Draft Environmental Impact Report

Gateway Crossings Project

SCH #2017022066

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April 2018

TABLE OF CONTENTS

Acronyms and Abbreviations v

Summary ix

Section 1.0 Introduction 1

1.1 Purpose of the Environmental Impact Report 1

1.2 EIR Process 1

1.3 Final EIR/Responses to Comments 2

Section 2.0 Project Information and Description 3

2.1 Project Location 3

2.2 Project Description 8

2.3 Project Objectives 14

2.4 Uses of the EIR 15

Section 3.0 Environmental Setting, Impacts, and Mitigation 16

3.1 Aesthetics 23

3.2 Agricultural and Forestry Resources 35

3.3 Air Quality 37

3.4 Biological Resources 56

3.5 Cultural Resources 63

3.6 Energy 70

3.7 Geology and Soils 79

3.8 Greenhouse Gas Emissions 85

3.9 Hazards and Hazardous Materials 95

3.10 Hydrology and Water Quality 101

3.11 Land Use and Planning 109

3.12 Mineral Resources 118

3.13 Noise and Vibration 119

3.14 Population and Housing 142

3.15 Public Services 145

3.16 Recreation 152

3.17 Transportation/Traffic 155

3.18 Utilities and Service Systems 208

Section 4.0 Growth-Inducing Impacts 216

Section 5.0 Significant and Irreversible Environmental Changes 217

5.1 Use of Nonrenewable Resources 217

5.2 Commitment of Future Generations to Similar Use 217
5.3 Irreversible Damage Resulting from Environmental Accidents Associated with the Project 218
Section 6.0 Significant Unavoidable Impacts 219
Section 7.0 Alternatives 220
7.1 Significant Impacts of the project 220
7.2 Objectives of the Project 221
7.3 Feasibility of Alternatives 222
7.4 Selection of Alternatives 222
7.5 Project Alternatives 222
Section 8.0 References 230
Section 9.0 Lead Agency and Consultants 234
9.1 Lead Agency 234
9.2 Consultants 234

Figures

Figure 2.1-1: Regional Map 4
Figure 2.1-2: Vicinity Map 5
Figure 2.1-3: Aerial Photograph with Surrounding Land Uses 6
Figure 2.1-4: Existing Land Use Designation 7
Figure 2.2-1: Conceptual Plan 9
Figure 2.2-2: Conceptual Cross-Sections 10
Figure 3.1-1: BART Extension Project – Santa Clara Station Conceptual Site Plan 30
Figure 3.1-2: Conceptual Renderings 32
Figure 3.11-1: Shade and Shadow Diagram of the Proposed Project 114
Figure 3.13-1: Noise Measurements Locations 125
Figure 3.13-2: Future Exterior Noise Exposure 129
Figure 3.17-1: Existing Roadway Network and Study Intersections 161
Figure 3.17-2: Existing Bicycle Facilities 163
Figure 3.17-3: Existing Transit Facilities 165

Photos

Photo 1: View of the project site from Brokaw Road looking east 26
Photo 2: View of the project site from Coleman Avenue looking west 26
Photo 3: View of retail development at the northwestern quadrant of Coleman Avenue and Brokaw Road 27
Photo 4: View of office/light industrial development on the north side of Brokaw Road from the project site 27
Photo 5: View of a restaurant building on Coleman Avenue looking north 28
Photo 6: View of the commercial/light industrial buildings at the northeast quadrant of Coleman Avenue and Brokaw Road 28

Tables

Table 3.0-1: Cumulative Projects List 18
Table 3.3-1: Ambient Air Quality Standards 38
Table 3.3-2: BAAQMD Air Quality Significance Thresholds 43
Table 3.3-3: Summary of Daily Project Construction Emissions 44
Table 3.3-4: Summary of Option 2 Operational Air Emissions 46
Table 3.3-5: Maximum Health Risk to Proposed On-Site Sensitive Receptors 51
Table 3.3-6: Cumulative Maximum Health Risk to Proposed On-Site Sensitive Receptors 54
Table 3.4-1: Summary of Existing On-Site Trees 58
Table 3.7-1: Approximate Distances to Nearby Faults 81
Table 3.8-1: Summary of Estimated Annual GHG Emissions and GHG Emissions Per Service Population 91
Table 3.8-2: Summary of Applicable Climate Action Plan Measures and Project Consistency 93
Table 3.10-1: Summary of the Approximate Pervious/Impervious Surfaces On Site 107
Table 3.13-1: Groundborne Vibration Impact Criteria 121
Table 3.13-2: Vibration Source Levels for Construction Equipment 133
Table 3.13-3: Estimated Construction Noise Levels at the Nearby Receptors 135
Table 3.17-1: Signalized Intersection Level of Service Definitions 156
Table 3.17-2: Freeway Level of Service Based on Density 157
Table 3.17-3: Existing and Background Intersection Levels of Service 169
Table 3.17-4: Existing Freeway Levels of Service 171
Table 3.17-5: Project Trip Generation Estimates 179
Table 3.17-6: Existing and Existing + Project Intersection Levels of Service 182
Table 3.17-7: Freeway Segment Levels of Service 185

Table 3.17-8: Background and Background + Project Intersection Levels of Service 191
Table 3.17-9: Background, Cumulative, and Cumulative + Project Intersection Levels of Service 201
Table 3.17-10: Summary of Cumulatively Significantly Impacted Intersections 204
Table 4.0-1: Allowed and Proposed Development 216
Table 7.5-1: Summary of Project and No Project/Development Alternative Estimated Air Pollutant and GHG Emissions, Daily Trips, Energy Demand, and Utility Demands 225
Table 7.5-2: Summary of Project and Project Alternative Impacts 228

Appendices

Appendix A: NOP and Comments Received
Appendix B: Air Quality Assessment, Air Quality Memos, GHG Memo
Appendix C: Arborist Report
Appendix D: Geotechnical Investigation
Appendix E: Site Management Plan
Appendix F: Noise and Vibration Assessment
Appendix G: Traffic Impact Analysis
Appendix H: Water Supply Assessment

ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACE	Altamount Commuter Express
AIA	Airport Influence Area
ALUC	Airport Land Use Commission
ATI	Approved Trip Inventory
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BMP	Best Management Practices
Btu	British thermal unit
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CARB	California Air Resources Board
CBC	California Building Code
CBSC	California Building Standards Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CLUP	Comprehensive Land Use Plan
CMP	Congestion Management Program
CNEL	Community Noise Equivalent Level
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
CRHR	California Register of Historical Resources
dB	Decibel
dBA	A-weight decibel
DCE	Dichloroethene
DNL	Day-Night Level

Acronym/Abbreviation	Definition
DPM	Diesel Particulate Matter
du/ac	dwelling units per acre
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESL	Environmental Screening Levels
EV	Electric Vehicle
FAA	Federal Aviation Administration
FAR	Floor area ratio
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
FMC	Food Machinery and Chemical Corporation
FTA	Federal Transit Administration
GHG	Greenhouse gas
GPA	General Plan Amendment
GWETS	Groundwater Extraction and Treatment System
GWh	Gigawatt-hours
HCM	Highway Capacity Manual
HOV	High-Occupancy Vehicle
HVOC	halogenated volatile organic compounds
ITE	Institute of Transportation Engineers
kW	kilowatt
kWh	kilowatt hour
L_{eq}	Noise Equivalent Level
LID	Low Impact Development
L_{max}	maximum A-weighted noise level
LOS	Level of Service
LUC	Land Use Covenant
MCL	Maximum Contaminant Levels
ML	Light Industrial
MND	Mitigated Negative Declaration
mph	miles per hour
MRP	Municipal Regional Permit

Acronym/Abbreviation	Definition
MT	metric tons
MTC	Metropolitan Transportation Commission
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NFIP	National Flood Insurance Program
NOD	Notice of Determination
NOI	Notice of Intent
NOP	Notice of Preparation
NO_x	nitrogen oxides
NO_2	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	Ozone
OCP	Organochlorine pesticides
OITC	Outdoor-Indoor Transmission Class
Pb	Lead
PCB	polychlorinated biphenyles
PDA	Priority Development Areas
PM_{10}	particulate matter
$PM_{2.5}$	fine particulate matter
PPV	Peak Particle Velocity
R&D	Research and Development
RMS	Root Mean Square
ROG	reactive organic gases
RPS	Renewables Portfolio Standard
RRP	Risk Reduction Plan
RWF	San José-Santa Clara Regional Wastewater Facility
RWQCB	Regional Water Quality Control Board
SBWR	South Bay Water Recycling
SCFD	Santa Clara Fire Department
SCPD	Santa Clara Fire Department
SCS	Sustainable Communities Strategy

Acronym/Abbreviation	Definition
SCUSD	Santa Clara Unified School District
SCVWD	Santa Clara Valley Water District
SFHA	Special Flood Hazard Areas
SHMA	Seismic Hazards Mapping Act
SHPO	State Office of Historic Preservation
SMP	Site Management Plan
SR	State Route
STC	Sound Transmission Class
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
TCE	Trichloroethylene
TPH	Total Petroleum Hydrocarbons
UPRR	Union Pacific Railroad
US	United States
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VC	vinyl chloride
VdB	vibration decibels
VOC	Volatile Organic Compounds
vph	vehicles per hour
VTA	Valley Transportation Authority

SUMMARY

The Gateway Crossings project site is located at the southwest corner of Coleman Avenue and Brokaw Road in the City of Santa Clara. The project requires a General Plan Amendment (GPA) to change to the land use designation on the site to allow residential development at 51 to 100 dwelling units per acre (du/ac) in conjunction with a minimum commercial Floor Area Ratio (FAR) of 0.20; an amendment to the General Plan Land Use Map for the Santa Clara Station Focus Area to reflect the General Plan change; an amendment to the City's Climate Action Plan; a rezoning of the project site; and a Zoning Code text amendment to add a new zoning designation to facilitate the development of the land uses and building types contemplated for the project site. The project also includes a Vesting Tentative Parcel Map and Development Agreement. The project would develop one of two options at the project site:

- **Option 1:** Up to 1,400 residential dwelling units and up to 215,000 square feet of commercial uses, or
- **Option 2:** Up to 1,600 residential dwelling units and up to 215,000 square feet of commercial uses.

Option 2 is the preferred project alternative.

Summary of Significant Impacts and Mitigation Measures

The following table is a brief summary of the significant environmental impacts of the project identified and discussed within the text of the EIR, and the mitigation measures proposed to avoid or reduce those impacts. The reader is referred to the main body text of the EIR for detailed discussions of the existing setting, impacts, and mitigation measures. Alternatives to the proposed project are also summarized at the end of this section.

The project would result in the following significant unavoidable impacts:

- Greenhouse gas emissions (Option 1 only)
- Noise (exterior noise, including aircraft noise)
- Transportation (intersection and freeway levels of service)

The project would also result in the following significant unavoidable cumulative impacts:

- Greenhouse gas emissions (Option 1 only)
- Transportation (intersection levels of service)
- Utilities (landfill capacity)

Impact	Mitigation Measures
	Air Quality
Impact AIR-1: The project (under either option) would result in significant construction air pollutant emissions without the implementation of BAAQMD's standard construction BMPs.	**MM AIR-1.1:** During any construction period ground disturbance, the applicant shall ensure that the project contractor implements the following BAAQMD BMPs: • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • 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. • All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph). • 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. • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • Post a publicly visible sign with the telephone number and person to contact at the construction firm regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations. **Less than Significant Impact with Mitigation Incorporated**

Impact	Mitigation Measures
	MM AIR-1.2: The project shall develop a plan demonstrating that the off-road equipment used on-site to construct the project would achieve a fleet-wide average 92 percent reduction in PM_{10} exhaust emissions or more. The plan shall include, but is not limited to, one or more of the following: • All mobile diesel-powered off-road equipment larger than 25 horsepower and operating on the site for more than two days continuously shall meet, at a minimum, USEPA particulate matter emissions standards for Tier 4 engines or equivalent and include the use of equipment that includes CARB-certified Level 3 Diesel Particulate Filters. • Use of alternatively-fueled equipment (i.e., non-diesel), such as electric, biodiesel, or liquefied petroleum gas for example, would meet this requirement. • Other measures may be the use of added exhaust devices, or a combination of measures, provided that these measures are approved by the City and demonstrated to reduce community risk impacts to less than significant. **Less than Significant Impact with Mitigation Incorporated**
Impact AIR-2: The operation of the project (Option 2 only) would result in significant operational ROG emissions.	Option 2 shall implement the following measures: **MM AIR-2.1:** The project shall develop and implement a Transportation Demand Management (TDM) plan that would reduce vehicle trips by 20 percent, half of which (a 10 percent reduction) shall be achieved with TDM measures. **MM AIR-2.2:** The project shall use low volatile organic compound or VOC (i.e., ROG) coating, that are below current BAAQMD requirements (i.e., Regulation 8, Rule 3: Architectural Coatings), for at least 50 percent of all residential and nonresidential interior and exterior paints. This includes all architectural coatings applied during both construction and reapplications throughout the project's operational lifetime. At least 50 percent of coatings applied must meet a "super-compliant" VOC standard of less than 10 grams of VOC per liter of paint. For reapplication of coatings during the project's operational lifetime, the Declaration of Covenants, Conditions, and Restrictions shall contain a stipulation for low VOC coatings to be used.

Impact	Mitigation Measures
	Less than Significant Impact with Mitigation Incorporated
	Biological Resources
Impact BIO-1: Project construction (under either option) could impact nesting birds on or adjacent to the site, if present.	**MM BIO-1.1**: Construction shall be scheduled to avoid the nesting season to the extent feasible. The nesting season for most birds, including most raptors, in the San Francisco Bay Area extends from February 1 through August 31. If it is not possible to schedule construction and tree removal between September and January, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure that no nests shall be disturbed during project implementation. This survey shall be completed no more than 14 days prior to the initiation of grading, tree removal, or other demolition or construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). During this survey, the ornithologist shall inspect all trees and other possible nesting habitats within and immediately adjacent to the construction area for nests. If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist, in consultation with CDFW, shall determine the extent of a construction-free buffer zone to be established around the nest to ensure that nests of bird species protected by the MBTA or Fish and Game code shall not be disturbed during project construction. A final report of nesting birds, including any protection measures, shall be submitted to the Director of Community Development prior to the start of grading or tree removal.
	Less than Significant Impact with Mitigation Incorporated
	Cultural Resources
Impact CUL-1: Unknown buried archaeological resources could be impacted during project construction (under either option).	**MM CUL-1.1:** Archaeological monitoring by a qualified prehistoric archaeologist shall be completed during soil remediation and presence/absence exploration with a backhoe shall be completed where safe, undisturbed, and possible prior to construction activities. If any potentially CRHR eligible resources are identified, they should be briefly documented, photographed, mapped, and tarped before the

Impact	Mitigation Measures
	area is backfilled. If resources are identified, a research design and treatment plan shall be completed and implemented by the archaeologist and shall include hand excavating the feature(s) or deposits prior to building construction. **MM CUL-1.2:** As part of the safety meeting on the first day of construction/ground disturbing activities, the Archaeological Monitor shall brief construction workers on the role and responsibility of the Archaeological Monitor and procedures to follow in the event cultural resources are discovered. The prime construction contractor and any other subcontractors shall be informed of the legal and/or regulatory implications of knowingly destroying cultural resources or removing artifacts, human remains, and other cultural materials from the study area. The archaeological monitor has the authority to stop or redirect construction/remediation work to other locations to explore for potential features. **MM CUL-1.3:** In the event that human remains are discovered during excavation and/or grading of the site, all activity within a 50-foot radius of the find shall be stopped. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) immediately. Once NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines. **Less than Significant Impact with Mitigation Incorporated**
Greenhouse Gas Emissions	
Impact GHG-1: The proposed project (Option 1 only) would generate significant GHG emissions.	The project (both options) reduces GHG emissions in various ways, including: • Developing an infill site; • Proposing a mix of uses; • Proposing high-density residential uses near existing transit;

Impact	Mitigation Measures
	• Implementing a TDM program to promote automobile-alternative modes of transportation (see MM AIR-2.1); • Constructing bike lanes on Coleman Avenue and Brokaw Road; • Improving an existing bus stop; • Constructing in conformance with the Title 24 and CALGreen to promote energy and water efficiency; • Installing both EV fixtures and wiring for additional EV stalls in all of the parking garages; • Including recycling services onsite to reduce solid waste disposal; • Planting trees to reduce the heat island effect; • Connecting to recycled water for landscape irrigation; • Providing for use of lawn and garden equipment powered by electricity; and • Incorporating permeable paving. Even with the implementation of the above features to reduce GHG emissions, Option 1 would exceed the 2.6 MT of CO_2e per year per service population threshold needed to achieve the state's 2030 target. Option 1's GHG emissions, therefore, are considered significant unavoidable. **Significant Unavoidable Impact**
Impact GHG-2: The proposed project (Option 2 only) would generate significant GHG emissions.	The project (both options) reduces GHG emissions in various ways, including: • Developing an infill site; • Proposing a mix of uses; • Proposing high-density residential uses near existing transit; • Implementing a TDM program to promote automobile-alternative modes of transportation (see MM AIR-2.1); • Constructing bike lanes on Coleman Avenue and Brokaw Road; • Improving an existing bus stop; • Constructing in conformance with the Title 24 and CALGreen to promote energy and water efficiency; • Installing both EV fixtures and wiring for additional EV stalls in all of the parking garages; • Including recycling services onsite to reduce solid waste disposal; • Planting trees to reduce the heat island effect;

Impact	Mitigation Measures
	• Connecting to recycled water for landscape irrigation; • Providing for use of lawn and garden equipment powered by electricity; and • Incorporating permeable paving. After implementation of the above measures, Option 2 would result in GHG emissions below the 2.6 MT of CO2e per year per service population threshold needed to achieve the state's 2030 target. **Less than Significant Impact with Mitigation Incorporated**
Impact C-GHG-1: The proposed project (Option 1 only) would generate significant cumulative GHG emissions.	While Option 1 includes features that reduce GHG emissions, Option 1's emissions are above the 2.6 MT of CO_2e per year per service population threshold needed to achieve the state's 2030 target. Option 1's GHG emissions, therefore, are considered significant unavoidable. **Significant Unavoidable Cumulative Impact**
Hazards and Hazardous Materials	
Impact HAZ-1: Construction workers, future occupants, and the surrounding environment could be exposed to contaminated soils and subject to soil vapor intrusion.	**MM HAZ-1.1:** The project shall develop and implement a Site Management Plan (SMP) that outlines the measures required to mitigate potential risks (including soil vapor intrusion) to construction workers, future occupants, and the environment from potential exposure to hazardous substances that may be encountered during soil intrusive or construction activities on-site. As part of the SMP, a worker health and safety plan shall be prepared that identifies procedures to address potential hazards to construction workers and off-site receptors that may result from construction activities. The SMP shall also identify all wells on-site and identify measures to protect and/or abandon existing remediation systems, groundwater monitoring wells, and soil vapor monitoring wells. All wells to be abandoned shall be permitted through the SCVWD. The SMP shall be submitted to the City and the RWQCB for approval prior to commencement of construction activities. A draft of the SMP is included in Appendix E of this EIR.

Impact	Mitigation Measures
	Less than Significant Impact with Mitigation Incorporated
	Noise and Vibration
Impact NOI-1: Future residents would be exposed to exterior noises from aircraft above the City's exterior land use compatibility goal of 55 dBA CNEL.	**MM NOI-1.1:** Potential residents and buyers shall be provided with a real estate disclosure statement and buyer deed notices which would offer comprehensive information about the noise environment of the project site. There are no feasible measures to reduce aircraft noise levels at the proposed at-grade park amenity areas and common outdoor amenity areas in the residential buildings. For this reason, this impact is significant unavoidable.
	Significant Unavoidable Impact
Impact NOI-2: Existing land uses in the project vicinity would be exposed to an increase in ambient noise levels due to project construction activities (under either option).	In addition to adhering to the City Code for construction hours, the project proposes to implement the following standard construction noise control measures to reduce construction noise levels at nearby land uses: **MM NOI-2-1:** Develop a construction noise control plan, including, but not limited to, the following available controls: • Construct temporary noise barriers, where feasible, to screen stationary noise-generating equipment. Temporary noise barrier fences would provide a five dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and receiver and if the barrier is constructed in a manner that eliminates any cracks or gaps. • Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment. • Unnecessary idling of internal combustion engines shall be strictly prohibited (i.e., no more than two minutes in duration) • Locate stationary noise-generating equipment, such as air compressors or portable power generators, as far as possible from sensitive receptors as feasible. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used to reduce noise levels at the adjacent sensitive receptors.

Impact	Mitigation Measures
	Any enclosure openings or venting shall face away from sensitive receptors. • Utilize "quiet" air compressors and other stationary noise sources where technology exists. • Construction staging areas shall be established at locations that would create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction. • Locate material stockpiles, as well as maintenance/equipment staging and parking areas, as far as feasible from commercial (and proposed residential) receptors. • Control noise from construction workers' radios to a point where they are not audible at land uses bordering the project site. • The contractor shall prepare a detailed construction schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent land uses so that construction activities can be scheduled to minimize noise disturbance. • Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., bad muffler, etc.) and require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.
	Less than Significant Impact with Mitigation Incorporated
Impact NOI-3: On-site mechanical equipment (including the backup generator) would exceed on and off-site noise limits identified in the City Code.	**MM NOI-3.1:** Mechanical equipment shall be selected and designed to meet the City's noise level requirements. A qualified acoustical consultant shall be retained to review mechanical noise as these systems are selected to determine specific noise reduction measures necessary to reduce noise to comply with the City's noise level requirements. Noise reduction measures could include, but are not limited to, selection of equipment that emits low noise levels, installation of mufflers or sound attenuators, and/or installation of noise barriers such as enclosures and parapet walls to block the line-of-sight between the noise source and

Impact	Mitigation Measures
	the nearest receptors. Alternate measures may include locating equipment in less noise-sensitive areas, where feasible. **Less than Significant Impact with Mitigation Incorporated**
	Transportation/Traffic
Impact TRAN-1: The project (under either option) would have a significant impact under existing plus project conditions at the following two intersections: 1. Coleman Avenue/Brokaw Road (City of Santa Clara) and 6. De La Cruz Boulevard/Central Expressway (City of Santa Clara/CMP).	**MM TRAN-1.1:** 1. Coleman Avenue/Brokaw Road (City of Santa Clara) – This intersection is under the jurisdiction of the City of Santa Clara. The improvement includes changing the signal for Brokaw Road (the east and west legs of this intersection) from protected left-turn phasing to split phase, adding a shared through/left turn lane to the east and west approaches within the existing right-of-way, changing the existing shared through/right-turn lanes to right-turn only lanes on the east and west approaches, changing the eastbound right-turn coding from "include" to "overlap" indicating that eastbound right turns would be able to turn right on red, prohibiting U-turns on northbound Coleman Avenue, and adding a third southbound through lane on Coleman Avenue by removing the pork chop island, squaring off the corner, and restriping to provide exclusive southbound through and right turn lanes. **Less than Significant Impact with Mitigation Incorporated** **MM TRAN-1.2:** 6. De La Cruz Boulevard/Central Expressway (City of Santa Clara/CMP) – This intersection is located in the City of Santa Clara and under the jurisdiction of Santa Clara County. The Comprehensive County Expressway Planning Study identifies the conversion of the single HOV lane in each direction to mixed-flow lanes on Central Expressway as a Tier 1A project. The approved City Place development also identifies adding a second southbound right-turn lane and a third northbound left-turn lane as a mitigation measure. The project shall make a fair-share contribution towards the HOV lane conversion and additional turn lanes identified as mitigation for the City Place project. The project shall implement MM TRAN-1.2, however, the impact is concluded to be significant unavoidable because the improvement at this intersection is not under the jurisdiction of the City of Santa Clara and the City cannot guarantee the

Impact	Mitigation Measures
	implementation of the improvement concurrent with the proposed project. **Significant Unavoidable with Mitigation Incorporated**
Impact TRAN-2: The project (under either option) would result in a significant impact to mixed-flow lanes on 21 directional freeway segments during at least one peak hour.	**MM TRAN-2.1:** The project shall pay a fair-share contribution towards the VTA's Valley Transportation Plan (VTP) 2040 express lane program along US 101. The project, with the implementation of MM TRAN-2.1, would reduce the project's result in a significant impacts to freeway segments; however, the impact is concluded to be significant unavoidable because the mitigation is not under the jurisdiction of the City of Santa Clara and the City cannot guarantee the implementation of the improvement concurrent with the proposed project. **Significant Unavoidable Impact with Mitigation Incorporated**
Impact TRAN-3: The project (under either option) would have a significant impact under background plus project conditions at the following five intersections: 1. Coleman Avenue/Brokaw Road (City of Santa Clara); 6. De La Cruz Boulevard/Central Expressway (City of Santa Clara/CMP); 7. Lafayette Street/Central Expressway (City of Santa Clara/CMP); 13. Coleman Avenue/I-880 (S) (City of San José/CMP); and 15. Coleman Avenue/Taylor Street (City of San José)	The project proposes to implement MM TRAN-1.1 and -1.2 and the following mitigation measures to reduce the project's significant level of service impacts: **MM TRAN-3.1:** 7. Lafayette Street/Central Expressway (City of Santa Clara/CMP) – This intersection is located in the City of Santa Clara and under the jurisdiction of Santa Clara County. The Comprehensive County Expressway Planning Study identifies the conversion of the single HOV lane in each direction to mixed-flow lanes on Central Expressway as a Tier 1A project. The project shall make a fair-share contribution towards this improvement. **MM TRAN-3.2:** 13. Coleman Avenue/I-880 (S) (City of San José/CMP) – This intersection is located in the City of San José and under the jurisdiction of the City of San José. This improvement includes restriping one of the left-turn lanes to a shared left- or right-turn lane, effectively creating three right-turn lanes. Three receiving lanes currently exist on the north leg of Coleman Avenue. **MM TRAN-3.3:** 15. Coleman Avenue/Taylor Street (City of San José) – This intersection is located in and under the jurisdiction of the City of San José. The widening of Coleman Avenue has been identified as a Downtown

Impact	Mitigation Measures
	Strategy 2000 improvement by the City of San José and is an approved project that will be implemented in the near-term. The project shall make a fair-share contribution towards this improvement. The project, with the implementation of MM TRAN-1.1, would result in a less than significant impact at Coleman Avenue/Brokaw Road under background plus project conditions. **Less than Significant Impact with Mitigation Incorporated** The project, with the implementation of MM TRAN-1.2 and -3.1 through -3.3, would reduce its impact at the intersections of 6. De La Cruz Boulevard/Central Expressway (City of Santa Clara/CMP); 7. Lafayette Street/Central Expressway (City of Santa Clara/CMP); 13. Coleman Avenue/I-880 (S) (City of San José/CMP); and 15. Coleman Avenue/Taylor Street (City of San José) under background plus project conditions. However, the project's impacts are concluded to be significant unavoidable because the improvements at these intersections are not under the jurisdiction of the City of Santa Clara and the City cannot guarantee the implementation of the improvement concurrent with the proposed project. **Significant Unavoidable with Mitigation Incorporated**
Impact C-TRAN-1: The project would have a cumulatively considerable contribution to significant cumulative impacts at the following intersections: 1. Coleman Avenue/Brokaw Road (City of Santa Clara); 6. De La Cruz Boulevard/Central Expressway (City of Santa Clara/CMP); 7. Lafayette Street/Central Expressway (City of Santa Clara/CMP); 8. Scott Boulevard/Central Expressway (City of Santa Clara/CMP); 12. Coleman Avenue/I-880 (N) (City of San José/CMP); 13. Coleman Avenue/I-880 (S) (City of San José/CMP); and	The project proposes to implement MM TRAN-1.1, -1.2, and -3.1 through -3.3 and the following two mitigation measures: **MM C-TRAN-1.1:** 8. Scott Boulevard/Central Expressway – This intersection is located in the City of Santa Clara and under the jurisdiction of the County of Santa Clara. The Comprehensive County Expressway Planning Study identifies the conversion of HOV to mixed-flow lanes on Central Expressway as a Tier 1A project. The project shall make a fair-share contribution to this improvement. With implementation of this improvement, the intersection of Scott Boulevard/Central Expressway would operate at an unacceptable LOS F

Impact	Mitigation Measures
15. Coleman Avenue/Taylor Street (City of San José).	during the PM peak hour, but the average delay would be better than under cumulative conditions. **MM C-TRAN-1.2:** 12. Coleman Avenue/I-880 (N) – This intersection is located in the City of San José and under the jurisdiction of the City of San José. This improvement would include restriping one of the left-turn lanes to a shared left- or right-turn lane, effectively creating three right-turn lanes. Three receiving lanes currently exist on the north leg of Coleman Avenue. With implementation of this improvement, the intersection would operate at an acceptable LOS C during the AM peak hour. The project, with the implementation of MM TRAN-1.1, would reduce its cumulative contribution to the significant cumulative impact at Coleman Avenue/Brokaw Road to a less than significant level. **Less than Significant Cumulative Impact with Mitigation Incorporated** The project, with the implementation of MM TRAN-1.2, -3.1 through -3.3, C-TRAN-1.1, and C-TRAN-1.2, would reduce its cumulative contribution to the significant cumulative impacts at the intersections of 6. De La Cruz Boulevard/Central Expressway (City of Santa Clara/CMP); 7. Lafayette Street/Central Expressway (City of Santa Clara/CMP); 8. Scott Boulevard/Central Expressway (City of Santa Clara/CMP); 12. Coleman Avenue/I-880 (N) (City of San José/CMP); 13. Coleman Avenue/I-880 (S) (City of San José/CMP); and 15. Coleman Avenue/Taylor Street (City of San José). However, the impacts are concluded to be significant unavoidable because the improvements at these intersections are not under the jurisdiction of the City of Santa Clara and the City cannot guarantee the implementation of the improvement concurrent with the proposed project. **Significant Unavoidable Cumulative Impact with Mitigation Incorporated**
Utilities and Service Systems	

Impact	Mitigation Measures
Impact C-UTIL-1: Without a specific plan for disposing of solid waste beyond 2024, solid waste generated by development in the City post 2024 (including waste from the proposed project) would result in a significant unavoidable cumulative impact.	The City does not currently have a specific plan for disposing of solid waste generated by development in the City post 2024. **Significant Unavoidable Cumulative Impact**

Summary of Project Alternatives

CEQA requires that an EIR identify alternatives to a project as it is proposed. The CEQA Guidelines specify that the EIR should identify alternatives 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." The purpose of this section is to determine whether there are alternatives of design, scope, or location which would substantially lessen the significant impacts, even if those alternatives "impede to some degree the attainment of the project objectives" or are more expensive (Section 15126.6).

While CEQA does not require that alternatives must be capable of meeting all of the project objectives, their ability to meet most of the objectives is considered relevant to their consideration. As identified in *Section 2.3*, the applicant's objectives for the project are as follows:

1. Develop the 24-acre project site at the corner of Coleman Avenue and Brokaw Road in Santa Clara into an economically viable mixed use project consisting of commercial spaces and a vibrant residential community, providing a range of product types that will support the diversity of Santa Clara and is designed to be inviting to all.
2. Provide the on-site residential community and public access to a pedestrian friendly site with a variety of on-site recreational amenities including a neighborhood park, BBQ area, children's playground, dog park, and various lounge areas.
3. Develop an on-site commercial component of approximately 215,000 square feet, consisting of a hotel and ancillary commercial uses, that will provide services to both the residential community and public at large and will generate tax revenues for the City.
4. Create a transit-oriented development that supports alternative modes of transportation with a direct connection to the Santa Clara Transit Station.
5. Comply with and advance the General Plan goals and policies for the Santa Clara Station Focus Area (General Plan Section 5.4.3).

The City's objectives for this key site within the Santa Clara Station Focus Area are as follows:

1. Create a mixed-use neighborhood of high density residential development combined with commercial services to support the residents, businesses and visitors within and around the plan area as well as the users of the abutting Santa Clara Caltrain/BART heavy rail transit node.

2. Promote long term sustainability with an array and arrangement of complementary uses by achieving LEED certification (or equivalent), minimizing vehicle miles traveled, capitalizing on efficient public infrastructure investment and providing convenient amenities for residents and users of the plan area.
3. Maximize housing unit yield on a site with minimal impact on existing neighborhoods that will address the jobs/housing balance, create a critical mass of housing to justify commercial services, particularly retail services, and provide a variety of housing unit types.
4. Provide a suitable affordable housing component that addresses the City's lower income housing needs in close proximity to transit services and commercial services and jobs.
5. Provide a significant hotel component and retail services that support the business travel market, enhance the tax base and contribute other revenues to support City services that serve the development.

The City considered an alternative location for the proposed project that would lessen or avoid the project's nesting bird, construction-related air quality, cultural resources, hazards and hazardous materials, and/or construction-related noise impacts. The alternative location needed to be of similar size to the project site, within the urban service area of the City, near existing transit, and have the appropriate General Plan land use designation(s). There are no vacant or available sites of approximately 24-acres in the City. In addition, there are no sites of similar size that have the appropriate land use designation. Furthermore, the project applicant does not have control of alternative sites of similar size in the City. For these reasons, an alternative location to the project was considered but rejected as infeasible.

A summary of the project alternatives evaluated in this EIR is provided below. Refer to *Section 7.0* for the full discussion of each alternative.

<u>No Project Alternative</u>

The CEQA Guidelines specifically require consideration of a "No Project" Alternative. The purpose of including a No Project Alternative is to allow decision makers to compare the impacts of approving the project with the impacts of not approving the project. The Guidelines specifically advise that the No Project Alternative is "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services." The Guidelines emphasize that an EIR should take a practical approach, and not "…create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment (Section 15126.6[e][3][B])."

Currently, the project site is undeveloped. Under the No Project Alternative, the project site could remain as it is or it could be developed with uses consistent with the existing General Plan and zoning designations. The existing General Plan and zoning allows for the development of 758 to 1,278 residential units and up to 1,025,838 square feet of commercial uses. For these reasons, there are two logical No Project alternatives for the project: 1) a No Project/No Development Alternative and 2) a No Project/Development Alternative.

1. *No Project/No Development Alternative* – The No Project/No Development Alternative assumes that the project site would remain as it is today, undeveloped and unoccupied. Because the No Project/No Development Alternative would not result in any development on

the site, this Alternative would avoid all of the environmental impacts from the project. However, this Alternative would not meet any of the applicant's or City's project objectives.

2. *No Project/Development Alternative* – For the purposes of the No Project/Development Alternative, it is assumed that the project site would be developed with 605,070 square feet of R&D uses consistent with the existing Light Industrial (ML) zoning designation for the project site. The No Project/Development Alternative would result in lesser aesthetics, air quality, energy, land use and planning, noise and vibration, population and housing, public services, recreation, transportation, and utilities and service systems impacts compared to the proposed project. The No Project/Development Alternative would result in the same or similar impacts to agricultural and forestry resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, and mineral resources. The No Project/Development Alternative would result in greater GHG emissions per service population than the proposed project. The No Project/Development Alternative could meet project objective 4; however, it would not meet project objectives 1, 2, 3, or 5 which stipulate residential and commercial mixed-use development. The Alternative would not meet any of the City's objectives, which focus on transit-oriented residential mixed-used development.

Reduced Development Alternative

The Reduced Development Alternative assumes the development of 880 residential units and 118,250 square feet of commercial uses. The Reduced Development Alternative would avoid the project's significant unavoidable freeway and intersection (under existing plus project and background plus project conditions).

The Reduced Development Alternative would result in lesser aesthetics, energy, public services, utilities, air quality, construction-related noise, and population and housing impacts compared to the proposed project. The Reduced Development Alternative would result in the same or similar impacts to the proposed project for all other resource areas (i.e., agricultural and forestry resources, nesting birds, cultural resources, geology and soils, GHG, hazards and hazardous materials, hydrology and water quality, land use, and mineral resources). The Reduced Development Alternative could meet project objectives 1, 2, and 4 but would not meet project objective 5 of advancing the General Plan goals and policies for the Santa Clara Station Focus Area (which include developing high-intensity uses and maximizing residential development) to the same extent as the proposed project. It is possible the Reduced Development Alternative could meet City objectives 2 and 4 but would not meet City objectives 1, 3, and 5 of providing high-density residential development and a significant commercial/retail component on-site.

Known Views of Local Groups and Areas of Controversy

Concerns from local residents, property owners, organizations, or agencies about the project were related to cultural resources and transportation.

SECTION 1.0 INTRODUCTION

1.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The City of Santa Clara, as the Lead Agency, has prepared this Draft Environmental Impact Report (EIR) for the Gateway Crossings project in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines.

As described in CEQA Guidelines Section 15121(a), an EIR is an informational document that assesses potential environmental impacts of a proposed project, as well as identifies mitigation measures and alternatives to the proposed project that could reduce or avoid adverse environmental impacts (CEQA Guidelines 15121[a]). As the CEQA Lead Agency for this project, the City of Santa Clara is required to consider the information in the EIR along with any other available information in deciding whether to approve the project. The basic requirements for an EIR include discussions of the environmental setting, environmental impacts, mitigation measures, cumulative impacts, alternatives, and growth-inducing impacts. It is not the intent of an EIR to recommend either approval or denial of a project.

1.2 EIR PROCESS

1.2.1 Notice of Preparation and Scoping

In accordance with Sections 15063 and 15082 of the CEQA Guidelines, the City of Santa Clara prepared a Notice of Preparation (NOP) for this EIR. The NOP was circulated to local, state, and federal agencies on February 21, 2017. The standard 30-day comment period concluded on March 23, 2017. The NOP provided a general description of the proposed project and identified possible environmental impacts that could result from implementation of the project. The City also held a public scoping meeting on March 16, 2017 to discuss the project and solicit public input as to the scope and contents of this EIR. The meeting was held at the City Hall City Council Chambers at 1500 Warburton Avenue, Santa Clara. Appendix A of this EIR includes the NOP and comments received on the NOP.

1.2.2 Draft EIR Public Review and Comment Period

Publication of this Draft EIR will mark the beginning of a 45-day public review and comment period. During this period, the Draft EIR will be available to local, state, and federal agencies and to interested organizations and individuals for review. Notice of this Draft EIR will be sent directly to every agency, person, and organization that commented on the NOP. Written comments concerning the environmental review contained in this Draft EIR during the 45-day public review period should be sent to:

Debby Fernandez
City of Santa Clara
1500 Warburton Avenue
Santa Clara, CA 95050
(408) 615-2450
DFernandez@santaclaraca.gov

1.3 FINAL EIR/RESPONSES TO COMMENTS

Following the conclusion of the 45-day public review period, the City will prepare a Final EIR in conformance with CEQA Guidelines Section 15132. The Final EIR will consist of:

- Revisions to the Draft EIR text, as necessary;
- List of individuals and agencies commenting on the Draft EIR;
- Responses to comments received on the Draft EIR, in accordance with CEQA Guidelines (Section 15088); and
- Copies of letters received on the Draft EIR.

Section 15091(a) of the CEQA Guidelines stipulates that no public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings. If the lead agency approves a project despite it resulting in significant adverse environmental impacts that cannot be mitigated to a less than significant level, the agency must state the reasons for its action in writing. This Statement of Overriding Considerations must be included in the record of project approval.

1.3.1 Notice of Determination

If the project is approved, the City will file a Notice of Determination (NOD), which will be available for public inspection and posted within 24 hours of receipt at the County Clerk's Office for 30 days. The filing of the NOD starts a 30-day statute of limitations on court challenges to the approval under CEQA (CEQA Guidelines Section 15094[g]).

SECTION 2.0 PROJECT INFORMATION AND DESCRIPTION

2.1 PROJECT LOCATION

The approximately 24-acre project site (Assessor's Parcel Numbers 230-46-069 and 230-46-070) is located at the southwest corner of Coleman Avenue and Brokaw Road in the City of Santa Clara.[1] The project site consists of several addresses: 1205 Coleman Avenue, 328 Brokaw Road, and 340 Brokaw Road. The project site was previously developed with several Research and Development (R&D) buildings totaling approximately 272,840 square feet, which were recently demolished in order for the applicant to better characterize on-site hazards and hazardous materials conditions. Currently, the site is undeveloped. Regional and vicinity maps of the project site are shown on Figures 2.1-1 and 2.1-2. As shown in Figure 2.1-2, most of the site (approximately 23 acres) is located in the City of Santa Clara. The southeastern tip (approximately one acre) is located in the City of San José.

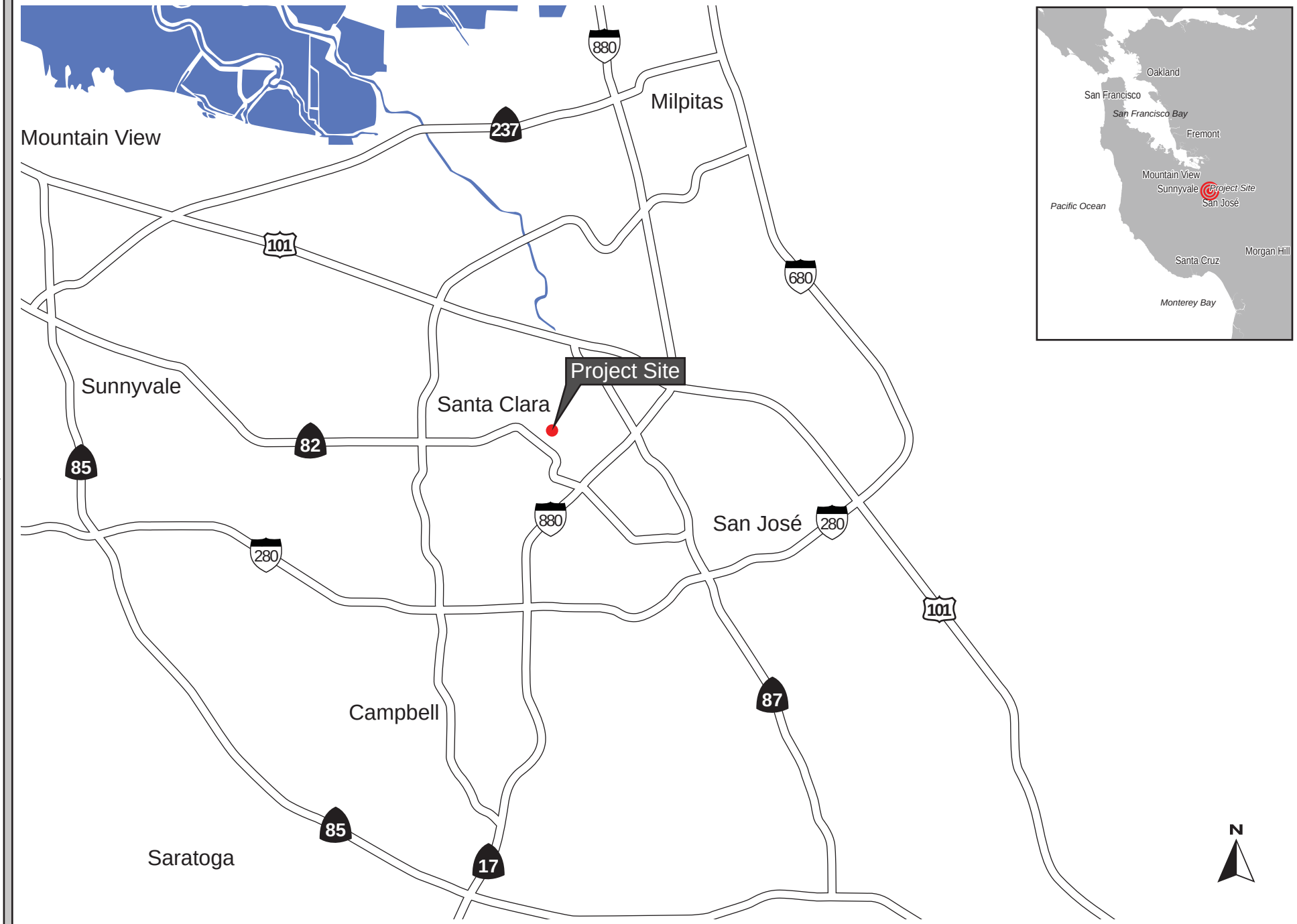
The project site is bounded by Brokaw Road and commercial and office/light industrial uses to the north, Coleman Avenue and commercial and industrial uses to the east, a parking lot and undeveloped land to the south, and a storage area and railroad tracks to the west. An aerial photograph with surrounding land uses is shown on Figure 2.1-3.

