under Alternative 3 would be similar to those that would occur under the project. (*Similar*)

AIR QUALITY

Alternative 3 would result in less residential development potential in the LSAP area as the proposed LSAP Update and would result in reduced operation-related air emissions beyond what was evaluated in the 2016 LSAP EIR. Thus, impacts under Alternative 3 would be less than those that would occur under the project. (*Less*)

CULTURAL AND TRIBAL CULTURAL RESOURCES

Alternative 3 would involve land disturbance from planned development that could result in the disturbance, destruction, or alteration of any known or as-yet-undiscovered/unrecorded archaeological resources, tribal cultural resources, human remains, and paleontological resources to the same extent as the LSAP Update and ISI project because there would be no change in the overall development footprint of the area. As addressed in Section 3.3, "Cultural and Tribal Cultural Resources," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, cultural resource impacts under Alternative 3 would be similar to those that would occur under the project. (*Similar*)

BIOLOGICAL RESOURCES

This alternative would involve land disturbance from planned development that could result impacts to special status species, nesting bird and raptors similar to the proposed LSAP Update and ISI project because the extent of anticipated land disturbance from planned development would be the same (no change in the overall development footprint of the area). As addressed in Section 3.4, "Biological Resources," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, biological resource impacts under Alternative 3 would be similar to those that would occur under the project. (*Similar*)

ENERGY

Because Alternative 3 would not expand planned residential development potential in the LSAP area to the extent of the proposed LSAP Update, this alternative would have reduced energy demands. The LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR because it would comply with energy efficiency standards (e.g., Title 24 Building Energy Efficiency Standards and the City's Playbook). Thus, impacts under Alternative 3 would be less than those that would occur under the project. (*Less*)

GEOLOGY AND SOILS

This alternative would involve land disturbance from planned development that could result impacts to paleontological resources similar to the proposed LSAP Update and ISI project because the extent of anticipated land disturbance from planned development would be the same. As addressed in Section 3.6, "Geology and Soils," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, geologic resource impacts under Alternative 3 would be similar to those that would occur under the project. (*Similar*)

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Because Alternative 3 would not expand planned residential development potential in the LSAP area to the extent of the proposed LSAP Update, this alternative would less GHG emissions than the LSAP Update. Thus, impacts under Alternative 3 would be less than those that would occur under the project. (*Less*)

HAZARDS AND HAZARDOUS MATERIALS

Alternative 3 would involve the same land use activities (e.g., construction and operation of uses) from planned development that would occur under the LSAP Update and ISI project. As addressed in Section 3.8, "Hazards and Hazardous Materials," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, hazard impacts under Alternative 3 would be similar to those that would occur under the project. (*Similar*)

HYDROLOGY AND WATER QUALITY

Alternative 3 would involve the same land disturbance from planned development that would occur under the LSAP Update and ISI project because there would be no change in the overall development footprint of the area. As addressed in Section 3.9, "Hydrology and Water Quality," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, hydrology and water quality impacts under Alternative 3 would be similar to those that would occur under the project. (*Similar*)

LAND USE AND PLANNING

Alternative 3 and the proposed LSAP Update and ISI project would both require changes to land use designations in the LSAP boundary expansion area/ISI site, rezoning of several parcels and various text amendments for changes in development standards associated with some of the existing LSAP zoning districts, and the addition of new land use goals and policies associated with the LSAP Update and changes in City policies and standards since the 2016 LSAP adoption. While these would be amendments to the LSAP, General Plan, and City zoning, the LSAP Update and ISI project, the project would be consistent with the City's goals for sustainable growth and concentration of new development within LUTE designated plan areas. As addressed in Section 3.10, "Land Use and Planning," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, land use impacts under Alternative 3 would be similar to those that would occur under the project. (*Similar*)

NOISE AND VIBRATION

Because Alternative 3 would not expand planned residential development potential in the LSAP area to the extent of the proposed LSAP Update, this alternative would have less potential to increase traffic noise. As identified in Section 3.11, "Noise and Vibration," and Chapter 4, "Cumulative Impacts," this increase in traffic noise by the proposed LSAP Update and ISI project would not be substantial and would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. While Alternative 3 would reduce these traffic noise impacts further, it would not result in a perceptible change in noise conditions (i.e., a 3 dB change in noise levels is necessary for the human ear to perceive a change in noise) Thus, impacts under Alternative 3 would be similar to those that would occur under the project. (*Similar*)