The majority of the project site located in Santa Clara is part of a larger 244-acre area designated as the *Santa Clara Station Focus Area* in the City's General Plan. The Santa Clara Station Focus Area includes land on both the west and east side of the Union Pacific Railroad (UPRR)/Caltrain/Amtrak/ Capitol Corridor/Altamont Corridor Express (ACE) tracks and is generally bounded by De La Cruz Boulevard, Reed Street, and Martin Avenue to the north and northeast, and Franklin Street and El Camino Real to the south and southwest (see Figure 2.1-2). At the center of this area is the existing Santa Clara Transit Station, which is served by Caltrain, Amtrak, ACE, and Valley Transportation Authority (VTA) bus service. The Transit Station will ultimately include the Bay Area Rapid Transit (BART) terminus of the planned Fremont, San José, and Santa Clara extension (also known as BART Silicon Valley Phase II Extension).

Currently within the Santa Clara Station Focus Area, the project site is designated as *Santa Clara Station Very High Density Residential* (51-90 dwelling units per acre [du/ac]), *Santa Clara Station High Density Residential* (37-50 du/ac), and *Santa Clara Station Regional Commercial* (up to 3.0 FAR, with an emphasis on office and hotel uses). The project site is zoned *Light Industrial* (ML). A map showing the existing designations is shown on Figure 2.1-4.

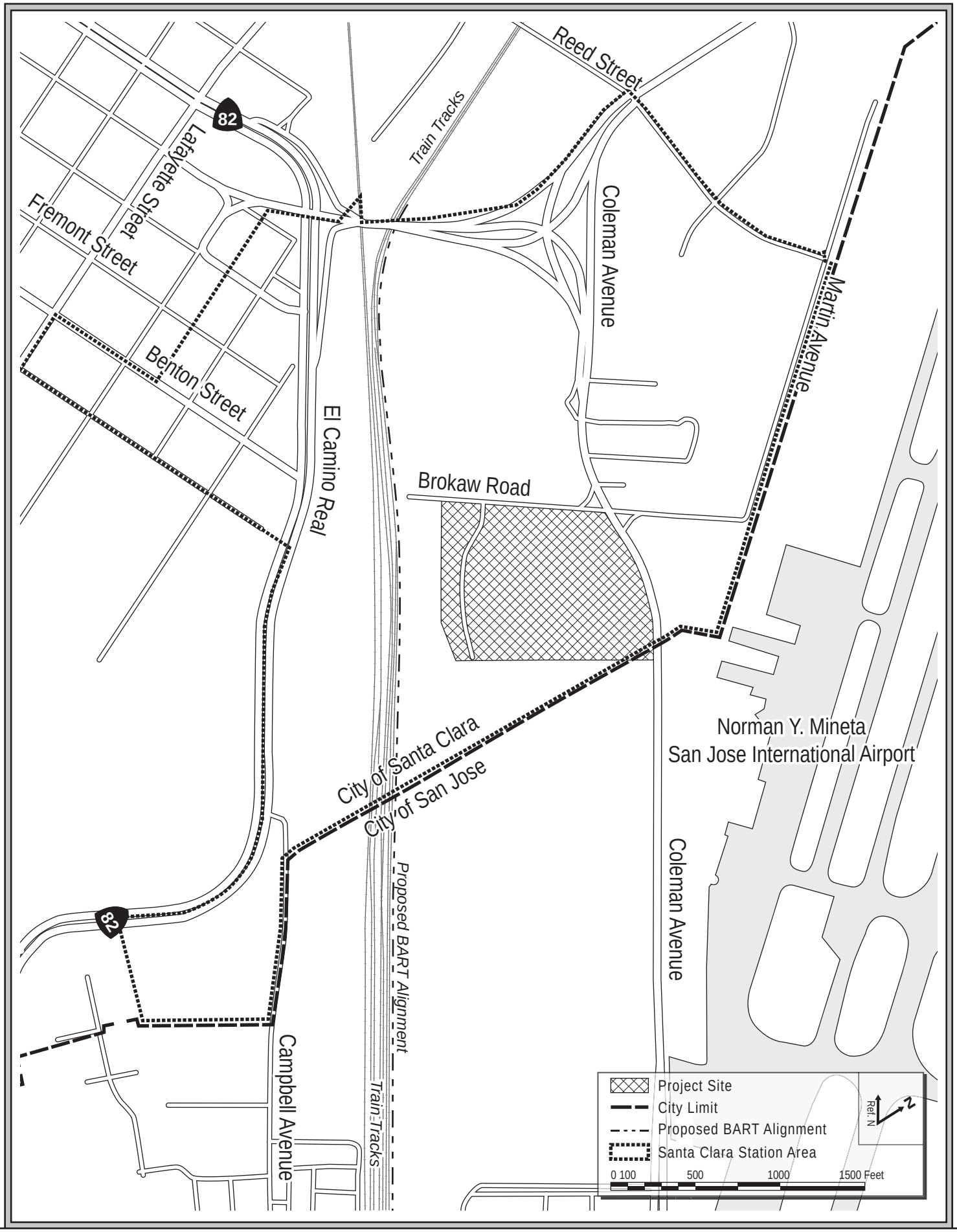
The Santa Clara Station Focus Area is envisioned to be a new gateway into the City with office, hotel, retail, and high-density residential uses that maximizes the use of existing and planned transit and provides for improved pedestrian, bicycle, and transit connections. Pedestrian and bicycle circulation is a priority within the Santa Clara Station Focus Area, with transit and vehicular access a priority for access to the Station.

[1] For the purposes of this EIR and for ease of reference, this document assumes Coleman Avenue is a north-south trending roadway. Therefore, Brokaw Road is considered north of the site and Coleman Avenue is considered east of the site.



REGIONAL MAP

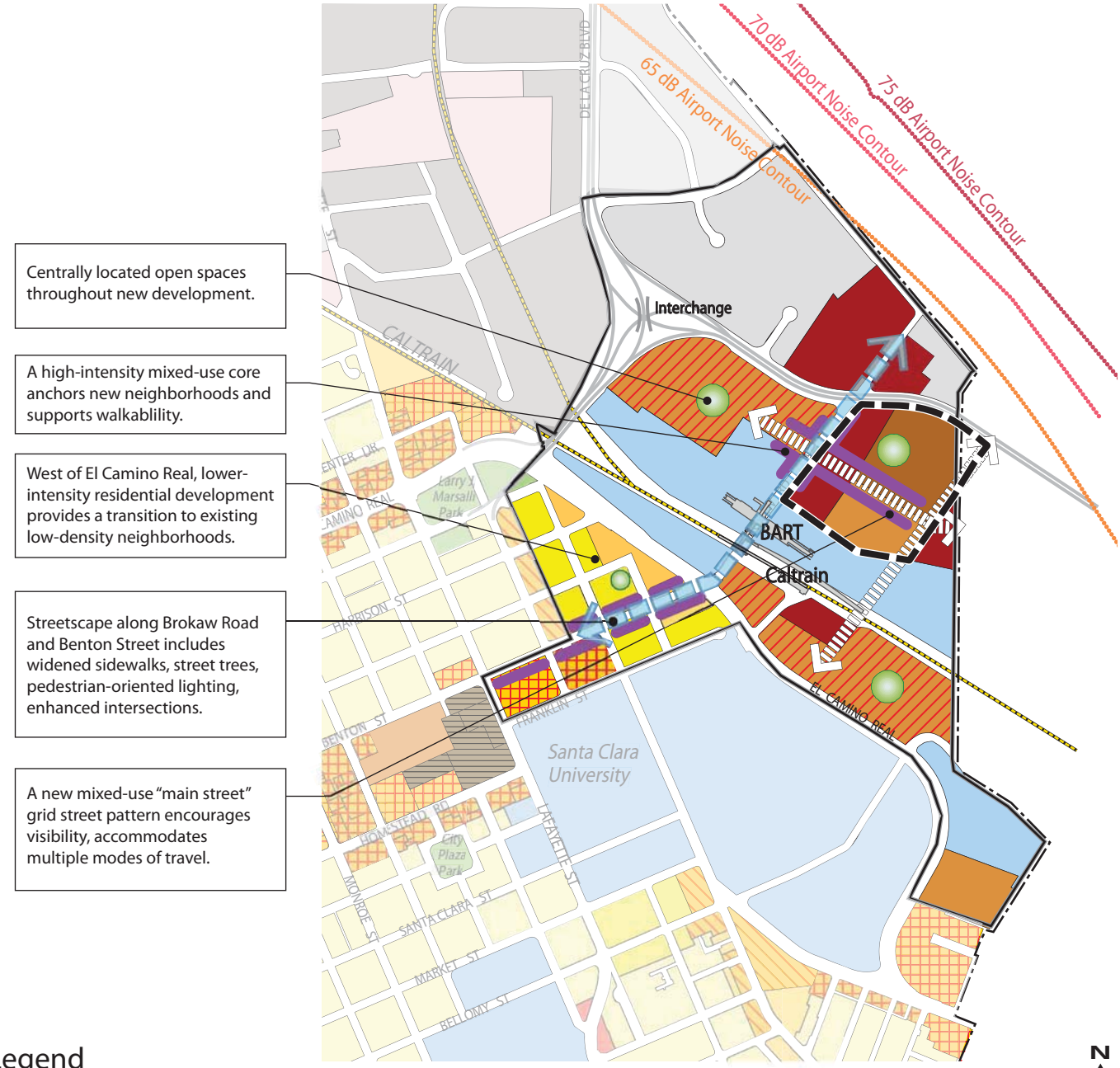
FIGURE 2.1-1



VICINITY MAP FIGURE 2.1-2

AERIAL PHOTOGRAPH AND SURROUNDING LAND USES

FIGURE 2.1-3



Legend

Land Uses Within the Focus Area

- Santa Clara Station Low Density Residential (8-18 du/ac)
- Santa Clara Station Medium Density Residential (19-36 du/ac)
- Santa Clara Station High Density Residential (37-50 du/ac)
- Santa Clara Station Very High Density Residential (51-90 du/ac)
- Santa Clara Station Regional Commercial (up to 3.0 FAR) (with an emphasis on office and hotel uses)
- Santa Clara Station Regional Mixed Use (Santa Clara Station Regional Commercial + Santa Clara Station High Density Residential) (with an emphasis on residential and commercial uses)
- Santa Clara Station Community Mixed Use Commercial (up to 0.45 FAR + Santa Clara Statiuon Medium Density Residential)
- Santa Clara Station Public/Quasi Public (Intensity based on policies 5.3.1, 5.5.1 and 5.9.2)
- Santa Clara Station Light Industrial (up to 0.6 FAR)
- City Limits

0 1/4 1/2
MILES

N
Ref. N

Urban Design Features

- Focus Area Boundary
- Potential Street
- Pedestrian Connection
- Pedestrian Orientation/Active Street Frontage
- Proposed Open Space (Not to scale)
- Site Boundary

EXISTING GENERAL PLAN LAND USE DESIGNATIONS FIGURE 2.1-4

The approximately one-acre portion of the site that is located in the City of San José has a San José General Plan land use designation of *Combined Industrial/Commercial* (CIC) and is part of a larger 92.5-acre area that is zoned *Planned Development* (PD) for up to 3.0 million square feet of office/research and development (R&D). In addition, an undetermined amount of hotel, retail, and commercial uses may be constructed, but in no case would total development on the 92.5-acre area exceed the traffic performance criteria that is equivalent to the traffic that would result from 3.0 million square feet of new office/R&D. The PD zoning also allows for an up to 18,000 seat open-air stadium in addition to the office/R&D and/or hotel, retail, or commercial uses that would not exceed the traffic performance criteria which is equivalent to the traffic that would result from 3.0 million square feet of new office/R&D. To date, the stadium has been constructed and approximately 356,000 square feet of office is under construction.

2.2 PROJECT DESCRIPTION

The project requires a General Plan Amendment (GPA) to change the land use designation on the site to *Very High Density Residential* to allow residential development at 51 to 100 du/ac in conjunction with a minimum commercial FAR of 0.20; an amendment to the General Plan Land Use Map for the Santa Clara Station Focus Area to reflect the General Plan change; and an amendment to Appendix 8.13 to the General Plan (the Climate Action Plan) to establish a 20 percent reduction in Vehicle Miles Traveled (VMT), half of which (a 10 percent reduction) would be achieved with a Transportation Demand Management (TDM) program. In addition, the project requires a Zoning Code text amendment to add a new zoning designation of *Very High Density Mixed Use* to facilitate the development of the land uses and building types contemplated for the project site; and a rezoning of the project site to the new zoning designation. The project also includes a Vesting Tentative Parcel Map and Development Agreement.

The project would develop one of two options:

- **Option 1:** Up to 1,400 dwelling units and up to 215,000 square feet of commercial uses, or
- **Option 2:** Up to 1,600 dwelling units and up to 215,000 square feet of commercial uses.

Option 2 is the preferred project alternative. The proposed maximum building height on the site under both options is 150 feet and subject to the Federal Aviation Administration (FAA) Regulations Part 77 height restrictions. Under both options, the development would have a minimum setback of 25 feet from Coleman Avenue and Brokaw Road.

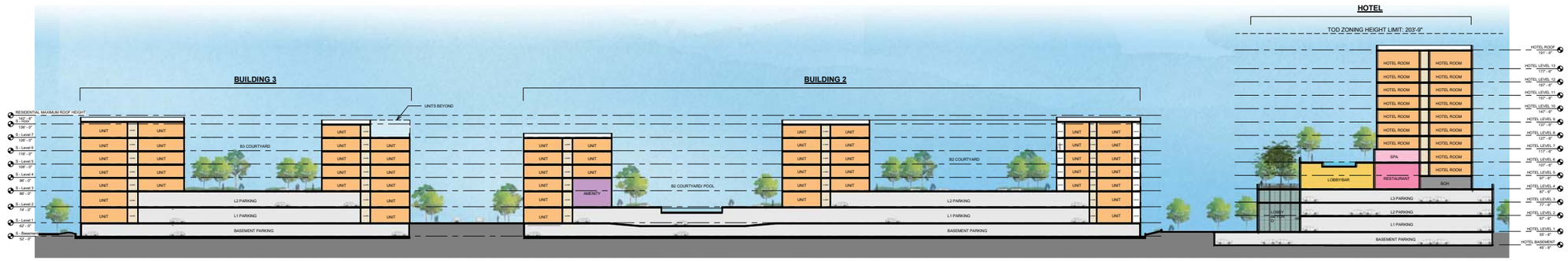
The difference between the two options is the maximum number of dwelling units proposed. The project components, including the residential development, commercial development, and common open space and landscaping, are described below. When there are differences between the two project options, they are noted.

Conceptual site plan and cross sections of Option 2 are shown on Figures 2.2-1 and 2.2-2, respectively.

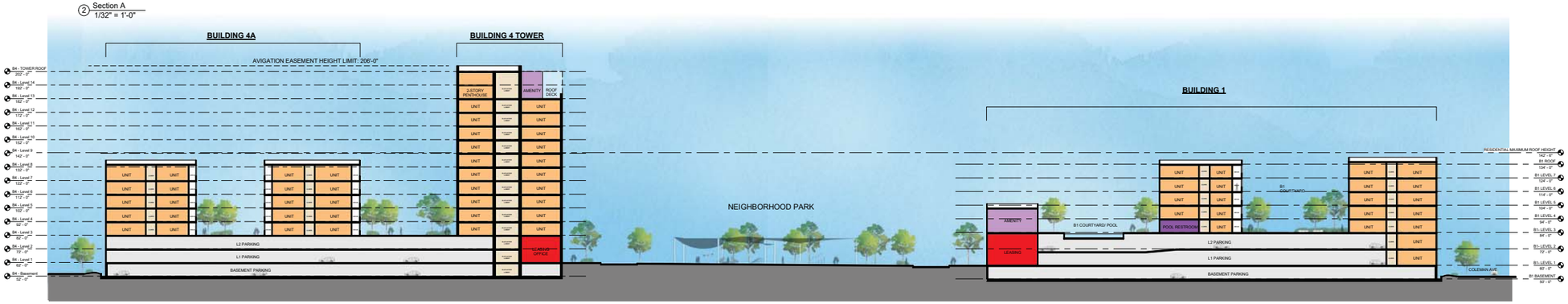
Base Map Source: Hunter Storm, 2/16/18.

CONCEPTUAL SITE PLAN

FIGURE 2.2-1



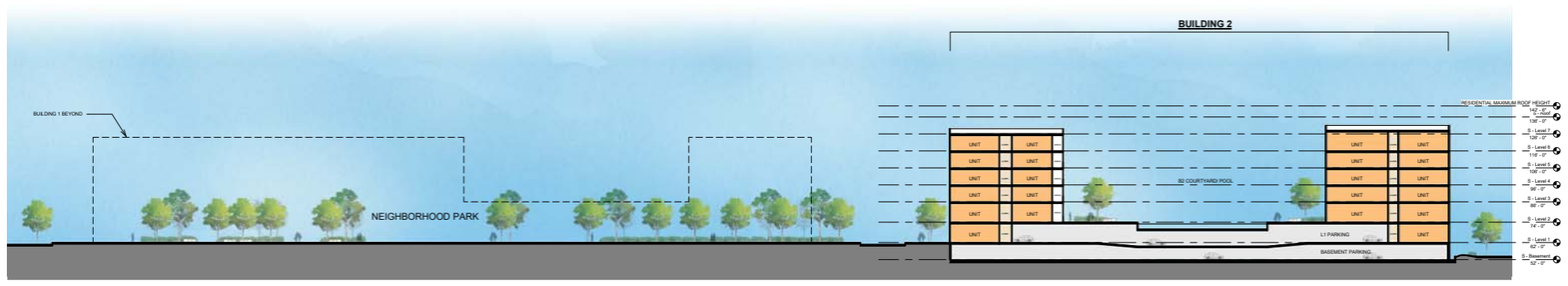
2 Section A
1/32" = 1'-0"

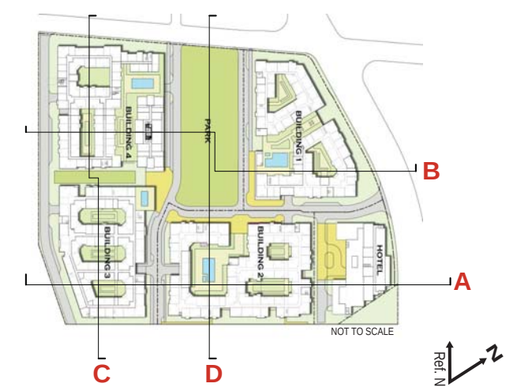


3 Section B
1/32" = 1'-0"

NOTE: PARAPET AND ROOF HEIGHT SUBJECT TO CHANGE PENDING EXTERIOR ELEVATION DEVELOPMENT

4 Section C
1/32" = 1'-0"





Source: MVE Partners., 1/12/2018.

CONCEPTUAL CROSS-SECTIONS

FIGURE 2.2-2

2.2.1 Project Components

2.2.1.1 *Residential Development*

Under both options, the residential dwelling units would consist of studio, one bedroom, one bedroom plus den, two bedrooms, and two bedrooms plus den units. The units would range in size from approximately 600 to 1,355 square feet.

The proposed residential units would be located in four, six to 13-story podium buildings located around the perimeter of the site (see Figures 2.2-1 and 2.2-2). The residential buildings would total approximately 3.0 million square feet. Residential units would include private balconies. Buildings 1-3 would consist of one level of semi-subterranean parking, one to two levels of above ground parking with units lining the exterior of the parking and capped by a podium structure, and five to six levels of units above the podium. From the street level, Buildings 1-3 would appear as six to seven stories tall plus varied amounts of exposed semi-subterranean garage parking. Building 4 would consist of one level of semi-subterranean parking, two levels of above ground parking with units lining the exterior of the parking and capped by a podium structure. The podium structure on Building 4 would have five and 11 levels of units above the podium. From the street level, Building 4 would appear as seven to 12 stories tall plus varied amounts of exposed semi-subterranean garage. Under Option 2, up to 1,600 dwelling units would be constructed, resulting in a density of about 75 du/ac.[2]

Under Option 1, 1,400 dwelling units would be built and result in a density of about 65 du/ac. Under Option 1, Buildings 3 and 4 would have less levels than described above. The building footprints would be similar under either option.

Under both options, all the residential buildings would include landscaping, common courtyards, and recreational areas on top of the podium structures. Parking for the residential units would be provided in the structured parking integrated into each residential building and along internal streets.

2.2.1.2 *Commercial Development*

Under both options, up to 215,000 square feet of commercial uses would be constructed on-site and primarily consist of a full service hotel and other ancillary commercial spaces throughout the site. The development of 215,000 square feet of commercial uses on-site would result in an FAR of 0.23.[3]

The hotel would be located at the southeast corner of the site in one, nine-story building above a podium with three levels of above ground parking and one level of semi-subterranean parking (a total of 13 stories above grade) (refer to Figure 2.2-2). The hotel would include up to 250 rooms, an up to 10,000 square foot restaurant, and up to 5,000 square feet of conference/meeting space for a total gross floor area of up to 200,000 square feet. The hotel would also include a 100 kilowatt (kW) diesel emergency back-up generator with an approximately 220-gallon diesel tank.

[2] The residential density calculated for the two project options is based on a net site acreage of 21.4. The gross site acreage is 23.8 acres and the project proposes to dedicate 2.4 acres for public right-of-way, resulting in a net site acreage of 21.4.
[3] The commercial FAR is calculated based on a net site acreage of 21.4. See footnote above.

Up to 15,000 square feet of ancillary commercial space would be located throughout the project site on the ground floor of the residential buildings. Parking for the ancillary commercial uses would be provided along internal streets and in the residential parking structures.

2.2.1.3 *Neighborhood Park/Common Amenity Space and Landscaping*

Under both options, the proposed residential and hotel buildings would be situated around a publically accessible, approximately two-acre neighborhood park. The neighborhood park could include amenities such as a natural grass play field, fitness stations, picnic areas, and a children's playground. Additionally, approximately 0.3 acres of common amenity space would be provided at-grade throughout the project site that could include gardens, seating areas, and a bocce ball court.

Under both options, a total of approximately two acres of active and passive recreation areas would be provided in the residential buildings on top of the podium structures. The common outdoor amenity space area for each residential building could include seating areas, a fireplace, picnic areas, a pool and spa, and fitness and game areas. Common indoor amenity areas could include a fitness center, a recreation clubhouse, and restroom facilities.

The proposed hotel would include a total of approximately 23,190 square feet of outdoor amenity space on the 4th and 6th floors and an approximately 3,000 square foot rooftop deck. The amenity space on the 4th and 6th floors could include landscaping, a pool and spa, seating and lounge areas, and a fireplace. The hotel rooftop deck could include landscaping, bar area, and seating areas.

The project under either option includes new landscaping including trees, ornamental plants, and shrubs. Benches, paseos, and other hardscape elements would be integrated into the landscaping. The new landscaping would primarily be located around the perimeter of the site, perimeter of the buildings, and within the proposed neighborhood park and podium open space areas.

2.2.1.4 *Green Building Measures and Vehicle Miles Traveled Reduction Plan*

The project proposes to achieve a minimum of 80 points (or silver certification) on the GreenPoint Rated New Home Multi-family certification system by incorporating green building measures. Project green building measures could include permeable pavement, filtration and/or bio-retention features, water-efficient landscaping, minimal turf, shade trees, recycled water irrigation system, community gardens, outdoor electrical outlets for gardening equipment, Electric Vehicle (EV) fixtures and wiring for additional EV stalls in all parking garages, water-efficient fixtures, and energy-efficient lighting and appliances.

As part of the project, a Vehicle Miles Traveled (VMT) Reduction Plan shall be developed and implemented. The VMT Reduction Plan shall achieve a 20 percent reduction in project VMT, half of which (a 10 percent reduction) shall be achieved with TDM measures. The VMT reductions may be achieved through project design characteristics, land use, parking, access, and TDM best practices (e.g., on-site bicycle parking and Eco Passes for residents).

2.2.1.5 *Site Access and Parking*

Under both options, vehicle access to the project site would be provided via two driveways on Coleman Avenue (with the driveway on Coleman Avenue at the southern property line restricted to emergency vehicles only[4]) and three driveways with residential garage access from Brokaw Road (see Figure 2.2-1). The main entrance of the project site is proposed midblock on Coleman Avenue and would allow for right-in and right-out access only. Internal private streets throughout the site would serve the uses on the site. Pedestrian access to the site would be provided via sidewalks on the site perimeter on Coleman Avenue, Brokaw Road, the planned Champions Way, and walkways throughout the site.

Vehicle parking for the residential uses would be provided in a structured parking garage that would be integrated into each residential building. Parallel parking spaces and loading areas are proposed along the internal private street adjacent to the neighborhood park and residential and commercial uses. Retail parking would be shared among the open parallel parking spaces on-site and provided in the residential parking structures. Vehicle parking for the hotel use would be provided in a structured parking garage that is integrated into the hotel building.

EV charging stations (a minimum of three percent of total parking spaces) would be provided for the proposed uses throughout the project site, including within the parking garages. The project proposes one Class I bicycle parking space per three residential units and one class II bicycle parking spaces per 15 residential units. The bicycle parking spaces would be provided within the residential parking garages and near the proposed neighborhood park.

2.2.1.6 *Public Right-of-Way Improvements*

Under either option, the City would require the project to widen Coleman Avenue along the project site frontage to provide for a third northbound through-lane for vehicular traffic, new bike lane, and relocation of the existing VTA bus duckout.[5] As part of the project, the crosswalk on Coleman Avenue at Brokaw Road would be restriped, and new bike lanes would also be included on Brokaw Road west of Coleman Avenue.

The project includes other public street improvements including replacement and widening of the existing sidewalks, installation of park strips, standard driveway construction and/or removals, and new curb and sidewalks as necessary along Coleman Avenue and Brokaw Road frontages.

[4] Separate from this project, a new road is proposed along the southern boundary of the site. When built, this road would provide access to the properties on both sides. The access road would connect to the project site's internal roadway between Buildings 2 and 3, providing a more direct route to facilities located along the Coleman Avenue frontage.

[5] It is anticipated that the existing VTA bus stop would be removed and re-constructed south of its current location due to the widening of Coleman Avenue. This coincides with a larger vision for multiple bus stops along Coleman Avenue between the project site at Brokaw Road and the existing soccer stadium at Newhall Drive.

2.2.1.7 *Utility Connections and Improvements*

Under either option, the project would utilize existing utility connections to the site where feasible and construct new utility service laterals to existing utility service systems (potable water, recycled water, fire protection, sanitary sewer, storm drain, gas, and electric) in Coleman Avenue and Brokaw Road to serve the project. The project also proposes to underground the existing overhead electrical lines along the project site frontage on Brokaw Avenue.

2.2.1.8 *Construction*

Construction of the project under either option is estimated to take approximately seven years to complete, possibly starting as early as late 2018 and concluding as early as mid-2025. Project construction would likely be completed in multiple phases. The project would excavate a total of approximately 90,000 cubic yards of soil. The project proposes a temporary traffic control plan with a flagger during construction and all construction workers would park on-site in designated staging areas.

2.3 PROJECT OBJECTIVES

The applicant's objectives for the project are as follows:

1. Develop the 24-acre project site at the southwest corner of Coleman Avenue and Brokaw Road in Santa Clara into an economically viable mixed use project consisting of commercial spaces and a vibrant residential community, providing a range of product types that will support the diversity of Santa Clara and is designed to be inviting to all.
2. Provide the on-site residential community and public access to a pedestrian friendly site with a variety of on-site recreational amenities including a neighborhood park, BBQ area, children's playground, dog park, and various lounge areas.
3. Develop an on-site commercial component of approximately 215,000 square feet, consisting of a hotel and ancillary commercial uses, that will provide services to both the residential community and public at large and will generate tax revenues for the City.
4. Create a transit-oriented development that supports alternative modes of transportation with a direct connection to the Santa Clara Transit Station.
5. Comply with and advance the General Plan goals and policies for the Santa Clara Station Focus Area (General Plan Section 5.4.3).

The City's objectives for this key site within the Santa Clara Station Focus Area are as follows:

1. Create a mixed-use neighborhood of high density residential development combined with commercial services to support the residents, businesses and visitors within and around the plan area as well as the users of the abutting Santa Clara Caltrain/BART heavy rail transit node.
2. Promote long term sustainability with an array and arrangement of complementary uses by achieving LEED certification (or equivalent), minimizing vehicle miles traveled, capitalizing on efficient public infrastructure investment and providing convenient amenities for residents and users of the plan area.

3. Maximize housing unit yield on a site with minimal impact on existing neighborhoods that will address the jobs/housing balance, create a critical mass of housing to justify commercial services, particularly retail services, and provide a variety of housing unit types.
4. Provide a suitable affordable housing component that addresses the City's lower income housing needs in close proximity to transit services and commercial services and jobs.
5. Provide a significant hotel component and retail services that support the business travel market, enhance the tax base and contribute other revenues to support City services that serve the development.

2.4 USES OF THE EIR

This EIR provides decision makers in the City of Santa Clara and the general public with relevant environmental information to use in considering the proposed project. It is proposed that this EIR be used for appropriate discretionary approvals necessary to implement the project, as proposed. These discretionary actions may include, but are not limited to, the following:

- GPA and amendment to the General Plan Land Use Map for the Santa Clara Station Focus Area;
- Rezoning and Zoning Code text amendment;
- Amendment to the Climate Action Plan
- Architectural Review;
- Vesting Tentative Parcel Map; and
- Development Agreement.

Ministerial permits from the City, such as grading permits and building permits, would also be required.

Submittal of a Site Development Permit will be required for the proposed landscape improvements on the approximately one-acre portion of the site located in the City of San José. Encroachment permits may be required from the City of San José and the California Department of Transportation for transportation improvements.

SECTION 3.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

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

3.1	Aesthetics	3.10	Land Use and Planning
3.2	Agricultural and Forestry Resources	3.11	Mineral Resources
3.3	Air Quality	3.12	Noise and Vibration
3.4	Biological Resources	3.13	Population and Housing
3.5	Cultural Resources	3.14	Public Services
3.6	Geology and Soils	3.15	Recreation
3.7	Greenhouse Gas Emissions	3.16	Transportation/Traffic
3.8	Hazards and Hazardous Materials	3.17	Utilities and Service Systems
3.9	Hydrology and Water Quality		

The discussion for each environmental subject includes the following subsections:

ENVIRONMENTAL SETTING

This subsection: 1) provides a brief overview of relevant plans, policies, and regulations that compose the regulatory framework for the project and 2) describes the existing, physical environmental conditions at the project site and in the surrounding area, as relevant.

IMPACTS

This subsection: 1) includes thresholds of significance for determining impacts, 2) discusses the project's consistency with those thresholds, and 3) discusses the project's consistency with applicable plans. For significant impacts, feasible mitigation measures are identified. "Mitigation measures" are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines Section 15370). Each impact is numbered using an alphanumeric system that identifies the environmental issue. For example, **Impact HAZ-1** denotes the first potentially significant impact discussed in the Hazards and Hazardous Materials section. Mitigation measures are also numbered to correspond to the impact they address. For example, **MM NOI-2.3** refers to the third mitigation measure for the second impact in the Noise section.

As discussed in *Section 2.2*, the project is the development of one of two options:

- **Option 1:** Up to 1,400 dwelling units and up to 215,000 square feet of commercial uses, or
- **Option 2:** Up to 1,600 dwelling units and up to 215,000 square feet of commercial uses.

This EIR evaluates the impact of Option 2, the preferred project alternative and the option that proposes the most development which would result in greater impacts (compared to Option 1). Where impacts substantially differ between the project options, it will be noted. The baseline for

analysis is the conditions generally at the time the NOP was circulated (February 2017) unless otherwise noted.

Planning Considerations

The California Supreme Court in a December 2015 opinion (*California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 [No. S 213478]) confirmed that CEQA, with several specific exceptions, is concerned with the impacts of a project on the environment, not the effects the existing environment may have on a project. Therefore, the evaluation of the significance of project impacts under CEQA in the following sections focuses on impacts of the project on the environment, including whether a project may exacerbate existing environmental hazards.

The court ruling provided for several exceptions to the general rule where an analysis of the project on the environment is warranted: 1) if the project would exacerbate existing environmental hazards (such as exposing hazardous waste that is currently buried); 2) if the project qualifies for certain specific specified exemptions (certain housing projects and transportation priority projects PRC 21159.21 (f),(h); 21159.22 (a),(b),(3); 21159.23 (a)(2)(A); 21159.24 (a)(1),(3); or 21155.1(a)(4),(6)); 3) if the project is exposed to potential noise and safety impacts on the project occupants due to proximity to an airport (PRC 21096); and 4) school projects requiring specific assessment of certain environmental hazards (per PRC 21151.8).

The City of Santa Clara currently has policies that address existing conditions (e.g., air quality, noise, and hazards) affecting a proposed project. This is consistent with one of the primary objectives of CEQA and this document, which is to provide objective information to decision-makers and the public regarding a project as a whole. The CEQA Guidelines and the courts are clear that a CEQA document (e.g., EIR or Initial Study) can include information of interest even if such information is not an "environmental impact" as defined by CEQA.

Therefore, where applicable, in addition to describing the impacts of the project on the environment, this chapter will discuss planning considerations that relate to policies pertaining to existing conditions. Such examples include, but are not limited to, locating a project near sources of air emissions that can pose a health risk, in a floodplain, in a geologic hazard zone, in a high noise environment, or on/adjacent to sites involving hazardous substances.

Cumulative Impacts

The project's contribution to cumulative impacts on the resource is also discussed. Cumulative impacts, as defined by CEQA, refer to two or more individual effects, which when combined, compound or increase other environmental impacts. Cumulative impacts may result from individually minor, but collectively significant effects taking place over a period of time. CEQA Guideline Section 15130 states that an EIR should discuss cumulative impacts "when the project's incremental effect is cumulatively considerable." The discussion does not need to be in as great detail as is necessary for project impacts, but is to be "guided by the standards of practicality and reasonableness." The purpose of the cumulative analysis is to allow decision makers to better understand the impacts that might result from approval of past, present, and reasonably foreseeable future projects, in conjunction with the proposed project addressed in this EIR.

The CEQA Guidelines advise that a discussion of cumulative impacts should reflect both their severity and the likelihood of their occurrence. To accomplish these two objectives, the analysis should include either a list of past, present, and probable future projects or a summary of projections from an adopted general plan or similar document. The analysis must then determine whether the project's contribution to any cumulatively significant impact is cumulatively considerable, as defined by CEQA Guideline Section 15065(a)(3).

The cumulative discussion for each environmental issue addresses two aspects of cumulative impacts: 1) would the effects of all of the pending development listed result in a cumulatively significant impact on the resources in question? And, if that cumulative impact is likely to be significant, 2) would the contributions to that impact from the proposed project make a cumulatively considerable contribution to those cumulative impacts?

Table 3.0-1 identifies the primary pending and approved projects in the project vicinity that are considered in the cumulative analysis. A complete list of cumulative projects considered is included in Appendix G.

Table 3.0-1: Cumulative Projects List

Project Name and/or File #	Location*	Description
Pending Projects		
Gateway Crossings, PLN2016-12318 & 12321 *Project evaluated in this EIR*	1205 Coleman Avenue	1,400-1,600 dwelling units and 215,000 sf of commercial uses
PLN2015-11411	3069 Lawrence Expressway	333 multi-family units
PLN2015-11684, PLN2016-11686 & PLN2016-11687	2490, 2500 El Camino Real	332 residential, 66 senior residential units, a 306-room hotel with a 6,000 sf restaurant, and 205,197 sf of commercial space
International Swim Center (ISC) project, PLN2015-10939	909 Kiely Boulevard	171,650 sf community recreation center
Approved But Not Yet Fully Constructed/Occupied		
Coleman Highline	1125 Coleman Avenue	1,500,000 sf of office space and two hotels
BART Silicon Valley Phase II Extension Project	Adjacent to the project site to the south	Five mile long subway extension through downtown San José to Santa Clara Station at-grade, and a parking structure with 500 spaces on Brokaw Road
City Place Santa Clara, PLN2014-10554	5155, 5120 Stars And Stripes Drive	5,700 sf office, 1,100 sf retail, 1,360 sf multi-family units; 700 hotel rooms; 250,000 sf restaurant uses; 190,000 sf entertainment space

Table 3.0-1: Cumulative Projects List		
Project Name and/or File #	**Location***	**Description**
North San José Development Policy	North and west of I-880 and south of SR 237	16,000 dwelling units and 200,000 sf of commercial space
PLN2015-11507	3001 Tasman Drive	150,000 sf office building
PLN2015-11031, PLN2016-12283	3305 Kifer Road	45 townhomes and flats
PLN2016-12232	3375 Scott Boulevard	237,104 sf office building, and a four story parking structure with 14,000 sf of amenity building
Great America Theme Park Master Plan, PLN2014-10851	1 Great America Parkway	Park Master Plan with up to 100,000 sf of commercial space
PLN2013-09744,09752,09753,09754	2611, 2621, 2635, 2645, 2655 El Camino Real	183 multi-family units
Mission Town Center, PLN2015-10980 thru PLN2010983†	575 Benton Street	25,942 sf commercial space and 417 multi-family units
Mission College Master Plan	Mission College Boulevard	427,000 sf of commercial uses
PLN2008-07218, PLN2008-07220, PLN2008-07221	5010 Old Ironsides Drive	3,060,000 sf office/R&D
Calvary Southern Baptist Church, PLN2010-08087, CEQ2010-01109	3137 Forbes Avenue	14,000 sf church building
PLN2012-09224, PLN2012-09529, PLN2008-06880, PLN2007-02379, PLN2007-06551	2200 Lawson Lane	Increase building square footage from 516,000 to 613,800 sf
3000 Bowers Avenue Office, PLN2015-11247	3000 Bowers Avenue	A total of 150,000 sf of office buildings and 17,400 sf amenity building
PLN2013-09860	4800 Great America Parkway	171,000 sf office building
PLN2013-09665, PLN2013-0966	3515-3585 Monroe Street	825 residential units and 40,000 sf of retail
PLN2014-10256	2620 Augustine Drive	1,243,300 sf of office space and 125,000 sf of retail space
PLN2014-10201	3303 Scott Boulevard	78,000 sf office building
PLN2012-09351, PLN2013-10106, PLN2014-10542	1313 Franklin Street, 1052 Monroe Street, 1358 Benton Street	46 multi-family units and 16,000 sf of retail uses

Table 3.0-1: Cumulative Projects List		
Project Name and/or File #	**Location***	**Description**
PLN2014-10628	4090 Network Circle	Three-story and single story office and data center
Gateway Santa Clara, PLN2012-09542, PLN2012-09540	3700 El Camino Real	87,000 retail/commercial and 476 multi-family units
PLN2015-11204	2950 Lakeside Drive	188-room hotel
Santa Clara Square Mixed Use, PLN2015-10899, 10900,10901,10902,10904	2600 Augustine Drive & 3265 Scott Boulevard	2,000 rental housing units and 40,000 sf of retail
PLN2015-11384	3535 Garrett Drive	150,00 sf office building
PLN2013-10185	3033 Scott Boulevard	Expansion of activities at Muslim Community Association to include new high school student base and administrative offices
PLN2015-11053	3607 Kifer Road	199,460 sf office building
Pulte Homes, PLN2015-11152, PLN2017-12657	1525 Alviso Street	40 dwelling units
PLN2015-11274, PLN2015-11275	555 Reed Street, 2100-2160 De La Cruz Boulevard, 2000-2070 De La Cruz Boulevard	110,175 sf data center building
River of Life Church, PLN2015-11236	1777 Laurelwood Road	35,000 sf sanctuary structure
PLN2015-11586	3226 Scott Boulevard	230,500 sf office building
PLN2016-11402, PLN2016-11737	2041 Mission College Boulevard	24,000 sf retail space and 175-room hotel
PLN2016-11763, PLN2016-11764	3100-3200 Coronado Drive	245,000 sf office development
PLN2015-11361, PLN2015-11362	1890 El Camino Real	56 dwelling units
NVIDIA, PLN2008-07176 thru 07180, PLN2013-09673, PLN2013-09674	2600 and 2800 San Tomas Expressway, 2400 Condensa Street	1,200,000 sf of office and lab space
BAREC Project, PLN2003-03744, PLN2003-03745	90 North Winchester Boulevard	110 single-family units (completed and occupied) and 165 multi-family units (remaining to be built)
2350 Mission College Boulevard Office Retail, PLN2007-06433,	2350 Mission College Boulevard	300,000 sf of office space and 6,000 square feet of retail

Table 3.0-1: Cumulative Projects List		
Project Name and/or File #	**Location***	**Description**
PLN2012-09171, PLN2008-07654, PLN2013-09743, PLN2013-09780		
PLN2013-09805	2585 El Camino Real	60 dwelling units
PLN2012-09113, PLN2013-09978, PLN2013-09656	1460 Monroe Street	6726 sf of ground floor retail and 28 residential units
Recently Completed		
PLN2013-10184	5450 Great America Parkway	213,325 sf office building
Marriot Townplace Suites, PLN2010-08051	2875 Lakeside Drive	107-room hotel
Menlo Equities Office Park, PLN2011-08759	3333 Scott Boulevard	Expansion of 581,000 additional sf of office buildings for a total of 1,316,000 sf
Fairfield Development, PLN2007-06802, PLN2008-06920, PLN2009-07548	900 Kiely Boulevard	57 single-family units, 68 row houses, 116 townhouses/552 apartments
PLN2014-10754	750 Walsh Avenue	57,000 sf of industrial building space
PLN2012-09176, PLN2012-09208	3499 The Alameda	Six single-family units
PLN2013-09799, PLN2014-10416	45 Buckingham Drive	222 multi-family units
U-Haul and Self Storage, PLN2013-09776	2121 Laurelwood Road	Conversion & expansion of an existing commercial warehouse use to a self-storage facility with vehicle rental & outdoor storage
PLN2010-0817	3051 Homestead Road	Eight single-family units

Notes: sf = square feet

* All locations are in the City of Santa Clara except for the Coleman Highline project and North San José, which are located in the City of San José.

† The City Council certified an EIR and approved a General Plan Amendment, rezoning, and related approvals for the Irvine Company's "Mission Town Center" mixed-use residential development project at 575 Benton Street on February 23, 2016. Irvine Company subsequently canceled its plans to develop the property. Another developer, Prometheus Real Estate Group, has since filed an application to construct a similar project on the same site. The new project application filed (PLN2017-12489, PLN2017-12574, PLN2017-12575 & PLN2017-12387) is for 355 residential units and 22,108 sf of commercial uses.

For each environmental issue, cumulative impacts may occur over different geographic areas. For example, the project effects on air quality would combine with the effects of projects in the entire air basin, whereas noise impacts would primarily be localized to the surrounding area. In each cumulative analysis, the geographic area of impact is identified.

Consistency with Applicable Plans

The project's consistency with applicable plans (such as general plans, specific plans, and regional plans) is also discussed within this subsection pursuant to CEQA Guidelines Section 15125(d).

CONCLUSION

This subsection provides a summary of the project's impacts on the resource.

3.1 AESTHETICS

3.1.1 Environmental Setting

3.1.1.1 *Regulatory Framework*

State

Scenic Highways Program

The California Scenic Highway Program is managed by the California Department of Transportation (Caltrans). The program is intended to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. State laws governing the Scenic Highway Program are found in the Streets and Highway Code, Sections 260 through 263.8. There are no state-designated scenic highways in Santa Clara. State Route (SR) 280 from the San Mateo County line to SR 17, which includes segments in San José, is an eligible, but not officially designated, State Scenic Highway.

Local

Santa Clara General Plan

General Plan policies applicable to aesthetics include, but are not limited to, the following listed below.

Policies	Description
General Land Use	
5.3.1-P3	Support high quality design consistent with adopted design guidelines and the City's architectural review process.
5.3.1-P10	Provide opportunities for increased landscaping and trees in the community, including requirements for new development to provide street trees and a minimum 2:1 on- or off-site replacement for trees removed as part of the proposal to help increase the urban forest and minimize the heat island effect.
5.3.1-P28	Encourage undergrounding of new utility lines and utility equipment throughout the City.
Mixed Use Land Use	
5.3.4-P8	Encourage building heights of up to five stories in large mixed-use developments along arterial street frontages, with the potential for taller buildings north of the Caltrain corridor.
5.3.4-P10	Require parking to be substantially below-grade or in structures with active uses along streets.
5.3.4-P12	Prioritize pedestrian-oriented streetscape and building design in mixed-use development, including features such as wider sidewalks, street furniture, specialty planters, signage, public art, street trees, special paving materials, decorative awnings, enhanced entrances, colors, variety of materials, and textures and distinctive building massing and articulation.
Santa Clara Station Focus Area	
5.4.3-P9	Encourage streetscape design with street trees, wider sidewalks, pedestrian-oriented lighting, curb bulb-outs and special paving and/or striping within the Focus Area to emphasize accessibility.
5.4.3-P12	Minimize surface parking by requiring below-grade or structured parking facilities with active uses along street frontages.

City Code

The City Code includes regulations associated with protection of the City's visual character. The Code includes regulations for the maintenance of property or premises, to promote a sound and attractive community appearance that is in character with the City. The City Code also includes an Architectural Review process, as outlined in Zoning Ordinance Chapter 18.76. The Architectural Review process is intended to serve the following purposes:

- Encourage the orderly and harmonious appearance of structures and properties;
- Maintain the public health, safety, and welfare;
- Maintain property and improvement values throughout the City;
- Encourage the physical development of the City that is consistent with the General Plan and other City regulations; and
- Enhance the aesthetic appearance, functional relationships, neighborhood compatibility and excellent design quality.

No building permit shall be issued, and no structure, building, or sign shall be constructed or undergo exterior alternations until such plans and drawings have been approved by the Architectural Committee.

Architectural Committee Policies – Community Design Guidelines

The Architectural Committee reviews plans and drawings submitted for architectural review for design, aesthetic considerations, and consistency with zoning standards, generally prior to submittal for building permits. The Architectural Committee follows the City's Community Design Guidelines. The intent of these guidelines for architectural review is to provide a manual of consistent development standards in the interest of continued maintenance and enhancement of the high-quality living and working environment in the City.

3.1.1.2 *Existing Conditions*

Project Site

The project site is located within the Santa Clara Station Focus Area (see Figure 2.1-2), which is planned for redevelopment and intensification given its location near the Santa Clara Transit Station. The Santa Clara Station Focus Area is envisioned to redevelop with office, hotel, retail, and high-density residential uses. The project site is located within an urbanized area that is relatively flat in nature. Given the developed nature of the area, only intermittent views of the Diablo Range and Santa Cruz Mountains are available from the project site looking east and west, respectively.

Located at the southwest quadrant of the intersection of Coleman Avenue and Brokaw Road, the project site is at the northern end of a long block that includes 38-acres planned for redevelopment with approximately 1.5 million square feet of office space and two hotels in the City of San José (Coleman Highline project).

The project site was previously developed with several one-story R&D buildings totaling approximately 272,840 square feet, surface parking, and landscaping, which were recently demolished in late 2016/early 2017. The buildings and surface paving were demolished and landscaping were removed in order to better characterize the site's hazardous materials conditions. In total, 227 trees were removed with clearance of the site.

The former buildings were occupied by BAE systems until as recent as April 2016.[6] The project site is currently vacant and undeveloped and has minimal physical features. The project site is secured by five to 10-foot chain link fencing around the perimeter of the property. As shown in Photos 1 and 2, most of the fencing is screened, obscuring views of the project site from the surrounding public right-of-way. The project site consists of bare ground with some areas covered with ruderal vegetation. There are several tall mounds of aggregate and/or dirt on-site and electricity poles and overhead wires. An existing Groundwater Extraction and Treatment System (GWETS) is located on the western boundary of the site, which can be seen from Brokaw Road. Existing mature trees are located at the southeastern corner of the project site (refer to *Section 3.4 Biological Resources* for more information about the trees on-site).

Surrounding Area

On the west side of Coleman Avenue, the property adjacent to the south of the project site is currently developed with a large surface parking lot that is used for airport parking. This parking facility is obscured from public view by mature perimeter trees and a screened, chain link fence along the facility's frontage. The parking facility is part of the larger 38-acre Coleman Highline project site in the City of San José that is planned for approximately 1.5 million square feet of office uses and two hotels. The Coleman Highline buildings planned to be adjacent to the project site would be up to approximately 100 feet tall.

The retail development north of the project site, north of Brokaw Road, consists of two modern one-story commercial buildings with several business tenants and one big-box retail building (Costco) with an associated gasoline station. The retail development is setback from Coleman Avenue with perimeter landscaping and surface parking (see Photo 3). Behind the retail development at Coleman Avenue and Brokaw Road is a flat-roofed, one-story office/light industrial building with several rollup garage doors. This office/light industrial facility is secured by wrought iron fencing (see Photo 4). The office/light industrial building is setback from Brokaw Road with surface parking and a wide landscaping strip that includes mature trees.[7]

On the east side of Coleman Avenue, across from the project site, there are one- and two-story flat-roofed office buildings. The exterior of the office buildings primarily consist of brick, stucco, and window glass. Two older one-story restaurant buildings with wood siding and pitched roofs (House of Soul Food and Lillie Mae's House of Soul Food) are also located across Coleman Avenue east of the project site (see Photo 5). North of Brokaw Road on the east side of Coleman Avenue, there are older, flat-roofed one-story commercial/light industrial buildings with rollup garage doors (see Photo 6).

[6] Bergen, Brian. Personal communications with BAE Systems. February 28, 2017.
[7] This property is identified in the approved BART Extension project as a future BART parking garage.

PHOTO 1: View of the project site from Brokaw Road looking east.

PHOTO 2: View of the project site from Coleman Avenue looking west.

PHOTOS 1 AND 2

PHOTO 3: View of retail development at the northwestern quadrant of Coleman Avenue and Brokaw Road.

PHOTO 4: View of office/light industrial development on the north side of Brokaw Road from the project site.

PHOTO 5: View of a restaurant building on Coleman Avenue looking north.

PHOTO 6: View of the commercial/light industrial buildings at the northeast quadrant of Coleman Avenue and Brokaw Road.

PHOTOS 5 AND 6

Adjacent to the west of the project site is an unpaved area with large portable storage containers. This storage facility is secured by a chain link fence. This area is planned for the terminal station of the approved BART Silicon Valley Phase II Extension (BART Extension project) from Fremont to Santa Clara that includes a ground-level station with a below-ground concourse, and pedestrian access connecting the BART concourse level to the Santa Clara Caltrain plaza and Brokaw Road. The pedestrian connection would be provided via the newly constructed pedestrian and bicycle undercrossing located west of the portable storage container area and east of the UPRR tracks; which provides access from Brokaw Road to the Santa Clara Transit Station. A BART parking garage is planned across from the project site on the north side of Brokaw Road. The conceptual site plan for the planned BART Extension project is shown in Figure 3.1-1.

3.1.2 Aesthetic Impact

3.1.2.1 *Thresholds of Significance*

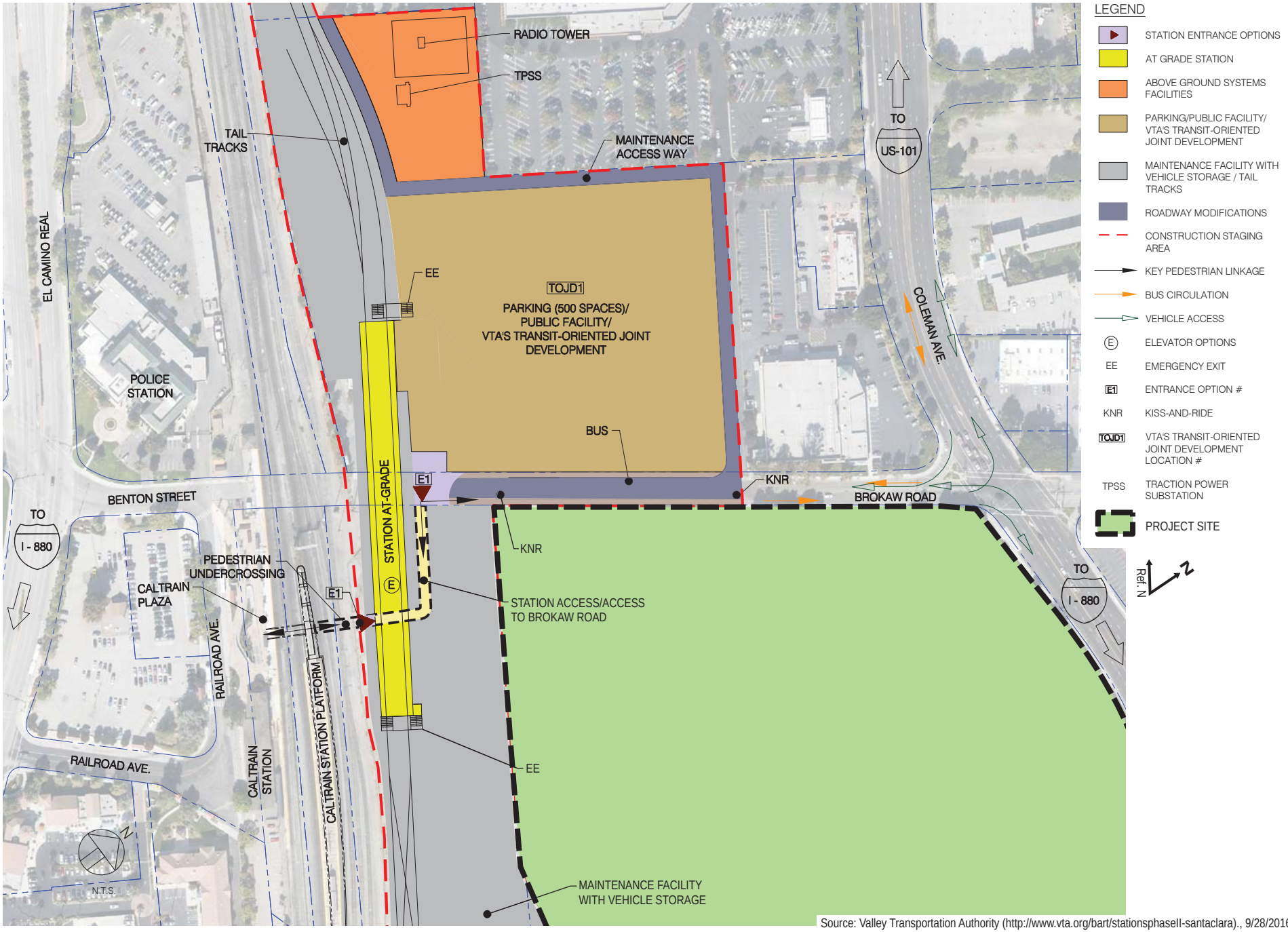
For the purposes of this EIR, an aesthetic impact is considered significant if the project would:

- 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;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

3.1.2.2 *Effect on Scenic Vistas*

A scenic vista is a view of an area that is visually or aesthetically pleasing. Aesthetic components of a scenic vista include scenic quality, sensitivity level, and view access. There are no scenic vistas within the City according to the certified 2010-2035 General Plan Integrated Final EIR (General Plan EIR).[8] For this reason, the development of the project site would not impact a scenic vista. **(No Impact)**

[8] City of Santa Clara. *2010-2035 General Plan Integrated Final Environmental Impact Report.* SCH# 2008092005. January 2011. Page 141.



Source: Valley Transportation Authority (http://www.vta.org/bart/stationsphaseII-santaclara)., 9/28/2016.

BART EXTENSION PROJECT - SANTA CLARA STATION SITE PLAN

FIGURE 3.1-1

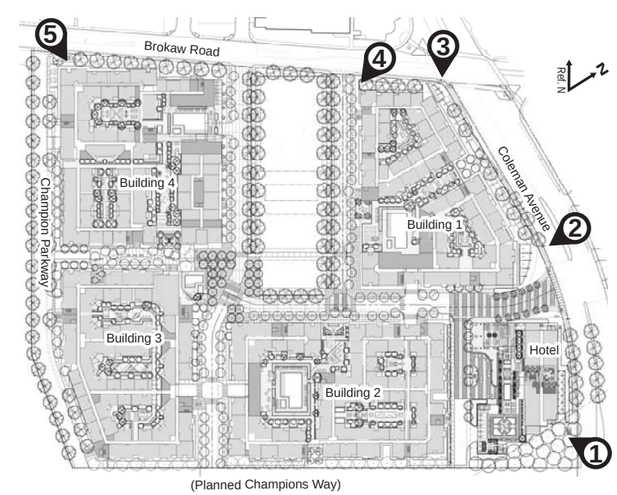
3.1.2.3 *Scenic Resources Impacts*

The project site does not contain rock outcroppings or historic buildings, nor is it located on a scenic highway. The General Plan EIR lists the Santa Cruz Mountains, Diablo Range, San Tomas Aquino Creek, and the Guadalupe River as "visual resources" within the City. However, existing views of the Santa Cruz Mountains and Diablo Range from the project area are currently limited and obscured by existing development and landscaping. Views of San Tomas Aquino Creek or Guadalupe River are not available from the project site. The project site, however, contains mature landscaped trees. As discussed in more detail in *Section 3.4 Biological Resources*, the project would result in the removal of the five existing trees on-site. The project shall replace all removed trees in accordance with General Plan Policy 5.3.1-P10, which requires a minimum replacement ratio of 2:1 (planted:removed). The project includes the planting of approximately 650 new trees on-site and in the public right-of-way fronting the project site in excess of the 2:1 minimum replacement requirement. For this reason, the project would reduce the visual impact from the removal of existing trees to a less than significant level. **(Less than Significant Impact)**

3.1.2.4 *Visual Character Impacts*

As discussed in *Section 2.2 Project Description*, the project would allow for the development of up to 1,600 dwelling units and up to 215,000 square feet of commercial uses on-site. Project buildings would be up to 150 feet tall and setback a minimum of 25 feet from Coleman Avenue and Brokaw Road.

As shown in the conceptual cross-sections (Figure 2.2-2), the project could consist of four, six to 13-story residential podium buildings located around the perimeter of the site and a nine-story hotel building on top of a podium with three levels of above ground parking (a total of 13 stories above grade) at the intersection of Coleman Avenue and Brokaw Road. The residential buildings under Option 2 would appear as six to 12 stories tall plus varied amounts of exposed semi-subterranean garage parking. Under Option 1 (1,400 units), Buildings 3 and 4 would be shorter, however, the building footprints and site layout are the same under either option. The hotel would be 10 stories above a podium with three levels of above ground parking and one level of semi-subterranean parking for a total of 13 stories in height above grade. Up to 15,000 square feet of ancillary commercial space would be located throughout the project site on the ground floor of the residential buildings, fronting the proposed interior driveways. The buildings would surround an approximately two-acre neighborhood park (see Figure 2.2-1). New landscaping, including trees, would be planted along the perimeter of the site, along the internal driveways, in the neighborhood park, within the common amenity areas at grade, and in each residential building. On-site amenities are detailed in *Section 2.2.1.3*. Renderings of the project from Coleman Avenue are shown on Figure 3.1-2.



Source: MVE Partners., 2/2/2018.

CONCEPTUAL RENDERINGS

FIGURE 3.1-2

Given that the project site is currently vacant and undeveloped, any development on-site would be a change compared to existing conditions. The project would be of greater mass and scale compared to the existing development in the immediate vicinity. The mass and scale of the project (51-100 du/ac and a minimum 2.0 FAR), however, would be largely consistent with the vision for the site in the City's General Plan Santa Clara Station Focus Area of a high-density development (up to 90 du/ac and up to 3.0 FAR). The project would also be of similar scale to the constructed Avaya Stadium and the Coleman Highline project under construction directly south of the project site in San José. In addition, the project is subject to the City's Architectural Review process that would ensure quality development that conforms to the City's Community Design Guidelines. For these reasons, while the project (under either option) would alter the existing visual character of the project site, it would not degrade the existing visual character or quality of the site and its surroundings. **(Less than Significant Impact)**

3.1.2.5 *Light and Glare Impacts*

The implementation of the project, which would include interior and exterior lighting, would result in new light sources in the area. Future development, however, would be subject to the City's Architectural Review process and would be reviewed for consistency with the City's Community Design Guidelines to avoid or reduce light and glare impacts to a less than significant level. During the Architectural Review process, building setbacks are reviewed to ensure adequate buffer is provided to avoid light spillover to adjacent properties. The City's Community Design Guidelines specify that lighting should be directed away or shielded from nearby properties and streets, lighting fixtures should generally not exceed the height of the building or a maximum height of 35 feet, and uplighting should be minimized or carefully designed to avoid distracting pedestrians and autos.

Glare can also be caused by sunlight or artificial light reflecting from finished surfaces such as window glass or other reflective materials. The primary building facade materials for the project include stucco, rainscreen, metal panels, cladding/metal cornice, enhanced glazing, slatted screen of engineered composite, and horizontal composite siding. The project would not be constructed with highly reflective materials, such as mirrored glass. In addition, the project does not propose any large, uninterrupted expansions of glass or other highly reflective materials. For these reasons, it is not anticipated that the project would result in significant glare impacts.

The implementation of the project under either option would be subject to the City's Architectural Review process and conformance with the Community Design Guidelines to reduce and/or avoid light and glare impacts to a less than significant level. **(Less than Significant Impact)**

3.1.2.6 *Consistency with Plans*

The project would be consistent with the applicable General Plan policies listed in *Section 3.1.1.1* by including new landscaping (including street trees), replacing removed trees at a minimum 2:1 ratio, providing structured parking, and incorporating pedestrian facilities throughout the project site.

3.1.2.7 *Cumulative Impacts*

The geographic area for cumulative aesthetic impacts is the immediate project vicinity. Because the existing views of the mountains are currently obstructed and obscured by existing development and landscaping in the area, the development of the proposed project, the adjacent Coleman Highline project, and the BART Extension project would not result in a significant cumulative impacts on scenic vistas. Each development project is required to replace removed trees, as applicable. For this reason, the cumulative projects would not result in a significant aesthetic impact to scenic resources.

The development of the project, adjacent Coleman Highline and BART Extension projects would change the visual character of the area; however, the redevelopment of the sites as proposed and/or planned are consistent with the cities of Santa Clara and San José's vision and General Plan designations for the area. For this reason, the cumulative projects in the immediate vicinity would not significantly degrade the character or quality of the area.

Future development on the project site and elsewhere in the City is subject to the City's Architectural Review process and Community Design Guidelines to avoid and/or reduce light and glare impacts. The development of Coleman Highline is subject to the City of San José's lighting policies and regulations, which would reduce its light and glare impacts to a less than significant level. For these reasons, it is not anticipated that the cumulative projects would result in significant cumulative light and glare impacts.

Based on the above discussion, the cumulative projects would not result in a significant cumulative aesthetics impact. Therefore, the project would not make a cumulatively considerable contribution towards a cumulative impact. **(Less than Significant Cumulative Impact)**

3.1.3 <u>Conclusion</u>

The proposed project (under either option), consistent with applicable General Plan policies, City Code 18.76, and Community Design Guidelines, would not result in significant aesthetic impacts. **(Less than Significant Impact)**

The proposed project (under either option) would not have a considerable contribution towards a significant cumulative aesthetic impact. **(Less than Significant Cumulative Impact)**

3.2 AGRICULTURAL AND FORESTRY RESOURCES

3.2.1 Environmental Setting

3.2.1.1 *Existing Conditions*

The project site is not designated as farmland or the subject of a Williamson Act contract.[9] According to the Santa Clara County Important Farmlands 2014 Map, the project site is designated as *Urban and Built-Up Land*.[10] *Urban and Built-Up Land* is defined as land with at least six structures per 10 acres and utilized for residential, institutional, industrial, commercial, landfill, golf course, and other urban-related purposes.

The project site and surrounding properties are designated for and developed (or planned to be developed) with urban uses. The project site was developed with several R&D buildings, which were recently demolished. The site is currently undeveloped. There are no agricultural or forest lands in the vicinity of the project site.

3.2.2 Agricultural and Forestry Resources Impacts

3.2.2.1 *Thresholds of Significance*

For the purposes of this EIR, an agricultural and forestry resource impact is considered significant if the project would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g));
- Result in a loss of forest land or conversion of forest land to non-forest use; or
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

As discussed above, the project site is not designated, used, or zoned for agricultural, forest, or timberland purposes. The project site is not the subject of a Williamson Act contract. The project site is located in an urban area surrounded by properties that are either developed or planned for development. For this reason, the development of the project site would not result in the conversion of agricultural land to non-agricultural uses or forest land to non-forest uses. For these reasons, the project (under either option) would not result in a significant impact to agriculture or forestry resources. **(No Impact)**

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[9] Agricultural lands in California can be protected from development and reserved for agricultural purposes or open-space conservation under the California Land Conservation Act, commonly known as the Williamson Act.
[10] California Department of Conservation. *Santa Clara County Important Farmland 2014 Map.* August 2016.

3.2.2.2 *Cumulative Impacts*

Because the project (under either option) would not impact agricultural or forestry resources, the project would not contribute to a significant cumulative impact to these resources. The project, therefore, would not have a cumulative impact on agricultural or forestry resources. (**No Cumulative Impact**)

3.2.3 <u>Conclusion</u>

The proposed project (under either option) would not impact agricultural and forestry resources. **(No Impact)**

The proposed project (under either option) would not have a considerable contribution towards a significant cumulative impact on agricultural and forestry resources. **(No Cumulative Impact)**

3.3 AIR QUALITY

The following discussion is based on an air quality assessment and supplemental memos prepared by *Illingworth & Rodkin, Inc.* in September, January, and March 2018, respectively. Copies of the report and memo can be found in Appendix B of this EIR.

3.3.1 Environmental Setting

3.3.1.1 *Background Information*

Ambient air quality standards have been established at both the state and federal level. The ambient air quality in a given area depends on the quantities of pollutants emitted within the area, transport of pollutants to and from surrounding areas, local and regional meteorological conditions, as well as the surrounding topography of the air basin. Air quality is described by the concentration of various pollutants in the atmosphere. Units of concentration are generally expressed in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$).

As required by the federal Clean Air Act, National Ambient Air Quality Standards (NAAQS) have been established for six major air pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter, including respirable particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$), sulfur oxides (So_x), and lead (Pb). Pursuant to the California Clean Air Act, the state has established the California Ambient Air Quality Standards (CAAQS). Both state and federal standards are summarized in Table 3.3-1. The "primary" standards have been established to protect the public health. The "secondary" standards are intended to protect the nation's welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation and other aspects of the general welfare. CAAQS are generally the same or more stringent than NAAQS. The Bay Area meets all ambient air quality standards with the exception of ground-level O_3, PM_{10}, and $PM_{2.5}$.

Air Pollutants of Concern

High O_3 levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_x). These precursor pollutants react under certain meteorological conditions to form high O_3 levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce O_3 levels. High O_3 levels aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Table 3.3-1: Ambient Air Quality Standards				
Pollutant	**Averaging Time**	**California Standards**	**National Standards[a]**	
			Primary[b,c]	**Secondary[b,d]**
Ozone (O_3)	8-hour	0.07 ppm	0.07 ppm	Same as primary
	1-hour	0.09 ppm	---	Same as primary
Carbon Monoxide (CO)	8-hour	9.0 ppm	9 ppm	---
	1-hour	20 ppm	35 ppm	---
Nitrogen Dioxide (NO_2)	Annual	0.030 ppm	0.053 ppm	Same as primary
	1-hour	0.18 ppm	0.100 ppm[e]	---
Sulfur Dioxide (SO_2)	Annual	---	---	---
	24-hour	0.04 ppm	---	---
	3-hour	---	---	0.5 ppm
	1-hour	0.25 ppm	0.075 ppm	---
Respirable Particulate Matter (PM_{10})	Annual	20 $\mu g/m^3$	---	Same as primary
	24-hour	50 $\mu g/m^3$	150 $\mu g/m^3$	Same as primary
Fine Particulate Matter ($PM_{2.5}$)	Annual	12 $\mu g/m^3$	12 $\mu g/m^3$	15 $\mu g/m^3$
	24-hour	---	35 $\mu g/m^3$	---
Lead (Pb)	Calendar quarter	---	1.5 $\mu g/m^3$	Same as primary
	30-day average	1.5 $\mu g/m^3$	---	---

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

[a] California standards for O_3, CO, sulfur dioxide, nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are not to be exceeded. National standards (other than O_3, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year.

[b] Concentrations are expressed first in units in which they were promulgated.

[c] Primary Standards: the levels of air quality necessary, with an adequate margin of safety to protect the public health. Each state mush attain the primary standards no later than three years after that state's implementation plan is approved by the USEPA.

[d] Secondary Standards: the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[e] The form of the 1-hour NO_2 standard is the three year average of the 98th percentile of the daily maximum 1-hour average concentration.

Toxic Air Contaminants

Toxic Air Contaminants (TACs) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue.

3.3.1.2 *Regulatory Framework*

Below is a summary of the federal, state, regional, and local regulations. Refer to Appendix B for additional details about the regulatory framework for air quality.

Federal

The US Environmental Protection Agency (USEPA) sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The USEPA also sets nationwide fuel standards, including diesel engine emission standards and diesel fuel requirements. The federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

State

To address the issue of diesel emissions in the state, CARB developed the Diesel Risk Reduction Plan (Diesel RRP) to reduce diesel particulate matter emissions. In addition to requiring more stringent emission standards for new on- and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel RRP have been approved and adopted, including the federal on- and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy duty diesel trucks that represent the bulk of DPM emissions from California highways. CARB has also adopted and implemented regulations to reduce DPM and NO_x emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers, backhoes, off-highway trucks, etc.).

Regional

The Bay Area Air Quality Management District (BAAQMD) is the agency primarily responsible for assuring that the federal and state ambient air quality standards are maintained in the San Francisco Bay Area. BAAQMD has permit authority over stationary sources, acts as the primary reviewing agency for environmental documents, and develops regulations that must be consistent with or more stringent than federal and state air quality laws and regulations.

Regional air quality management districts such as BAAQMD must prepare air quality plans specifying how state air quality standards would be met. BAAQMD's most recently adopted plan is the Bay Area 2017 Clean Air Plan (2017 CAP). The 2017 CAP defines an integrated, multi-pollutant control strategy to reduce emissions of particulate matter, TACs, O_3 precursors, and greenhouse gases (GHGs). The proposed control strategy is designed to complement efforts to improve air quality and protect the climate that are being implemented by partner agencies at the state, regional, and local scale. The control strategy encompasses 85 individual control measures that describe specific actions to reduce emissions of air and climate pollutants from the full range of emission sources and is based on the following four key priorities:

- Reduce emissions of criteria air pollutants and TACs from all key sources;
- Reduce emissions of "super-GHGs" such as methane, black carbon, and fluorinated gases;
- Decrease demand for fossil fuels (gasoline, diesel, and natural gas); and
- Decarbonize our energy system.

For stationary sources, the key elements in the control strategy are to:

- Decrease emissions of GHGs and criteria air pollutants through a region-wide strategy to reduce combustion and improve combustion efficiency at industrial facilities, beginning with the three largest sources of emissions: oil refineries, power plants, and cement plants;
- Reduce methane emissions from landfills, and from oil and natural gas production and distribution; and
- Reduce emissions of toxic air contaminants by adopting more stringent thresholds and methods for evaluating toxic risks at existing and new facilities.

For transportation, the key elements in the control strategy are to:

- Reduce motor vehicle travel by promoting transit, bicycling, walking, and ridesharing.
- Implement pricing measures to reduce travel demand;
- Direct new development to areas that are well-served by transit and conducive to bicycling and walking;
- Accelerate the widespread adoption of electric vehicles; and
- Promote the use of clean fuels and low- or zero- carbon technologies in trucks and heavy-duty equipment.

For buildings and energy, the key elements in the control strategy are to:

- Expand the production of low-carbon, renewable energy by promoting on-site technologies such as rooftop solar, wind, and ground-source heat pumps;
- Support the expansion of community choice energy programs throughout the Bay Area;
- Promote energy and water efficiency in both new and existing buildings; and

- Promote the switch from natural gas to electricity for space and water heating Bay Area buildings.

2017 CAP control measures applicable to the project include, but are not limited to, the following listed below.

Policies	Description
Stationary Source Control Measures	
SS20	Reducing public exposure to TACs from existing facilities through Draft Rule 11-18.
SS32	Reduce emissions of DPM and black carbon from backup generators through Draft Rule 11-18, resulting in reduced health risks to impacted individuals, and in climate protection benefits.

Local

Santa Clara General Plan

General Plan policies applicable to air quality include, but are not limited to, the following listed below.

Policies	Description
Stationary Source Control Measures	
5.10.2-P1	Support alternative transportation modes and efficient parking mechanisms to improve air quality.
5.10.2-P2	Encourage development patterns that reduce vehicle miles traveled and air pollution.
5.10.2-P3	Encourage implementation of technological advances that minimize public health hazards and reduce the generation of air pollutants.
5.10.2-P6	Require “Best Management Practices” for construction dust abatement.
Safety	
5.10.5-P34	Implement minimum setbacks of 500 feet from roadways with average daily trips of 100,000 or more and 100 feet from railroad tracks for new residential or other uses with sensitive receptors, unless a project-specific study identifies measures, such as site design, tiered landscaping, air filtration systems, and window design, to reduce exposure, demonstrating that the potential risks can be reduced to acceptable levels.
Transportation Demand Management	
5.8.5-P1	Require new development and City employees to implement transportation demand management programs that can include site-design measures, including preferred carpool and vanpool parking, enhanced pedestrian access, bicycle storage and recreational facilities.
5.8.5-P5	Encourage transportation demand management programs that provide incentives for the use of alternative travel modes to reduce the use of single-occupant vehicles.
5.8.5-P9	Promote transportation demand management programs that provide education, information and coordination to connect residents and employees with alternate transportation opportunities.

3.3.1.3 *Existing Conditions*

The project is located in Santa Clara County, which is in the San Francisco Bay Area Air Basin. The Bay Area is considered a non-attainment area for ground-level O_3 and $PM_{2.5}$ under both the federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM_{10} under the California Clean Air Act, but not the federal act. The area has attained both state and federal ambient air quality standards for CO.

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, churches, elder care facilities, elementary schools, and parks. A review of the project site location did not reveal any sensitive receptors within 1,000 feet of the project site.

3.3.2 <u>Air Quality Impacts</u>

3.3.2.1 *Thresholds of Significance*

For the purposes of this EIR, an air quality impact is considered significant if the project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for O_3 precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

BAAQMD adopted thresholds of significance to assist the review of projects under CEQA. These thresholds were designed to establish the level at which BAAQMD reports air pollution emissions would cause significant environmental impacts. The significance thresholds identified by BAAQMD and used in this analysis are summarized in Table 3.3-2.

As previously discussed in *Section 3.0*, in December 2015, the California Supreme Court issued an opinion in "CBIA vs. BAAQMD" holding that CEQA is primarily concerned with the impacts of a project on the environment and generally does not require agencies to analyze the impact of existing conditions on a project's future users or residents unless the project risks exacerbate those environmental hazards or risks that already exist. Nevertheless, the City has General Plan policies (refer to *Section 3.3.1.2*) that address existing conditions affecting a proposed project, which are discussed below as planning considerations.

Table 3.3-2: BAAQMD Air Quality Significance Thresholds			
Pollutant	**Construction Thresholds**	**Operational Thresholds**	
	Average Daily Emissions (pounds/day)	**Average Daily Emissions** (pounds/day)	**Annual Average Emissions** (tons/year)
Criteria Air Pollutants			
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards for Single Sources			
Excess Cancer Risk	>10 per one million		
Hazard Index	>1.0		
Incremental annual $PM_{2.5}$	>0.3 µg/m^3		
Health Risks and Hazards for Combined Sources (Cumulative from all sources within 1,000 foot zone of influence)			
Excess Cancer Risk	>100 per one million		
Hazard Index	>10.0		
Annual Average $PM_{2.5}$	>0.8 µg/m^3		
Notes: ROG = reactive organic gases, NO_x = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less, µm/m^3 = micrograms per cubic meter.			

3.3.2.2 *Cumulative Contribution to Non-Attainment Criteria Pollutant Emissions*

As discussed previously in *Section 3.3.1.3*, the Bay Area is considered a non-attainment area for ground-level O_3 and $PM_{2.5}$ under both the federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM_{10} under the California Clean Air Act. As part of an effort to attain and maintain ambient air quality standards for O_3 and PM_{10}, BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for O_3 precursor pollutants (ROG and NO_x), PM_{10}, and $PM_{2.5}$ and apply to both construction period and operational period impacts and are summarized in Table 3.3-2.

The California Emissions Estimator Model (CalEEMod) was used to predict emissions from project construction and operation at full buildout. Refer to Appendix B for more details regarding CalEEMod.

Construction Emissions

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit dirt/mud on local streets, which could be an additional source of airborne dust after it dries.

Construction period emissions were modeled based on equipment list and schedule information provided by the applicant. Refer to Appendix B for details about the modeling, data inputs, and assumptions. Table 3.3-3 summarizes the average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the project under Option 2[11] and shows the project's construction emissions would not exceed the BAAQMD thresholds of significance. Project construction emissions under Option 1 would be less but similar to that of Option 2. BAAQMD considers construction emission impacts that are below the thresholds of significance (such as those of the project) less than significant if Best Management Practices (BMPs) are implemented.

Table 3.3-3: Summary of Daily Project Construction Emissions

	ROG	**NO_X**	**PM_{10} Exhaust**	**$PM_{2.5}$ Exhaust**
	(pounds per day)			
Average Daily Emissions	24.8	45.5	1.9	1.8
BAAQMD Thresholds	*54*	*54*	*82*	*54*
Exceeds Threshold?	**No**	**No**	**No**	**No**

Impact AIR-1: The project (under either option) would result in significant construction air pollutant emissions without the implementation of BAAQMD's standard construction BMPs. **(Significant Impact)**

Mitigation Measures: The project proposes to implement the following standard BAAQMD construction BMPs to control dust and exhaust during construction:

MM AIR-1.1: During any construction period ground disturbance, the applicant shall ensure that the project contractor implements the following BAAQMD BMPs:

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

[11] To be conservative, the project's construction emissions also includes the emissions from the demolition of the previous buildings on-site.

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

- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- 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.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the construction firm regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

MM AIR-1.2: The project shall develop a plan demonstrating that the off-road equipment used on-site to construct the project would achieve a fleet-wide average 92 percent reduction in PM_{10} exhaust emissions or more. The plan shall include, but is not limited to, one or more of the following:

- All mobile diesel-powered off-road equipment larger than 25 horsepower and operating on the site for more than two days continuously shall meet, at a minimum, USEPA particulate matter emissions standards for Tier 4 engines or equivalent and include the use of equipment that includes CARB-certified Level 3 Diesel Particulate Filters.
- Use of alternatively-fueled equipment (i.e., non-diesel), such as electric, biodiesel, or liquefied petroleum gas for example, would meet this requirement.
- Other measures may be the use of added exhaust devices, or a combination of measures, provided that these measures are approved by the City and demonstrated to reduce community risk impacts to less than significant.

The project, with the implementation of the above mitigation measures, would reduce construction emissions to a less than significant level by controlling dust and exhaust, limiting exposed soil

surfaces, and reducing PM_{10} exhaust emissions from construction equipment. **(Less than Significant Impact with Mitigation Incorporated)**

Operational Emissions

Operational air emissions from the project were modeled and would be generated primarily from automobiles driven by future residents, employees, and customers. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are typical emissions from these types of uses. In addition, emissions from energy use, solid waste generation, water/wastewater use, and the proposed on-site emergency back-up generator were included in the modeling. Refer to Appendix B for more details about the modeling, data inputs, and assumptions.

Table 3.3-4 summarizes the project's estimated operational emissions under Option 2 and shows that Option 2's operational emissions of NO_x, PM_{10}, and $PM_{2.5}$ would be below BAAQMD significance thresholds but Option 2's operational emissions of ROG would exceed the BAAQMD significance threshold.

Operational emissions under Option 1 would be similar to Option 2; however, Option 1 would not result in ROG emissions above the BAAQMD significance thresholds. Option 1 would result in a net ROG emissions of 9.18 tons per year and 50.3 pounds per day, which are below the BAAQMD significance thresholds of 10 tons per year and 54 pounds per day. Like Option 2, Option 1 would have emissions of NO_x, PM_{10}, and $PM_{2.5}$ below the BAAQMD thresholds of significance.

Table 3.3-4: Summary of Option 2 Operational Air Emissions

Scenario	ROG	NO_X	PM_{10}	$PM_{2.5}$
Proposed Project (Option 2) Operational Emissions (tons/year)	11.78	10.09	9.92	2.85
Previous R&D Operational Emissions (tons/year)	1.56	1.62	1.62	0.46
Net Project (Option 2) Emissions (tons/year)	10.22	8.47	8.30	2.39
BAAQMD Thresholds (tons/year)	*10*	*10*	*15*	*10*
Exceed Threshold?	**Yes**	**No**	**No**	**No**
Net Project (Option 2) Emissions (pounds/day)	56.0	46.4	45.5	13.1
BAAQMD Thresholds (pounds/day)	*54*	*54*	*82*	*54*
Exceeds Threshold?	**Yes**	**No**	**No**	**No**

Impact AIR-2: The operation of the project (Option 2 only) would result in significant operational ROG emissions. **(Significant Impact)**

Mitigation Measures: For Option 2 only, the project proposes to implement the following mitigation measures to reduce operational criteria air pollutants:

MM AIR-2.1: The project shall develop and implement a VMT Reduction Plan that would reduce vehicle trips by 20 percent, half of which (a 10 percent reduction) shall be achieved with TDM measures.

MM AIR-2.2: The project shall use low volatile organic compound or VOC (i.e., ROG) coating, that are below current BAAQMD requirements (i.e., Regulation 8, Rule 3: Architectural Coatings), for at least 50 percent of all residential and nonresidential interior and exterior paints. This includes all architectural coatings applied during both construction and reapplications throughout the project's operational lifetime. At least 50 percent of coatings applied must meet a "super-compliant" VOC standard of less than 10 grams of VOC per liter of paint. For reapplication of coatings during the project's operational lifetime, the Declaration of Covenants, Conditions, and Restrictions shall contain a stipulation for low VOC coatings to be used.

The implementation of MM AIR-2.1 would reduce the number of net new project trips by a total of 20 percent. The net project trips for Option 2 in Table 3.17-5 (9,831 trips) account for a portion of the 20 percent reduction already. Since 80 percent of ROG emissions are associated with consumer product use and maintenance painting of individual units and buildings, total ROG emissions would only be reduced by two percent, reducing ROG emissions by 0.2 tons per year. MM AIR-2.2 would reduce ROG emissions from architectural coatings by about 40 percent. Architectural coatings make up about 11.5 percent of the project ROG emissions, so this would equate to a reduction of 4.6 percent of ROG emissions, reducing ROG emissions by 0.54 tons per year. The combination of MM-AIR 2.1 and MM AIR-2.2 would reduce ROG emissions by 0.73 tons per year. This would reduce the net project ROG emissions from 10.22 to 9.49 tons per year, or from 56.0 to 52.0 pounds per day. ROG emissions would be reduced below the annual and average daily thresholds for operational emissions. For these reasons, this impact would be less than significant with the implementation of the above mitigation measures. **(Less than Significant Impact with Mitigation Incorporated)**

3.3.2.3 *Effects on Air Quality Standards*

The discussion in *Section 3.3.2.2* above addresses cumulatively considerable net increases of criteria pollutant or precursors. The project would have a cumulatively considerable net increase in ROG emissions and those emissions were concluded to be significant unavoidable (refer to Impact AIR-2). At the local level, the project would not contribute substantially to existing or projected violations of O_3 or particulate matter standards. For these reasons, the project would not contribute substantially to existing or projected violations of standards for O_3 and particulate matter.

CO emissions from traffic generated by the project would be the pollutant of greatest concern at the local level. Congested intersections with a large volume of traffic have the greatest potential to cause high-localized concentrations of CO. Air pollutant monitoring data indicate that CO levels have been at healthy levels (i.e., below state and federal standards) in the Bay Area since the early 1990s. As a result, the region has been designated as attainment for the CO standard. The highest measured level

over any eight-hour averaging period in the Bay Area during the last three years is less than 3.0 ppm, compared to the ambient air quality standard of 9.0 ppm.

Based on the trip generation rates, the project under Option 2 would add approximately 1,326 peak hour trips and would not affect high-volume intersections that have the potential to result in exceedances of an ambient air quality standard for CO. BAAQMD screening guidance indicates that the project would have a less than significant impact with respect to CO levels if project traffic projections indicate traffic levels would not increase at any affected intersection to more than 44,000 vehicles per hour. Because cumulative traffic volumes at all intersections affected by the project would have less than 44,000 vehicles per hour, the project (under either option) would have a less than significant effect with respect to CO.

As discussed in *Section 3.3.2.2*, the project (under either option) would exceed the BAAQMD O_3 (specifically ROG) air quality standard (refer to Impact AIR-2).

The project would not violate other air quality standards (including those for NO_x and CO). **(Less than Significant Impact)**

3.3.2.4 *Exposure of Sensitive Receptors to Pollutant Concentrations*

Project impacts related to increased community risk can occur either by introducing a new sensitive receptor, such as a residential use, in proximity to an existing source of TACs or by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity.

Community health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors that are located within 1,000 feet of a project site. These sources include construction sites, freeways or highways, busy surface streets, and stationary sources identified by BAAQMD. Traffic on high volume roadways is a source of TAC emissions that may adversely affect sensitive receptors in proximity to the roadway. For local roadways, BAAQMD considers roadways with traffic volumes of over 10,000 vehicles per day to have a potentially significant impact on a proposed project.

Exposure of Sensitive Receptors from Project Construction Activity

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations, as discussed above in *Section 3.3.2.2*. Construction exhaust emissions may still pose community risks for sensitive receptors such as nearby residents. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A community risk assessment of the project construction activities under Option 2 was completed that evaluated potential health effects of sensitive receptors at nearby residences from construction emissions of DPM and $PM_{2.5}$.

Impacts to Off-Site Sensitive Receptors

A review of the project area did not reveal any sensitive receptors within 1,000 feet of the project site. For this reason, project construction activities would not result in significant health risk impacts to off-site sensitive receptors. **(Less than Significant Impact)**

Effects to On-Site Sensitive Receptors (Planning Consideration)

Since project construction would be phased, future on-site residences would be considered sensitive receptors for later phases of construction since it is assumed that phases of the project would become operational once constructed. Emissions and dispersion modeling was conducted to estimate the on-site DPM concentrations resulting from project construction of Option 2, so that lifetime cancer risks and non-cancer health effects could be evaluated. The results of the assessment indicate that the maximum excess cancer risk would be 122.6 in one million at the maximally exposed individual, which exceeds the BAAQMD threshold of 10 in one million. The maximum modeled annual $PM_{2.5}$ concentration is 1.4 $\mu g/m^3$ at the maximally exposed individual, which exceeds the BAAQMD significance threshold of 0.3 $\mu g/m^3$. The maximum computed Health Index based on DPM concentration would be 0.12, which is below the BAAQMD significance threshold of 1.0. The health risk under Option 1 would be similar to that of Option 2. Refer to Appendix B for additional details regarding the modeling, assumptions, and results.