POPULATION, EMPLOYMENT, AND HOUSING

Alternative 3 and the proposed LSAP Update would both expand residential development potential of the LSAP area. These additional units would serve an existing housing shortage in the region and would be developed over time in response to market demand. However, the proposed LSAP Update would provide 2,537 more housing units than Alternative 3 and would be more effective in addressing housing needs. In addition, the LSAP Update would result in greater benefits related to the jobs-housing balance in the LSAP area. Thus, impacts under Alternative 3 would be greater than those that would occur under the project. (*Greater*)

PUBLIC SERVICES AND RECREATION

Alternative 3 would involve the same land use activities from planned development that would occur under the LSAP Update and ISI project. As addressed in Section 3.13, "Public Services and Recreation," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, hazard impacts under Alternative 3 would be similar to those that would occur under the project. (*Similar*)

TRANSPORTATION

Because Alternative 3 would not expand planned residential development potential in the LSAP area to the extent of the proposed LSAP Update, this alternative would generate fewer vehicle trips and total VMT than the proposed LSAP Update. As identified in Section 3.14, "Transportation," the only new significant (but mitigable) impact identified was construction traffic impacts for the ISI project. This project-level impact also occur under Alternative 3. Thus, impacts under Alternative 3 would be less than those that would occur under the project. (*Less*)

UTILITIES AND SERVICE SYSTEMS

Because Alternative 3 would not expand planned residential development potential in the LSAP area to the extent of the proposed LSAP Update, this alternative would generate lower utility demands (water supply, wastewater service, and solid waste service) than the proposed LSAP Update. As addressed in Section 3.15, "Utilities and Service Systems," the LSAP Update and ISI project would not result in any new significant impacts or a substantial increase in severity of a previously identified significant impact from the 2016 LSAP EIR. Therefore, impacts under Alternative 3 would be less than those that would occur under the project. (*Less*)

5.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Both Alternative 2 and Alternative 3 would provide the greatest number of reduced impacts associated with air quality, energy, GHG, transportation, and utility services. Alternative 2 would be the environmentally superior alternative as it would reduce impacts and provide the greatest extent of additional residential development potential among the alternatives.

Table 5-1 Summary of Environmental Effects of the Alternatives Relative to the LSAP Update and ISI Project

Environmental Topic	Project Impacts As Compared to the 2016 LSAP EIR Impacts	Alternative 1: No Project Alternative	Alternative 2: Reduced Development Alternative A	Alternative 3: Reduced Development Alternative B
Aesthetics	No new impact (less than significant)	Similar	Similar	Similar
Air Quality	Significant and unavoidable (cumulative impacts only)	Less	Less	Less
Cultural and Tribal Cultural Resources	No new impact (less than significant)	Similar	Similar	Similar

Environmental Topic	Project Impacts As Compared to the 2016 LSAP EIR Impacts	Alternative 1: No Project Alternative	Alternative 2: Reduced Development Alternative A	Alternative 3: Reduced Development Alternative B
Biological Resources	No new impact (less than significant)	Similar	Similar	Similar
Energy	No new impact (less than significant)	Less	Less	Less
Geology and Soils	No new impact (less than significant)	Similar	Similar	Similar
Greenhouse Gas Emissions and Climate Change	No new impact (less than significant)	Less	Less	Less
Hazards and Hazardous Materials	No new impact (less than significant)	Similar	Similar	Similar
Hydrology and Water Quality	No new impact (less than significant)	Similar	Similar	Similar
Land Use and Planning	No new impact (less than significant)	Similar	Similar	Similar
Noise and Vibration	No new impact (less than significant)	Similar	Similar	Similar
Population, Employment, and Housing	No new impact (less than significant)	Greater	Greater	Greater
Public Services and Recreation	No new impact (less than significant)	Similar	Similar	Similar
Transportation	Less than significant (with mitigation)	Less	Less	Less
Utilities and Service Systems	No new impact (less than significant)	Greater	Less	Less