Implementation of MM AIR-1.2 would result in a 92 percent or more reduction in PM_{10} exhaust emissions, thereby reducing the excess cancer risk to 9.8 in one million (which is below the BAAQMD significance threshold of 10 in one million). The implementation of MM AIR-1.1 would reduce $PM_{2.5}$ concentrations to 0.24 $\mu g/m^3$ at the maximally exposed individual, which is below the BAAQMD significance threshold of 0.3 $\mu g/m^3$.

Exposure of Sensitive Receptors to Project Emergency Generator Testing and Maintenance

The proposed project (under either option) includes one 100 kW diesel-fueled emergency backup generator. The generator would be operated for testing and maintenance purposes, with a maximum of 50 hours per year of non-emergency operation under normal conditions. During testing periods the engine would typically be run for less than one hour under light engine loads. The engines would be required to meet USEPA emission standards and consume commercially available California low sulfur diesel fuel.

The generator would require a permit from BAAQMD. As part of the BAAQMD permit requirements, an assessment that shows less than significant health risks from DPM exposure would be required. The risk assessment, prepared by BAAQMD, would have to show that cancer risks are less than 10 per million and that the project includes Best Available Toxics Control Technology, which would set limits for DPM emissions. Sources of air pollutant emissions complying with all applicable BAAQMD regulations generally are not be considered to have a significant air quality community risk impact.

Emissions from the testing and maintenance of the generators were calculated using CARB's OFFROAD emissions model for large compression-ignited engines above 25 horsepower. Results of generator modeling indicate average daily emissions of about 0.0004 pounds of DPM per day. Risk and $PM_{2.5}$ concentrations from a diesel generator of this size and average daily emissions were

then calculated based on BAAQMD's Risk and Hazards Emissions Screening Calculator (Beta Version).

Impacts to Off-Site Sensitive Receptors

There are no sensitive receptors within 1,000 feet of the project site. For this reason, the project emergency backup generator under either option would not have a significant health risk to off-site sensitive receptors due to generator testing. **(Less than Significant Impact)**

Effects to On-Site Sensitive Receptors

Results indicate that the project generator would result in an excess cancer risk of 2.4 per million, $PM_{2.5}$ concentration of less than 0.01 $\mu g/m^3$, and Health Index of <0.01 at the nearest on-site receptor, all of which would be below BAAQMD thresholds of significance. The project's emergency backup generator (under either option), therefore, would not result in substantial health risks to future on-site sensitive receptors.

Exposure of On-Site Sensitive Receptors from Existing TAC Sources

The project would introduce new sensitive receptors (residences) in proximity to nearby TAC sources, including El Camino Real, Coleman Avenue, multiple stationary sources, and nearby railroad traffic. The effect of existing TAC sources on future project receptors (residences) is analyzed to comply with the 2017 CAP goal of reducing population exposure and protecting public health in the Bay Area. Details regarding the source, health risk calculation, and assumptions are included in Appendix B.

The results of the community risk analysis from each source is summarized in Table 3.3-5. Table 3.3-5 shows that the health risk (cancer risk, $PM_{2.5}$ concentration, and Health Index) from El Camino Real and stationary sources is below BAAQMD significance thresholds. The cancer risk and $PM_{2.5}$ concentrations at the maximally exposed individual on-site (under either option) from Coleman Avenue and railroad traffic would exceed BAAQMD thresholds. The Health Index from these sources to on-site receptors is below the BAAQMD significance thresholds. To be conservative, the health risk analysis for railroad traffic assumes that Caltrain would not be electrified in the future. If the electrification of Caltrain were to be assumed, the cancer risk would be 9.2, which is below BAAQMD's threshold of significance. Refer to Appendix B for additional details regarding Caltrain service and plans for electrification.

In addition to the single sources identified above, the Norman Y. Mineta San José International Airport contains multiple TAC sources. Currently, there are no screening tools available to determine health risks from the Airport to future residents on-site.

Maintained ventilation systems with high-efficiency air filtration of the fresh air supply would reduce overall concentrations of DPM and $PM_{2.5}$ concentrations, substantially lowering cancer risk and annual $PM_{2.5}$ concentrations. These systems should be installed on either an individual unit-by-unit basis, with individual air intake and exhaust ducts ventilating each unit separately, or through a centralized building ventilation system.

Table 3.3-5: Maximum Health Risk to Proposed On-Site Sensitive Receptors			
Single Source	**Maximum Cancer Risk** (per million)	**Maximum $PM_{2.5}$ Concentration** ($\mu g/m^3$)	**Maximum Hazard Index**
El Camino Real	3.4	0.02	<0.01
Coleman Avenue	**21.2**	**0.7**	<0.03
Railroad Traffic	**14.6**	0.03	<0.01
Stationary Sources			
• Plant 19357 (facility located at 1250 Aviation Avenue)	3.7	0.0	<0.01
• Plant 15839 (emergency backup generator at 601 El Camino Real)	9.1	0.0	<0.01
• Plant G9614 (gas dispensing facility at 1601 Coleman Avenue)	4.0	0.0	<0.01
• Plant 10821 (facility located at 1210 Aviation Avenue)	1.5	0.0	<0.01
BAAQMD Threshold for Single Sources	*10*	*0.3*	*1.0*
Note: **Bold** text indicates levels above single source thresholds.			

The USEPA reports particle size removal efficiency for filters rated MERV13 of 90 percent for particles in the size range of one to three µm and less than 75 percent for particles 0.3 to one µm. BAAQMD's *Planning Healthy Places* guidance indicates that MERV13 air filtration devices installed on an HVAC air intake system can remove 80-90 percent of indoor particulate matter (greater than 0.3 microns in diameter).

As conditions of approval, the project shall implement the following measures to reduce the health risk from existing TAC sources to future occupants of the site under either project option:

- The final site layout shall locate operable windows and air intakes as far as possible and feasible from TAC sources.
- Install air filtration at all residential units. Air filtration devices shall be rated MERV13 or higher. To ensure adequate health protection to sensitive receptors, a ventilation system shall meet the following minimal design standards:
    a. A MERV13 or higher rating;
    b. At least one air exchange(s) per hour of fresh outside filtered air; and
    c. At least four air exchange(s) per hour recirculation.

    Alternately, at the approval of the City, equivalent control technology may be used if it is shown by a qualified air quality consultant or heating, ventilation, and air conditioning (HVAC) engineer that it would reduce risk below significance thresholds.
- Implement an ongoing maintenance plan for the building's HVAC air filtration system. Recognizing that emissions from air pollution sources are decreasing, the maintenance period shall last as long as significant excess cancer risk or annual $PM_{2.5}$ exposures are predicted.

Subsequent studies could be conducted by an air quality expert approved by the City to identify the ongoing need for the filtered ventilation systems as future information becomes available.

- Ensure that the lease agreement and other property documents (1) require cleaning, maintenance, and monitoring of the affected units for air flow leaks; (2) include information on the ventilation system to new owners and tenants; and (3) include provisions that fees associated with owning or leasing a unit(s) in the building include funds for cleaning, maintenance, monitoring, and replacements of the filters, as needed.
- Prior to building occupancy, an authorized air pollutant consultant or HVAC engineer shall verify the installation of all necessary measures to reduce TAC exposure.

A properly installed and operated ventilation system with MERV13 air filters would reduce $PM_{2.5}$ concentrations, including DPM, from mobile and stationary sources by 80 percent or greater indoors when compared to outdoors. The USEPA reports that people, on average, spend 90 percent of their time indoors. The overall effectiveness calculations take into effect time spent outdoors. Assuming two hours of outdoor exposure plus one hour of open windows (calculated as outdoor exposure) per day, the overall effectiveness of the MERV13 filtration systems would be 70 percent.

Implementation of the above recommended measures are estimated to reduce single-source cancer risk from Coleman Avenue to 6.4 in one million, and single-source cancer risk from railroad traffic to 4.4 in one million, both of which would be below the BAAQMD significance thresholds.

3.3.2.5 *Odors*

Examples of land uses that generate considerable odors includes wastewater treatment plants, landfills, and chemical plants. The project proposes residential and commercial uses on-site. It is not anticipated that the proposed uses would create objectionable odors. **(Less than Significant Impact)**

3.3.2.6 *Consistency with Plans*

2017 Clean Air Plan

The project supports the goals of the 2017 CAP of protecting public health and protecting the climate and is consistent with 2017 CAP control measures SS20 and SS32 by:

- Implementing mitigation measures to reduce criteria air pollutants during construction and operation,
- Evaluating health risk from the backup generator proposed on-site to nearby receptors,
- Reducing motor vehicle miles traveled by proposing a mixed-use project in proximity to existing/proposed/planned pedestrian, bicycle, and transit facilities,
- Including a TDM program that encourages automobile-alternative transportation, and
- Complying with applicable regulations that would result in energy and water efficiency including Title 24 and California Green Building Standards Code.

The project as proposed would not disrupt or hinder the implementation of applicable control measures. **(Less than Significant Impact)**

Santa Clara General Plan

The project is consistent with applicable General Plan policies regarding air quality by proposing high-density residential mixed-use near existing alternative transportation (which reduces vehicle miles traveled), implementing BMPs for construction dust abatement, evaluating and mitigating health risks impacts from the project to off-site sensitive receptors, identifying recommendations to reduce health risks to on-site receptors from existing sources, and implementing a TDM program.

3.3.2.7 *Cumulative Impacts*

By its very nature, air pollution is largely a cumulative impact. The geographic area for cumulative air quality impacts is the San Francisco Bay Area Air Basin. Past, present, and future development projects contribute to the region's adverse air quality impacts. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts.

Cumulative Air Pollutant Emissions

In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. As discussed above, the project (under either option) with the implementation of the identified mitigation measures (MM AIR-1.1, -1.2, -2.1 [Option 2 only], and -2.2 [Option 2 only]) would reduce the project's (cumulative) impact to air quality to a less than significant level. The project (under either option), therefore, would result in a less than significant cumulative air pollutant emissions impact. **(Less than Significant Cumulative Impact)**

Exposure of On-Site Sensitive Receptors to Cumulative Pollutant Concentrations (Planning Consideration)

As discussed above, the project site is affected by multiple sources of TACs. In addition, two nearby construction projects were identified that could occur simultaneously with the proposed project: the Mission Town Center project and the BART Extension project.[12] The construction of Phase III of the Coleman Highline project (which is within 1,000 feet of site) is speculative because the developer has not yet purchased the property for the Phase III development. For this reason, the construction of Phase III of the Coleman Highline project is not considered in this cumulative analysis.

Table 3.3-6 summarizes the health risk associated with each source affecting the project site. The sum of impacts from combined sources (i.e., sources within 1,000 feet of the project) would exceed the cumulative threshold for cancer risk. However, with implementation of mitigation measures MM AIR-1.1, MM AIR-1.2, and the recommended measures identified to reduce the health risk from

[12] The City Council certified an EIR and approved a General Plan Amendment, rezoning, and related approvals for the Irvine Company's "Mission Town Center" mixed-use residential development project at 575 Benton Street on February 23, 2016. Irvine Company subsequently canceled its plans to develop the property. Another developer, Prometheus Real Estate Group, has since filed an application to construct a similar project on the same site, and will be relying upon previously certified EIR for the project; as such, it is appropriate to consider the cumulative impacts of the project as approved, even though the original developer is no longer proceeding with the project.

existing TAC sources to future occupants of the site, the health risk at the project site to future on-site receptors would be reduced to below BAAQMD significance thresholds.

Odor

The project does not include land uses that would generate considerable odors. For this reason, the project would not have a considerable contribution to a significant cumulative odor impact. **(Less than Significant Cumulative Impact)**

Table 3.3-6: Cumulative Maximum Health Risk to Proposed On-Site Sensitive Receptors

Source	**Maximum Cancer Risk** (per million)	**Maximum $PM_{2.5}$ Concentration** ($\mu g/m^3$)	**Maximum Hazard Index**
Project Construction (Mitigated)	6.1	<0.3	<0.01
Mission Town Center Construction (Mitigated)	<2.7	<0.1	<0.01
BART Silicon Valley Phase II Construction (Mitigated)	<1.6	<0.1	<0.02
El Camino Real*	---	---	---
Coleman Avenue	2.1	0.1	<0.03
Railroad Traffic	<14.6	0.0	<0.01
Stationary Sources			
• Plant 19357 (facility located at 1250 Aviation Avenue)*	---	---	---
• Plant 15839 (emergency backup generator at 601 El Camino Real)	<9.1	0.0	<0.01
• Plant G9614 (gas dispensing facility at 1601 Coleman Avenue)*	---	---	---
• Plant 10821 (facility located at 1210 Aviation Avenue)*	---	---	---
Project Generator	<0.4	<0.01	<0.01
Cumulative Total (Mitigated)	**<36.2**	**<0.6**	**<0.09**
BAAQMD Threshold for Cumulative Sources	*>100*	*>0.8*	*>10.0*
Exceeds Threshold?	**No**	**No**	**No**

Note: * These sources are located over 1,000 feet from the construction maximally exposed individual and therefore, is not considered to be a cumulative source of health risk for the construction maximally exposed individual.

3.3.3 Conclusion

Impact AIR-1: The proposed project (under either option), with the implementation of mitigation measures MM AIR-1.1 and -1.2, would not result in significant construction air pollutant emissions. **(Less than Significant Impact with Mitigation Incorporated)**

Impact AIR-2: Option 2, with the implementation of mitigation measures MM AIR-2.1 and -2.2, would reduce Option 2's operational ROG emissions to a less than significant level. **(Less than Significant Impact Mitigation Incorporated)**

The proposed project would not result in other significant air quality impacts (i.e., obstruction of the CAP and creation of objectionable odors). **(Less than Significant Impact)**

The proposed project, with the implementation of MM AIR-1.1, -1.2, -2.1 (Option 2 only), and -2.2 (Option 2 only) would not result in significant cumulative air quality impacts. **(Less than Significant Cumulative Impact)**

3.4 BIOLOGICAL RESOURCES

3.4.1 Environmental Setting

3.4.1.1 *Regulatory Framework*

Federal and State

Special-Status Species

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

In addition to species listed under state and federal Endangered Species Acts, Section 15380(b) and (c) of the CEQA Guidelines provide that all potential rare or sensitive species, or habitats capable of supporting rare species, are considered for environmental review per the CEQA Guidelines. These may include plant species of concern in California listed by the California Native Plant Society and CDFW listed "Species of Special Concern."

Migratory Bird and Birds of Prey Protections

Federal and state laws also protect most bird species. The federal Migratory Bird Treaty Act (MBTA) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

Birds of prey, such as owls and hawks, are protected in California under provisions of the State Fish and Game Code. The code states that it is "unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFW.

Sensitive Habitats

Wetland and riparian habitats are considered sensitive habitats under CEQA. They are also afforded protection under applicable federal, state, and local regulations, and are generally subject to regulation, protection, or consideration by the US Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), CDFW, and/or the USFWS under provisions of the federal Clean Water Act (e.g., Sections 303, 304, 404) and State of California Porter-Cologne Water Quality Control Act. USEPA regulations, called for under Section 402 of the Clean Water Act, also include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge into waters of the United States (e.g., streams, lakes, bays, etc.).

Regional and Local

Santa Clara Valley Habitat Plan/Natural Community Conservation Plan

The Santa Clara Valley Habitat Plan/Natural Community Conservation Plan (Habitat Plan) covers an area of 519,506 acres, or approximately 62 percent of Santa Clara County. It was developed and adopted through a partnership between Santa Clara County, the cities of San José, Morgan Hill, and Gilroy, Santa Clara Valley Water District (SCVWD), VTA, USFWS, and CDFW. The Habitat Plan is intended to promote the recovery of endangered species and enhance ecological diversity and function, while accommodating planned growth on approximately 500,000 acres of southern Santa Clara County. The Santa Clara Valley Habitat Agency is responsible for implementing the plan.

The City of Santa Clara, where most of the project site is located, is not a member jurisdiction of Habitat Plan and, therefore, is not subject to the obligations imposed upon member agencies. However, the southeastern tip of the project site (approximately one acre) is within the City of San José and is subject to the Habitat Plan.

Santa Clara General Plan

General Plan policies applicable to biological resources include, but are not limited to, the following listed below.

Policies	Description
5.3.1-P10	Provide opportunities for increased landscaping and trees in the community, including requirements for new development to provide street trees and a minimum 2:1 on- or off-site replacement for trees removed as part of the proposal to help increase the urban forest and minimize the heat island effect.
5.10.1-P4	Protect all healthy cedars, redwoods, oaks, olives, bay laurel, and pepper trees of any size, and all other trees over 36 inches in circumference measured from 48 inches above-grade on private and public property, as well as in the public right-of-way.

3.4.1.2 *Existing Conditions*

The project site is located in an urbanized area. The project site was previously developed with several R&D buildings and surface parking, which have since been demolished and removed. As part of the demolition activities and to better characterize the existing hazardous materials conditions on-site, 227 trees were removed.

The project site is currently undeveloped. There are no sensitive habitats or wetlands on or adjacent to the site and, therefore, the presence of special-status species on-site is unlikely. The main biological resource on-site consists of five remaining trees along the southeastern portion of the project site. Arborist reports were completed for the site in February and March 2017. Copies of these reports are included in Appendix C of this EIR. A summary of tree diameter and conditions is provided in Table 3.4-1.

Table 3.4-1: Summary of Existing On-Site Trees

Tree ID#	**Common Name**	**Diameter** (inches)	**Condition**
533	Cork Oak	60	Good
535	Cork Oak	44	Good
536	Cork Oak	39	Good
706	Holly Oak (multi-stem)	22,18,16	Moderate
707	Holly Oak	36	Moderate

The southeastern tip of the project site (approximately one acre) is within the City of San José and is located within the Habitat Plan area. This portion of the site is designated as *Urban – Suburban*[13] in the Habitat Plan and subject to applicable fees including the burrowing owl fee. The remaining majority of the project site (approximately 23 acres) is located in the City of Santa Clara and is not located within the Habitat Plan area.

3.4.2 <u>Biological Resources Impacts</u>

3.4.2.1 *Thresholds of Significance*

For the purposes of this EIR, a biological resource impact is considered significant if the project would:

- 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, regulations or by the CDFW or USFWS;

[13] *Urban – Suburban* land comprises of areas where native vegetation has been cleared for development.

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

3.4.2.2 *Special-Status Species and Sensitive Habitats Impacts*

Given the urbanized nature of the project site and surrounding area, there are no sensitive habitats (such as riparian or wetlands) or special-status animal or plant species on or adjacent to the site. The project site is not used as a wildlife corridor or wildlife nursery site.

Nesting Birds

The project site, however, does include trees which could be used by nesting birds (including migratory birds and raptors). Nesting birds are protected under the MBTA, and are protected by the California Fish and Game Code 3503, 3503.5, and 2800. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes abandonment and/or loss of reproductive effort is considered a taking by CDFW. Any loss of fertile eggs, nesting raptors, or any activities resulting in nest abandonment would constitute a significant impact. Construction activities such as site grading that disturb a nesting bird or raptor on-site or immediately adjacent to the construction zone would constitute a significant impact.

Impact BIO-1: Project construction (under either option) could impact nesting birds on or adjacent to the site, if present. **(Significant Impact)**

Mitigation Measure: In compliance with federal and state regulations and protocol, the project proposes to implement the following mitigation measures, to reduce impacts to a less than significant level:

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

If it is not possible to schedule construction and tree removal between September and January, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure that no nests shall be disturbed during project implementation. This survey shall be completed no more than 14 days prior to the initiation of grading, tree removal, or other demolition or construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August).

During this survey, the ornithologist shall inspect all trees and other possible nesting habitats within and immediately adjacent to the construction area for nests. If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist, in consultation with CDFW, shall determine the extent of a construction-free buffer zone to be established around the nest to ensure that nests of bird species protected by the MBTA or Fish and Game Code shall not be disturbed during project construction.

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

The project (under either option), with implementation of the above mitigation measures, would reduce impacts to nesting birds (if present) by avoiding construction during nesting bird season or completing pre-construction nesting bird surveys to minimize and/or avoid impacts to nesting birds. **(Less than Significant Impact with Mitigation Incorporated)**

Bird Strikes

The project would introduce buildings on the project site up to 150 feet tall. Injury or death to birds could result from collisions with buildings due to transparent or reflective glass and from improper lighting at the project site, which could misdirect or confuse birds during flight. As a condition of approval, the project shall implement the following safeguards:

- The project shall prepare and submit a plan to implement bird-safe design standards into project buildings and lighting design to minimize hazards to birds. These specific standards shall include the following to minimize hazards to birds:
    - Reduce large areas of transparent or reflective glass.
    - Locate water features and other bird habitat away from building exteriors to reduce reflection.
    - Reduce or eliminate the visibility of landscaped areas behind glass.
    - To the extent consistent with the normal and expected operations of the residential and commercial uses of the project, take appropriate measures to avoid use of unnecessary lighting at night, especially during bird migration season (February through May and August through November) through the installation of motion-sensor lighting, automatic light shut-off mechanisms, downward-facing exterior light fixtures, or other effective measures to the extent possible.

The project (under either option), with implementation of the above condition of approval, would reduce the potential for bird strikes by incorporating bird-safe design standards. **(Less than Significant Impact)**

3.4.2.3 *Impacts to Trees*

The development of the project under either option would require the removal of all the existing trees on-site. The project, however, would plant 650 trees, shrubs, and groundcover as part of the proposed development. The new landscaping would be planted around the project site perimeter on-site, along pedestrian walkways throughout the site, in the podium courtyards of the proposed residential buildings, and within the park strips in the public right-of-way fronting the project site (refer to Figure 2.2-1).

General Plan Policy 5.3.1-P10 requires all removed trees to be replaced at a 2:1 (planted:removed) ratio. Under existing conditions, the removal of five trees would requires the planting of 10 new trees. Taking into consideration the previous removal of 227 trees during previous demolition activities, the removal of 232 trees (227 previously removed trees + five existing trees = 232 trees) would require the planting of 464 new trees. The project proposes to plant 650 new trees, which exceeds the City's tree replacement ratio.[14] For this reason, the project under either option, would be consistent with the City's policy regarding tree removal and not result in significant impacts to trees. **(Less than Significant Impact)**

3.4.2.4 *Consistency with Plans*

Habitat Plan

The southeastern tip of the project site is located in San José and is subject to the Habitat Plan and shall pay all applicable Habitat Plan fees, including the burrowing owl fee. For this reason, the project (under either option) is consistent with the Habitat Plan. **(Less Than Significant Impact)**

Santa Clara General Plan

Given the project's design and construction, the five existing trees on-site would need to be removed in order to make the proposed improvements on-site. The project would remove a total of five City protected trees (over 36-inches in circumference measured from 48-inches above-grade). However, the proposed project would be consistent with the City's General Policy 5.3.1-P10 by exceeding the tree replacement ratio of 2:1 ratio. For this reason, the project (under either option) is generally consistent with the applicable General Plan policies.

3.4.2.5 *Cumulative Impacts*

The geographic area for cumulative biological resources impacts includes the project site and its surrounding area. The project site is located within an urbanized area and does not contain sensitive habitat.

The development of the project would impact nesting birds (if present during construction) and trees. Other past, present, and pending development projects could also impact nesting birds (if present during construction) and trees. Cumulatively, the proposed project and other development projects in the area could result in a significant cumulative impact to these biological resources. Each

[14] The removal of five trees and the planting of 650 new trees results in a tree replacement ratio of 130:1. The removal of 232 trees and the planting of 650 new trees results in a tree replacement ratio of 2.8:1.

development project, however, is subject to federal and state regulations that protect nesting birds and the City's General Plan Policy requiring the replacement of trees removed that would avoid and/or reduce the cumulative impact to nesting birds and trees to a less than significant level. In addition, the portion of the project that is subject to the Habitat Plan shall pay all applicable fees to reduce its contribution to the cumulative impacts to species covered by the Habitat Plan to a less than significant level. For these reasons, the project would not have a considerable contribution to a significant cumulative biological resources impact. **(Less than Significant Cumulative Impact)**

3.4.3 Conclusion

Impact BIO-1: The proposed project (under either option), with the implementation of mitigation measures MM BIO-1, would result in a less than significant impact to nesting birds. **(Less than Significant Impact with Mitigation Incorporated)**

The proposed project (under either option), with the planting of new replacement trees at a minimum ratio of 2:1, would not result in other significant biological resources impacts (i.e., significant impacts to sensitive habitats, wildlife corridors, and the Habitat Plan. **(Less than Significant Impact)**

The proposed project (under either option) would not have a considerable contribution towards a significant cumulative biological resources impact. **(Less than Significant Cumulative Impact)**

3.5 CULTURAL RESOURCES

The following discussion is based on a cultural resources report prepared by *Holman & Associates* in April 2016. A copy of the report is on file with the City.

3.5.1 Environmental Setting

3.5.1.1 *Regulatory Framework*

Federal

National Historic Preservation Act

The National Register of Historic Places (NRHP), established under the National Historic Preservation Act, is a comprehensive inventory of known historic resources throughout the United States. The NRHP is administered by the National Park Service and includes buildings, structures, sites, objects and districts that possess historic, architectural, engineering, archaeological or cultural significance. CEQA requires evaluation of project effects on properties that are listed in or eligible for listing in the NRHP.

State

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is a guide to cultural resources that must be considered when a government agency undertakes a discretionary action subject to CEQA. The CRHR aids government agencies in identifying, evaluating, and protecting California's historical resources, and indicates which properties are to be protected from substantial adverse change (Public Resources Code, Section 5024.1[a]). The CRHR is administered through the State Office of Historic Preservation (SHPO), which is part of the California State Parks system. A historic resource listed in, or formally determined to be eligible for listing in, the NRHP is, by definition, included in the California Register (Public Resources Code Section 5024.1(d)(1)).[15]

State Regulations Regarding Cultural and Paleontological Resources

Archaeological, paleontological, and historical sites are protected by a number of state policies and regulations under the California Public Resources Code, California Code of Regulations (Title 14 Section 1427), and California Health and Safety Code. California Public Resources Code Sections 5097.9-5097.991 require notification of discoveries of Native American remains and provides for the treatment and disposition of human remains and associated grave goods.

Both state law and County of Santa Clara County Code (Sections B6-19 and B6-20) require that the Santa Clara County Coroner be notified if cultural remains are found on a site. If the Coroner determines the remains are those of Native Americans, the Native American Heritage Commission (NAHC) and a "most likely descendant" must also be notified.

[15] Refer to Public Resources Code Section 5024.1(d)(1)

Assembly Bill 52 – Tribal Cultural Resources

A tribal cultural resource can be a site, feature, place, or 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. It also must be either on or eligible for the CRHR, a local historic register, or the lead agency, at its discretion, chooses to treat the resource as a tribal cultural resource. Assembly Bill 52 (AB 52), which amends the Public Resources Code, requires lead agencies to participate in formal consultations with California Native American tribes during the CEQA process, if requested by any tribe, to identify tribal cultural resources that may be subject to significant impacts by a project. Where a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document must discuss the impact and whether feasible alternatives or mitigation measures could avoid or substantially lessen the impact. Consultation is required until the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource or when it is concluded that mutual agreement cannot be reached.

Senate Bill 18

The intent of Senate Bill 18 (SB 18) is to aid in the protection of traditional tribal cultural places through local land use planning by requiring city governments to consult with California Native American tribes on projects which include adoption or amendment of general plans (defined in Government Code Section 65300 et seq.) and specific plans (defined in Government Code Section 65450 et seq.). SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process.

Paleontological Resources Regulations

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

Local

Santa Clara General Plan

General Plan policies applicable to cultural resources include, but are not limited to, the following listed below.

Policies	Description
5.6.3-P1	Require that new development avoid or reduce potential impacts to archaeological, paleontological and cultural resources.
5.6.3-P4	Require that a qualified paleontologist/archaeologist monitor all grading and/or excavation if there is a potential to affect archeological or paleontological resources, including sites within 500 feet of natural water courses and the Old Quad neighborhood.
5.6.3-P5	In the event that archeological/paleontological resources are discovered, require that work be suspended until the significance of the find and recommended actions are determined by a qualified archeologist/paleontologist.
5.6.3-P6	In the event that human remains are discovered, work with the appropriate Native American representative and follow the procedures set forth in State Law

3.5.1.2 *Existing Conditions*

The project site is currently undeveloped. There are no structures on-site. The project site was previously developed with several R&D buildings, surface parking lots, and landscaping, which have been recently demolished and removed.

Historic and Archaeological Resources

Historic resources are buildings, structures, objects, sites, and districts of significance in history, archaeology, architecture, and culture. These resources include intact structures of any type that are 50 years or more of age and are sometimes called the "built environment." Archaeological resources are the physical remains of past human activities that can be either prehistoric or historic.

The project site has been the subject of several cultural resources investigations with overlapping boundaries and is considered to have low potential for historic-era deposits and a moderate potential for buried Native American sites.

The project site is not listed on the NRHP or CRHR.[16] The project site is not identified on the City's Architecturally or Historically Significant Properties list.[17] The project site is within the architectural resources boundaries associated with the larger Food Machinery Corporation/later Food Machinery and Chemical Corporation (FMC) property whose canning operations were redirected during World War II to manufacture amphibious vehicles for military needs. It was then operated by United

[16] Source: 1) State of California, Office of Historic Preservation. "Santa Clara." Accessed: March 23, 2017. Available at: http://ohp.parks.ca.gov/?page_id=21522..2) National Parks Service. "National Register of Historic Places." Accessed: March 23, 2017. Available at: https://www.nps.gov/nr/research/.
[17] City of Santa Clara. "Historic Properties." Accessed: March 23, 2017. Available at: http://santaclaraca.gov/about/city-history/santa-clara-s-historic-properties-story-map/historic-properties.

Defense and thereafter BAE Systems and was engaged in the development, delivery, and support of advanced defense, security, and aerospace systems. All buildings associated with the previous uses, however, no longer exist. Prior to FMC, the project site was part of a 645-acre ranch.

There are two Native American resources recorded within a quarter mile of the project site. Archaeological monitoring for a small portion of the project site along with adjacent lands during remediation efforts found no Native American or historic-era archaeological materials or deposits.

Paleontological Resources

The project site is underlain by Holocene basin deposits.[18] Geologic units of Holocene age are generally not considered sensitive for paleontological resources because biological remains younger than 10,000 years are not usually considered fossils; however, these recent sediments overlie sediments of older Pleistocene sediments with high potential to contain paleontological resources.[19] These older sediments, often found at depths of 10 feet or more below the ground surface, have yielded the fossil remains of plants and extinct terrestrial Pleistocene vertebrates.

3.5.2 Cultural Resources Impacts

3.5.2.1 *Thresholds of Significance*

For the purposes of this EIR, a cultural resources impact is considered significant if the project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.
- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
    - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or
    - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying this criteria, the significance of the resource to a California Native American tribe shall be considered.

[18] City of Santa Clara. *Integrated Final EIR for the City of Santa Clara Draft 2010-2035 General Plan*. January 2011. Figure 4.5-1.
[19] City of Santa Clara. *Integrated Final EIR for the City of Santa Clara Draft 2010-2035 General Plan*. January 2011. Page 323.

3.5.2.2 *Historic Resources Impacts*

The project site is not listed on the NRHP, CRHR, or the City's Architecturally or Significant Properties list. There are no buildings on the project site. For these reasons, the project (under either option) would not impact historic resources. **(No Impact)**

3.5.2.3 *Archaeological Resources Impacts*

As discussed in *Section 3.5.1.2*, the project site has a low potential for historic-era deposits and a moderate potential for buried Native American sites. Project construction (under either option) includes grading and excavation of up to a depth of six feet that could impact unknown, buried cultural resources.

Impact CUL-1: Unknown buried archaeological resources could be impacted during project construction (under either option). **(Significant Impact)**

Mitigation Measures: The project (under either option) proposes to implement the following mitigation measures to avoid and/or reduce significant impacts to unknown archaeological resources to a less than significant level:

MM CUL-1.1: Archaeological monitoring by a qualified prehistoric archaeologist shall be completed during soil remediation and presence/absence exploration with a backhoe shall be completed where safe, undisturbed, and possible prior to construction activities. If any potentially CRHR eligible resources are identified, they should be briefly documented, photographed, mapped, and tarped before the area is backfilled. If resources are identified, a research design and treatment plan shall be completed and implemented by the archaeologist and shall include hand excavating the feature(s) or deposits prior to building construction.

MM CUL-1.2: As part of the safety meeting on the first day of construction/ground disturbing activities, the Archaeological Monitor shall brief construction workers on the role and responsibility of the Archaeological Monitor and procedures to follow in the event cultural resources are discovered. The prime construction contractor and any other subcontractors shall be informed of the legal and/or regulatory implications of knowingly destroying cultural resources or removing artifacts, human remains, and other cultural materials from the study area. The archaeological monitor has the authority to stop or redirect construction/remediation work to other locations to explore for potential features.

MM CUL-1.3: In the event that human remains are discovered during excavation and/or grading of the site, all activity within a 50-foot radius of the find shall be stopped. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission NAHC immediately. Once NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines.

The project (under either option), with the implementation of the above mitigation measures would avoid and/or reduce significant impacts to unknown buried archaeological resources to a less than significant level by completing a presence/absence exploration and/or monitoring excavation activities and following procedures to protect resources if found. **(Less than Significant Impact with Mitigation Incorporated)**

3.5.2.4 *Paleontological Resources Impacts*

Ground disturbing activities of 10 feet in depth or more at the site has the potential to impact undiscovered paleontological resources. The project would require ground disturbing activities of up to six feet below ground. For this reason, the project (under either option) is not anticipated to impact paleontological resources. **(No Impact)**

3.5.2.5 *Tribal Cultural Resource Impacts*

Local Native American tribes were contacted in accordance with AB 52 and no tribes responded as having tribal cultural resources (e.g., sites, features, places, cultural landscapes, sacred places, and/or objects with cultural value) on-site. In addition, a Sacred Lands file search was completed for the project site by the NAHC. The search provided negative results.[20] For this reason, the project (under either option) would not impact tribal cultural resources. **(No Impact)**

3.5.2.6 *Consistency with Plans*

The proposed project (under either option) is consistent with applicable General Plan policies listed in *Section 3.5.1.1* by implementing mitigation measures which include archaeological monitoring, suspending work when a find is discovered, and complying with state law if human remains are found.

3.5.2.7 *Cumulative Impacts*

The proposed project (under either option) would not impact historic or paleontological resources, therefore, the project would not contribute to a significant cumulative impact to historic or paleontological resources. (**No Cumulative Impact)**

The geographic area for cumulative impacts to archaeological resources for the proposed project is the immediate project area. The development of cumulative projects in proximity to the project site (i.e., Coleman Highline and BART Extension projects), in conjunction with the development of the proposed project, could significantly impact unknown buried archaeological resources. The cumulative projects are all subject to CEQA and are required to comply with the federal, state, and local regulations put in place to protect cultural resources. For this reason, the cumulative projects (including the proposed project under either option) would not result in a significant impact to archaeological resources. **(Less than Significant Cumulative Impact)**

[20] Native American Heritage Commission. Re: Gateway Crossings, Santa Clara County. August 22, 2017.

3.5.3 Conclusion

Impact CUL-1: The proposed project (under either option), with the implementation of mitigation measures MM CUL-1.1 through CUL-1.3, would result in a less than significant impact on cultural resources. **(Less than Significant Impact with Mitigation Incorporated)**

The proposed project (under either option) would not result in other significant cultural resources impacts (i.e., impacts to historic and tribal cultural resources). **(Less than Significant Impact)**

The proposed project (under either option) would not have a considerable contribution towards a significant cumulative impact to cultural resources. **(Less than Significant Cumulative Impact)**

3.6 ENERGY

3.6.1 Environmental Setting

3.6.1.1 *Background Information*

Energy consumption is analyzed in an EIR because of the environmental impacts associated with its production and usage. Such impacts include the depletion of nonrenewable resources (e.g., oil, natural gas, coal, etc.) and emissions of pollutants during both the production and consumption phases of energy use.

Energy usage is typically quantified using British thermal units (Btu).[21] As points of reference, the approximate amount of energy contained in a gallon of gasoline, a cubic foot of natural gas, and a kilowatt hour (kWh) of electricity are 123,000 Btu, 1,000 Btu, and 3,400 Btu respectively. Utility providers measure gas usage in therms. One therm is approximately equal to 100,000 Btu.

Electrical energy is expressed in units of kilowatts (kW) and kilowatt hour (kWh). One kW, a measurement of power (energy used over time), equals one thousand joules[22] per second. A kWh is a measurement of energy. If run for one hour, a 1,000 watt (one kW) hair dryer would use one kWh of electrical energy. Other measurements of electrical energy include the megawatt (1,000 kW) and the gigawatt (1,000,000 kW).

Total energy usage in California was approximately 7,300 trillion Btu in the year 2015 (the most recent year for which this specific data was available).[23] The breakdown by sector was approximately 18 percent for residential uses, 19 percent for commercial uses, 24 percent for industrial uses, and 39 percent for transportation.[24]

3.6.1.2 *Regulatory Framework*

Federal

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

[21] A Btu is the amount of energy that is required to raise the temperature of one pound of water by one degree Fahrenheit.
[22] As defined by the International Bureau of Weights and Measures, the joule is a unit of energy or work. One joule equals the work done when one unit of force (a Newton) moves through a distance of one meter in the direction of the force.
[23] United States Energy Information Administration (EIA). "California Energy Consumption Estimates 2015." Accessed July 13, 2017. Available at: http://www.eia.gov/state/?sid=CA#tabs-2.
[24] EIA. "California Energy Consumption by End-Use Sector, 2015." Accessed July 14, 2017. Available at: http://www.eia.gov/beta/state/seds/data.cfm?incfile=/state/seds/sep_sum/html/sum_btu_1.html&sid=CA.

State

Renewable Energy Standards

In 2002, California established its Renewables Portfolio Standard (RPS) Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2010. In 2006, California's 20 percent by 2010 RPS goal was codified under SB 107. Under the provisions of SB 107, investor-owned utilities were required to generate 20 percent of their retail electricity using qualified renewable energy technologies by the end of 2010. In 2008, Executive Order S-14-08 was signed into law and required that retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Silicon Valley Power is the electricity provider to the project site. Silicon Valley Power's 2014 electricity mix was 36.3 percent renewable.[25]

In October 2015, Governor Brown signed SB 350 to codify California's climate and clean energy goals. A key provision of SB 350 for retail sellers and publicly owned utilities, requires them to procure 50 percent of the state's electricity from renewable sources by 2030.

Building Codes

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the California Code of Regulations (Title 24), was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately every three years, and the 2016 Title 24 updates went into effect on January 1, 2017.[26] Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments.[27]

In January 2010, the state adopted the California Green Building Standards Code (CALGreen), which established mandatory green building standards for buildings in California. CALGreen was also updated and went in to effect on January 1, 2017. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality.

[25] Silicon Valley Power. "About SVP." Accessed: May 30, 2017. Available at: http://www.siliconvalleypower.com/svp-and-community/about-svp.
[26] California Building Standards Commission. "Welcome to the California Building Standards Commission." Accessed: February 6, 2017. Available at: http://www.bsc.ca.gov/.
[27] California Energy Commission (CEC). Accessed February 6, 2017. "2016 Building Energy Efficiency Standards." Available at: http://www.energy.ca.gov/title24/2016standards/index.html.

Local

Santa Clara General Plan

General Plan policies applicable to energy include, but are not limited to, the following listed below.

Policies	Description
Air Quality	
5.10.2-P1	Support alternative transportation modes and efficient parking mechanisms to improve air quality.
Air Quality	
5.10.2-P2	Encourage development patterns that reduce vehicle miles traveled and air pollution.
Energy	
5.10.3-P1	Promote the use of renewable energy resources, conservation and recycling programs.
5.10.3-P2	Transition away from using coal as an energy source to renewable resources by replacing coal in Silicon Valley Power's portfolio, exploring City owned property for renewable energy projects, developing solar projects, and incentivizing solar projects for residents and businesses, consistent with the CAP.
5.10.3-P3	Maximize the efficient use of energy throughout the community by achieving adopted electricity efficiency targets and promoting natural gas efficiency, consistent with the CAP. .
5.10.3-P4	Encourage new development to incorporate sustainable building design, site planning and construction, including encouraging solar opportunities.
5.10.3-P5	Reduce energy consumption through sustainable construction practices, materials, and recycling.
5.10.3-P6	Promote sustainable buildings and land planning for all new development, including programs that reduce energy and water consumption in new development.
General Mobility and Transportation	
5.8.1-P4	Expand transportation options that improve alternate modes that reduce GHG emissions.
Santa Clara Station Focus Area Sustainability Policies	
5.4.3-P2	Maximize residential development within walking distance of the Station, particularly on the northeast side of the Caltrain corridor.
5.4.3-P6	Provide pedestrian oriented retail uses to serve new residential development, Station visitors and area employees.
5.4.3-P11	Encourage parking consolidation, alternate parking arrangements or reduced parking ratio within the Santa Clara Station Focus Area to promote the use of alternate transportation modes.
5.4.3-P13	Provide new street, bicycle and pedestrian networks that encourage visibility, accommodate multiple modes of travel and maximize connections, particularly through large sites and to the Downtown and Santa Clara University.
5.4.3-P14	Encourage alternative modes of travel to and from the Station, including biking, walking and shuttles.
5.4.3-P15	Prioritize vehicular and transit transportation modes on roadways, such as Coleman Avenue and De La Cruz Boulevard, that provide access to the Station and prioritize pedestrian and bicycle transportation modes on internal streets within the Santa Clara Station Focus Area.

Santa Clara Construction and Demolition Debris Recycling Program

The City of Santa Clara requires applicants seeking building or demolition permits for projects greater than 5,000 square feet to recycle at least 50 percent of discards. Applicants may also meet the City's recycling requirement by reprocessing and reusing construction materials on-site or salvaging material, such as wood or fixtures for reuse.

3.6.1.3 *Existing Conditions*

Electricity

The electricity supply in California involves a complex grid of power plants and transmission lines. In 2016, California produced approximately 93 percent of the electricity it consumed and the rest was imported. California's non carbon dioxide (CO_2)-emitting electric generation (from nuclear, large hydroelectric, solar, wind, and other renewable sources) accounted for 50 percent of total in-state generation for 2016, compared to 40 percent in 2015.[28] Electricity supplied from out-of-state, coal-fired power plants has continued to decrease since 2006, following the enactment of a state law requiring California utilities to limit new long-term financial investments to power plants that meet California emissions standards.[29]

California's total system electric generation was 290,567 gigawatt-hours (GWh), which was down 1.6 percent from 2015's total generation of 295,405 GWh. California's in-state electric generation was up by approximately one percent at 198,227 GWh compared to 196,195 GWh in 2015, and energy imports were down by 6,869 GWh to 92,341 GWh.[30] In 2016, total in-state solar generation increased 31.5 percent from 2015 levels and wind generation increased 10.8 percent.

Growth in annual electricity consumption from traditional power plants declined reflecting increased energy efficiency and higher self-generation from solar photovoltaic power systems. Per capita drops in electrical consumption are predicted through 2027 as a result of energy efficiency gains and increased self-generation (particularly for photovoltaic systems).[31] Due to population increases, however, it is estimated that future demand in California for electricity will grow at approximately one percent each year through 2027, and that 319,256 GWh of electricity would be utilized in the state in 2027.[32]

Silicon Valley Power is the City of Santa Clara's energy utility, providing electricity for residential, commercial, industrial, and municipal uses. Silicon Valley Power generates or buys electricity from hydroelectric, renewable, natural gas, and coal facilities. In 2014, natural gas facilities provided 42.1 percent of Silicon Valley Power's electricity delivered to retail customers; renewable energy facilities including solar, geothermal, and biomass, eligible hydroelectric, and wind provided 36.3

[28] CEC. "Total System Electric Generation". Accessed July 14, 2017. Available at: http://www.energy.ca.gov/almanac/electricity_data/total_system_power.html.
[29] EIA. "California State Profile and Energy Estimates Profile Analysis." Accessed July 13, 2017. Available at: https://www.eia.gov/state/analysis.php?sid=CA#40.
[30] CEC. "Total System Electric Generation." Accessed July 14, 2017. Available at: http://www.energy.ca.gov/almanac/electricity_data/total_system_power.html
[31] CEC. *California Energy Demand Updated Forecast, 2017-2027*. Accessed July 14, 2017. Available at: http://docketpublic.energy.ca.gov/PublicDocuments/16-IEPR-05/TN214635_20161205T142341_California_Energy_Demand_Updated_Forecast.pdf.
[32] Ibid.

percent; large hydroelectric facilities provided 15.1 percent; and 11.4 percent was provided by coal facilities.[33]

Electricity usage for differing land uses varies substantially by the type of uses in a building, the type of construction materials used, and the efficiency of the electricity-consuming devices used. Electricity in Santa Clara County in 2016 was consumed primarily by the commercial sector (77 percent), followed by the residential sector consuming 23 percent. In 2016, a total of approximately 16,800 GWh of electricity was consumed in Santa Clara County.[34]

Natural Gas

Pacific Gas and Electric Company (PG&E) provides natural gas for residential, commercial, industrial, and municipal uses for the City of Santa Clara. In 2016, approximately three percent of California's natural gas supply came from in-state production, while 97 percent was imported from other western states and Canada.[35] California's natural gas is supplied by interstate pipelines, including the Mojave Pipeline, Transwestern Pipeline, Questar Southern Trails Pipeline, Tuscarora Pipeline, and the Baja Norte/North Baja Pipeline.[36] As a result of improved access to supply basins, as well as pipeline expansion and new projects, these pipelines currently have excess capacity.

In 2016, approximately 32 percent of the natural gas delivered for consumption in California was for electricity generation, 37 percent for industrial uses, 19 percent for residential uses, 11 percent for commercial uses, and less than one percent for vehicle fuel. As with electricity usage, natural gas usage depends on the type of uses in a building, the type of construction materials used, and the efficiency of gas-consuming devices. In 2016, California consumed approximately 1,275 trillion Btu of natural gas; a slight increase from 2015 when 1,225 trillion Btu were consumed.[37] In Santa Clara County, a total of approximately 42 trillion Btu of natural gas were consumed in 2016, which is about three percent of the state's total.[38]

Gasoline for Motor Vehicles

California crude oil production levels have been declining over the last 30 years; however, the state still accounts for six percent of the United States' crude oil production and petroleum refining capacity.[39] In 2016, 143.4 billion gallons of gasoline were consumed in the United States (setting an

[33] Silicon Valley Power. "Renewable Energy FAQ." Accessed: May 30, 2017. Available at: http://www.siliconvalleypower.com/solar-and-green-power/renewable-energy-faq.
[34] CEC. Energy Consumption Data Management System. "Electricity Consumption by County". Accessed July 13, 2016. http://ecdms.energy.ca.gov/elecbycounty.aspx.
[35] California Gas and Electric Utilities. "2016 California Gas Report." Accessed: July 14, 2017. Available at: http://docketpublic.energy.ca.gov/PublicDocuments/16-BSTD-06/TN212364_20160720T111050_2016_California_Gas_Report.pdf.
[36] Ibid.
[37] EIA. "Natural Gas Delivered to Consumers in California". Accessed August 22, 2017. http://www.eia.gov/dnav/ng/ng_sum_lsum_dcu_SCA_a.htm.
[38] CEC. "Natural Gas Consumption by County". Accessed March 1, 2018. http://ecdms.energy.ca.gov/gasbycounty.aspx.
[39] EIA. "California State Profile and Energy Estimates Profile Analysis." Accessed: July 13, 2017. Available at: https://www.eia.gov/state/analysis.php?sid=CA#40.

annual gasoline consumption record) and 15.5 billion gallons were consumed in California.[40,41] The United States has seen low gasoline prices and high demand in the last few years, though forecast growth in demand is expected to slow as retail prices begin to increase.[42]

The average fuel economy for light-duty vehicles (autos, pickups, vans, and SUVs) in the United States has steadily increased from about 13.1 miles-per-gallon (mpg) in the mid-1970s to 22.0 mpg in 2015.[43] Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. That standard, which originally mandated a national fuel economy standard of 35 mpg by the year 2020, applies to cars and light trucks of Model Years 2011 through 2020.[44,45] In 2012, the federal government raised the fuel economy standard to 54.5 mpg for cars and light-duty trucks by Model Year 2025.[46]

The project site is currently undeveloped and vacant. The project site, therefore, consumes little (if any) energy.

3.6.2 Energy Impacts

3.6.2.1 *Thresholds of Significance*

Based on Appendix F of the CEQA Guidelines, and for the purposes of this EIR, a project will result in a significant energy impact if the project will:

- Result in a wasteful, inefficient, or unnecessary consumption of energy; or
- Result in a substantial increase in demand upon energy resources in relation to projected supplies.

3.6.2.2 *Energy Use and Efficiency*

Energy would be consumed during both the construction and operational phases of development for the project.

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[40] EIA. "Frequently Asked Questions." Accessed: July 14, 2017. Available at: https://www.eia.gov/tools/faqs/faq.cfm?id=23&t=10.

[41] California State Board of Equalization. "Taxable Gasoline, Diesel Fuel, Jet Fuel Ten Year Reports." Accessed July 14, 2017. Available at: http://www.boe.ca.gov/sptaxprog/reports/MVF_10_Year_Report.pdf.

[42] EIA. "Short-Term Energy Outlook, U.S. Liquid Fuels." Accessed: July 14, 2017. Available at: http://www.eia.gov/forecasts/steo/report/us_oil.cfm.

[43] USEPA. "Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles." Accessed July 14, 2017. Available at: http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_04_23.html.

[44] U.S. Department of Energy. "Energy Independence & Security Act of 2007." Accessed December 7, 2016. Available at: http://www.afdc.energy.gov/laws/eisa.

[45] Public Law 110–140—December 19, 2007. "Energy Independence & Security Act of 2007." Page 1449. Accessed: December 7, 2016. Available at: http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf.

[46] National Highway Traffic Safety Administration. *Obama Administration Finalizes Historic 54.5 mpg Fuel Efficiency Standards*. Accessed: July 14, 2017. Available at: https://www.nhtsa.gov/press-releases/obama-administration-finalizes-historic-545-mpg-fuel-efficiency-standards.

Construction

Construction of the project (under either option) would require energy for the manufacture and transportation of building materials, preparation of the project site (e.g., grading), and the actual construction of the buildings and infrastructure. As discussed in *Section 3.3 Air Quality*, the project includes MM AIR-1.1 and -1.2 which minimizes idling times of construction equipment, requires properly maintaining construction equipment, and uses alternative fueled construction equipment. In addition, the project (under either option) shall comply with the City's Construction and Demolition Debris Recycling Program. For these reasons, the construction of the project (under either option) would not use fuel or energy in a wasteful manner. **(Less than Significant Impact)**

Operation

Operation of the project under either option would consume energy for multiple purposes including, but not limited to, building heating and cooling, lighting, appliances, and electronics. Operational energy would also be consumed during each vehicle trip generated by future residents, employees, and customers.

It is estimated that the proposed project would use approximately 18 GWh of electricity and 34 billion Btu of natural gas per year.[47] Given the project's estimated vehicle miles traveled (refer to *Section 3.8 Transportation*), it is estimated that project trips would use approximately 398,149 gallons of gasoline per year (assuming an average fuel economy of 54.5 mpg). The project's gasoline use is reduced given its proximity to existing transit, the proposed mix of uses (residential and commercial), placing residential development near jobs, and the proposed TDM program. The project would not use fuel or energy in a wasteful manner, given the project features that reduce energy use, including the following:

- Developing an infill site,
- Proposing a mix of uses,
- Proposing high-density residential uses near existing transit,
- Implementing a TDM program to promote automobile-alternative modes of transportation,
- Constructing bike lanes on Coleman Avenue and Brokaw Road,
- Improving an existing bus stop,
- Constructing in conformance with the Title 24 and CALGreen to promote energy and water efficiency,
- Including recycling services on-site to reduce solid waste disposal,
- Planting trees to reduce the heat island effect,
- Connecting to recycled water for landscape irrigation,
- Providing for use of lawn and garden equipment powered by electricity, and
- Incorporating permeable paving.

(Less than Significant Impact)

[47] Illingworth & Rodkin, Inc. *Gateway Crossing Project Air Quality & Greenhouse Gas Emissions Assessment*. May, 2017.

3.6.2.3 *Increase in Energy Demand*

As discussed previously, the annual electricity use in California is projected to be 320,862 GWh in 2025. Improvements in efficiency and production capabilities would help meet increased demand in the future, such as improving energy efficiency in California's existing and future buildings, establishing and achieving energy efficiency targets, inclusion of microgrids and zero-net energy buildings in the state, supporting development and implementation of distributed energy resource technologies, and integrating renewable technologies.[48] The proposed project would increase annual electricity use at the project site by approximately 18 GWh; therefore, the project (under either option) would not result in a significant increase in demand on electrical energy resources in relation to projected supply.

As discussed previously, California used approximately 1,275 trillion Btu of natural gas in 2016. It is assumed that energy efficiency technology and the RPS targets are likely to reduce demand for natural gas in the state in the future. Additionally, system and drilling efficiencies will continue to enhance production and decrease the overall need for natural gas.[49] Based on the relatively small increase in natural gas demand from the project of approximately 0.0026 percent (or 34.0 billion Btu per year), and compared to the growth trends in natural gas supply and the existing available supply in California, the proposed project (under either option) would not result in a significant increase in natural gas demand relative to projected supplies.

In addition, the General Plan EIR concluded that the buildout of the General Plan (in conformance with applicable regulations) would not result in a significant energy demand impact. The development proposed on-site is less than what was assumed for the site in the existing General Plan, therefore, it would use less energy than what was assumed in the General Plan EIR. **(Less than Significant Impact)**

3.6.2.4 *Consistency with Plans*

The proposed project (under either option) is consistent with applicable General Plan policies to reduce energy consumption by developing a high-density mixed-use project near existing transit, proposing a TDM program, providing recycling services on-site, participating in the City's Construction and Demolition Debris Recycling Program, complying with Title 24 and CALGreen, and proposing pedestrian, bicycle, and transit improvements (refer to *Section 2.2 Project Description*).

3.6.2.5 *Cumulative Impacts*

Energy is a cumulative resource. The geographic area for cumulative energy impacts is the State of California. Past, present, and future development projects contribute to the state's energy impacts. If the project is determined to have a significant energy impact, it is concluded that the impact is a cumulative impact. As discussed above, the project would not result in a significant energy impact. Therefore, the project would not contribute towards a significant cumulative energy impact. **(Less than Significant Cumulative Impact)**

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[48] CEC. *2016 Integrated Energy Policy Report*. 2016.
[49] CEC. "2013 Natural Gas Issues Trends, and Outlook." Available at: http://www.energy.ca.gov/2014publications/CEC-200-2014-001/CEC-200-2014-001-SF.pdf. Accessed: August 5, 2016.

3.6.3 Conclusion

The proposed project (under either option), with compliance with applicable regulations, would not result in a significant energy impact. **(Less than Significant Impact)**

The proposed project (under either option), with compliance with applicable regulations, would not have a considerable contribution towards a significant cumulative energy impact. **(Less than Significant Cumulative Impact)**

3.7 GEOLOGY AND SOILS

The following discussion is based on a geotechnical investigation prepared by *Cornerstone Earth Group* in August 2016. A copy of the geotechnical investigation is provided in Appendix D of this EIR.

3.7.1 Environmental Setting

3.7.1.1 *Regulatory Framework*

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed into law following the destructive 1971 San Fernando earthquake. The Act ensures public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. Local agencies are responsible for regulating most development projects within designated fault zones. Alquist-Priolo maps are distributed to affected cities, counties, and state agencies for their use in planning and controlling new construction.

Seismic Hazards Mapping Act

Following the 1989 Loma Prieta earthquake, the Seismic Hazards Mapping Act (SHMA) was passed by the California legislature in 1990. The SHMA (Public Resources Code, Chapter 7.8, Section 2690-2699.6) directs the Department of Conservation, California Geological Survey to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. It also requires that agencies only approve projects in seismic hazard zones following site-specific geotechnical investigations to determine if the identified hazard is present and the inclusion of appropriate mitigation to reduce earthquake-related hazards.

California Building Standards Code

Title 24 of the California Code of Regulations, known as the California Building Standards Code (CBSC) contains the regulations that govern the construction of buildings in California. Through the CBSC, the state provides a minimum standard for building design and construction. The CBSC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control.

The California Building Code (CBC) refers to Part 2 of the CBSC in Title 24 of the California Code of Regulations. The CBC covers grading and other geotechnical issues, building specifications, and non-building structures. The CBC requires that a site-specific geotechnical investigation report be prepared by a licensed professional for proposed developments. The purpose of a site-specific geotechnical investigation is to identify seismic and geologic conditions that require project mitigation, such as surface fault ruptures, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability. The CBC is renewed on a triennial basis (every three years).

Local

Santa Clara General Plan

General Plan policies applicable to geology and soils include, but are not limited to, the following listed below.

Policies	Description
5.10.5-P5	Regulate development, including remodeling or structural rehabilitation, to ensure adequate mitigation of safety hazards, including flooding, seismic, erosion, liquefaction and subsidence dangers.
5.10.5-P6	Require that new development is designed to meet current safety standards and implement appropriate building code to reduce risks associated with geologic conditions.
5.10.5-P7	Implement all recommendations and design solutions identified in project soils reports to reduce potential adverse effects associated with unstable soils or seismic hazards.

City Code

Title 15 of the Santa Clara City Code includes the City's adopted Building and Construction Code. These regulations are based on the CBC and include requirements for building foundations, walls, and seismic resistant design. Requirements for grading and excavation permits and erosion control are included in Chapter 15.15 (Building Code). Requirements for building safety and earthquake reduction hazard are addressed in Chapter 15.55 (Seismic Hazard Identification).

3.7.1.2 *Existing Conditions*

The project site is located within the Santa Clara Valley, a broad alluvial plane between the Santa Cruz Mountains to the southwest and west and the Diablo Mountain Range to the northeast. The San Andreas Fault system, including the Monte-Vista-Shannon Fault, exists within the Santa Cruz Mountains and the Hayward and Calaveras Fault systems exist within the Diablo Range.

Seismicity and Seismic Hazards

The project site is located within the San Francisco Bay Area, which is one of the most seismically active areas in the country. There are six faults located within 15 miles of the site (see Table 3.7-1). Given the site's proximity to these faults, moderate to severe earthquakes can cause strong ground shaking at the site.

The site is not located within a state-designated Alquist-Priolo Earthquake Fault Zone or a Santa Clara County Fault Hazard Zone. No known surface expression of fault traces cross the site; therefore, fault rupture hazard is not a significant geologic hazard at the site.

Table 3.7-1: Approximate Distances to Nearby Faults	
Fault Name	**Distance from the Project Site** (miles)
Hayward (southeast extension)	6.5
Monte Vista-Shannon	7.1
Calaveras	9.2
Hayward (total length)	9.3
San Andreas	11.1
Sargent	14.9

Liquefaction

Liquefaction is the result of seismic activity and is characterized as the transformation of loosely water-saturated soils from a solid state to a liquid state after ground shaking. There are many variables that contribute to liquefaction, including the age of the soil, soil type, soil cohesion, soil density, and groundwater level.

The site is within a state-designated Liquefaction Hazard Zone, as well as a Santa Clara County Liquefaction Hazard Zone. Analysis of on-site soils indicate that there is a potential for liquefaction of localized sand layers during a significant seismic event.

Lateral Spreading

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of an exposed slope. There are no open faces within a distance considered susceptible to lateral spreading; therefore, the potential for lateral spreading to affect the site is low.

Soils and Groundwater

Up to four feet of undocumented fill consisting of clayey sand with gravel and clay is located below the existing surface with varying amounts of clay and gravel. Below the undocumented fill, soils generally consist of clay, sand, and gravel. Additional details about on-site soils is included in Appendix D. Analysis of on-site soils indicate the soils have moderate to very high expansion potential.

Groundwater was encountered on-site at depths of 12 to 30 feet below current grades. Historic high groundwater levels are mapped at a depth of approximately eight feet below current grades. Fluctuations in groundwater levels occur due to many factors including seasonal and regional fluctuations, underground drainage patterns, and other factors.

3.7.2 Geology and Soils Impacts

3.7.2.1 *Thresholds of Significance*

For the purposes of this EIR, a geology and soils impact is considered significant if the project would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42);
  - Strong seismic ground shaking;
  - Seismic-related ground failure, including liquefaction; or
  - Landslides.
- Result in substantial soil erosion or the loss of topsoil; or
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2016), creating substantial risks to life or property; or
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

The project (under either option) would connect to the existing sewer sanitary system. No septic tanks or alternative waste water disposal systems are required for the project. For these reasons, the last threshold listed above is not discussed further.

As previously discussed in *Section 3.0*, the California Supreme Court issued an opinion in "CBIA vs. BAAQMD" holding that CEQA is primarily concerned with the impacts of a project on the environment and generally does not require agencies to analyze the impact of existing conditions on a project's future users or residents unless the project risks exacerbate those environmental hazards or risks already exist. Nevertheless, the City has policies and regulations (including those identified in *Section 3.7.1.1*) that address existing conditions affecting a proposed project.

3.7.2.2 *Seismicity and Seismic Hazards*

As discussed in *Section 3.6.1*, the site is not located within a state-designated Alquist-Priolo Earthquake Fault Zone or a Santa Clara County Fault Hazard Zone. The project site is not subject to fault rupture. The site is located in a seismically active region and, therefore, strong ground shaking would be expected during the lifetime of the project. Ground shaking could damage future residences and other structures on-site and threaten the welfare of residents and occupants of the site. There is a potential for liquefaction on-site, however, the potential for lateral spreading on-site is low.

The existing seismic and seismic hazards on-site discussed above would not be exacerbated by the project such that it would impact (or worsen) off-site conditions. **(Less than Significant Impact)**

3.7.2.3 *Soil and Groundwater Hazards*

Soil Hazard

Due to the flat topography of the project site, future development on-site is not expected to be exposed to slope instability, lateral spreading, or landslide-related hazards.[50] The site, however, includes moderate to very highly expansive soils. Expansive soil conditions could potentially damage the future buildings and improvements on-site without the incorporation of appropriate engineering into the grading and foundation design.

The existing expansive on-site soils conditions discussed above would not be exacerbated by the project such that it would impact (or worsen) off-site conditions. **(Less than Significant Impact)**

Soil Erosion

The project would not lead to substantial soil erosion or loss of topsoil. The project is required to minimize erosion hazards through the implementation of a Stormwater Pollution Prevention Plan (SWPPP) under the National Pollutant Discharge Elimination System (NPDES) General Construction Permit, and through conformance with grading and excavation requirements in the City Code (refer to *Section 3.9 Hydrology and Water Quality* for more detail).[51] The project (under either option), therefore, would not result in a significant impact from soil erosion. **(Less than Significant Impact)**

Groundwater Hazards

Historic groundwater levels are mapped at a depth of eight feet below current grades. The project (under both options) includes below grade parking garages and/or basement levels that would require excavation at depths of up to 15 feet on-site. For these reasons, groundwater could be encountered during construction and would likely be encountered in deeper excavations for infrastructure including utilities and elevators. Challenges associated with high groundwater typically consist of potentially wet and unstable subgrade, difficulty achieving compaction, and difficultly with underground utility installation.

Consistent with the requirements of the City of Santa Clara and existing regulations, the project applicant shall submit a design-level geotechnical engineering study to the City of Santa Clara for review and approval prior to the issuance of building permits. The project applicant shall comply with the specific design measures (including measures to address expansive soils, the need for dewatering, and seismic and seismic-related hazards) of the geotechnical report to ensure building integrity.

The existing groundwater conditions discussed above would not be exacerbated by the project such that it would impact (or worsen) off-site conditions. **(Less than Significant Impact)**

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[50] County of Santa Clara. *Santa Clara County Geologic Hazard Zones Combined Hazard Zones Map*. 2012.
[51] City of Santa Clara. *Integrated Final Environmental Impact Report for the City of Santa Clara Draft 2010-2035 General Plan.* Certified November 16, 2010. Page 192.

3.7.2.4 *Consistency with Plans*

The project (under either option) would be consistent with the applicable General Plan policies by preparing a design-level geotechnical investigation and implementing the identified recommendations to reduce or avoid geology and soil hazards and being built according to applicable codes (e.g., CBC and City Code).

3.7.2.5 *Cumulative Impacts*

The existing geology and soils conditions would not be exacerbated by the project (under either option) such that it would impact (or worsen) off-site geology and soils conditions. For this reason, the project would not contribute to a cumulatively significant geology and soils impact. **(Less than Significant Cumulative Impact)**

3.7.3 Conclusion

The proposed project (under either option) would not result in significant impacts to geology and soils. **(Less than Significant Impact)**

The proposed project (under either option) would not have a considerable contribution towards a significant cumulative geology and soils impact. **(Less than Significant Cumulative Impact)**

3.8 GREENHOUSE GAS EMISSIONS

In accordance with CEQA (Public Resources Code Section 21093) and CEQA Guidelines Section 15152, the following discussion is based in part on GHG emissions assessment completed for the project by *Illingworth & Rodkin, Inc.* in March 2018. A copy of this report is included in Appendix B.

3.8.1 Environmental Setting

3.8.1.1 *Background Information*

GHG emissions worldwide contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single land use project could generate sufficient GHG gas emissions on its own to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects in Santa Clara, the entire State of California, and across the nation and around the world, contribute cumulatively to the phenomenon of global climate change and its associated environmental impacts.

3.8.1.2 *Regulatory Framework*

Federal

Clean Air Act

The USEPA is the federal agency responsible for implementing the Clean Air Act. The US Supreme Court in its 2007 decision in *Massachusetts et al. v. Environmental Protection Agency et al.*, ruled that CO_2 is an air pollutant as defined under the Clean Air Act, and that USEPA has the authority to regulate emissions of GHGs. Following the court decision, USEPA has taken actions to regulate, monitor, and potentially reduce GHG emissions (primarily mobile emissions).

State

California Global Warming Solutions Act

Under the California Global Warming Solution Act, also known as AB 32, CARB has established a statewide GHG emissions cap for 2020, adopted mandatory reporting rules for significant sources of GHG, and adopted a comprehensive plan, known as the Climate Change Scoping Plan, that identifies how emission reductions will be achieved from significant GHG sources via regulations, market mechanisms, and other actions.

On September 8, 2016, Governor Brown signed SB 32 into law, amending the California Global Warming Solution Act. SB 32 requires CARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030. As a part of this effort, CARB is required to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons (MT) of carbon dioxide equivalent (CO_2e). CARB adopted the state's updated *Climate Change Scoping Plan* in December 2017. The updated plan provides a framework for achieving the 2030 target.

Senate Bill 375 – Redesigning Communities to Reduce GHGs

SB 375, known as the Sustainable Communities Strategy and Climate Protection Act, was signed into law in September 2008. SB 375 builds upon AB 32 by requiring CARB to develop regional GHG reduction targets for automobile and light truck sectors for 2020 and 2035, as compared to 2005 emissions levels. The per-capita GHG emissions reduction targets for passenger vehicles in the San Francisco Bay Area include a seven percent reduction by 2020 and a 15 percent reduction by 2035.

Consistent with the requirements of SB 375, Metropolitan Transportation Commission (MTC) partnered with the Association of Bay Area Governments (ABAG), BAAQMD, and Bay Conservation and Development Commission (BCDC) to prepare the region's Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan (RTP) process. The SCS is referred to as Plan Bay Area.

Originally adopted in 2013, Plan Bay Area established a course for reducing per-capita GHG emissions through the promotion of compact, mixed-use residential and commercial neighborhoods near transit, particularly within identified Priority Development Areas (PDAs). Building upon the development strategies outlined in the original plan, Plan Bay Area 2040 was adopted in July 2017 as a focused update with revised planning assumptions based current demographic trends. Target areas in the Plan Bay Area 2040 Action Plan area related to reducing GHG emissions, improving transportation access, maintaining the region's infrastructure, and enhancing resilience to climate change (including fostering open space as a means to reduce flood risk and enhance air quality). The project site is located within a PDA.

Clean Car Standards

CARB has adopted amendments to the "Pavley" regulations that are designed to reduce GHG emissions in new passenger vehicles. It is expected that the Pavley regulations will reduce GHG emissions from new California passenger vehicles by approximately 30 percent in 2016, all while improving fuel efficiency and reducing motorists' costs.

Regional

Bay Area Air Quality Management District

BAAQMD is the regional, government agency that regulates sources of air pollution within the nine San Francisco Bay Area counties. Several key activities of BAAQMD related to GHG emissions are described below.

- Regional Clean Air Plans: BAAQMD and other agencies prepare clean air plans as required under the state and federal Clean Air Acts. The 2017 CAP focuses on two closely-related BAAQMD goals: protecting public health and protecting the climate. Consistent with the GHG reduction targets adopted by the State of California, the 2017 CAP lays the groundwork for BAAQMD's long-term effort to reduce Bay Area GHG emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. The 2017 CAP includes a wide range of control measures designed to decrease emissions of methane and other "super-GHGs" that are potent climate pollutants in the near-term, and to decrease emissions of CO_2

by reducing fossil fuel combustion. The 2017 CAP is described in more detail in *Section 3.3.1.2*.

- BAAQMD CEQA Air Quality Guidelines: The BAAQMD CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. As discussed in the CEQA Guidelines, the determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the lead agency and must be based to the extent possible on scientific and factual data. The City of Santa Clara and other jurisdictions in the San Francisco Bay Area Air Basin often utilize the thresholds and methodology for GHG emissions developed by BAAQMD. The Guidelines include information on legal requirements, BAAQMD rules, plans and procedures, methods of analyzing GHG emissions, mitigation measures, and background information.

Local

Santa Clara General Plan

General Plan policies applicable to GHG include, but are not limited to, the following listed below.

Policies	Description
Santa Clara Station Focus Area Sustainability Policies	
5.4.3-P2	Maximize residential development within walking distance of the Station, particularly on the northeast side of the Caltrain corridor.
5.4.3-P6	Provide pedestrian oriented retail uses to serve new residential development, Station visitors and area employees.
5.4.3-P11	Encourage parking consolidation, alternate parking arrangements or reduced parking ratio within the Santa Clara Station Focus Area to promote the use of alternate transportation modes.
5.4.3-P12	Minimize surface parking by requiring below-grade or structured parking facilities with active uses along street frontages.
5.4.3-P13	Provide new street, bicycle and pedestrian networks that encourage visibility, accommodate multiple modes of travel and maximize connections, particularly through large sites and to the Downtown and Santa Clara University.
5.4.3-P14	Encourage alternative modes of travel to and from the Station, including biking, walking and shuttles.
5.4.3-P15	Prioritize vehicular and transit transportation modes on roadways, such as Coleman Avenue and De La Cruz Boulevard, that provide access to the Station and prioritize pedestrian and bicycle transportation modes on internal streets within the Santa Clara Station Focus Area.
General Mobility and Transportation	
5.8.1-P4	Expand transportation options and improve alternate modes that reduce GHG emissions.

Climate Action Plan

In December 2013, the City adopted a comprehensive GHG emissions reduction strategy (Climate Action Plan) to achieve its fair share of statewide emissions reductions for the 2020 timeframe consistent with AB 32. The City's Climate Action Plan defines the City's path toward creating a more sustainable, healthy, and livable community. The strategies outlined in the Plan will reduce GHG emissions and provide energy, fuel, and monetary savings while improving quality of life for the Santa Clara community. The reduction measures are focused in the following areas: coal-free and large renewables, energy efficiency, water conservation, waste reduction, off-road equipment, transportation and land use, and urban heat island effect.

The City's current Climate Action Plan does not address meeting the requirements of SB 32 (2030 emissions target).

3.8.1.3 *Existing Conditions*

The project site is currently undeveloped and vacant. The project site, therefore, generates little (if any) GHG emissions. The previous R&D uses on-site are estimated to have generated 2,469 MT of CO_2e per year.

3.8.2 Greenhouse Gas Emissions Impacts

3.8.2.1 *Thresholds of Significance*

For the purposes of this EIR, a GHG emissions impact is considered significant if the project 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.

BAAQMD adopted thresholds of significance to assist the review of projects under CEQA. These thresholds were designed to establish the level at which BAAQMD reports GHG emissions would cause significant environmental impacts. The significance thresholds identified by BAAQMD are 1,100 MT of CO_2e per year OR 4.6 MT CO_2e per service population per year. In addition, a project that is in compliance with the City's Climate Action Plan (a qualified GHG Reduction Strategy) is considered to have a less than significant GHG impact. The numeric thresholds, however, were to achieve the state's 2020 target of 1990 GHG levels. The project is anticipated to take approximately seven years to complete, starting in late 2018 and completing in mid-2025. The project, therefore, would be built-out post 2020. Although BAAQMD has yet to publish a threshold for 2030, for the purposes of this EIR, the efficiency metric of 2.6 MT CO_2e per service population per year is utilized. The efficiency threshold of 2.6 MT CO_2e per service population per year needed to meet the 2030 target is based on the GHG reduction goals of SB32/EO B-30-15, and the projected 2030 statewide population and employment levels.[52]

[52] Sources: 1) Association of Environmental Professionals. "Final White Paper Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California." October 18, 2016. Available at: https://www.califaep.org/images/climate-change/AEP-2016_Final_White_Paper.pdf. 2) California Department of Finance, Demographic Research Unit. "Total Estimated and Projected Population for

3.8.2.2 *Greenhouse Gas Emissions*

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational GHG emissions associated with project traffic, energy and water usage, and solid waste disposal. Emissions for the proposed project are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines.

Construction Emissions

GHG emissions associated with project construction (Option 2) were computed to be 5,621 MT of CO_2e. Project construction GHG emissions under Option 1 would be similar to Option 2. These emissions are from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions.

Operational Emissions

The project (both options) reduces GHG emissions in various ways, including:

- Developing an infill site;
- Proposing a mix of uses;
- Proposing high-density residential uses near existing transit;
- Implementing a TDM program to promote automobile-alternative modes of transportation (see MM AIR-2.1);
- Constructing bike lanes on Coleman Avenue and Brokaw Road;
- Improving an existing bus stop;
- Constructing in conformance with the Title 24 and CALGreen to promote energy and water efficiency;
- Installing both EV fixtures and wiring for additional EV stalls in all of the parking garages;
- Including recycling services onsite to reduce solid waste disposal;
- Planting trees to reduce the heat island effect;
- Connecting to recycled water for landscape irrigation;
- Providing for use of lawn and garden equipment powered by electricity; and
- Incorporating permeable paving.

The CalEEMod model and project vehicle trip generation rates were used to predict annual GHG emissions associated with operation of the proposed project, both before and after mitigation measures are imposed. Refer to Appendix B for details regarding the modeling, assumptions, and results.

California and Counties: July 1, 2010 to July 1, 2060 in 5-year Increments." February 2017. Available at: http://www.dof.ca.gov/Forecasting/Demographics/Projections/. 3) Caltrans. "California County-Level Economic Forecast 2017-2050." September 2017. Available at: http://www.dot.ca.gov/hq/tpp/offices/eab/socio_economic_files/2017/FullReport2017.pdf.

Project Without Mitigation

Buildout of Option 2, without any mitigation, is estimated to generate approximately 13,684 MT of CO_2e per year. With an estimated service population of 4,906 residents and employees, Option 2 would result in 2.79 MT of CO_2e per service population per year, which exceeds the significance threshold of 2.6 MT of CO_2e per service population per year.

Option 1, without any mitigation, is estimated to generate approximately 12,969 MT of CO_2e per year. With an estimated service population of 4,134, Option 1 would result in 3.14 MT of CO_2e per service population per year, which exceeds the significance threshold of 2.6 MT of CO_2e per service population per year. Option 1, therefore, would also have a significant operational GHG emissions impact.

Project With Mitigation

Buildout of Option 2, including the implementation of MM AIR-2.1 (which is the VMT Reduction Plan described as part of the project in *Section 2.2.1.4*), is estimated to generate approximately 12,772 MT of CO_2e per year. With an estimate service population of 4,906 residents and employees, Option 2 would result in 2.60 MT of CO_2e per service population per year which does not exceed the significance threshold of 2.6 MT of CO_2e per service population per year. Option 2, therefore, would result in a less than significant operational GHG emissions impact after implementation of all feasible mitigation.

Option 1, including implementation of the VMT Reduction Plan described in *Section 2.2.1.4*), is estimated to generate approximately 12,150 MT of CO_2e per year. With an estimated service population of 4,134, Option 1 would result in 2.94 MT of CO_2e per service population per year which exceeds the significance threshold of 2.6 MT of CO_2e per service population per year. Option 1, therefore, would have a significant operational GHG emissions impact, even after all feasible mitigation measures have been adopted.

If the project site were to be built-out under the existing General Plan land use designations (which allows for the development of up to 1,278 residential units and 1,025,838 square feet of commercial uses), the development would generate 18,565 MT of CO_2e per year. Development under the existing General Plan would generate 6,414 more MT of CO_2e per year than Option 1 (which is the project option that would result in a significant operational GHG emissions impact). The development of the project site under the existing General Plan land use designations would result in 3.0 MT of CO_2e per year per service population, which is slightly greater than the Option 1's estimated 2.94 MT of CO_2e per year per service population and also exceeds the 2.6 MT of CO_2e per year per service population threshold. Therefore, Option 1 would generate less GHG emissions and fewer GHG emissions per service population than the development allowed under the existing General Plan land use designations. The General Plan EIR disclosed that in order to meet the state's 2030 emissions target, substantial emissions reductions will require policy decisions at the federal and state level, and new and substantially advanced technologies that cannot today be anticipated, and are outside of the City's control, therefore cannot be relied upon as feasible mitigation measures.

The General Plan EIR, therefore, concluded that the buildout of the General Plan would result in significant unavoidable greenhouse gas emissions.[53]

Table 3.8-1 summarizes the GHG emissions from the previous use, proposed project (with mitigation), and allowed General Plan development on-site. While Option 1's annual GHG emissions are above the 2030 GHG emissions threshold of 2.6 MT per year per service population, Option 1 would have fewer total GHG emissions and a lower per service population emissions rate than development under the existing General Plan land use designations (refer to Table 3.8-1).

Table 3.8-1: Summary of Estimated Annual GHG Emissions and GHG Emissions Per Service Population

Scenario	**Estimated Annual GHG Emissions** (MT)	**Estimated Per Service Population Emissions** (MT)
Previous Development	2,469	**4.09**
Proposed Option 2 with mitigation	12,772	2.60
Proposed Option 1 with mitigation	12,150	**2.94**
Allowed General Plan Development	18,565	**3.07**
Significance Threshold	---	*2.6*

Notes: MT = metric tons; **Bold** text indicates significant GHG emissions per service population

The above calculations are based on the following assumptions: 2.73 average persons per household; one employee per 400 commercial square feet; and one employee per 450 R&D square feet (Sources: California Department of Finance. "E-5 City/County Population and Housing Estimates." May 2017. Accessed: August 18, 2017. Available at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/; City of Santa Clara. *City of Santa Clara 2010-2035 General Plan.* Adopted December, 2010, amended December 2013 and December 2014. Page 8.6-12.).

Service population calculations:

Proposed Project Development = (1,600 units *2.73) + (215,000 sf commercial *400) = 4,906;

Previous Development = (272,840 sf R&D *one employee/450 R&D sf) = 607;

Allowed General Plan Development = (1,278 sf units *2.73) + (1,025,838 sf office *one employee/400 commercial sf) = 6,054

Impact GHG-1: The proposed project (Option 1 only) would generate significant GHG emissions. **(Significant Unavoidable Impact)**

[53] City of Santa Clara. *2010-2035 General Plan Integrated Final Environmental Impact Report. SCH# 2008092005*. January 2011. P.492.

Impact GHG-2: The proposed project (Option 2 only), after implementation of all feasible mitigation measures, would result in less than significant GHG emissions. **(Less Than Significant Impact with Mitigation Incorporated)**

While the project includes features to reduce GHG emissions, Option 1 would exceed the 2.6 MT of CO_2e per year per service population threshold needed to achieve the state's 2030 target. Option 1's GHG emissions, therefore, are considered significant unavoidable. **(Significant Unavoidable Impact)**

3.8.2.3 *Consistency with Plans, Policies, and Regulations*

2017 Clean Air Plan

As discussed in *Section 3.3 Air Quality*, the project supports the goals of the 2017 CAP of protecting public health and protecting the climate and is consistent with 2017 CAP control measures SS20 and SS32 of reducing exposure to TACs and reducing DPM emissions by:

- Implementing mitigation measures to reduce criteria air pollutants during construction and operation;
- Evaluating health risk from the backup generator proposed on-site to nearby receptors;
- Reducing motor vehicle miles traveled by proposing a mixed-use project in proximity to existing/proposed/planned pedestrian, bicycle, and transit facilities;
- Including a TDM program that encourages automobile-alternative transportation; and
- Complying with applicable regulations that would result in energy and water efficiency including Title 24 and California Green Building Standards Code.

In addition, the project as proposed would not disrupt or hinder the implementation of applicable control measures (refer to *Section 3.3.1.2*) in the 2017 CAP. **(Less than Significant Impact)**

Santa Clara General Plan

The project (under either option) is consistent with applicable General Plan policies to reduce GHG emissions by developing a high-density mixed-use project at an infill site near existing transit, proposing a TDM program, complying with Title 24 and CALGreen, and proposing pedestrian, bicycle, and transit improvements (refer to *Section 2.2*).

Climate Action Plan

A summary of the project's consistency with applicable Climate Action Plan measures is provided in Table 3.8-2. The project (under either option) is consistent with all applicable Climate Action Plan measures except for Measure 2.4 of installing solar photovoltaic systems on the proposed development (refer to Table 3.8-2). In addition, the project includes an amendment to the City's Climate Action Plan to require a 20 percent VMT reduction for the proposed project. As discussed in *Section 2.2*, the project proposes to reduce VMT by 20 percent. The project (under either option), therefore, is generally consistent with the applicable measures in the Climate Action Plan.

Table 3.8-2: Summary of Applicable Climate Action Plan Measures and Project Consistency		
Applicable Climate Action Plan Measures		**Notes/Comments**
Energy Efficiency		
2.4	Customer Installed Solar Photovoltaic Systems on Customer-Owned Residential and Nonresidential Projects	Not proposed
Water Conservation		
3.1	Water Conservation: Reduce GHG-Intensive Water Use Practices	The project proposes to integrate water conservation practices, such as installing energy star dishwashers, showerheads, bathroom faucets, toilets, urinals, resource efficient landscapes, high-efficiency irrigation systems, minimal turf, recycled wastewater irrigation systems, and pre-plumbing for graywater systems.
Waste Reduction		
4.2	Increase Waste Diversion: Recycle, Food Waste Pickup, Construction, and Demolition Waste Programs to Increase Solid Waste Diversion to 80 percent	The proposed project would include recycling services and participate in the City's Construction and Demolition Debris Recycling Program.
Off-Road Equipment		
5.1	Provide for Use of Lawn and Garden Equipment Powered by Electricity (Lawn Mowers and Leaf Blowers; Outdoor Outlets)	The project proposes to provide for use of electrical lawn and garden equipment.
5.2	Use Cleaner Alternative Technologies for Construction Vehicles and Equipment (BAAQMD BMPs)	As discussed in *Section 3.3*, the project proposes to implement BAAQMD construction best management practices.
Transportation and Land Use		
6.1	Transportation Demand Management Programs for Residential Projects More Than 25 Units and Nonresidential Projects More Than 10,000 SF in Transportation Districts	The project proposes a TDM program that would achieve a 10 percent reduction in VMT.
6.3	Electric Vehicle Parking and Charging Station(s) for Multi-Family Residential or Nonresidential Projects	The project proposes to install both EV fixtures and wiring for additional EV stalls in all of the parking garages.

Table 3.8-2: Summary of Applicable Climate Action Plan Measures and Project Consistency		
Applicable Climate Action Plan Measures		**Notes/Comments**
Urban Heat Island Effect		
7.1	Shade Trees Near South-Facing Windows	The project proposes to have shade trees for south facing windows.
7.2	Light-Colored and/or Permeable Pavements in Uncovered Parking Spaces on Nonresidential Projects	The project proposes to have permeable paving as part of surface lots servicing the commercial uses.

3.8.2.4 *Cumulative Impacts*

Past, present, and future development projects worldwide contribute to global climate change. No single project is sufficient in size to, by itself, change the global average temperature. Therefore, due to the nature of GHG impacts, a significant project impact is a significant cumulative impact. As discussed in *Section 3.8.2.2*, the Option 1 only would generate significant levels of GHG emissions. Option 1, therefore, would result in significant cumulative GHG emissions (refer to Impact GHG-1).

Impact C-GHG-1: The proposed project (Option 1 only) would generate significant cumulative GHG emissions. **(Significant Unavoidable Cumulative Impact)**

3.8.3 Conclusion

Impact GHG-1: The proposed project (Option 1 only) would generate significant GHG emissions. **(Significant Unavoidable Impact)**

Impact GHG-2: The proposed project (Option 2 only), after implementation of all feasible mitigation measures, would result in less than significant GHG emissions. **(Less Than Significant Impact with Mitigation Incorporated)**

The proposed project (under either option) would not result in other significant GHG impacts (i.e., conflicts with applicable plan, policy, or regulation adopted to reduce GHG emissions). **(Less than Significant Impact)**

Impact C-GHG-1: The proposed project (Option 1 only) would generate significant cumulative GHG emissions. **(Significant Unavoidable Cumulative Impact)**

The proposed project (under either option) would not result in other significant cumulative GHG impacts (i.e., conflicts with applicable plan, policy, or regulation adopted to reduce GHG emissions). **(Less than Significant Cumulative Impact)**

3.9 HAZARDS AND HAZARDOUS MATERIALS

The following discussion is based in part on a draft Site Management Plan prepared for the project site by *Langan Treadwell Rollo* in April 2016. A copy of this plan is included in Appendix E of this EIR.

3.9.1 Environmental Setting

3.9.1.1 *Regulatory Framework*

Federal

Federal Aviation Regulations, Part 77

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

Local

Norman Y. Mineta San José International Airport Comprehensive Land Use Plan

The project site is located within the Airport Influence Area (AIA) of the Norman Y. Mineta San José International Airport (Airport), as defined by the Comprehensive Land Use Plan (CLUP). The CLUP includes land use compatibility policies and standards, which form the basis for evaluating the land use compatibility of individual projects with the Airport and its operations. The standards in the CLUP focus on the three areas of the Airport Land Use Commission (ALUC) responsibility: 1) aircraft noise, 2) the safety of persons on the ground and in aircraft, and 3) the control of objects in navigable airspace.