6 OTHER CEQA SECTIONS

6.1 GROWTH INDUCEMENT

Public Resources Code Section 21100(b)(5) specifies that the growth-inducing impacts of a project must be addressed in an environmental impact report (EIR). Section 15126.2(e) of the State CEQA Guidelines provides the following guidance for assessing growth-inducing impacts of a project:

> Discuss the ways in which the 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 (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can induce growth directly, indirectly, or both. Direct growth inducement would result if a project involved construction of new housing. Indirect growth inducement would result, for instance, if implementing a project resulted in any of the following:

- substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- substantial short-term employment opportunities (e.g., construction employment) that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; and/or
- removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

Growth inducement itself is not an environmental effect but may foreseeably lead to environmental effects. If substantial growth inducement occurs, it can result in secondary environmental effects, such as increased demand for housing, demand for other community and public services and infrastructure capacity, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or animal habitats, conversion of agricultural and open-space land to urban uses, and other effects.

The State CEQA Guidelines do not distinguish between planned and unplanned growth for purposes of considering whether a project would foster additional growth. Therefore, for purposes of this SEIR, to reach the conclusion that a project is growth inducing as defined by CEQA, the SEIR must find that it would foster (i.e., promote, encourage, allow) additional growth in economic activity, population, or housing, regardless of whether the growth is already approved by and consistent with local plans beyond what was evaluated in the 2016 LSAP EIR. The conclusion does not determine that induced growth is beneficial or detrimental, consistent with Section 15126.2(e) of the State CEQA Guidelines.

If the analysis conducted for the SEIR results in a determination that the project is growth-inducing beyond what was evaluated in the 2016 LSAP EIR, the next question is whether that growth may cause adverse effects on the environment. Environmental effects resulting from induced growth (i.e., growth-induced effects) fit the CEQA definition of "indirect" effects in Section 15358(a)(2) of the State CEQA Guidelines. These indirect or secondary effects of growth may result in significant environmental impacts. CEQA does not require that an EIR speculate unduly about the precise location and site-specific characteristics of significant, indirect effects caused by induced growth, but a good-faith effort is required to disclose what is feasible to assess. Potential secondary effects of growth could include consequences – such as conversion of open space to developed uses, increased demand on community and public services and infrastructure, increased traffic and noise, degradation of air and water quality, or degradation or loss of plant and wildlife habitat – that are the result of growth fostered by the project.

The decision to allow those projects that result from induced growth is the subject of separate discretionary processes by the lead agency(ies) responsible for considering such projects. Because the decision to allow growth is subject to separate discretionary decision making, and such decision making is itself subject to CEQA, the analysis of growth-inducing effects is not intended to determine site-specific environmental impacts and specific mitigation for the potentially induced growth. Rather, the discussion is intended to disclose the potential for environmental effects to occur more generally, such that decision makers are aware that additional environmental effects are a possibility if growth-inducing projects are approved. The decision of whether impacts do occur, their extent, and the ability to mitigate them is appropriately left to consideration by the agency responsible for approving such projects at such times as complete applications for development are submitted.

6.1.1 Growth Variables

The timing, magnitude, and location of land development and population growth in a community or region are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and nonresidential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Because the General Plan of a community defines the location, type, and intensity of growth, it is the primary means of regulating development and growth in California.

6.1.2 Growth-Inducing Impacts of the Project

DIRECT GROWTH-INDUCING IMPACTS ASSOCIATED WITH POPULATION GROWTH

Implementation of the LSAP Update/ISI project would foster short-term and long-term economic growth within the City as a result of new construction, increased residential units (LSAP Update), and construction and operation of office/R&D development and manufacturing uses that would serve up to 3,500 employees (ISI project). The proposed modifications to the adopted LSAP would result in an increase in housing potential within the LSAP. Development buildout under the proposed LSAP Update would result in expanding residential capacity under the adopted LSAP by an additional 3,612 units for a total allowable 5,935 units.