The CLUP includes 65, 70, and 75 decibels (dB) Community Noise Equivalent Level (CNEL) noise contours to indicate general areas of likely community response to noise generated by aircraft activity and as the basis for land use compatibility determinations (see *Section 3.13 Noise and Vibration* for a detailed discussion). Airport Safety Zones are established and identified in the CLUP to minimize the number of people exposed to potential aircraft accidents in the vicinity of the Airport by imposing density and use limitations within these zones. Airport vicinity height limitations are identified in the CLUP to protect the public safety, health, and welfare by ensuring aircraft can safely fly in the airspace around the Airport.

Santa Clara General Plan

General Plan policies applicable to hazards and hazardous materials include, but are not limited to, the following listed below.

Policies	Description
5.10.5-P23	Require appropriate clean-up and remediation of contaminated sites.
5.10.5-P29	Continue to refer proposed projects located within the Airport Influence Area to the Airport Land Use Commission.
5.10.5-P30	Review the location and design of development within Airport Land Use Commission jurisdiction for compatibility with the Airport Land Use Compatibility Plan.
5.10.5-P32	Encourage all new projects within the Airport Influence Area to dedicate an avigation easement.
5.10.5-P33	Limit the height of structures in accordance with the Federal Aviation Administration Federal Aviation Regulations, FAR Part 77 criteria.

Santa Clara Emergency Operations Plan

The City has an Emergency Operations Plan (EOP), which is required for each local government in the state. The plan establishes the emergency organization, assign tasks, specifies policies and general procedures, and provides for coordination of planning efforts for events such as earthquake, flooding, dam failure, and hazardous materials responses.

3.9.1.2 *Existing Conditions*

The project site is located within one of the Airport Safety Zones, the Traffic Pattern Zones (TPZ). The TPZ does not limit population density, but does require that at least 10 percent of the gross area be devoted to open space. In addition, sports stadiums and similar uses with very high concentrations of people (greater than 20,000) are prohibited. The City of San José holds an Aviation Easement that restricts maximum building heights on the project site to 206 feet above mean sea level.

The project site was used for agricultural purposes until Food Machinery Corporation (FMC) purchased the property in 1953 and began assembly and painting of military tracked vehicles in 1963. Following FMC's operations, United Defense operated the property. The site was subsequently leased by BAE Systems, which performed design, production, and testing of military track vehicles under US Department of Defense contracts. Additional site background details are included in Appendix E of this EIR.

The project site is identified as a hazardous material site due to its association with the former FMC facility and BAE Systems. The site is currently under the regulatory oversight of the San Francisco Bay RWQCB. The site has undergone remedial activities for volatile organic compounds (VOCs) in soil and groundwater. In addition, there is a Land Use Covenant (LUC) that restricts the use of groundwater on-site (i.e., no water supply wells are allowed). The LUC also restricts the excavation

of soil or extraction of groundwater until a Site Management Plan (SMP) has been prepared and accepted by the RWQCB to protect the health and safety of the public and workers.

As part of the ongoing remedial activities on-site, there are wells on-site used to monitor and extract groundwater to assess progress of remedial activities. Currently, there are 26 active wells and one abandoned well on-site.

Soil samples were collected from the site and analyzed for halogenated volatile organic compounds (HVOCs), metals, total petroleum hydrocarbons (TPHs), organochlorine pesticides (OCPs), herbicides, and polychlorinated biphenyles (PCBs). Arsenic and vanadium were the only contaminants detected at concentrations above their respective residential environmental screening levels (ESLs); however, the concentrations are within normal background ranges.[54]

There is an existing GWETS on-site to mitigate on-site groundwater impacts and prevent off-site migration of residual HVOCs. Groundwater samples were collected and analyzed for HVOCs. Trichloroethylene (TCE), cis-1,2 dichloroethene (DCE), 1,1-dichloreethane (DCA), and vinyl chloride (VC) were the only HVOCs detected above their respective drinking water maximum contaminant levels (MCLs) but below vapor intrusion ESLs.

Soil vapor investigations were completed and found that soil vapor concentrations of TCE at the site exceeded the residential and commercial soil vapor intrusion ESLs.

3.9.2 Hazards and Hazardous Materials Impacts

3.9.2.1 *Thresholds of Significance*

For the purposes of this EIR, a hazards and hazardous materials impact is considered significant if the project would:

- Create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- 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 for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;

[54] Langan Treadwell Rollo. *Site Management Plan 328 West Brokaw Road, Santa Clara, California.* April 18, 2016. Page 6.

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

3.9.2.2 *Routine Transport, Use, or Disposal of Hazardous Materials*

The project (under either option) does not propose any on-site use of hazardous materials other than small quantities of herbicides and pesticides for landscaping maintenance and cleaning and pool chemicals. The use, storage, and transportation of pool cleaning and maintenance chemicals would be managed in accordance with federal, state, and local laws and regulations. The implementation of the proposed project in accordance with federal, state, and local laws and regulations would ensure that the on-site use of chemicals results in a less than significant hazardous materials impact. **(Less than Significant Impact)**

3.9.2.3 *Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials*

The project site is identified as a hazardous material site pursuant to Government Code Section 65962.5 and is currently under the regulatory oversight of the RWQCB. Analysis of soil samples did not find elevated levels of contaminants above residential ESLs and/or background levels. The existing LUC restricts the use of groundwater on-site. Analysis of groundwater samples indicated certain HVOCs above their respective drinking water maximum contaminant levels (MCLs) but below vapor intrusion ESLs. Sampling found soil vapor concentrations of TCE at the site exceeding the residential and commercial soil vapor intrusion ESLs.

Given the previous uses on-site and the results of the soil vapor sampling completed to date, construction workers and future occupants could be exposed to contaminated soils and subject to soil vapor intrusion. The surrounding environment could also be affected by on-site hazardous material contamination if not properly handled.

Impact HAZ-1: Construction workers, future occupants, and the surrounding environment could be exposed to contaminated soils and subject to soil vapor intrusion. **(Significant Impact)**

Mitigation Measure: The project proposes to implement the following mitigation measure to mitigate potential hazardous materials risks to a less than significant level:

MM HAZ-1.1: The project shall develop and implement a Site Management Plan (SMP) that outlines the measures required to mitigate potential risks (including soil vapor intrusion) to construction workers, future occupants, and the environment from potential exposure to hazardous substances that may be encountered during soil intrusive or construction activities on-site. As part of the SMP, a worker health and safety plan shall be prepared that identifies procedures to address potential hazards to construction workers and off-site receptors that may result from construction activities.

The SMP shall also identify all wells on-site and identify measures to protect and/or abandon existing remediation systems, groundwater monitoring wells, and soil vapor monitoring wells. All wells to be abandoned shall be permitted through the SCVWD.

The SMP shall be submitted to the City and the RWQCB for approval prior to commencement of construction activities. A draft of the SMP is included in Appendix E of this EIR.

The implementation of MM HAZ-1.1 would reduce construction worker, future occupant, and surrounding environment exposure to on-site contaminated soil and vapor intrusion by implementing a plan and procedures to address potential hazards that may result from construction activities. **(Less than Significant Impact with Mitigation Incorporated)**

3.9.2.4 *Safety Hazards*

The project site is not located within the vicinity of a private airstrip. Per the CLUP, the project site is located within the Airport Safety Zone TPZ. The proposed project is consistent with the uses allowed in the TPZ by including at least 10 percent open space and not including uses generating very high concentrations of people (i.e., 20,000+ people)

FAR Part 77 establishes imaginary surfaces for the Norman Y. Mineta San José International Airport and its runways as a means to identify objects that are obstructions to air navigation. Given the project site's proximity to the Airport, development on-site may penetrate FAR Part 77 surfaces. For the project site, any proposed multi-story structure would need to be filed with the FAA for airspace safety review pursuant to the notification requirements of FAR Part 77. FAA issuance of a "Determination of No Hazard" for each structure, and compliance with any conditions set forth by the FAA in its determinations, would ensure that project development would not be a potential aviation hazard, and in turn comply with the CLUP's height policy. For these reasons, the project (under either option) would not result in a significant safety hazard to airport operations. **(Less than Significant Impact)**

3.9.2.5 *Impair or Interfere with an Adopted Emergency Response Plan or Emergency Evacuation Plan*

The project site is located in a developed area and would not change the local roadway circulation pattern and access, or otherwise physically interfere with the Santa Clara Emergency Operations Plan or other emergency response or evacuation plan.[55] **(No Impact)**

3.9.2.6 *Expose People or Structures to Wildland Fires*

According to the California Department of Forestry and Fire Hazard Protection, the project site is not subject to wildfire hazards.[56] **(No Impact)**

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[55] City of Santa Clara. *Emergency Operations Plan*. June 2016.
[56] California Department of Forestry and Fire Protection. "Santa Clara County Very High Fire Hazard Zones in LRA." October 8, 2008. Available at: http://frap.fire.ca.gov/webdata/maps/santa_clara/fhszl_map.43.pdf. Accessed June 1, 2017.

3.9.2.7 *Consistency with Plans*

The proposed project (under either option) is consistent with applicable General Plan policies by receiving concurrence from the ALUC for consistency with the CLUP[57] and proposing to prepare and implement a SMP to reduce impacts from contaminated soils and soil vapor intrusion.

3.9.2.8 *Cumulative Impacts*

The project's hazardous materials impacts are specific to the site as impacts vary by site characteristics, site history, and proposed land use. The project shall mitigate its hazardous materials impact to a less than significant level with the implementation of MM HAZ-1.1; therefore, the project would not have a considerable contribution to a significant cumulative hazardous materials impact. **(Less than Significant Cumulative Impact)**

3.9.3 <u>Conclusion</u>

Impact HAZ-1: The proposed project (under either option), with the implementation of mitigation measure MM HAZ-1.1, would not result in a reasonably foreseeable upset and accident conditions involving the release of hazardous materials. **(Less than Significant Impact with Mitigation Incorporated)**

The proposed project (under either option) would not result in other significant hazards and hazardous materials impacts (i.e., safety hazard due to airport proximity, impairing an emergency response or evacuation plan, or wildland fires). **(Less than Significant Impact)**

The proposed project (under either option) would not have a considerable contribution towards a significant cumulative hazards and hazardous materials impact. **(Less than Significant Cumulative Impact)**

[57] Airport Land Use Commission. Regular Meeting. June 28, 2017.

3.10 HYDROLOGY AND WATER QUALITY

3.10.1 Environmental Setting

3.10.1.1 *Regulatory Framework*

Federal, State, and Regional

Water Quality Overview

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

Basin Plan

The San Francisco Bay RWQCB regulates water quality in accordance with the Water Quality Control Plan or "Basin Plan." The Basin Plan lists the beneficial uses that the RWQCB has identified for local aquifers, streams, marshes, rivers, and the San Francisco Bay, as well as the water quality objectives and criteria that must be met to protect these uses. The RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements, including permits for nonpoint sources such as the urban runoff discharged by a City's stormwater drainage system. The Basin Plan also describes watershed management programs and water quality attainment strategies.

Statewide Construction General Permit

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

Municipal Regional Stormwater NPDES Permit (MRP)/C.3 Requirement

The San Francisco Bay RWQCB has issued a Municipal Regional Stormwater NPDES Permit (Permit Number CAS612008) (MRP) that covers the project area. Under provisions of the NPDES Municipal Permit, redevelopment projects that disturb more than 10,000 square feet are required to design and construct stormwater treatment controls to treat post-construction stormwater runoff. The MRP requires regulated projects to include Low Impact Development (LID) practices, such as pollutant source control measures and stormwater treatment features aimed to maintain or restore the site's natural hydrologic functions. The MRP also requires that stormwater treatment measures are properly installed, operated and maintained.

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

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) established the National Flood Insurance Program (NFIP) in order to reduce impacts of flooding on private and public properties. The program provides subsidized flood insurance to communities that comply with FEMA regulations protecting development in floodplains. As part of the program, FEMA publishes Flood Insurance Rate Maps (FIRM) that identify Special Flood Hazard Areas (SFHA). An SFHA is an area that will be inundated by the one-percent annual chance flood (one in one hundred chance of being flooded in any one year based on historic data), which is also referred to as the base flood or 100-year flood. The SFHA is the area where the NFIP floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies.

Dam Safety

Dam failure is the uncontrolled release of impounded water behind a dam. Flooding, earthquakes, blockages, landslides, lack of maintenance, improper operation, poor construction, vandalism, and terrorism can all cause a dam to fail. Because dam failure that results in downstream flooding may affect life and property, dam safety is regulated at both the federal and state level. Dams under the jurisdiction of the California Division of Safety of Dams are identified in California Water Code Sections 6002, 6003, and 6004 and regulations for dams and reservoirs are included in the California Code of Regulations. In accordance with the state's Dam Safety Act, dams are inspected regularly and detailed evacuation procedures have been prepared for each dam.

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

Santa Clara Valley Water District

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

Local

Santa Clara General Plan

General Plan policies applicable to hydrology and water quality include, but are not limited to, the following listed below.

Policies	Description
5.10.5-P11	Require that new development meet stormwater and water management requirements in conformance with state and regional regulations.
5.10.5-P13	Require that development complies with the Flood Damage Protection Code.
5.10.5-P15	Require new development to minimize paved and impervious surfaces and promote on-site Best Management Practices for infiltration and retention, including grassy swales, pervious pavement, covered retention areas, bioswales, and cisterns, to reduce urban water run-off.
5.10.5-P16	Require new development to implement erosion and sedimentation control measures to maintain an operational drainage system, preserve drainage capacity and protect water quality.
5.10.5-P17	Require that grading and other construction activities comply with the Association of Bay Area Governments' Manual of Standards for Erosion and Sediment Control Measures and with the California Stormwater Quality Association, Stormwater Best Management Practice Handbook for Construction.
5.10.5-P18	Implement the Santa Clara Valley Nonpoint Source Pollution Control Program, Santa Clara Valley Urban Runoff Pollution Prevention Program and the Urban Runoff Management Plan.
5.10.5-P20	Maintain, upgrade and replace storm drains throughout the City to reduce potential flooding.
5.10.5-P21	Require that storm drain infrastructure is adequate to serve all new development and is in place prior to occupancy.

City Code

Chapter 13.20, Storms Drains and Discharges, of City Code is enacted for the protection of health, life, resources and property through prevention and control of unauthorized discharges into watercourses. The primary goal of this chapter is the cleanup of stormwater pollution from urban runoff that flows to creeks and channels, eventually discharging into the San Francisco Bay. The City Code also includes Flood Damage Prevention Code (Chapter 15.45) and requirements for grading and excavation permits and erosion control (Chapter 15.15).

3.10.1.2 *Existing Conditions*

Surface Water Quality

The water quality of streams, creeks, ponds, and other surface water bodies can be greatly affected by pollution carried in contaminated surface runoff. Pollutants from unidentified sources, known as non-point source pollutants, are washed from streets, construction sites, parking lots, and other exposed surfaces into storm drains. Urban stormwater runoff often contains contaminants such as oil and grease, plant and animal debris (e.g., leaves, dust, animal feces, etc.), pesticides, litter, and heavy metals. In sufficient concentration, these pollutants have been found to adversely affect the aquatic habitats to which they drain. The nearest waterways to the project site are San Tomas Aquino Creek

approximately 1.7 miles to the northwest and the Guadalupe River approximately 1.1 miles to the east.

Groundwater

The project site is located within the Santa Clara Valley Groundwater Basin, Santa Clara Subbasin.[58] The regional topographic gradient is generally north towards the bay, however, the direction in groundwater flow patterns may vary due to the relatively flat topography. Historic high groundwater levels in the project area are mapped at a depth of approximately eight feet below current grades.[59] The depth to groundwater can vary due to seasonal fluctuation, underground drainage patterns, regional fluctuations and other factors. The site is not within an area used for in-stream or other groundwater recharge.

Stormwater Drainage

The City of Santa Clara Public Works Department operates and maintains the storm drainage system in the City. Stormwater from the site typically flows into existing storm drain lines in Coleman Avenue and Brokaw Road and ultimately discharges to San Francisco Bay.

The project site was previously developed with several R&D buildings, paved surface parking, and landscaping. The buildings were recently demolished and no longer currently exist on the site. When the site was developed, the site was approximately 84 percent impervious and 16 percent pervious (landscaped areas).

Flooding

As previously discussed, the two closest waterways to the site are San Tomas Aquino Creek and the Guadalupe River, both of which are located over a mile from the site. Both drain to San Francisco Bay, located approximately 5.5 miles north of the site. The site is not located within a 100-year flood (one percent annual flood) hazard zone. According to the FIRM for the project area, the site is located within Zone X, which is defined as "areas of the 0.2 percent annual chance flood; area of one percent annual chance flood with average depths of less than one foot or with drainage areas less than one square mile; and areas protected by levees from one percent annual chance flood."[60]

Dam Failure

There are two dams that affect the City of Santa Clara related to potential flooding. These dams are Lexington, located in the Town of Los Gatos, and Anderson, located in the City of Morgan Hill. The eastern edge of the project site is within the Anderson dam failure inundation area under the "inflow design" scenario, which assumes that dam failure occurs during a large storm event with a high pool elevation in the reservoir and high flow conditions downstream of the dam. The maximum inundation depth expected is 6.6 feet.[61]

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[58] California Department of Water Resources. "Basins and Subbasins of the San Francisco Bay Hydrologic Region." Available at: http://www.water.ca.gov/groundwater/bulletin118/sanfranciscobay.cfm. Accessed: April 17, 2017.
[59] Cornerstone Earth Group. *Geotechnical Investigation.* August 29, 2016. Page 5.
[60] Federal Emergency Management Agency. *Flood Insurance Rate Map, Community Panel No. 06085C0231H*. Effective Date: May 18, 2009.
[61] Santa Clara Valley Water District. *Anderson Dam EAP 2009 Inundation Maps.* 2009.

Sea Level Rise

Global climate change has the potential to cause sea level rise, which can inundate low-lying areas. Based on a US Geological Survey analysis which predicted areas in the San Francisco Bay Area region that are subject to inundation due to future sea level rise (up to 60 inches in year 2100), the project site is not subject to inundation due to sea level rise.[62] The project site has a surface elevation of approximately 60 feet above msl, and would not be affected by this projected increase.

Seiche, Tsunami, and Mudflows

A seiche is defined as a standing wave generated by rapid displacement of water within an enclosed body of water (such as a reservoir, lake, or bay) due to an earthquake that triggers land movement within the water body or landsliding into or beneath the water body.[63]

A tsunami is a large tidal wave caused by an underwater earthquake or volcanic eruption. Tsunamis affecting the Bay Area can result from off-shore earthquakes within the Bay Area. Since the site is approximately 5.5 miles from the San Francisco Bay and is not immediately adjacent to the Bay, the site will not likely be subject to inundation due to seiches and tsunamis.

A mudflow is a large rapid (up to approximately 50 miles per hour) mass of mud formed by loose earth and water. Hillsides and slopes of unconsolidated material could be at risk to mudflows if these areas become saturated. The project area is relatively flat and there are no hillsides near the site. Therefore, the project site is not likely to be subjected to mudflow.

3.10.2 Hydrology and Water Quality Impacts

3.10.2.1 *Thresholds of Significance*

For the purposes of this EIR, a hydrology and water quality impact is considered significant if the project would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- 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 which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

[62] U.S. Geological Survey. "Potential Inundation due to Rising Sea Levels in the San Francisco Bay Region." Accessed: April 18, 2017. Available at: http://cascade.wr.usgs.gov/data/Task2b-SFBay/index.shtm.
[63] U.S. Geological Survey. "Seismic Seiches." Accessed: April 18, 2017. Available at: http://earthquake.usgs.gov/learn/topics/seiche.php.

- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures which would impeded or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Inundation by seiche, tsunami, or mudflow.

3.10.2.2 *Water Quality Impacts*

During Construction

Because the project would disturb more than one acre of ground surface, it is subject to compliance with the Construction General Permit, and is required to develop and implement a SWPPP. The SWPPP will contain erosion and sediment controls designed to minimize stormwater pollution by reducing sediment loads in runoff form the construction site. The SWPPP will also contain a list of measures and BMPs that would be used to reduce pollutant loads in runoff generated by materials, equipment, and other construction activities. An NOI would also be filed with the RWQCB in conformance with NPDES Permit requirements. Implementation of the SWPPP and conformance to drainage standards required by the City would reduce the project's construction phase stormwater pollution impacts to less than significant levels. **(Less than Significant Impact)**

Post-Construction

The preliminary stormwater control plan for the project (under either option) depicts bioretention and mechanical filtration drainage management areas, self-treating areas, and self-retaining areas. The project (under either option) also proposes to incorporate source controls such as inlet stenciling, covered trash enclosures, and sanitary sewer connections for parking garage drains. Runoff from the project's building roof areas and podium deck surfaces would be directed into mechanical filtration systems, as allowed under the Special Projects provisions of the MRP. The source control measures and post-construction treatment controls incorporated into the project (under either option) would reduce stormwater quality impacts to less than significant levels. **(Less than Significant Impact)**

Construction of the project (under either option) would result in the replacement of more than 10,000 square feet of impervious surface area. As a result, the project would be required to comply with the new and redevelopment provisions of the MRP. In order to meet these requirements, the proposed development would include LID- and non-LID-based stormwater treatment controls (bioretention ponds, flow through planter boxes and media filters). Stormwater runoff from the site would drain into the stormwater treatment controls prior to entering the storm drainage system. The proposed treatment controls would be numerically sized and would have sufficient capacity to treat the runoff from the roofs, podium decks, hardscape, and driveway areas entering the storm drainage system consistent with the NPDES requirements.

With the implementation of the project's stormwater control plan, which is consistent with RWQCB requirements and in compliance with the City's regulatory policies pertaining to stormwater runoff, operation of the proposed project (under either option) would have a less than significant water quality impact. **(Less than Significant Impact)**

3.10.2.3 *Groundwater Impacts*

The project site does not currently contribute to recharging of the groundwater aquifers and this condition would not change if the project were implemented. **(Less than Significant Impact)**

3.10.2.4 *Drainage Pattern Impacts*

The proposed project (under either option) would not substantially alter the existing drainage pattern of the site or area through the altercation of any waterway. As a result, the project (under either option) would not substantially increase erosion or increase the rate or amount of stormwater runoff. **(Less than Significant Impact)**

3.10.2.5 *Storm Drainage System Impacts*

Compared to the previously developed site condition, the development of the project (under either option) would decrease the amount of impervious surfaces on-site by eight percent, from 84 to 76 percent (see Table 3.10-1).

Table 3.10-1: Summary of the Approximate Pervious/Impervious Surfaces On Site

	Previous Site Coverage (Square Feet)	**Previous Site Coverage** (Percentage)	**Proposed Site Coverage** (Square Feet)	**Proposed Site Coverage** (Percentage)
Impervious	786,430	84	710,009	76
Pervious (Landscaping)	145,749	16	222,170	24
Total	**932,179**	**100**	**932,179**	**100**

The decrease in impervious surfaces would result in a decrease in stormwater runoff generated from the site. For this reason, it is expected that the existing storm drain system would be sufficient to convey project runoff (under either option). Self-treating and self-retaining drainage areas, which can reduce the velocity and volume of stormwater runoff, are proposed for the perimeter areas of the site. Stormwater runoff from the proposed driveways and sidewalks would drain into LID-based treatment controls such as flow-through planters and bioretention ponds located in landscape areas throughout the site. These types of treatment controls can provide some retention of runoff in addition to pollution prevention. The proposed on-site drainage system would convey the treated stormwater flows to the existing City storm drain lines in Coleman Avenue and Brokaw Road via new manholes and lateral connections to these lines. For these reasons, the project (under either option) would not generate significant volumes of stormwater that would impact the existing City storm drain system. **(Less than Significant Impact)**

3.10.2.6 *Off-Site Flood Impacts*

The project site is not located in a 100-year flood hazard area; therefore, the project (under either option) would not impede or redirect flood flows within a 100-year flood hazard area, nor would the project (under either option) worsen flooding off-site. **(No Impact)**

3.10.2.7 *On-Site Flooding and Other Inundation Effects (Planning Consideration)*

As discussed in *Section 3.0,* in December 2015, the California Supreme Court issued an opinion "CBIA v. BAAQMD" holding that CEQA is primarily concerned with the impacts of a project on the environment and generally does not require agencies to analyze the impact of existing conditions on a project's future users or residents unless the project risks exacerbate those environmental hazards or risks that already exists. Nevertheless, the City has policies and regulations (including General Plan policies 5.10.5-P13 and 5.10.5-P20) that address existing conditions (e.g., flooding) affecting a proposed project, which are discussed below.

The project site is outside the 100-year flood hazard zone and, therefore, would not expose people or structures to 100-year flood hazards. As discussed previously, the project site is not subject to sea-level rise, seiche, tsunami, or mudflow. The eastern edge of the project site, however, is located within the inundation area for Anderson Dam. As discussed previously in *Section 3.10.1,* the SCVWD routinely monitors and studies the condition of Anderson Dam. The regulatory inspection programs currently in place reduces the potential for dam failure and inundation.

3.10.2.8 *Consistency with Plans*

The project would be required to comply with all applicable federal, state, regional, and local water quality and stormwater control standards and permits, as well as all regulations pertaining to flood zones. In doing so, the project would be consistent with the applicable General Plan policies regarding hydrology and water quality.

3.10.2.9 *Cumulative Impacts*

The geographic area for the project's cumulative hydrology and water quality impacts include the approved and pending cumulative projects. As a direct result of the regulations summarized in *Section 3.10.1,* development projects (including the proposed project) are required to undertake steps to avoid, minimize, and/or mitigate flooding and water quality impacts. For these reasons, the cumulative projects in compliance with applicable regulations would not result in significant cumulative hydrology or water quality impacts. **(Less than Significant Cumulative Impact)**

3.10.3 <u>Conclusion</u>

The proposed project (under either option) would not result in a significant hydrology or water quality impact. **(Less than Significant Impact)**

The proposed project (under either option) would not have a considerable contribution towards a significant cumulative hydrology or water quality impact. **(Less than Significant Cumulative Impact)**

3.11 LAND USE AND PLANNING

3.11.1 Environmental Setting

3.11.1.1 *Regulatory Framework*

Regional

Norman Y. Mineta San José International Airport Comprehensive Land Use Plan

The project site is located within the AIA, as defined by the Airport's CLUP, adopted by the Santa Clara County ALUC on May 25, 2011. The CLUP includes land use compatibility policies and standards, which form the basis for evaluating the land use compatibility of individual projects with the Airport and its operations. Standards in the CLUP focus on the three areas of ALUC responsibility: 1) aircraft noise, 2) the safety of persons on the ground and in aircraft, and 3) the control of objects in navigable airspace.

Proposals for amendments to general or specific plans and either building or zoning regulations by local agencies must be submitted to the ALUC for a determination of consistency. In addition, development projects that are higher than 200 feet above ground level are also encouraged to be submitted for review by the ALUC. Recommendations made by the ALUC are advisory to local jurisdictions, not mandatory.

Applicable CLUP land use policies to the project include the following listed below.

Policies	Description
G-5	Where legally allowed, dedication of an avigation easement to the City of San José shall be required to be offered as a condition of approval on all projects located within an Airport Influence Area, other than reconstruction projects.
G-7	All new exterior lighting within the AIA shall be designed so as to create no interference with aircraft operations. Such lighting shall be constructed and located so that only the intended area is illuminated and off-site glare is fully controlled. The lighting shall be arrayed in such a manner that it cannot be mistaken for airport approach or runway lights by pilots.
O-1	All new projects within the AIA that are subject to discretionary review and approval shall be required to dedicate in compliance with state law, an avigation easement to the City of San José.

Santa Clara Valley Habitat Plan

The Habitat Plan, discussed in *Section 3.4 Biological Resources*, is a conservation program intended to promote the recovery of endangered species and enhance ecological diversity and function, while accommodating planned growth on approximately 500,000 acres of southern Santa Clara County.

Local

Santa Clara General Plan

The project site is part of a larger 244-acre area designated as the *Santa Clara Station Focus Area* in the City's General Plan. The Santa Clara Station Focus Area includes land on both the west and east side of the railroad tracks and is generally bound by De La Cruz Boulevard, Reed Street, and Martin Avenue to the north and northeast, and Franklin Street and El Camino Real to the south and southwest (see Figure 2.1-2). At the center of this area is the existing Santa Clara Transit Station. The Santa Clara Station Focus Area is envisioned to be a new gateway into the City with office, hotel, retail, and high-density residential uses that maximizes the use of existing and planned transit and provides for improved pedestrian, bicycle, and transit connections.

Currently within the Santa Clara Station Focus Area, the project site is designated as *Santa Clara Station Very High Density Residential* (51-90 du/ac), *Santa Clara Station High Density Residential* (37-50 du/ac) and *Santa Clara Station Regional Commercial* (up to 3.0 FAR, with an emphasis on office and hotel uses).

General Plan policies applicable to land use, and safety related to airspace protection, include but are not limited to, the following listed below.

Policies	Description
General	
5.3.1-P9	Require new development provide adequate public services and facilities, infrastructure, and amenities to serve the new employment or residential growth.
5.3.1-P13	Support high density and intensity development within a quarter-mile of transit hubs and stations and along transit corridors.
5.3.1-P30	Resolve any conflicts between proposed development, plans or funding for improvements and the Land Use Diagrams, Transportation and Mobility Diagrams or text through a General Plan Amendment in order to evaluate the implications of the proposal as well as to ensure the required internal consistency for the Plan.
5.3.2-P1	Encourage the annual construction of the housing units necessary to meet the City's regional housing needs assessment by reducing constraints to housing finance and development.
5.3.4-P4	Require mixed-use development to meet the density and intensity specified in the lands use classifications.
Residential	
5.3.2-P2	Encourage higher-density residential development in transit and mixed-use areas and in other locations throughout the City where appropriate.
5.3.2-P3	Encourage below-grade parking and parking structures for development in Medium Density and High Density designations.
5.3.2-P6	Provide adequate choices for housing tenure, type and location, including higher density, and affordability for low- and moderate-income and special needs household.
Commercial	
5.3.4-P6	Locate a neighborhood square or plaza within large mixed-use developments.

Policies	Description
5.3.4-P11	Foster active, pedestrian-oriented uses at the ground level, such as retail shops, office, restaurants with outdoor seating, public plazas or residential units with front stoops, in mixed-use development.
Santa Clara Station Focus Area	
5.4.3-P1	Allow a range of development intensities, with the potential for up to 3.0 FAR, for the area northeast of El Camino Real.
5.4.3-P2	Maximize residential development within walking distance of the Station, particularly on the northeast side of the Caltrain corridor.
5.4.3-P3	Provide pedestrian-oriented ground floor uses and a network of parks and public spaces to serve both residential and non-residential development.
5.4.3-P5	Provide approximately 7.0 acres of publicly accessible open space within the area designated for residential and/or commercial uses.
5.4.3-P6	Provide pedestrian-oriented retail uses to serve new residential development, Station visitors and area employees.
Safety	
5.10.5-P29	Continue to refer proposed projects located within the Airport Influence Area to the Airport Land Use Commission.
5.10.5-P30	Review the location and design of development within Airport Land Use Commission jurisdiction for compatibility with the Airport Land Use Compatibility Plan.
5.10.5-P31	Discourage schools, hospitals, sensitive uses and critical infrastructure, such as power plants, electric substations and communications facilities, from locating within specified safety zones for the Airport as designated in the Airport Comprehensive Land Use Plan.
5.10.5-P32	Encourage all new projects within the Airport Influence Area to dedicate an avigation easement.
5.10.5-P33	Limit the height of structures in accordance with the Federal Aviation Administration Federal Aviation Regulations, FAR Part 77 criteria.

Zoning Code

The intent of the Zoning Code (Title 18 of the City Code) is to encourage development of various kinds of living, working and commercial activities in specific areas as defined in general in the General Plan and to segregate and protect the activities of these areas one from another and to accomplish the following purposes:

- To promote the public health, safety, comfort, and general welfare.
- To conserve the values of property throughout the City and to protect the character and stability of residential, commercial, professional and manufacturing areas, and to promote the orderly and beneficial development of such areas.
- To provide adequate light, air, privacy, and convenience of access to property.
- To minimize congestion on the public streets and highways.
- To provide for the elimination of incompatible and nonconforming uses of land, buildings, and structures which are adversely affecting the character and value of desirable development in each district.

- To establish official plan lines and building setback lines.
- To define the powers and duties of the administrative officers and bodies as provided herein.
- To promote efficient urban design arrangement and to secure economy in governmental expenditures.
- To preserve landmarks which reflect the City's historical, architectural, cultural and aesthetic traditions and promote a sense of community identity and historic perspective.

The project site is currently zoned *Light Industrial* (ML).[64]

Envision San José 2040 General Plan

The southeastern tip of the project site, approximately one acre in size, is located within the City of San José. This portion of the project site has a San José General Plan land use designation of CIC and is zoned PD (also discussed in *Section 2.1 Project Location*).

3.11.1.2 *Existing Conditions*

As discussed in *Section 3.9.1.2*, the project site is not located within the CLUP 2022 65, 70, or 75 dB CNEL aircraft noise contour. The project site is within Airport Safety Zones TPZ. The TPZ does not limit population density, but does require that at least 10 percent of the gross area be devoted to open space. In addition, sports stadiums and similar uses with very high concentrations of people (greater than 20,000) are prohibited. The City of San José holds an Aviation Easement that restricts maximum building height on the project site to 206 feet above msl.

As discussed in *Section 3.4 Biological Resources*, the southeastern tip of the project site is within the City of San José is designated as *Urban – Suburban* in the Habitat Plan. The remaining majority of the project site is located in the City of Santa Clara and is not located within the Habitat Plan area.

The project site is currently undeveloped and vacant. The project site is bounded by Brokaw Road and commercial and office/light industrial uses to the north, Coleman Avenue and commercial and industrial uses to the east, a parking lot and undeveloped land to the south, and a storage area and railroad tracks to the west. An aerial photograph with surrounding land uses is shown on Figure 2.1-3.

3.11.2 Land Use and Planning Impacts

3.11.2.1 *Thresholds of Significance*

For the purposes of this EIR, a land use and planning impact is considered significant if the project would:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local

[64] Note that the existing zoning designation on-site is not consistent with the existing General Plan land use designation.

coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or

- Conflict with any applicable habitat conservation plan or natural community conservation plan.

3.11.2.2 *Physically Divide an Established Community*

The project area includes a mix of uses including commercial, office, light industrial, and airport uses (refer to Figure 2.1-3). Nearby residential uses are located on the west side of the tracks on Franklin Street, Benton Street, and Campbell Avenue. The adjacent, approximately 38-acre property south of the project site in the City of San José is approved for redevelopment with the Coleman Highline project. The Coleman Highline project includes approximately 1.5 million square feet of office space, three amenity buildings, and two hotels with associated retail space.

The project (under either option) proposes to develop residential and commercial (including hotel) uses on-site and includes a new public street (Champion Parkway) on the west side of the project, as shown on Figure 2.2-1. As part of the future development of the Coleman Highline project, a new public roadway (Champions Way) would be constructed to the south of the project site. The project site, therefore, would be separated from adjacent land uses by roadways on all four sides of the site.

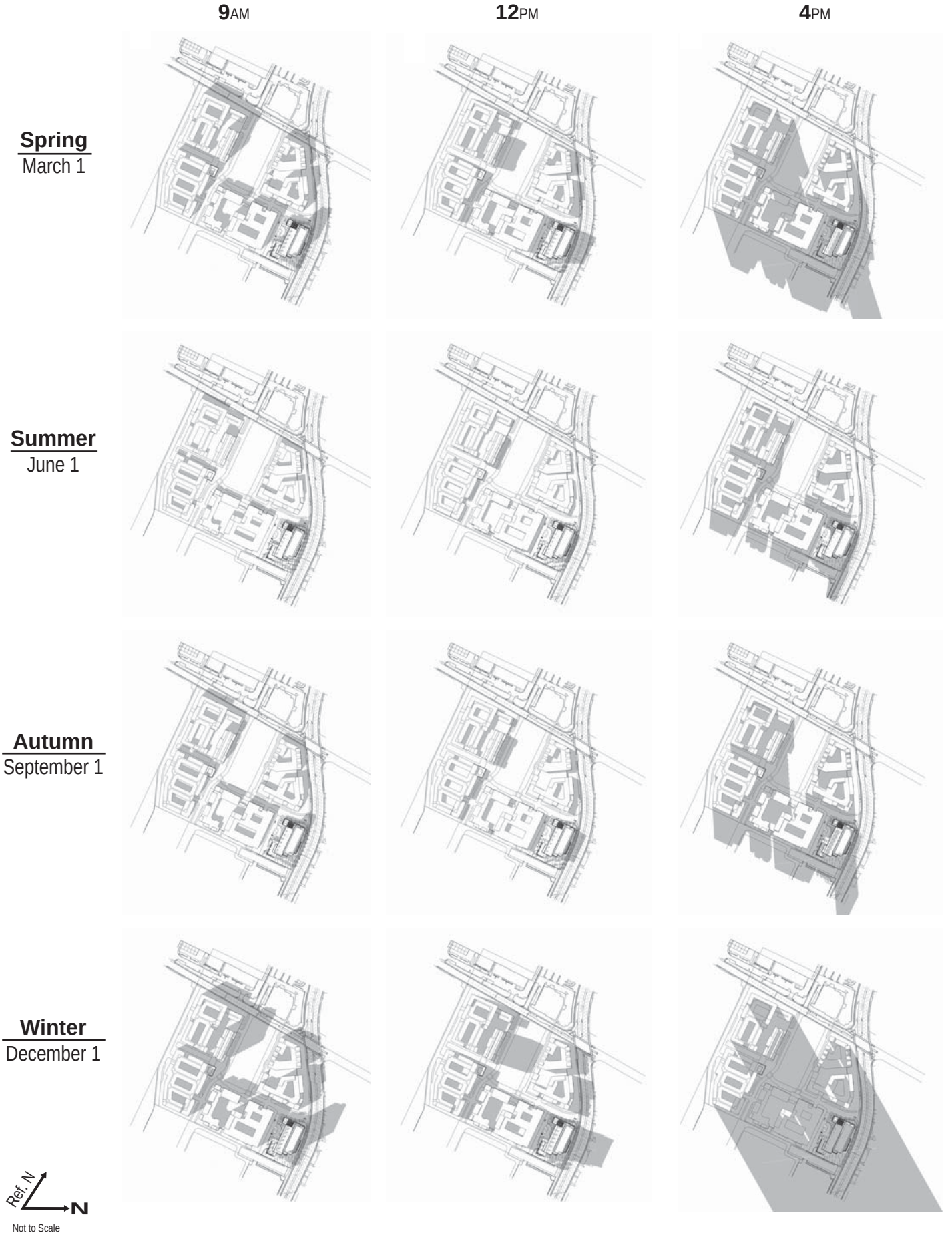
Given that the existing and planned development in the project area consists of a mix of land uses and the project site is (or is planned to be) separated from adjacent properties with roadways, the development of the project under either option would not physically divide an established community. **(Less than Significant Impact)**

3.11.2.3 *Shade and Shadow*

Currently, there are no structures on-site. Implementation of the project would result in the construction of buildings of up to 150 feet tall. The project buildings would shade and create shadows on adjacent uses and properties during certain hours of the day and certain months of the year.

The surrounding uses to the project site include roadways, commercial uses, office/light industrial uses, surface parking, undeveloped land, and a storage area (refer to Figure 2.1-3). There are no existing residences or public spaces adjacent to the project site. A shade and shadow diagram of the project is shown on Figure 3.11-1. The project's shade and shadow were simulated in the diagram for spring, summer, autumn, and winter at 9 AM, noon, and 4 PM. As shown in Figure 3.1-1, the project's shade and shadow would be the greatest to the east, north and south during the winter and spring. The project's shade and shadow to the west would be minimal during all seasons. The project would also shade itself, including the park proposed in the center of the site.

The City does not have a threshold for shade or shadow impacts. The project's shading of the adjacent roadways (i.e., Brokaw Road and Coleman Avenue) and uses/properties (i.e., commercial and office/light industrial uses, and surface parking) would not preclude the use of the properties or interfere with operations. For these reasons, the project's shade and shadow would not result in a significant land use impact. **(Less than Significant Impact)**



SHADE AND SHADOW DIAGRAM OF THE PROPOSED PROJECT FIGURE 3.11-1

3.11.2.4 *Consistency with Plans*

Norman Y. Mineta San José International Airport Comprehensive Land Use Plan

The project site is located within AIA as identified in the CLUP. As discussed in *Sections 3.11.1.2 and 3.9.2.4*, the project site is not located within the 65 dB CNEL aircraft noise contour. While the project site is located within Airport Safety Zone TPZ, the project would satisfy the minimum open space requirements of the TPZ (at least 10 percent) and would not violate the land use restrictions (no sports stadiums or similar uses). Moreover, the project (under either option) would not include buildings that would interfere with navigable airspace. In addition, as discussed in *Section 3.9.2.7*, the ALUC has issued a consistency determination for the project.

Santa Clara Valley Habitat Plan

Only the southeastern tip of the project site, which is in the City of San José, is subject to the Habitat Plan. As discussed further in *Section 3.4 Biological Resources*, the project would not conflict with the Habitat Plan and would pay applicable fees to reduce the impact to biological resources to a less than significant level.

Santa Clara General Plan

The project proposes a GPA to change the land use designation on the site to *Very High Density Residential* to allow residential development at 51 to 100 dwelling units per acre in conjunction with a minimum commercial floor area ratio of 0.2. As a result, the project would also require an amendment to the General Plan Land Use Map for the Santa Clara Station Focus Area to reflect the General Plan change.

While the project proposes a GPA to redefine the land use boundaries and densities within the site, the proposed residential and commercial uses are the same land uses that are currently allowed under the existing land use designations on-site. In addition, the project is consistent with the applicable General Plan land use policies by:

- Being adequately serviced by public facilities (refer to the discussion in *Section 3.15*) and infrastructure (refer to the discussion in *Section 3.18*);
- Proposing a mix of residential and commercial uses near existing jobs and residential neighborhoods;
- Proposing high density (51 to 100 du/ac) residential uses in proximity to the Santa Clara Transit Station;
- Proposing commercial uses at a minimum 0.2 FAR;
- Proposing up to 15,000 square feet of ancillary commercial space throughout the project site on the ground floor of the residential buildings;
- Proposing a publically-accessible neighborhood park on-site; and
- Proposing parking for the site in parking structures.

Envision San José General Plan

The project proposes only landscaping in the southeastern tip of the project site that is within the City of San José. No buildings are proposed in this portion of the project site. The landscaping is for the proposed hotel use and includes a park strip along Coleman Avenue. Landscaping and street enhancements fronting the hotel use are consistent with the existing land use designation in the City of San José's General Plan.

3.11.2.5 *Cumulative Impacts*

The project's cumulative impact on the existing community is evaluated in conjunction with the land uses in the vicinity of the project site. The immediate land uses surrounding the project site are of low intensity and include commercial uses east of the site on Coleman Avenue, commercial and office/light industrial uses north of the site on Brokaw Road, airport parking and undeveloped land bordering the project site to the south, and storage area and railroad tracks neighboring the project site to the west (refer to Figure 2.1-3). The project area, however, is undergoing transition with the recent construction and operation of Avaya Stadium and the current construction of the Coleman Highline project. The redevelopment of the project site would contribute and be consistent with this planned change in the community that is envisioned for the area in the General Plans for the cities of Santa Clara and San José. For this reason, the cumulative projects would not physically divide an established community.

The project's cumulative impact on applicable land use plans is evaluated in conjunction with all past, present, and pending land uses in the City. All development (including the proposed project) in the City of Santa Clara is subject to conformance with applicable land use plans for the purposes of avoiding or mitigating environmental effects. As discussed above, the project is consistent with the CLUP, General Plan, and Habitat Plan. For this reason, the project would not contribute to a significant cumulative conflict with applicable land use plans.

Most of the project site (approximately 23 acres) is located within the City of Santa Clara. The City of Santa Clara is not located within the Habitat Plan area (refer to *Section 3.4* for more detail). As concluded in the certified General Plan Final EIR, development within the City of Santa Clara would not conflict with a Habitat Plan.[65] The southeastern tip of the project site (approximately one acre) is within the City of San José, which is part of the Habitat Plan, and is designated as *Urban – Suburban* in the Habitat Plan. As discussed above, the project would not conflict with the Habitat Plan and would pay applicable fees to reduce the project's impact to biological resources to a less than significant level. All cumulative projects that are subject to the Habitat Plan are required to comply with the Habitat Plan and pay the applicable fees. For these reasons, the cumulative projects would not conflict with the Habitat Plan.

Based on the above discussion, the project would not have a cumulatively considerable contribution to a significant cumulative land use impact. **(Less than Significant Cumulative Impact)**

[65] *2010-2035 General Plan Integrated Final Environmental Impact Report.* SCH# 2008092005. January 2011. Page 118.

3.11.3 Conclusion

The proposed project (under either option) would not result in significant land use impacts. **(Less than Significant Impact)**

The proposed project (under either option) would not have a considerable contribution towards a significant cumulative land use impact. **(Less than Significant Cumulative Impact)**

3.12 MINERAL RESOURCES

3.12.1 Environmental Setting

3.12.1.1 *Existing Conditions*

The City of Santa Clara is located in an area zoned MRZ-1 for aggregate materials by the State of California. MRZ-1 zones are areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence. The proposed site is not known to support significant mineral resources of any type. No mineral resources are currently being extracted in the City. The State Office of Mine Reclamation's list of mines (AB 3098 list) regulated under the Surface Mining and Reclamation does not include any mines within the City.

3.12.2 Mineral Resources Impacts

3.12.2.1 *Thresholds of Significance*

For the purposes of this EIR, a mineral resource impact is considered significant if the project would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state; or
- Result in the loss of availability of locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

The project under either option would not result in the loss of availability of a known mineral resource, and no mineral excavation sites are present with the general area. The proposed project, therefore, would not result in impacts to mineral resources. **(No Impact)**

3.12.2.2 *Cumulative Impacts*

Because the project (under either option) would not impact mineral resources, the project would not contribute to a significant cumulative impact to mineral resources. (**No Cumulative Impact**)

3.12.3 Conclusion

The proposed project (under either option) would not result in impacts to known mineral resources. **(No Impact)**

The proposed project (under either option) would not have a considerable contribution towards a significant cumulative impact to mineral resources. **(No Cumulative Impact)**

3.13 NOISE AND VIBRATION

The following discussion is based on a noise and vibration assessment prepared by *Illingworth & Rodkin, Inc*. in January 2018. A copy of the report can be found in Appendix F of this EIR.

3.13.1 Environmental Setting

3.13.1.1 *Background Information*

Noise

Several factors influence sound as it is perceived by the human ear, including the actual level of sound, the period of exposure to the sound, the frequencies involved, and the fluctuation in the noise level during exposure. Noise is measured on a "decibel" scale which serves as an index of loudness. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc.

There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Because the human ear cannot hear all pitches or frequencies, sound levels are frequently adjusted or weighted to correspond to human hearing. This adjusted units is known as the "A-weighted" decibel, or dBA. Further, sound is averaged over time and penalties are added to the average for noise that is generated during times that may be more disturbing to sensitive uses such as early morning or late evening.

Since excessive noise levels can adversely affect human activities (such as conversation and sleeping) and human health, federal, state, and local governmental agencies have set forth criteria or planning goals to minimize or avoid these effects. The noise guidelines are almost always expressed using one of several noise averaging methods, such as L_{eq}, DNL, or CNEL.[66] Using one of these descriptors is a way for a location's overall noise exposure to be measured, realizing of course that there are specific moments when noise levels are higher (e.g., when a jet is taking off from the Airport or when a leaf blower is operating) and specific moments when noise levels are lower (e.g., during lulls in traffic flows on I-880 or in the middle of the night). L_{max} is the maximum A-weighted noise level during a measurement period.

Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the Peak Particle Velocity (PPV) and another is the Root Mean Square (RMS) velocity. The PPV is defined as the

[66] L_{eq} stands for the Noise Equivalent Level and is a measurement of the average energy level intensity of noise over a given period of time such as the noisiest hour. DNL stands for Day-Night Level and is a 24-hour average of noise levels, with a 10 dB penalty applied to noise occurring between 10:00 PM and 7:00 AM. CNEL stands for Community Noise Equivalent Level; it is similar to the DNL except that there is an additional five dB penalty applied to noise which occurs between 7:00 PM and 10:00 PM. As a general rule of thumb where traffic noise predominates, the CNEL and DNL are typically within two dBA of the peak-hour L_{eq}.

maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration. In this report, a PPV descriptor with units of millimeters per second (mm/sec) or inches per second (in/sec) is used to evaluate construction generated vibration for building damage and human complaints.

Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile driving and vibratory compaction equipment typically generates the highest construction related ground-borne vibration levels. Because of the impulsive nature of such activities, the use of the PPV descriptor has been routinely used to measure and assess ground-borne vibration and almost exclusively to assess the potential of vibration to induce structural damage and the degree of annoyance for humans.

The two primary concerns with construction-induced vibration, the potential to damage a structure, and the potential to interfere with the enjoyment of life, are evaluated against different vibration limits. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 in/sec PPV. Human perception to vibration varies with the individual and is a function of physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels, such as people in an urban environment, may tolerate a higher vibration level.

Railroad and light-rail operations are potential sources of substantial ground vibration depending on distance, the type and the speed of trains, and the type of railroad track. People's response to ground vibration has been correlated best with the velocity of the ground. The velocity of the ground is expressed on the decibel scale. The reference velocity is 1×10^{-6} in/sec RMS, which equals 0 VdB, and one in/sec equals 120 VdB. Although not a universally accepted notation, the abbreviation "VdB" is used in this document for vibration decibels to reduce the potential for confusion with sound decibels.

Additional information on the fundamentals of noise and vibration are included in Appendix F of this EIR.

3.13.1.2 *Regulatory Framework*

Federal and State

Federal Transit Administration Vibration Limits

The US Department of Transportation Federal Transit Administration (FTA) has developed vibration impact assessment criteria for evaluating vibration impacts associated with transit projects. FTA has vibration impact criteria based on maximum overall levels for a single event. The impact criteria for groundborne vibration are shown in Table 3.13-1, below. As summarized in Table 3.13-1, there are criteria for frequent events (more than 70 events of the same source per day), occasional events (30 to 70 vibration events of the same source per day), and infrequent events (less than 30 vibration events of the same source per day).

Table 3.13-1: Groundborne Vibration Impact Criteria			
Land Use Category	**Groundborne Vibration Impact Levels** (VdB re 1 µinch/sec, RMS)		
	Frequent Events[1]	**Occasional Events**[2]	**Infrequent Events**[3]
Category 1 – Buildings where vibration would interfere with interior operations.	65 VdB[4]	65 VdB[4]	65 VdB[4]
Category 2 – Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3 – Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB

Notes: VdB re 1 µinch/sec, RMS = Root-mean-square vibration velocity in vibration decibel relative to 1 micro-inch per second

[1] "Frequent Events" is defined as more than 70 vibration events of the same source per day. Most rapid transit projects fall into this category.

[2] "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.

[3] "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.

[4] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration sensitive manufacturing or research should always require detailed evaluation to define the acceptable vibration levels. Ensuring low vibration levels in a building requires special design of HVAC systems and stiffened floors.

California Building Code, Title 24, Part 2

The State Building Code, Title 24, Part 2 of the State of California Code of Regulations establishes uniform minimum noise insulation performance standards to protect persons within new buildings which house people, including hotels, motels, dormitories, apartments, and dwellings other than single-family dwellings. Title 24 mandates that interior noise levels attributable to exterior sources shall not exceed 45 dBA DNL or CNEL[67] in any habitable room.

California Green Building Standards Code

The state established exterior sound transmission control standards for non-residential buildings as set forth in the California Green Building Standards Code, Section 5.507.4.1 and 5.507.4.2. CALGreen requires that wall and roof-ceiling assemblies exposed to the adjacent roadways have a composite Sound Transmission Class (STC) rating of at least 50 or a composite Outdoor-Indoor Transmission Class (OITC) rating of no less than 40. Exterior windows must have a minimum STC of 40 or OITC of 30 when the commercial property falls within the 65 dBA DNL noise contour for a freeway or expressway, railroad, industrial source or fixed-guideway noise source, as determined by the local general plan noise element.

[67] Title 24 states that the determination of whether to apply DNL or CNEL should be consistent with the metric used in the noise element of the local general plan.

Regional and Local

Norman Y. Mineta San José International Airport Comprehensive Land Use Plan

The project site is located within the AIA, as defined by the Airport's CLUP, adopted by the ALUC on May 25, 2011. The CLUP includes noise policies and contains standards for projects within the vicinity of the Norman Y. Mineta San José International Airport. These policies include, but are not limited to, the following:

Policies	Description
N-1	The CNEL method of representing noise levels shall be used to determine if a specific land use is consistent with the CLUP.
N-2	In addition to the other policies herein, the Noise Compatibility Policies presented in Table 4-1 shall be used to determine if a specific land use is consistent with this CLUP, which shows residential uses are generally acceptable in 55-60 CNEL environments, conditionally acceptable in 60-65 CNEL environments, generally unacceptable in 65-70 CNEL environments and unacceptable in 70+ CNEL environments. Transient lodging including motels and hotels are generally acceptable in 55-65 CNEL noise environments, conditionally acceptable in 65 to 70 CNEL noise environments, unacceptable at 70+ CNEL noise environments. Commercial uses are generally acceptable in 55-65 CNEL noise environments, conditionally acceptable in 65-70 CNEL noise environments, generally unacceptable in 70-75 noise environments, and unacceptable in 75+ CNEL noise environments.
N-3	Noise impacts shall be evaluated according to the Aircraft Noise Contours presented on Figure 5. On Figure 5, the project site is not within the 65 dB CNEL noise contour.
N-4	No residential or transient lodging construction shall be permitted within the 65 dB CNEL contour boundary unless it can be demonstrated that the resulting interior sound levels will be less than 45 dB CNEL and there are no outdoor patios or outdoor activity areas associated with the residential portion of a mixed use residential project or a multi-unit residential project.
N-5	All property owners within the Airport Influence Area who rent or lease their property for residential use shall include in their rental/lease agreement with the tenant, a statement advising that they (the tenants) are living within a high noise area and the exterior noise level is predicted to be greater than 65 dB CNEL in a manner that is consistent with current state law including AB2776 (2002).
N-6	Noise level compatibility standards for other types of land uses shall be applied in the same manner as the above residential noise level criteria. Table 4-1 presents acceptable noise levels for other land uses in the vicinity of the Airport (refer to Policy N-2 to land uses proposed by the project).
N-7	Single-event noise levels (SENL) from single aircraft overflights are also to be considered when evaluating the compatibility of highly noise-sensitive land uses such as schools, libraries, outdoor theaters, and mobile homes. Single-event noise levels are especially important in the areas regularly overflown by aircraft, but which may not produce significant CNEL contours, such as the down-wind segment of the traffic pattern, and airport entry and departure flight corridors.

Santa Clara General Plan

General Plan policies applicable to noise include, but are not limited to, the following listed below.

Policies	Description
5.10.6-P1	Review all land use and development proposals for consistency with the General Plan compatibility standards and acceptable noise exposure levels. Residential land uses are considered compatible in noise environments of 55 dBA CNEL or less, where the exterior noise levels are greater than 55 dBA CNEL and less than 70 dBA CNEL, the design of the project should include measures to reduce noise levels to acceptable levels. Noise levels exceeding 70 dBA CNEL at residential land uses are considered incompatible. Residential land uses proposed in noise environments exceeding 70 dBA CNEL should generally be avoided, except when the residential use is entirely indoors and where interior noise levels can be maintained at 45 dBA CNEL or less. Commercial land uses are considered compatible in noise environments of 65 dBA CNEL or less.
5.10.6-P2	Incorporate noise attenuation measures for all projects that have noise exposure levels greater than General Plan "normally acceptable" levels (as defined above).
5.10.6-P3	New development should include noise control techniques to reduce noise to acceptable levels, including site layout (setbacks, separation and shielding), building treatments (mechanical ventilation system, sound-rated windows, solid core doors and baffling) and structural measures (earthen berms and sound walls).
5.10.6-P4	Encourage the control of noise at the source through site design, building design, landscaping, hours of operation and other techniques.
5.10.6-P5	Require noise-generating uses near residential neighborhoods to include solid walls and heavy landscaping along common property lines, and to place compressors and mechanical equipment in sound-proof enclosures.
5.10.6-P6	Discourage noise sensitive uses, such as residences, hospitals, schools, libraries and rest homes, from areas with high noise levels, and discourage high noise generating uses from areas adjacent to sensitive uses.

City Code

The City Code establishes noise and vibration level performance standards for fixed sources. Section 9.10.40 of the City Code limits noise levels at residences to 55 dBA during daytime hours (7:00 AM to 10:00 PM) and 50 dBA at night (10:00 PM to 7:00 AM), noise levels at commercial uses to 65 dBA during daytime hours and 60 dBA during nighttime hours, and noise levels at light industrial uses to 70 dBA at any time. The noise limits are not applicable to emergency work, licensed outdoor events, City-owned electric, water, and sewer utility system facilities, construction activities occurring within allowable hours, permitted fireworks displays, or permitted heliports. The City Code does not define the acoustical time descriptor such as L_{eq} (the average noise level) or L_{max} (the maximum instantaneous noise level) that is associated with the above limits. A reasonable interpretation of the City Code would identify the ambient base noise level criteria as an average or median noise level (L_{eq}/L_{50}).

Section 9.10.230 of the City Code states construction activities are not permitted within 300 feet of residentially zoned property except within the hours of 7:00 AM and 6:00 PM on weekdays and 9:00 AM and 6:00 PM on Saturdays. No construction is permitted on Sundays or holidays.

Section 9.10.050 of the City Code states "It shall be unlawful for any person to operate or cause, permit, or allow the operation of, any fixed source of vibration of disturbing, excessive, or offensive vibration on property owned, leased, occupied, or otherwise controlled by such person, such that the vibration originating from such source is above the vibration perception threshold of an individual at the closest property line point to the vibration source on the real property affected by the vibration."

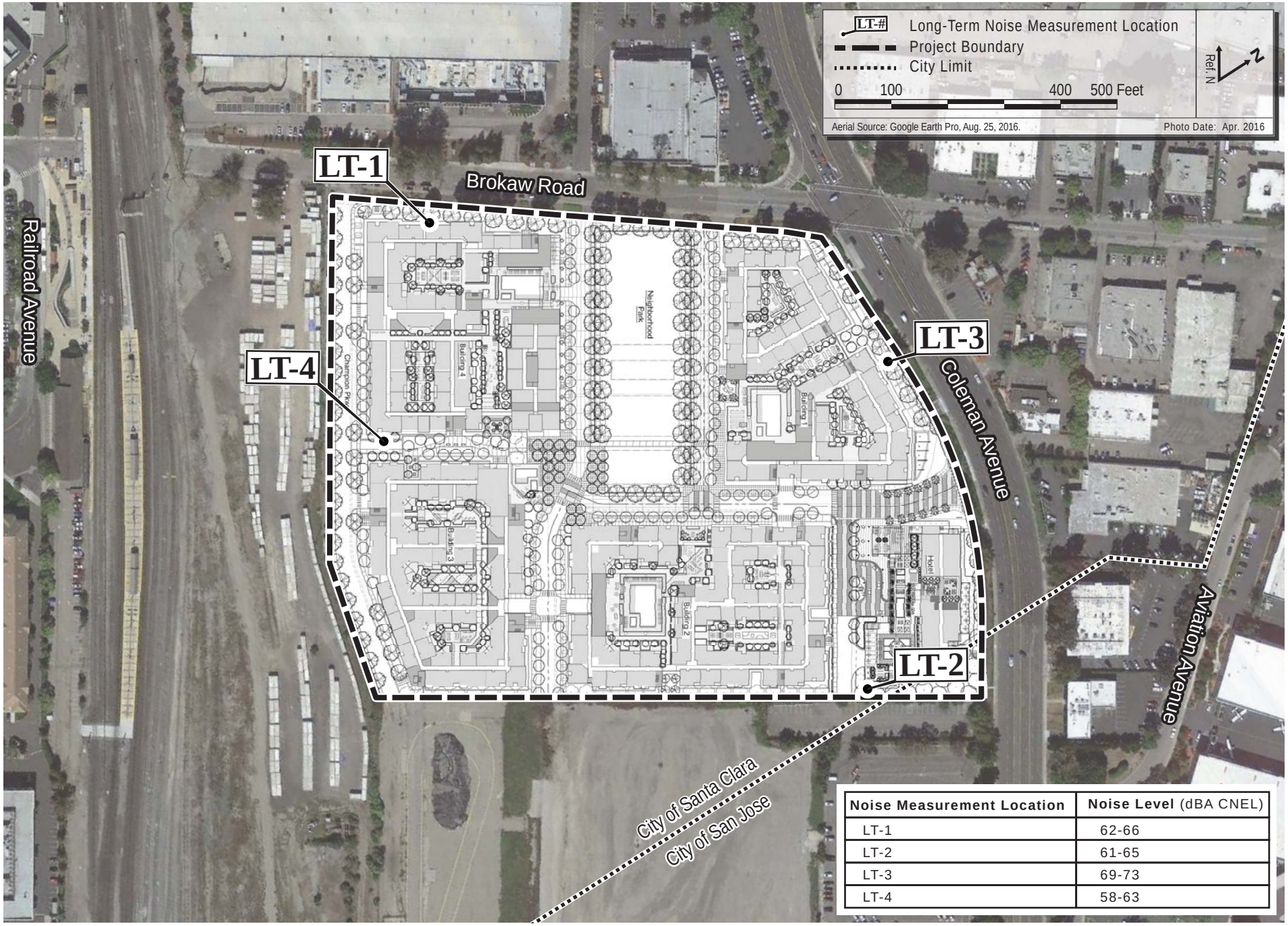
3.13.1.3 *Existing Conditions*

The project site is located south of the intersection of Coleman Avenue and Brokaw Road in the City of Santa Clara. The project site is bounded by Brokaw Road and commercial and office/light industrial uses to the north, Coleman Avenue and commercial and industrial uses to the east, a parking lot and undeveloped land to the south, and a storage area and railroad tracks to the west. The Santa Clara Transit Station is located to the southwest of the project site and the Mineta San José International Airport is located to the northeast of the project site.

Ambient noise levels were monitored in March 2017 (refer to Appendix F for details regarding noise monitoring locations and levels). The predominant sources of noise that affect the noise environment at the site and at nearby land uses results primarily from vehicular traffic along Coleman Avenue and Brokaw Road. Aircraft associated with Mineta San José International Airport and trains along the UPRR also contribute to the noise environment in the area.

The Community Noise Equivalent Level at the northwestern project boundary (see LT-1 on Figure 3.13-1) ranges from 62 to 66 dBA CNEL, 61 to 65 dBA CNEL at the southeastern project boundary facing Coleman Avenue (see LT-2 on Figure 3.13-1), 69 to 73 dBA CNEL at the northeastern site boundary near Coleman Avenue and Brokaw Road (see LT-3 on Figure 3.13-1), and 58-63 dBA CNEL at the western site boundary (see LT-4 on Figure 3.13-1). During the measurement at southeast corner of the site, a motorcycle passing by produced maximum noise levels of 97 dBA L_{max}. Before and during the measurement at the western boundary, airplanes passing overhead produced maximum noise levels of 76 dBA L_{max}, trains passing along the UPRR produced maximum noise levels of 65 dBA L_{max}, and construction equipment produced maximum noise levels of 60 dBA L_{max}.

According to the CLUP for Mineta San José International Airport, the noise impact of an airport is a direct result of the number and types of aircraft operations at the airport. Updated aviation activity forecasts for the airport show the same level of activity is expected for the years 2017 through 2027. Figure 2 in the CLUP shows the noise exposure contours resulting exclusively from aircraft operations over this time period. The project site straddles the 60 CNEL noise exposure contour indicating that aircraft noise exposure ranges from about 58 CNEL to 62 CNEL.



Noise Measurement Location	Noise Level (dBA CNEL)
LT-1	62-66
LT-2	61-65
LT-3	69-73
LT-4	58-63

NOISE MEASUREMENT LOCATIONS

FIGURE 3.13-1

3.13.2 Noise and Vibration Impacts

3.13.2.1 *Thresholds of Significance*

For the purposes of this EIR, a noise and vibration impact is considered significant if the project would result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- 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 expose people residing or working in the project area to excessive noise levels; or
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

The project site is not within the vicinity of a private airstrip; therefore, the last threshold listed above is not discussed further. CEQA does not define what noise level increase would be considered substantial. The following criteria based on standards identified in the Building Code, CALGreen Code, General Plan, City Code, and City practice were used to evaluate the significance of environmental noise resulting from the project:

- A significant noise impact would be identified if the project would expose persons to or generate noise levels that would exceed applicable noise standards presented in the General Plan or City Code.
- A significant impact would be identified if the construction of the project would expose persons to excessive vibration levels. Ground-borne vibration levels exceeding 0.3 in/sec PPV would have the potential to result in cosmetic damage to normal buildings.
- A significant impact would be identified if traffic generated by the project or project improvements/operations would substantially increase noise levels at sensitive receptors in the vicinity. A substantial increase would occur if: a) the noise level increase is five dBA CNEL or greater, with a future noise level of less than the “normally acceptable” standard, or b) the noise level increase is three dBA CNEL or greater, with a future noise level equal to or greater than the “normally acceptable” standard.
- A significant noise impact would be identified if construction-related noise would temporarily increase ambient noise levels at sensitive receptors. Hourly average noise levels exceeding 60 dBA $L_{eq,}$ and the ambient by at least five dBA L_{eq}, for a period of more than one year would constitute a significant temporary noise increase at adjacent residential land uses. Where noise from construction activities exceeds 70 dBA L_{eq} and the ambient noise environment by at least 5 dBA L_{eq} at commercial land uses in the project vicinity for a period exceeding one year, the impact would be considered significant.

As previously discussed in *Section 3.0,* the California Supreme Court issued an opinion in "CBIA vs. BAAQMD" holding that CEQA is primarily concerned with the impacts of a project on the environment and generally does not require agencies to analyze the impact of existing conditions on a project's future users or residents. The ruling provided for several exceptions to the general rule where an analysis of the project on the environment is warranted, including if the project is exposed to potential noise and safety impacts on the project occupants due to proximity to an airport (PRC 21096) as discussed in *Section 3.0*. Consequently, the noise impacts on the project that have the potential to quality as significant impacts under CEQA are those related to airport noise. Nevertheless, the City has policies and regulations (including those identified in *Section 3.13.1.2*) that address existing conditions affecting a proposed project, which are discussed below.

3.13.2.2 *Impacts/Effects to the Project*

Future Exterior Noise Levels

The future noise environment at the project site would continue to result primarily from vehicular traffic along Coleman Avenue and Brokaw Road, aircraft associated with Norman Y. Mineta San José International Airport, and trains along the UPRR. In addition, the future BART Silicon Valley Extension to the Santa Clara Station would be located south of the project site.

The future noise levels from traffic along Coleman Avenue and Brokaw Road, aircraft, and trains were calculated to determine the future exterior noise exposure levels at key locations on the project site. These locations and projected future exterior noise levels are shown in Figure 3.13-2, in which some of the locations represent building facade exposures and some represent outdoor common use areas. Future exterior noise levels take into account the distances of the key locations to the noise sources and the shielding from the proposed buildings themselves. The noise levels are the total noise exposure from all noise sources at each location.

<u>Neighborhood Park and Common Amenity Areas At-Grade</u>

The project includes a neighborhood park and other common outdoor amenity areas at-grade throughout the project site (refer to *Section 2.2.1.3* for more detail). The City's noise standard of 65 dBA CNEL for recreational exterior noise would apply to the neighborhood park and common outdoor amenity areas at-grade.

The approximately two-acre neighborhood park and amenity areas at-grade would be partially shielded, by the proposed buildings from traffic noise along the high traffic volume roadways (e.g., Coleman Avenue and Brokaw Road) and train/potential BART noise from the tracks south of the site. However, the proposed buildings would not provide any acoustic shielding from aircraft noise. Traffic noise along Brokaw Road and aircraft noise would produce exterior noise levels of 63 dBA at the center of the proposed neighborhood park, and 67 dBA CNEL at the edge of the neighborhood park nearest to Brokaw Road. Although the portion of the neighborhood park nearest to Brokaw Road would have exterior noise levels that would exceed the City's noise standard of 65 dBA CNEL, the majority of the neighborhood park would have exterior noise levels below the City's 65 dBA CNEL.

Residential Outdoor Common Amenity Areas

The proposed project would have outdoor common amenity areas located on the 2nd and 3rd floor podium levels of residential Buildings 1 through 4 as shown on Figure 3.13-2. The City's exterior noise standard of 55 dBA CNEL would apply to these residential common amenity spaces, however, noise standards typically are not applied at private decks or balconies.

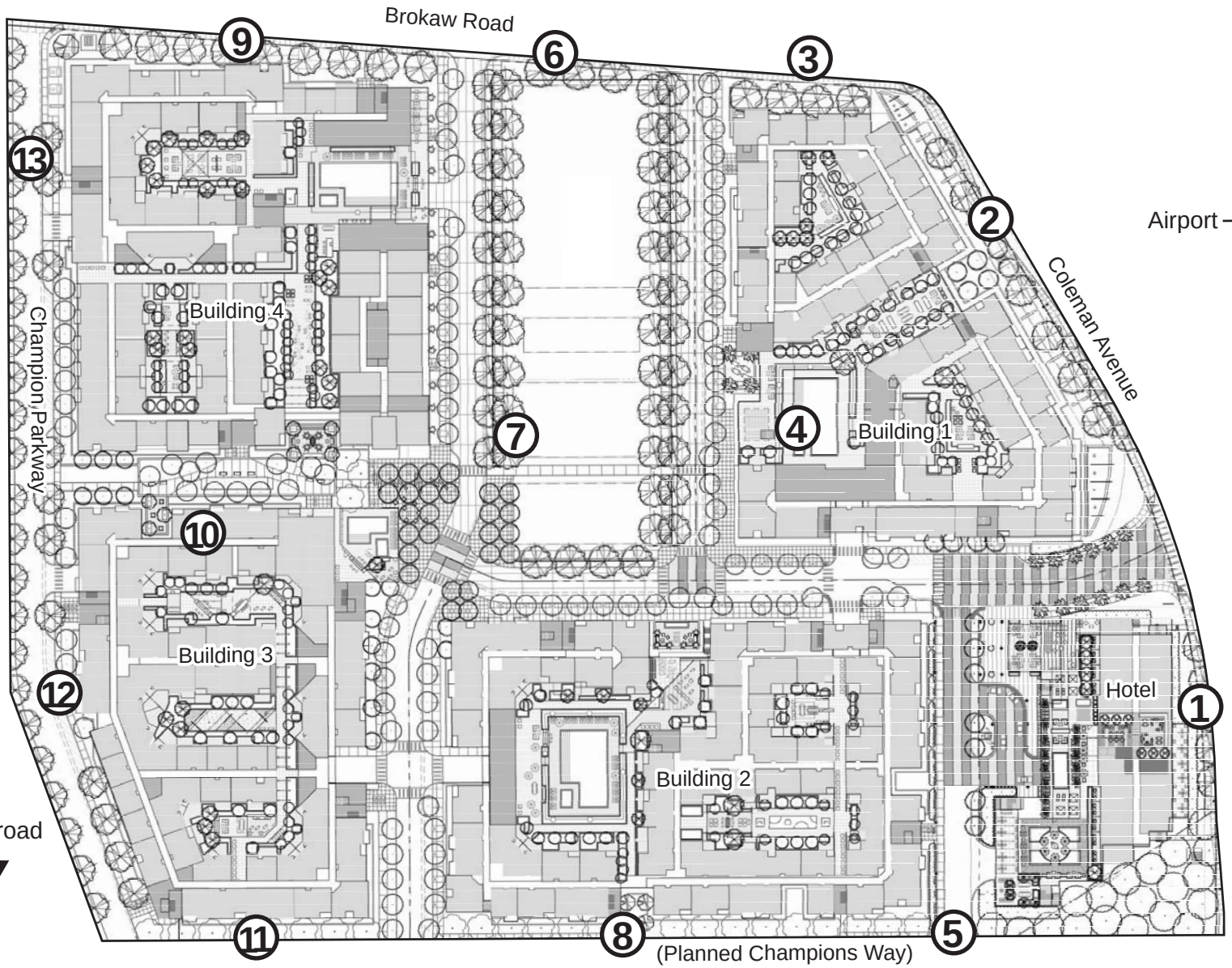
The outdoor podium amenity areas in the residential Buildings 1 through 4 would be acoustically shielded by the proposed buildings themselves from traffic noise along the high traffic volume roadways (e.g., Coleman Avenue and Brokaw Road) and train/potential BART noise from the tracks south of the site. However, the proposed buildings would not provide any acoustic shielding from aircraft noise. Therefore, outdoor use areas around Location 4 as shown on Figure 3.13-2, including outdoor use areas in Building 1 around and in the east section of Building 2, would have exterior noise levels of 61 dBA CNEL due to aircraft noise. Outdoor use areas around Location 7, including areas in the west section of Building 2, would have exterior noise levels of 60 dBA CNEL due to aircraft noise. Outdoor use areas around Location 10, including the outdoor courtyard area of Buildings 3 and 4, would have exterior noise levels of 59 dBA CNEL due to aircraft noise.

The project site is located in proximity to major ground transportation sources and the Norman Y. Mineta International Airport. Noise from these sources would be audible throughout the project site. In addition, noise from special events at Avaya Stadium would be expected to be intermittently audible.[68] Events at the Stevens Stadium and Schott Stadium approximately 0.3 miles west and southwest of the project site could also be intermittently audible at the site, though events at these stadiums are smaller in scale compared to events at Avaya Stadium.[69] The proposed building layout from the site plan would substantially reduce ground transportation noise (traffic and train) at outdoor activity areas to below the City's 55 dBA CNEL standard for the residential outdoor areas. However, aircraft noise would range from 59 to 61 dBA CNEL in the outdoor activity areas. Even though the aircraft noise exposure would be under and consistent with the CLUP's 65 dBA CNEL contour line, the aircraft noise exposure would exceed the City's 55 dBA CNEL goal.

Impact NOI-1: Exterior noise levels at the proposed neighborhood park and outdoor residential common amenity areas would exceed the City's exterior land use compatibility goal of 65 dBA CNEL for recreational uses and 55 dBA CNEL for residential uses. **(Significant Impact)**

[68] Avaya Stadium is located approximately 0.5 miles south of the project site and hosts approximately 20 events per year with an attendance of approximately 18,000 people. Avaya Stadium also host approximately 10 other large events (3,000+ people annually). (Source: Fedesco, Richard. Vice President, San José Earthquakes. Personal Communication. August 14, 2017.)

[69] Stevens Stadium hosts approximately 16 to 22 games per year with an average attendance of 600-800 people. Schott Stadium hosts approximately 33 to 40 games per year with an average attendance between 300-400 people. (Source: Mendoza, Christopher. Assistant Athletic Director, Santa Clara University Athletics. Personal Communication. August 14, 2017.)



LOCATIONS:

1 73 dBA CNEL Traffic/Aircraft	4 61 dBA CNEL Aircraft	7 60 dBA CNEL Aircraft	10 59 dBA CNEL Aircraft
2 72 dBA CNEL Traffic/Aircraft	5 64 dBA CNEL Traffic/Aircraft	8 64 dBA CNEL Traffic/Aircraft/Trains	11 64 dBA CNEL Aircraft/Trains
3 70 dBA CNEL Traffic/Aircraft	6 60 dBA CNEL Traffic/Aircraft	9 68 dBA CNEL Traffic/Aircraft/Trains	12 67 dBA CNEL

Ref. N

0 50 100 150 Feet

FUTURE EXTERIOR NOISE EXPOSURE

FIGURE 3.13-2

Mitigation Measure: The project shall implement the following measure to disclose aircraft noise impacts to future residents.

MM NOI-1.1: Potential residents and buyers shall be provided with a real estate disclosure statement and buyer deed notices which would offer comprehensive information about the noise environment of the project site.

There are no feasible measures to reduce aircraft noise levels at the proposed neighborhood park, at-grade outdoor amenity areas, and common outdoor amenity areas in the residential buildings. For this reason, this impact is significant unavoidable. **(Significant Unavoidable Impact)**

Hotel Outdoor Use Areas

The proposed hotel would have outdoor amenity space on the 4th and 6th floors and a rooftop deck (refer to *Section 2.2.1.3* for more detail). The outdoor amenity space and rooftop deck would be set back from the centerline of Coleman Avenue and would be acoustically shielded by the proposed hotel building itself from traffic noise along Coleman Avenue. The acoustical shielding and distance from Coleman Avenue to the 4th floor, 6th floor, and rooftop outdoor use areas would reduce traffic noise levels to below 60 dBA CNEL at these areas. The hotel's outdoor use areas would also be exposed to aircraft noise levels, which would result in a total noise exposure of 64 dBA CNEL. The noise environment at the hotel outdoor amenity spaces on the 4th and 6th floors and rooftop would not exceed the City's 65 dBA CNEL exterior noise standard for commercial land uses. **(Less than Significant Impact)**

Future Interior Noise Levels (Planning Consideration)

Residential and Hotel Uses

Interior noise levels would vary depending upon the design of the buildings (relative window area to wall area) and the selected construction materials and methods. Standard residential construction provides approximately 15 dBA of exterior-to-interior noise reduction, assuming the windows are partially open for ventilation. Standard construction with the windows closed provides approximately 20 to 25 dBA of noise reduction in interior spaces. Where exterior noise levels range from 60 to 65 dBA CNEL, the inclusion of adequate forced-air mechanical ventilation is often the method selected to reduce interior noise levels to acceptable levels by closing the windows to control noise. Where noise levels exceed 65 dBA CNEL, forced-air mechanical ventilation systems and sound-rated construction methods are normally required. Such methods or materials may include a combination of smaller window and door sizes as a percentage of the total building façade facing the noise source, sound-rated windows and doors, sound-rated exterior wall assemblies, and mechanical ventilation so windows may be kept closed at the occupant's discretion.

Given the ambient noise levels at the building facades (see Figure 3.13-2), forced-air mechanical ventilation or air conditioning systems should be required at all the buildings on the project site so that windows may be kept closed at the discretion of the occupants to control noise and meet the 45 dBA CNEL interior noise limit. The facades of the hotel building and Building 1 facing Coleman Avenue at Locations 1, 2, and 3 would be exposed to noise levels ranging from 70 to 73 dBA CNEL. The perpendicular facing units would be exposed to noise levels ranging from 65 to 70 dBA CNEL. The facades of Building 4 facing Brokaw Road at Locations 6 and 9, would be exposed to noise

levels ranging from 67 to 68 dBA CNEL. The facades of Building 4 and 3 facing the railroad at Locations 12 and 13 would be exposed to noise levels ranging from 66 to 67 dBA CNEL. The southern facing facades of Buildings 2 and 3 at Locations 8 and 11 would be exposed to noise levels of 64 dBA CNEL.

In addition to having forced-air mechanical ventilation or air conditioning systems, sound-rated construction methods should be required for these buildings to meet the 45 dBA CNEL interior noise limit. Standard construction with adequate forced-air mechanical ventilation would be satisfactory throughout the remainder of the project.

As conditions of approval, the following noise insulation features shall be incorporated into the proposed project to reduce interior noise levels to 45 dBA CNEL or less:

- Provide a suitable form of forced-air mechanical ventilation, as determined by the local building official, so that windows can be kept closed to control noise.

- A qualified acoustical specialist shall prepare a detailed analysis of interior residential noise levels resulting from all exterior sources during the design phase pursuant to requirements set forth in the State Building Code. The study will also establish appropriate criteria for noise levels inside the commercial spaces affected by environmental noise. The study will review the final site plan, building elevations, and floor plans prior to construction and recommend building treatments to reduce residential interior noise levels to 45 dBA CNEL or lower. Treatments would include, but are not limited to, STC sound-rated windows and doors, sound-rated wall and window constructions, acoustical caulking, protected ventilation openings, etc. The specific determination of what noise insulation treatments are necessary shall be conducted on a unit-by-unit basis during final design of the project. Results of the analysis, including the description of the necessary noise control treatments, shall be submitted to the City, along with the building plans and approved design, prior to issuance of a building permit.

<u>Commercial Land Uses</u>

The project proposes commercial uses located at the 4th floor of the hotel building (e.g., restaurant and bar) and on the ground floor of Buildings 1 and 4 (e.g., small clinics, grocery/convenience stores, child care facilities, and coffee shops) facing the neighborhood park. Noise levels at the commercial uses would range from 60 to 65 dBA L_{eq}. Standard commercial construction provides at least 30 dBA of outdoor to indoor noise reduction assuming that the building includes adequate forced-air mechanical ventilation systems so that the windows and doors may remain closed to control noise. Assuming standard commercial construction methods with the windows and doors closed, interior noise levels are calculated to range from 30 to 35 dBA $L_{eq(1\text{-}hr)}$ during daytime hours, which would be below the CALGreen Code standard of 50 dBA $L_{eq(1\text{-}hr)}$.

BART Vibration Impacts

The FTA vibration impact criteria are based on maximum overall levels for a single event. The impact criteria for groundborne vibration are shown in Table 3.13-1.

The frequency of the railway and potential BART pass-bys would place the level of train activity in the "frequent events" category and the applicable standard is 72 VdB. According to the FTA, vibration levels would be below 70 VdB or less at a distance of 330 feet from the centerline of the nearest proposed UPRR railroad train track to the project site. The nearest buildings would be 300 feet from the centerline of the nearest proposed BART track, which is beyond the 200 foot screening distance for a rail rapid transit system such as BART. Vibration levels produced by BART would also be below the 72 VdB threshold level. Persons at rest may perceive the vibration; however, vibration controls are not recommended.

Construction-related vibration impacts from the BART Extension project is discussed in *Section 3.13.2.5*.

3.13.2.3 *Impacts from the Project*

Construction-Related Impacts

Construction-Related Vibration Impacts

The construction of the project may generate perceptible vibration when heavy equipment or impact tools (e.g. jackhammers, hoe rams) are used. Construction activities would include site preparation work, foundation work, paving, and new building framing and finishing. The proposed project would not require pile driving, which can cause excessive vibration.

For structural damage, the California Department of Transportation recommends a vibration limit of 0.3 in/sec PPV for buildings that are found to be structurally sound but where structural damage is a major concern, and a conservative limit of 0.08 in/sec PPV for ancient buildings or buildings that are documented to be structurally weakened. No ancient buildings or buildings that are documented to be structurally weakened adjoin the project site. Therefore, ground-borne vibration levels exceeding 0.3 in/sec PPV at buildings in the vicinity would not have the potential to result in a significant vibration impact.

Table 3.13-2 presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet. Project construction activities, such as drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) may generate substantial vibration in the immediate vicinity. Vibration levels would vary depending on soil conditions, construction methods, and equipment used.

The nearest structure to the project site is the commercial building to the north of the project site across Brokaw Road. The commercial building is approximately 110 feet from the primary work area and vibration levels produced by a vibratory roller would be up to 0.04 in/sec PPV at this distance. This vibration level would be below the 0.3 in/sec PPV significance threshold. All other construction activities would generate substantially lower vibration levels.

At the surrounding areas where vibration would not be expected to cause structural damage, vibration levels may still be perceptible. However, as with any type of construction, this would be anticipated and would not be considered significant, given the intermittent and short duration of the phases that have the highest potential of producing vibration (use of jackhammers and other high power tools). By use of administrative controls, such as notifying adjacent building occupants of scheduled construction activities and scheduling construction activities with the highest potential to produce perceptible vibration during hours with the least potential to affect nearby occupants, perceptible vibration can be kept to a minimum. **(Less than Significant Impact)**

Table 3.13-2: Vibration Source Levels for Construction Equipment

Equipment		**PPV at 25 feet** (in/sec)	**Approximate L_v at 25 feet** (VdB)
Pile Driver (Impact)	upper range	1.158	112
	typical	0.644	104
Pile Driver (Sonic)	upper range	0.734	105
	typical	0.170	93
Clam Shovel Drop		0.202	94
Hydromill (slurry wall)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

Notes: VdB is the term used for vibration decibels. in/sec = inches per second

Source: United States Department of Transportation, Office of Planning and Environment, Federal Transit Administration. Transit Noise and Vibration Impact Assessment, May 2006.

Construction-Related Noise Impacts to Off-Site Receptors

Noise impacts resulting from construction depend upon the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction lasts over extended periods of time.

The City exempts noise due to construction activities from the noise level performance standards for fixed sources of noise, when construction falls within the City's allowable hours of between 7:00 AM and 6:00 PM Monday through Friday, and between 9:00 AM and 6:00 PM on Saturdays. Construction on Sundays or holidays is prohibited. However, where noise from construction activities exceeds 60 dBA L_{eq} and exceeds the ambient noise environment by at least five dBA L_{eq} at noise-sensitive residential uses in the project vicinity for a period exceeding one year, the impact would be considered significant. For commercial uses, a significant impact would be identified if construction noise were to exceed 70 dBA L_{eq} and exceeds the ambient noise environment by at least five dBA L_{eq} for a period exceeding one year.

Construction noise impacts were assessed at four representative land uses in the project vicinity. Based on noise measurements taken, it is estimated that the ambient noise level at the commercial developments located northeast of the project site across Coleman Avenue, would have an average ambient daytime noise level at 71 dBA L_{eq}. The commercial land uses north of the project site across Brokaw Road have an estimated average ambient daytime noise levels of about 62 dBA L_{eq}. The Santa Clara Transit Center and Candlewood Suites are located to the south of the project site. Based on measurements conducted for a previous project, the average ambient daytime noise level at both these locations is about 64 dBA L_{eq}.

Construction activities for individual projects are typically carried out in stages. During each stage of construction, there would be a different mix of equipment operating, and noise levels would vary by stage and vary within stages, based on the amount of equipment in operation and the location at which the equipment is operating. Most demolition and construction noise falls with the range of 80 to 90 dBA at a distance of 50 feet from the source. Refer to Appendix F for additional detail regarding typical construction noise levels.

Construction activities generate considerable amounts of noise, especially during earth-moving activities and during the construction of the building's foundation when heavy equipment is used. The highest noise levels would be generated during grading, excavation, and foundation construction. The hauling of excavated materials and construction materials would generate truck trips on local roadways, as well. Construction activities would include site preparation, excavation, grading, trenching, building construction, paving, and architectural coating.

The project proposes to construct four residential buildings and a hotel, each with a subgrade and podium parking structure. The buildings would be built one at a time, with some overlap during the construction of the first three residential buildings. The construction of the project is estimated to begin October 2018 and estimated to end in August 2025. Each residential building is estimated to be constructed over one year, and the hotel is estimated to be constructed over 20 months. Construction-generated noise levels drop off at a rate of about six dBA per doubling of the distance between the source and receptor. Shielding by buildings or terrain can provide an additional five to 10 dBA noise reduction at distant receptors. Once construction moves indoors, minimal noise would be generated at off-site locations.