Construction of the ISI project would likely occur over a three-year timeframe. As described in Section 3.12, "Population, Employment, and Housing," a large number of local workers commute in from other areas within the county. Therefore, it would be reasonable to expect that construction workers for the project would not relocate to the City for a temporary job. The LSAP Update would provide housing that exceeds the projections in the City of Sunnyvale's current planning documents, including the adopted LSAP and General Plan. As described under Impact 3.12-1 of this Draft SEIR, these additional units would serve an existing housing shortage, would be developed over time in response to market demand, and would not induce unplanned population growth. This would be consistent with LSAP policies H-P1, H-P2, and H-P3 that identify the need to promote housing. The environmental impacts associated with these direct growth-inducing effects are described throughout this SEIR.

DIRECT GROWTH-INDUCING IMPACTS ASSOCIATED WITH REMOVAL OF BARRIERS TO POPULATION GROWTH

The City's LSAP is located in the east-central part of the City of Sunnyvale in Santa Clara County, adjacent to the City of Santa Clara. Lawrence Expressway bisects the plan area north to south, while the Caltrain right-of-way bisects the area east to west. The plan area north of the tracks is bounded by Kifer Road and the City of Santa Clara border to the north, Uranium Drive and the City of Santa Clara border to the east, and 960 Kifer Road to the west. This area is dominated by industrial and commercial uses on large parcels. Several development projects are under construction or have been recently completed in this area. East of Lawrence Expressway, newer development includes office and R&D uses. Implementation of the project would require amendments to the adopted LSAP policy provisions and

guidelines. In addition, the LSAP Update and ISI project would require changes to the land use designation in the LSAP boundary expansion area/ISI site, rezoning of many parcels and various text amendments for changes in development standards associated with some of the existing LSAP zoning districts, the removal of one and the addition of four new LSAP zoning districts, and the addition of a new land use goals and policies associated with the LSAP Update and changes in City policies and standards since the 2016 LSAP adoption. Consistent with the Housing Crisis Act of 2019 (Senate Bill 330), objective design standards would also be established within the plan.

The project would eliminate an obstacle to growth through the extension and provision of utilities and services within the LSAP area. Implementation of the LSAP Update would increase the allowable housing potential within the LSAP, resulting in additional new residents beyond the number anticipated in the 2016 LSAP EIR. The WSA prepared for the LSAP Update and ISI project calculated the increase in water demand associated with the LSAP Update and ISI project. The LSAP Update would increase water demand to 1,501 AFY, an increase of 688 AFY over the 813 AFY assumed in the 2016 LSAP EIR. As discussed under Impact 3.15-1 the City has adequate water supply to accommodate the increase in demand from the LSAP Update, and it was determined that the potential increased demand for water supply would be less than significant. Additionally, as discussed under Impact 3.15-4, implementation of the LSAP Update and ISI project would not result in a new significant effect related to wastewater conveyance and treatment and the impact on wastewater conveyance and treatment would be less than significant. An infrastructure impact study prepared for the LSAP Update evaluated the existing wastewater collection system and calculated whether upgrades would be required to serve the LSAP Update. The study concluded that while the Kifer Lift Station has enough capacity to serve the LSAP Update, three pipes did not meet the design criteria and would require upgrades (BKF 2020a:22). Based on existing flow and pipe data, implementation of the LSAP Update would require the following pipe updates: upsizing the existing 10-inch VCP sewer main in San Zeno Way to a 12-inch PVC sewer main; upsizing the existing 10-inch VCP sewer main at the intersection of Willow Avenue and Aster Avenue to an 18-inch PVC sewer main; and upsizing the existing 27-inch VCP sewer main in Lawrence Expressway to a 30-inch PVC sewer main (BKF 2020a:22). These improvements are intended to improve existing conveyance issues and not future development beyond the project. The project would directly connect to existing utility infrastructure (water, wastewater, natural gas, and electricity) and would not facilitate additional development through expansion of regional facilities (e.g., water treatment plants, wastewater treatment plants, electrical substations) beyond that which was planned for within the Land Use and Transportation Element Update for City buildout.

OTHER EMPLOYMENT GROWTH AND OTHER ECONOMIC-RELATED GROWTH IMPACTS

Vacancy rates are an indicator of housing supply and demand. Low vacancy rates influence greater upward price pressures and higher vacancy rates indicate downward price pressures. A 5- to 6-percent vacancy rate is generally considered healthy. Approximately 4.9 percent of City of Sunnyvale housing units were vacant as of January 1, 2021, estimates (California Department of Finance 2021). Thus, the City is currently considered to have a high demand for housing. As discussed under Impact 3.12-1, Induce Substantial Unplanned Population Growth, the 2016 LSAP EIR determined buildout of residential units under the LSAP would increase the population in the plan area within the general range of planning assumptions of the City's General Plan and that additional office/R&D/industrial uses proposed under the LSAP would further increase employment opportunities in the plan area. The 2016 LSAP EIR concluded that physical environmental effects of plan area growth were addressed in the DEIR and the LSAP would not substantially or indirectly induce population growth beyond current General Plan growth assumptions, resulting in a less-than-significant impact The LSAP Update would provide additional housing opportunities within the LSAP. These additional units would serve an existing housing shortage in the region, and would be developed over time in response to market demand. The ISI project would not exceed the amount of total office/R&D development allowable under the adopted LSAP. Therefore, the ISI project would not be anticipated to generate employment opportunities that exceed the planned capacity of the LSAP or induce substantial unplanned population growth. The Land Use and Transportation Element was updated in 2017 to include the population and employment projections in the adopted LSAP. The LSAP Update would provide housing that exceeds the projections in the City of Sunnyvale's current planning documents, including the General Plan. Similar to the adopted LSAP, these additional units would serve an existing housing shortage, would be

developed over time in response to market demand, and would not induce unplanned population growth. The environmental impacts of this growth have been addressed by the City in this SEIR.

6.2 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

The State CEQA Guidelines (Section 15126) require a discussion of the significant irreversible environmental changes which would be involved in a project should it be implemented. The irreversible and irretrievable commitment of resources is the permanent loss of resources for future or alternative purposes. Irreversible and irretrievable resources are those that cannot be recovered or recycled or those that are consumed or reduced to unrecoverable forms.

The project would result in the irreversible and irretrievable commitment of energy and material resources during construction and operation, including the following:

- construction materials, including such resources as soil, rocks, wood, concrete, glass, roof shingles, and steel;
- land area committed to new project facilities;
- water supply for project operation; and
- energy expended in the form of electricity, gasoline, diesel fuel, and oil for equipment and transportation vehicles that would be needed for project construction and operation.

The use of these nonrenewable resources is expected to account for a minimal portion of the region's resources and would not affect the availability of these resources for other needs within the region. Construction activities would not result in inefficient use of energy or natural resources (see Section 3.5, "Energy," for a further discussion of the project's energy use). Long-term project operation would not result in substantial long-term consumption of energy and natural resources. The ISI project would implement energy efficiency measures to meet U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Gold certification for building design and construction and the 2019 Building Energy Efficiency Standards the with the implementation of onsite solar PV, electric vehicle charging, light-emitting diode lighting, EnergyStar®–certified appliances, and no natural gas use. For these reasons, the ISI project would not result in wasteful, inefficient, or unnecessary consumption of energy.

The State CEQA Guidelines Section 15126.2(b) requires EIRs to include a discussion of the significant environmental effects that cannot be avoided if the proposed project is implemented. As documented throughout Chapter 3, "Environmental Setting, Impacts, and Mitigation Measures," and Chapter 4, "Cumulative Impacts," of this Draft SEIR, after implementation of the recommended mitigation measures, all but three impacts associated with the proposed LSAP Update/ISI project would be reduced to a less-than-significant level:

- Impact 3.2-1: Cause Construction-Generated Criteria Air Pollutant or Precursor Emissions to Exceed BAAQMD-Recommended Thresholds
- Impact 4-3: Cumulative Air Quality Impacts (criteria pollutant emissions during construction)
- Impact 4-22: Contribute to Cumulative Impacts on Wastewater Services

The following significant and unavoidable impacts of the LSAP were identified in the 2016 LSAP EIR, and a statement of overriding considerations was adopted by the City as part of the 2016 LSAP adoption:

- Impact 3.4.6: Implementation of the land uses under the LSAP would contribute to significant traffic operational impacts at intersections and freeway segments as compared to existing conditions
- Impact 3.5.3: The LSAP could result in short-term construction emissions that could violate or substantially contribute to a violation of federal and state standards.

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