As summarized in Table 3.13-3, noise levels are estimated to exceed the commercial threshold of 70 dBA L_{eq} and ambient noise increase of at least five dBA L_{eq} for more than one year. As shown in Table 3.13-3, noise levels would exceed the commercial threshold at the commercial land uses across Coleman Avenue and Brokaw Road during the construction of Building 1 with noise levels up to 84

dBA, across Brokaw Road during the construction of Building 4 with noise levels up to 86 DBA, and across Coleman Avenue during the construction of the hotel with noise levels up to 81 dBA. Noise levels would exceed the noise-sensitive land use threshold at the Candlewood Suites during the one-month of construction of Building 3 when the grading and trenching construction phases overlap with noise level up to 70 dBA.

Table 3.13-3: Estimated Construction Noise Levels at the Nearby Receptors

Building	Construction Period	Calculated Hourly Average L_{eq} at Receptors, dBA			
		Coleman Commercial	Brokaw Commercial	Train Station	Candlewood Suites Hotel
Building 1[a]	10/1/2018 – 10/1/2019	**77 – 84**	**79 – 86**	57 – 64	56 – 63
Building 2[b]	7/1/2019 – 7/1/2020	67 – 74	62 – 69	60 – 67	59 – 66
Building 4[c]	4/1/2020 – 4/1/2021	58 – 65[d]	**79 – 86**	64 – 71	62 – 69
Building 3	3/1/2022 – 3/1/2023	50 – 57 [d]	55 – 62[d]	64 – 71	63 – **70**
Hotel	1/1/2024 – 8/1/2025	74 **– 81**	51 – 58[d]	45 – 52[d]	45 – 52[d]

Notes: **Bold =** Exceeds noise threshold of land use and exceeds the ambient noise environment by at least five dBA L_{eq} for a period exceeding one year.

[a] The range of noise levels for Building 1 construction reflects overlap with Building 2 construction.

[b] The range of noise levels for Building 2 construction reflects overlap with Buildings 1 and 4 construction.

[c] The range of noise levels for Building 4 construction reflects overlap with Building 2 construction.

[d] Construction noise levels are reduces by 10 dBA due to shielding from intervening buildings.

Impact NOI-2: Existing land uses in the project vicinity would be exposed to an increase in ambient noise levels due to project construction activities (under either option). **(Significant Impact)**

Mitigation Measure: In addition to adhering to the City Code for construction hours, the project proposes to implement the following standard construction noise control measures to reduce construction noise levels at nearby land uses:

MM NOI-2.1: Develop a construction noise control plan, including, but not limited to, the following available controls:

- Construct temporary noise barriers, where feasible, to screen stationary noise-generating equipment. Temporary noise barrier fences would provide a five dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and receiver and if the barrier is constructed in a manner that eliminates any cracks or gaps.

- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines shall be strictly prohibited (i.e., no more than two minutes in duration)
- Locate stationary noise-generating equipment, such as air compressors or portable power generators, as far as possible from sensitive receptors as feasible. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used to reduce noise levels at the adjacent sensitive receptors. Any enclosure openings or venting shall face away from sensitive receptors.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Construction staging areas shall be established at locations that would create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- Locate material stockpiles, as well as maintenance/equipment staging and parking areas, as far as feasible from commercial (and proposed residential) receptors.
- Control noise from construction workers' radios to a point where they are not audible at land uses bordering the project site.
- The contractor shall prepare a detailed construction schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent land uses so that construction activities can be scheduled to minimize noise disturbance.
- Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., bad muffler, etc.) and require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.

The implementation of the noise controls outlined above would reduce construction noise levels emanating from the site in order to minimize disruption and annoyance. With the implementation of these controls, as well as the City Code limits on allowable construction hours, and considering that construction is temporary, the impact would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

<u>Construction Noise at On-Site Receptors</u>

Project buildings would be built sequentially. Once a building is complete, it could be occupied and the occupants would be exposed to noise during construction of the subsequent buildings. The highest noise levels would occur during construction on an adjacent building on-site when the equipment is closest to the receptor. Noise levels for this worst-case scenario, at an average distance of approximately 100 feet, would range from 78 to 85 dBA L_{eq}. These worst-case noise levels would

substantially exceed the noise-sensitive land use threshold of 60 dBA L_{eq} for more than one year. When construction activity occurs at a greater distance, noise levels would be lower but at times still exceed the threshold intermittently over a period of several years.
In addition to adhering to the City's construction hours and the implementation of MM NOI-1.1, as a condition of approval, potential residents and buyers shall be provided with a real estate disclosure statement and buyer deed notices which would offer comprehensive information about the noise during the construction period of the project site.

Operational Noise

Stationary Equipment Noise Impacts Off-Site

The proposed project would include mechanical equipment, such as heating and air conditioning systems. Typical air conditioning units and heat pumps for multi-family and hotel complexes would be about 60 dBA L_{eq} at a distance of 50 feet. This type of equipment could run continuously during the daytime and nighttime. The closest building to the project site would be the commercial building to the north across Brokaw Road. At a distance of 125 feet from the worst-case location for a stationary noise source, the worst-case project-generated mechanical equipment noise is calculated to be 52 dBA L_{eq}, and would be below the 65 dBA daytime noise limit and 60 dBA nighttime noise limit for commercial uses as established in the City Code.

The hotel would also include a 100 kW diesel emergency backup generator located either in the hotel garage or service area. This type of generator would produce a noise level of approximately 56 dBA L_{eq} at the commercial building to the east across Coleman Avenue, which is below the 65 dBA daytime noise limit and 60 dBA nighttime noise limit for commercial uses established in the City Code. The proposed generator would produce noise levels of approximately 70 dBA L_{eq} at the shared property line with Coleman Highline adjacent to the south of the site, which would exceed the City's 65 dBA daytime noise limit and 60 dBA nighttime noise limit for commercial uses.

Stationary Equipment Noise Effects On-Site

Once the project site is operational, the hotel building and the residential buildings may have stationary noise sources that could affect on-site adjacent residential buildings. In addition to typical air conditioning units and heat pumps discussed above, the hotel's mechanical equipment would also include a 100 kW diesel emergency backup generator located in either the garage or service area. This type of generator would produce a noise level of approximately 72 dBA L_{eq} at 23 feet. The testing of this generator, which is assumed to be during the daytime, would be subject to the City's daytime noise level limit. At a typical minimum distance of 80 feet from the worst-case location for a stationary noise source an adjacent residential building, the worst-case project-generated air conditioning and heat pump noise is calculated to be 56 dBA L_{eq}, and generator noise is calculated to be 61 dBA L_{eq}. These noise levels would be above the 55 dBA daytime noise limit and 50 dBA nighttime noise limit for residential uses as established in the City Code.

Impact NOI-3: On-site mechanical equipment (including the backup generator) would exceed the noise limits identified in the City Code. **(Significant Impact)**

Mitigation Measure: The project proposes to implement the following noise control measure to reduce stationary equipment noise:

MM NOI-3.1: Mechanical equipment shall be selected and designed to meet the City's noise level requirements. A qualified acoustical consultant shall be retained to review mechanical noise as these systems are selected to determine specific noise reduction measures necessary to reduce noise to comply with the City's noise level requirements. Noise reduction measures could include, but are not limited to, selection of equipment that emits low noise levels, installation of mufflers or sound attenuators, and/or installation of noise barriers such as enclosures and parapet walls to block the line-of-sight between the noise source and the nearest receptors. Alternate measures may include locating equipment in less noise-sensitive areas, where feasible.

The project (under either option), with implementation of the above measure, would reduce the operational noise impacts from onsite mechanical equipment to noise-sensitive receptors to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

Project Generated Traffic

The existing noise levels at the noise-sensitive receptors located in the project vicinity exceed 55 dBA CNEL; therefore, a significant impact would occur if project-generated traffic increased levels by three dBA CNEL or more. To determine the effect of the project-generated traffic on the existing residences, the existing plus project traffic volumes included in the traffic data provided by *Hexagon Transportation Consultants* was compared to the existing traffic volumes. Nearby intersections adjacent to a residential area include Benton Street and El Camino Real and along Lafayette Street at El Camino Real and Lewis Street. Peak hour traffic volumes during both AM and PM indicated a less than one dBA CNEL increase along the roadways at these intersections. Project traffic volumes were assumed to be negligible at other residential areas in the vicinity because they were not identified in the traffic study to be impacted, therefore were not expected to have project generated traffic noise. The project-generated traffic, therefore, would not cause a permanent noise increase at the nearest noise-sensitive receptors. **(Less than Significant Impact)**

3.13.2.4 *Consistency with Plans*

The project is consistent with the CLUP by preparing a noise assessment using the CNEL method to represent noise levels for the project site. The project site is outside the 65 CNEL noise contour, and proposes compatible land uses consistent with Table 4-1 of the CLUP by including residential and hotel uses with noise insulation features, and commercial uses. In addition, potential residents and buyers shall be provided with a real estate disclosure statement and buyer deed notices disclosing the property's noise environment. On June 28, 2017, the ALUC issued a consistency determination for the project with the safety, height, and noise policies in the CLUP.

The project site is consistent with the City's General Plan by including noise attenuation measures to reduce residential and hotel interior noise levels to 45 dBA CNEL. The building layouts substantially reduces ground transportation noise (traffic and train) at residential outdoor areas below the City's 55 dBA CNEL standard, below the 60 dBA CNEL standard for commercial outdoor area, and place commercial uses in a noise environment under 65 dBA CNEL. However, aircraft noise

would range from 59 to 61 dBA CNEL at the outdoor activity areas, which would exceed the City's 55 dBA CNEL goal (see impact NOI-1 in *Section 3.13.2.2*). The project, therefore, is generally consistent with the applicable General Plan policies.

3.13.2.5 *Cumulative Impacts*

The project's noise and vibration impacts are localized, therefore, the geographic extent of the cumulative impacts for noise and vibration is the surrounding area.

Cumulative Construction Noise Impact

The proposed project may contribute to cumulative construction noise levels resulting from the development of pending projects, and projects that are approved, but have not started construction. The construction of the proposed project is estimated to begin October 2018 and estimated to end in August 2025. In light of the proximity and scale of surrounding development, construction of the Coleman Highline and BART Extension projects would have the greatest potential for substantial temporary noise increases on receptors near the project site.

Phase I construction of the Coleman Highline project has already begun, but construction of Phase II and III of this project is speculative because the developer has not executed a lease for the buildings in Phase I and does not own the Phase III property yet.[70] Phase III of the Coleman Highline project is adjacent to the project site. For these reasons, the cumulative contribution of the Coleman Highline project is not considered in the cumulative construction noise impact discussion below. The BART Extension project is scheduled to begin construction in 2018 and begin operating in 2026.

Nearby receptors to the proposed project and the BART Extension cumulative project would be most affected by construction noise emanating from the closest construction site. For example, construction activities occurring at the BART site is estimated to produce noise levels ranging from 80 to 90 dBA L_{eq} at a distance of 50 feet from the center of the construction site.

The nearest noise-sensitive receptor is the Candlewood Suites hotel. The closest project to this particular receptor is BART, which would produce construction noise of approximately 66 to 76 dBA L_{eq} at a distance of 260 feet from the hotel.[71] Assuming simultaneous construction at the southernmost portion of the project site and BART, cumulative construction noise levels from BART would increase by at most two to three dBA, which would not be a noticeable cumulative noise level increase. Similarly, the existing commercial uses along Brokaw Road and Coleman Avenue would be most affected by construction noise from the proposed project. With construction noise levels as high as 86 dBA L_{eq}, a worst-case cumulative construction noise increase of less than three dBA from BART is anticipated, which would not make a noticeable increase to the overall construction noise level.

[70] Rupert, Josh. Coleman Highline developer, Hunter Storm Properties. Personal communication. April 14, 2017.
[71] Santa Clara Valley Transportation Authority (VTA). *VTA's BART Silicon Valley Phase II Extension Project Draft Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report and Draft Section 4(f) Evaluation.* December 2016.

In addition, the proposed project would implement the construction BMPs identified in MM NOI-1.1 to reduce construction noise levels emanating from the site. Similar controls are made part of mitigation measures for the approved BART project. Since cumulative construction noise levels would not be noticeably higher than construction noise levels expected from the individual projects alone, the cumulative construction noise impact is considered less than significant. **(Less than Significant Cumulative Impact)**

Cumulative Traffic Noise Impact

A significant impact would occur if the cumulative traffic noise level increase was three dBA CNEL or greater for existing levels exceeding 55 dBA CNEL or was five dBA CNEL or greater for existing levels at or below 55 dBA CNEL, and if the project would make a "cumulatively considerable" contribution to the overall traffic noise increase. A "cumulatively considerable" contribution would be defined as an increase of one dBA CNEL or more attributable solely to the proposed project.

Cumulative traffic noise level increases were calculated by comparing the cumulative traffic volumes and the cumulative plus project volumes to existing traffic volumes. The traffic noise increases calculated under both cumulative scenarios (with and without the project) were one to two dBA CNEL along the roadways in the project vicinity. Since the traffic noise level increase of both cumulative scenarios is less than three dBA CNEL, the cumulative projects would not result in a significant, permanent cumulative noise impact. **(Less than Significant Cumulative Impact)**

Cumulative Construction Vibration Impact

The proposed project could be constructed around the same time as the Coleman Highline project and BART Extension project. Receptors located in the vicinity of these cumulative projects would be most affected by construction vibration emanating from the closest construction site. Under a worst-case assumption, the highest vibration generating equipment would be running simultaneously on multiple construction sites at the closest point to any off-site building. Construction activities occurring at the BART and project sites (if occurring simultaneously) could result in a cumulative vibration level of 0.05 in/sec PPV at the commercial building to the west opposite Brokaw Road (nearest common receptor). This cumulative vibration level would be below the 0.3 in/sec PPV significance threshold. All other cumulative construction activities would generate substantially lower vibration levels at sensitive receptors located further away. As discussed previously, the construction of Phase III of the Coleman Highline project (which is adjacent to the project site) is speculative. For this reason, the cumulative vibration impacts from the project and Phase III of the Coleman Highline project are not discussed further. **(Less than Significant Cumulative Impact)**

3.13.3 Conclusion

Impact NOI-1: Exterior noise levels at the proposed neighborhood park and outdoor residential common amenity areas (under either option) would exceed the City's exterior land use compatibility goal of 65 dBA CNEL for recreational uses and 55 dBA CNEL for residential uses primarily due to aircraft noise. **(Significant Unavoidable Impact)**

Impact NOI-2: The proposed project (under either option), with the implementation of MM NOI-1.1, would reduce construction noise impacts to land uses to a less than significant level. **(Less than Significant Level with Mitigation Incorporated)**

Impact NOI-3: The project (under either option), with implementation of MM NOI-3.1, would reduce the operational noise impacts from onsite mechanical equipment to noise-sensitive receptors to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

The proposed project (under either option) would not result in other significant noise and vibration impacts (i.e., excessive vibration, permanent increase in ambient noise, and inconsistency with the CLUP). **(Less than Significant Impact)**

The proposed project (under either option) would not have a considerable contribution towards a significant cumulative noise and vibration impact. **(Less than Significant Cumulative Impact)**

3.14 POPULATION AND HOUSING

3.14.1 Environmental Setting

3.14.1.1 *Regulatory Framework*

Regional

State Housing Element Law and Plan Bay Area

The ABAG allocates regional housing needs to each city and county within the nine-county Bay Area, based on statewide goals. ABAG also develops forecasts for population, households, and economic activity in the Bay Area. ABAG, MTC, and local jurisdiction planning staff created the *Regional Forecast of Jobs, Population and Housing* (upon which *Plan Bay Area 2040* is based), which is an integrated land use and transportation plan looking out to the year 2040 for the nine-county San Francisco Bay Area.

MTC and ABAG originally adopted *Plan Bay Area* in 2013. *Plan Bay Area* established a course for reducing per-capita GHG emissions through the promotion of compact, mixed-use residential and commercial neighborhoods near transit–particularly within identified Priority Development Areas (PDAs). *Plan Bay Area 2040* was adopted in July 2017 as a focused update building upon the development strategies developed in the original *Plan Bay Area* but with updated planning assumptions that incorporate key economic and demographic trends from the last four years. *Plan Bay Area 2040* includes the region's Sustainable Communities Strategy and 2040 Regional Transportation Plan. *Plan Bay Area 2040* is a state-mandated, integrated long-range transportation, land-use and housing plan that will support a growing economy, provide more housing and transportation choices and reduce transportation-related pollution in the Bay Area.

California's Housing Element Law requires all cities to: 1) zone adequate lands to accommodate its Regional Housing Needs Allocation (RHNA); 2) produce an inventory of sites that can accommodate its share of the regional housing need; 3) identify governmental and non-governmental constraints to residential development; 4) develop strategies and work plan to mitigate or eliminate those constraints; and 5) adopt a housing element that is to be updated on a regular recurring basis.

The City of Santa Clara's Housing Element and related land use policies were last updated in 2014.

Local

Santa Clara General Plan

General Plan policies applicable to population and housing include, but are not limited to, the following listed below.

Policy	Description
5.3.2-P2	Encourage higher-density residential development in transit and mixed-use areas and in other locations throughout the City where appropriate.

Applicable population and housing policies in the City's Housing Element include the following listed below.

Policy	Description
B-2	Encourage the building of higher density housing on appropriate vacant or underutilized sites.
B-6	Encourage higher density residential development in transit-oriented and mixed use areas where appropriate.

3.14.1.2 *Existing Conditions*

According to the California Department of Finance, the City had a population of approximately 123,983 residents as of January 2017.[72] ABAG projects the City's population will increase to 156,500 by 2040.[73]

The project site is currently undeveloped. There are no existing residences on-site.

3.14.2 Population and Housing Impacts

3.14.2.1 *Thresholds of Significance*

For the purposes of this EIR, a population and housing impact is considered significant if the project would:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

The project would develop up to 1,400-1,600 residential units and up to 215,000 square feet of commercial uses, resulting in approximately 3,822-4,368 new residents (depending on the project option) and approximately 538 new jobs.[74]

While the project would result in growth in the area compared to existing conditions, it is growth largely anticipated and planned for in the City's General Plan. The City's General Plan envisions the buildout of the project site with residential (758-1,278 units) and commercial uses (1,025,838 square

[72] California Department of Finance. "E-5 City/County Population and Housing Estimates." May 2017. Accessed: August 18, 2017. Available at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.
[73] Association of Bay Area Governments. *Plan Bay Area Projections 2013*. December 2013.
[74] The number of new residents was estimated assuming 2.73 persons per household and the number of commercial jobs was estimated assuming one employee per 400 square feet (Sources: California Department of Finance. "E-5 City/County Population and Housing Estimates." May 2017. Accessed: August 18, 2017. Available at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/; City of Santa Clara. *City of Santa Clara 2010-2035 General Plan.* Adopted December, 2010, amended December 2013 and December 2014. Page 8.6-12).

feet). The number of proposed residential units is greater than assumed in the General Plan (122-322 units more) and the amount of commercial uses is less (810,838 square feet less); however, the proposed land uses, development, and intensification of the site is consistent with the General Plan vision and is consistent with the General Plan policies listed in *Section 3.14.1.1* above that encourage higher density housing.

The City is a "job rich" community with an estimated jobs to housing ratio of 2.50 in 2010.[75] The jobs to housing ratio is projected to slightly decrease to 2.48 by 2040. The project would create a more balanced jobs to housing ratio by constructing more housing. For these reasons, the project would not induce substantial population growth in the area. **(Less than Significant Impact)**

The project site is currently undeveloped, therefore, the proposed development would not displace existing housing or substantial numbers of people. **(Less than Significant Impact)**

3.14.2.2 *Consistency with Plans*

The project is consistent with the applicable General Plan (including Housing Element) policies listed in *Section 3.14.1.1* above by proposing high density (51-100 du/ac) residential development within the Santa Clara Station Focus Area, which is a mixed use area centered on the existing Santa Clara Transit Station. The project also proposes housing that would help the City meet its housing needs.

3.14.2.3 *Cumulative Impacts*

The geographic area for cumulative population and housing impacts is the City's boundaries. The project is consistent with the intent of the General Plan for housing and commercial development on the site. For this reason, the project would not contribute to a significant cumulative population and housing impact. **(Less than Significant Cumulative Impact)**

3.14.3 Conclusion

The proposed project (under either option) would result in a less than significant population and housing impact. **(Less than Significant Impact)**

The proposed project (under either option) would not have a considerable contribution towards a significant cumulative population and housing Impact. **(Less than Significant Cumulative Impact)**

[75] City of Santa Clara. *2010-2035 General Plan.* December 2014. Appendix 8.12 (Housing Element), page 8.12-25.

3.15 PUBLIC SERVICES

3.15.1 Environmental Setting

3.15.1.1 *Regulatory Framework*

State

Parkland Dedication Requirements

The Quimby Act (California Government Code Sections 66475-66478) was approved by the California legislature to preserve open space and parkland in the state. This legislation was in response to California's increased rate of urbanization and the need to preserve open space and provide parks and recreation facilities for California's growing communities. The Quimby Act authorizes local governments to establish ordinances requiring developers of new subdivisions to dedicate parks, pay an in-lieu fee, or perform a combination of the two. Pursuant to the Quimby Act and the Mitigation Fee Act, the City enacted Chapter 17.35 of the City Code.

School Impact Fees

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

In accordance with California Government Code Section 65996, developers pay a school impact fee to the school district to offset the increased demands on school facilities caused by their proposed residential development project. The school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

Local

Santa Clara General Plan

Applicable public services General Plan policies include, but are not limited to, the following listed below.

Policies	Description
Prerequisite	
5.1.1-P5	Prior to the implementation of Phase III of the General Plan, evaluate the appropriate measures to maintain emergency response time standards.
5.1.1-P20	Prior to 2023, identify the location for new parkland and/or recreational facilities to serve employment centers and pursue funding to develop these facilities by 2035.

Policies	Description
Parks, Open Space and Recreation	
5.4.3-P3	Provide pedestrian-oriented ground floor uses and a network of parks and public spaces to serve both residential and non-residential development.
5.9.3-P1	Encourage design techniques that promote public and property safety in new development and public spaces.
5.9.1-P2	Develop new parks to serve the needs of the surrounding community based on the criteria for mini (less than one acre, appropriate for all areas), neighborhood (1-15 acres, appropriate for medium- and high density residential areas serving individual neighborhoods), and community (over 15 acres, appropriate for medium- and high-density residential areas serving the City as a whole) parks.
5.9.3-P3	Maintain a City-wide average three minute response time for 90 percent of police emergency service calls.
5.9.3-P4	Maintain a City-wide average three minute response time for fire emergency service calls.
5.9.1-P5	Encourage public visibility for all parks, trails and open spaces.
5.9.1-P14	Encourage publicly accessible open space in new development.
5.9.1-P15	Provide opportunities for private maintenance of publicly accessible open space and trails.
5.9.1-P17	Foster site design for new development so that building height and massing do not overshadow new parks and plazas.
5.9.1-P18	Promote open space and recreational facilities in large-scale developments in order to meet a portion of the demand for parks generated by new development.
5.9.1-P20	Promote the continuation of parks per population ratio of 2.4 per 1,000 residents and explore the potential to increase the ratio to 3.0, based on the Parks and Recreation Needs Assessment (Parks Master Plan), referenced in Plan Prerequisite 5.1.1-P24 of the General Plan.

Santa Clara City Code Chapter 17.35

Santa Clara City Code Chapter 17.35 requires new residential developments to provide adequate park and recreational facilities and/or pay a fee in-lieu of parkland dedication at the discretion of the City, and pursuant to the Quimby Act and/or the Mitigation Fee Act to help mitigate the impacts of new resident demand on existing parkland and recreational facilities. The City is meeting the standard of three acres per 1,000 residents per the Quimby Act provisions of the City Code and 2.53 acres per 1,000 residents per the Mitigation Fee Act provisions of the City Code.

3.15.1.2 *Existing Conditions*

Fire Service

The City of Santa Clara Fire Department (SCFD) consists of 10 stations distributed throughout the City to provide fire protection services. The closest fire station to the project site is Station 1 located at 777 Benton Street, approximately one mile northwest of the project site.

The City also participates in the Santa Clara County Fire and Rescue Mutual Aid Response Plan to further ensure that fires and other emergencies are handled efficiently. Fire departments from neighboring and nearby jurisdictions and the Santa Clara County Fire Department are participating

members of this plan. Neighboring departments work in conjunction to reduce reflex and response times. When a developing fire overburdens one department, other departments will send the necessary task force to reduce the burden.

Police Service

The City of Santa Clara Police Department (SCPD) headquarters is located at 601 El Camino Real, approximately one mile northwest of the project site. The SCPD has 231 full-time employees (155 sworn officers and 76 civilians) and a varying number of part-time or per diem employees, community volunteers, police reserves, and chaplains.[76]

Parks

The City of Santa Clara Parks and Recreation Department provides parks and recreational services in the City. The Parks and Recreation Department is responsible for maintaining and programming the various parks and recreational facilities, and works cooperatively with public agencies in coordinating all recreational activities within the City. Overall, as of January 2017, the Parks and Recreation Department maintains and operates approximately 260 acres of park (including community parks, neighborhood parks, and mini parks[77]), open space, recreational, and joint-use facilities.

The closest neighborhood park to the project site is the Larry J. Marsalli Park located at 1425 Lafayette Street, approximately one mile walking distance from the site.

Schools

The project site is located within the Santa Clara Unified School District (SCUSD). Students in the project area attend Scott Lane Elementary School located at 1925 Scott Boulevard (approximately two miles northwest of the site), Buchser Middle School located at 1111 Bellomy Street (approximately 1.9 miles west of the site), and Santa Clara High School located at 3000 Benton Street (approximately 3.5 miles northwest of the site).

Libraries

Library services are provided by the Santa Clara City Library (SCCL). The City of Santa Clara is served by the Central Park Library located at 2635 Homestead Road (approximately three miles west of the site), Mission Library Family Reading Center located at 1098 Lexington Street (approximately 1.6 miles west of the site), and Northside Branch Library located at 695 Moreland Way (approximately 3.3 miles northeast of the site). These facilities total approximately 104,770 square feet and have approximately 457,210 items combined. With a current service population of 123,983, the SCCL provides approximately 0.85 square foot of library space per resident and 3.69 items per resident.[78,79]

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[76] City of Santa Clara. "Santa Clara Police Department: About Us." Accessed: March 7, 2017. Available at: http://santaclaraca.gov/government/departments/police-department/about-us.

[77] Community parks are over 15 acres, neighborhood parks are one to 15 acres, and mini parks are typically less than one acre in size.

[78] Keith, Hilary. City Librarian, City of Santa Clara. Personal Communication. August 18, 2017.

[79] California Department of Finance. "E-5 City/County Population and Housing Estimates." May 2017. Accessed: August 18, 2017. Available at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.

3.15.2 Public Services Impacts

3.15.2.1 *Thresholds of Significance*

For the purposes of this EIR, a public services impact is considered significant if the impacts are associated with:

- The provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
  - Fire protection
  - Police protection
  - Schools
  - Parks
  - Other public facilities.

3.15.2.2 *Fire Protection Services*

The certified General Plan EIR concluded that the existing fire station facilities have capacity to absorb additional fire personnel (if needed to serve the buildout of the General Plan) without the need to expand or construct new facilities.[80] While the project proposal would intensify the use of the project site compared to existing conditions and proposes a different intensity of development than assumed for the site under the existing General Plan (and analyzed in the General Plan EIR),[81] it is not anticipated that the project would require the construction or expansion of fire station facilities. In addition, the proposed project would be reviewed by the SCFD and built to applicable Fire Code standards to reduce fire hazards.

Based on the discussion above, the proposed project would not require the expansion or construction of new fire facilities or substantially affect fire protection services. The project would have a less than significant impact on fire protection services. **(Less than Significant Impact)**

3.15.2.3 *Police Protection Service*

The certified General Plan EIR concluded that additional officers (if needed to serve the buildout of the General Plan) would be housed in the existing facilities and refurbishment of the facilities would consist of reconfiguration of space and regular upgrade of furniture and equipment. However, there would be no need for the construction of new or expanded facilities.[82] While the project proposal would intensify the use of the project site compared to existing conditions and proposes a different mix of development than assumed for the site under the existing General Plan (and analyzed in the General Plan EIR), it is not anticipated that the project would require the construction or expansion

[80] City of Santa Clara. *2010-2035 General Plan Integrated Final Environmental Impact Report. SCH# 2008092005*. January 2011. Pages 206-207.
[81] The project proposes up to 322 more residential units and 810,838 less commercial square footage than what is allowed in the existing General Plan for the site. The project proposes 1,400-1,600 residential units and 215,000 square feet of commercial uses. The existing General Plan allows the development of 758-1,278 residential units and 1,025,838 square feet of commercial uses.
[82] City of Santa Clara. *2010-2035 General Plan Integrated Final Environmental Impact Report. SCH# 2008092005*. January 2011. Page 207.

of police facilities. In addition, the project design shall be reviewed by SCPD to ensure safety features are incorporated to minimize criminal activity.

Based on the discussion above, the proposed project would not require the expansion or construction of new police facilities or substantially affect police protection services. The project would have a less than significant impact on police protection services. **(Less than Significant Impact)**

3.15.2.4 *School Impacts*

The project proposes 1,400-1,600 new multi-family residential units. It is estimated that the project would generate a total of 28-32 school aged children (depending on the project option).[83] Table 3.15-1 shows the existing capacity and enrollment of the local schools that the project generated students would attend.

Table 3.15-1: School Capacity and Enrollment

School	Existing Capacity	Current Enrollment
Scott Lane Elementary School	480	418
Buchser Middle School	1,294	1,025
Santa Clara High School	1,954	2,033

Source: Healy, Michal. Director of Facility Development and Planning, Santa Clara Unified School District. Personal Communication. August 21, 2017

Under Option 1 (1,400 units), the project would generate approximately 14 elementary school students (grades kindergarten-5), six middle school students (grades 6-8) and eight high school students (grades 9-12). Under Option 2 (1,600 units), the project would generate approximately 16 elementary school students (kindergarten-5), seven middle school students (6-8 grade), and nine high school students (9-12 grade). As shown in Table 3.15-1, Scott Lane Elementary School and Buscher Middle School currently have capacity to accommodate project generated students, while Santa Clara High School is currently over capacity.

It is anticipated that the project would be completed as early as mid-2025. The enrollment at the local schools may differ in 2025. SCUSD is currently in the planning phase to construct a new elementary, middle, and high school on the former Agnews Development Center site in north San José. These schools will alleviate capacity concerns for Buchser Middle School and Santa Clara High School. SCUSD is anticipating additional elementary schools will be needed north of 101, which would alleviate overcrowding for Scott Lane Elementary School.[84]

[83] Student generation rates of 0.01 for elementary school students, 0.00428 for middle school, and 0.00571 students for high school students were used to estimate the number of students from the project. (Source: Healy, Michal. Director of Facility Development and Planning, Santa Clara Unified School District. Personal Communication. August 21, 2017)

[84] Healy, Michal. Director of Facility Development and Planning, Santa Clara Unified School District. Personal Communication. August 21, 2017

While SCUSD anticipates the need for additional school facilities in the future, the project's incremental increase of 28-32 new students does not alone warrant construction of new school facilities. As required by state law (Government Code Section 65996), the project proponent shall pay the appropriate school impact fees to SCUSD to offset the increased demands on school facilities caused by the project. The proposed project, in conformance with state law (Government Code Section 65996), would not result in significant impacts to local schools. **(Less than Significant Impact)**

3.15.2.5 *Park Impacts*

Future residents, employees, and occupants of the project site could increase demand on local parks and could lead to physical deterioration of the park facilities and overcrowding. The project, however, includes on-site amenities that would partially offset its impact on existing park facilities. Under both options, the proposed residential and hotel buildings would be situated around a publically accessible, approximately two-acre neighborhood park. An additional approximately 0.3 acres of common amenity space would be provided at-grade throughout the project site and approximately two acres of common recreational amenity space would be provided in the residential buildings on the top of the podium structures. The proposed hotel would include amenity space on the 4th and 6th floors and a rooftop deck. The proposed park/amenity space is described in more detail in *Section 2.2.1.3*. In addition to providing amenity and recreational space on-site for future occupants, the project shall comply with existing regulations and policies, including City Code Chapter 17.35, which requires the project applicant to provide adequate park and recreational land and/or pay a fee in-lieu of parkland dedication to offset the project's impact on existing neighborhood parks.

The environmental impacts of constructing the proposed neighborhood park and outdoor amenity areas are discussed throughout this EIR and the analysis concludes that their construction would not result in significant unavoidable environmental impacts.

Based on the discussion above, the proposed project would result in less than significant impacts to park facilities. **(Less than Significant Impact)**

3.15.2.6 *Library*

As discussed in *Section 3.14.2*, the project would result in approximately 3,822-4,368 new residents. The project would increase the City's existing service population from approximately 123,983 to up to 128,315 residents. Project residents would incrementally increase the demand for library services.

The City does not currently have service ratios or other performance objectives for library services. The residents generated by the project would slightly reduce the library-space-per-resident ratio and library-items-per-resident ratio by 3.5 percent, from 0.85 to 0.82 square feet of library space per resident and from 3.69 to 3.56 items (e.g., books and audio/visual volumes) per resident.

The future residents, employees, and occupants of the proposed project would incrementally increase the demand on library facilities compared to existing conditions; however, it is not anticipated that the incremental increase in demand from the project alone would require the construction of new library facilities. (**Less than Significant Impact)**

3.15.2.7 *Consistency with Plans*

The proposed project is consistent with the applicable General Plan policies identified in *Section 3.15.11* by including common open space, landscaping, and ground floor retail space within the project; paying the appropriate school and park impact fees; including an approximately two-acre publicly accessible and visible park on-site; including a total of approximately 0.3 acres of amenity space throughout the project site; including approximately two acres of amenity space in the residential buildings on-site; including approximately 26,190 square feet of amenity space in the hotel; constructing in accordance with the Fire Code; and having site design reviewed by the SCPD. The proposed approximately two-acre neighborhood park on-site would be shaded at times by the proposed buildings, which is not fully consistent with General Plan Policy 5.9.1-P17 of designing projects so that building height and massing do not overshadow new parks and plazas. This inconsistency, however, is not considered a significant environmental impact.

3.15.2.8 *Cumulative Impacts*

The geographic area for cumulative public services impacts is the City boundaries. The General Plan EIR discussed the cumulative impact on public services from the buildout of the General Plan and concluded that future development, consistent with existing regulations, would not result in significant impacts to public facilities. The project would result in a net increase of up to 322 residential units and 810,838 less commercial square footage than what is allowed on-site under the existing General Plan. It is not anticipated that the project's incremental increase (approximately 0.5 percent increase) in the number of residential units citywide coupled with the project's compliance and consistency with existing policies and regulations would result in a significant cumulative impact on public services. In addition, as concluded in the certified City Place Santa Clara Project Final EIR, the buildout of the General Plan and the large cumulative City Place Santa Clara and Tasman East Specific Plan projects would not result in significant cumulative public services impacts.[85] **(Less than Significant Cumulative Impact)**

3.15.3 <u>Conclusion</u>

The proposed project (under either option) would not result in significant impacts to public services. **(Less than Significant Impact)**

The proposed project (under either option) would not have a considerable contribution to a significant cumulative public services impact. **(Less than Significant Cumulative Impact)**

[85] City of Santa Clara. *City Place Santa Clara Project Draft Environmental Impact Report.* SCH# 2014072078. Certified June 2016. Pages 3.13-23 through 3.13-25.

3.16 RECREATION

3.16.1 Environmental Setting

3.16.1.1 *Regulatory Framework*

State

Parkland Dedication Requirements

The Quimby Act (California Government Code Sections 66475-66478) was approved by the California legislature to preserve open space and parkland in the state. This legislation was in response to California's increased rate of urbanization and the need to preserve open space and provide parks and recreation facilities for California's growing communities. The Quimby Act authorizes local governments to establish ordinances requiring developers of new subdivisions to dedicate parks, pay an in-lieu fee, or perform a combination of the two. Pursuant to the Quimby Act and the Mitigation Fee Act, the City enacted Chapter 17.35 of the City Code.

Local

Santa Clara General Plan

Applicable recreational services General Plan policies, include, but are not limited to, the following listed below.

Policies	Description
Prerequisite	
5.1.1-P20	Prior to 2023, identify the location for new parkland and/or recreational facilities to serve employment centers and pursue funding to develop these facilities by 2035.
Santa Clara Station Focus Area	
5.4.3-P3	Provide pedestrian-oriented ground floor uses and a network of parks and public spaces to serve both residential and non-residential development.
Parks, Open Space and Recreation Policies	
5.9.1-P2	Develop new parks to serve the needs of the surrounding community based on the criteria for mini (less than one acre, appropriate for all areas), neighborhood (1-15 acres, appropriate for medium- and high density residential areas serving individual neighborhoods), and community (over 15 acres, appropriate for medium- and high-density residential areas serving the City as a whole) parks.
5.9.1-P5	Encourage public visibility for all parks, trails and open spaces.
5.9.1-P14	Encourage publicly accessible open space in new development.
5.9.1-P15	Provide opportunities for private maintenance of publicly accessible open space and trails.
5.9.1-P17	Foster site design for new development so that building height and massing do not overshadow new parks and plazas.
5.9.1-P18	Promote open space and recreational facilities in large-scale developments in order to meet a portion of the demand for parks generated by new development.

Policies	Description
5.9.1-P20	Promote the continuation of parks per population ratio of 2.4 per 1,000 residents and explore the potential to increase the ratio to 3.0, based on the Parks and Recreation Needs Assessment (Parks Master Plan), referenced in Plan Prerequisite 5.1.1-P24 of the General Plan.

City of Santa Clara City Code Chapter 17.35

Santa Clara City Code Chapter 17.35 requires new residential developments to provide adequate park and recreational facilities and/or pay a fee in-lieu of parkland dedication at the discretion of the City, and pursuant to the Quimby Act and/or the Mitigation Fee Act to help mitigate the impacts of new resident demand on existing parkland and recreational facilities. The City is meeting the standard of three acres per 1,000 residents per the Quimby Act provisions of the City Code and 2.53 acres per 1,000 residents per the Mitigation Fee Act provisions of the City Code.

3.16.1.2 *Existing Conditions*

As discussed in more detail in Section 3.15.1.2, the City of Santa Clara Parks and Recreation Department is responsible for maintaining and programming the City's various parks and recreational facilities. Overall, the Parks and Recreation Department maintains and operates approximately 260 acres of park, open space, recreational, and joint-use facilities.

The closest neighborhood park to the project site is the Larry J. Marsalli Park located at 1425 Lafayette Street, approximately one mile walking distance from the site.

3.16.2 Recreation Impacts

3.16.2.1 *Thresholds of Significance*

For the purposes of this EIR, a recreation impact is considered significant if the project would:

- Result in an increase in 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; or
- Include recreational facilities or require the construction of expansion of recreational facilities which might have an adverse physical effect on the environment.

The project includes on-site amenities that would partially offset its impact on existing park and recreational facilities. Under both options, the proposed residential and hotel buildings would be situated around a publically accessible, approximately two-acre neighborhood park. Approximately 0.3 acres of common amenity space would be provided at-grade throughout the project site and approximately two acres of common amenity space would be provided in the residential buildings on the top of the podium structures. The proposed hotel would include amenity space on the 4th and 6th floors and a rooftop deck. Refer to *Section 2.2.1.3* for more detail about the proposed neighborhood park/amenity space. In addition to providing amenity and recreational space on-site for future occupants, the project shall comply with existing regulations and policies, including City Code Chapter 17.35, which requires the project applicant to provide adequate park and recreational land

and/or pay a fee in-lieu of parkland dedication to offset the project's impact on existing neighborhood parks.
The environmental impacts of constructing the proposed neighborhood park, and amenity areas are discussed throughout this EIR and the analysis concludes that their construction would not result in significant unavoidable environmental impacts.

Based on the discussion above, the proposed project would result in less than significant impacts to recreational facilities. **(Less than Significant Impact)**

3.16.2.2 *Consistency with Plans*

The proposed project is consistent with the applicable General Plan policies listed in *Section 3.16.1.1* by including approximately 0.3 acres of common amenity space, landscaping, and ground floor retail space within the project; paying the appropriate school and park impact fees; including an approximately two-acre publicly accessible and visible neighborhood park on-site; approximately two acres of amenity space in the residential buildings on-site. The proposed neighborhood park on-site would be shaded at times by the proposed buildings, which is not fully consistent with General Plan Policy 5.9.1-P17 of designing projects so that building height and massing do not overshadow new parks and plazas. This policy, however, was not adopted for the purpose of avoiding an environmental effect, and so the inconsistency is not considered a significant environmental impact.

3.16.2.3 *Cumulative Impacts*

The geographic area for cumulative recreation impacts is the City's boundaries. The General Plan EIR discussed the cumulative impact on public services from the buildout of the General Plan and concluded that future development, consistent with existing regulations, would not result in significant impacts to public facilities. The project would result in a net increase of up to 322 residential units and 810,838 less commercial square footage than what is allowed on-site under the existing General Plan. It is not anticipated that the project's incremental increase (approximately 0.5 percent increase) in the number of residential units citywide coupled with the project's compliance and consistency with existing policies and regulations would result in a significant cumulative impact on public facilities. In addition, as concluded in the certified City Place Santa Clara Project Final EIR, the buildout of the General Plan and the large cumulative City Place Santa Clara and Tasman East Specific Plan projects would not result in significant recreation impacts.[86] **(Less than Significant Cumulative Impact)**

3.16.3 <u>Conclusion</u>

The proposed project (under either option) would not result in significant impacts to recreational services. **(Less than Significant Impact)**

The proposed project (under either option) would not have a considerable contribution to a significant cumulative impact to public facilities. **(Less than Significant Cumulative Impact)**

[86] City of Santa Clara. *City Place Santa Clara Project Draft Environmental Impact Report.* SCH# 2014072078. Certified June 2016. Pages 3.13-23 through 3.13-25.

3.17 TRANSPORTATION/TRAFFIC

The following discussion is based on a traffic impact analysis prepared by *Hexagon Transportation Consultants, Inc*. in March 2018. Although the proposed project is located in the City of Santa Clara, transportation facilities outside of the City would be affected by the proposed project. Thus, the transportation impacts of the project were evaluated following the standards and methodologies set forth by the cities of Santa Clara and San José, and VTA. Since the project would generate more than 100 peak hour vehicle trips, an analysis was prepared in accordance with the VTA's Congestion Management Program (CMP) guidelines. A copy of the traffic impact analysis is provided in Appendix G of this EIR.

3.17.1 Environmental Setting

3.17.1.1 *Background Information*

Traffic conditions at the study intersections were evaluated using level of service (LOS). Level of service is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or congested conditions with excessive delays. The various analysis methods are described below.

Cities of Santa Clara and San José Intersections

The cities of Santa Clara and San José level of service methodology is TRAFFIX, which is based on the Highway Capacity Manual (HCM) 2000 method for signalized intersections. This methodology evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Since TRAFFIX is also the CMP-designated intersection level of service methodology, each of the cities' methodologies employs the CMP defaults values for the analysis parameters. The City of Santa Clara has LOS D as the minimum standard, except on CMP and expressway facilities within Santa Clara and roadways considered "regionally significant," which have a standard of LOS E. The City of San José's level of service standard is LOS D or better for all signalized intersections, including CMP intersections. The correlation between average delay and level of service is shown in Table 3.17-1.

CMP Intersections

Since TRAFFIX is the designated level of service methodology for both the CMP and local municipalities, the CMP study intersections are not analyzed separately, but rather are among the local municipalities' signalized intersections analyzed using TRAFFIX. The only difference between the local municipalities' and CMP analyses is that project impacts are determined on the basis of a different level of service standard – the CMP level of service standard for signalized intersections is LOS E or better.

Table 3.17-1: Signalized Intersection Level of Service Definitions		
Level of Service	**Description of Operations**	**Average Control Delay** (seconds)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	Up to 10.0
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though may still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delay levels.	Greater than 80.0

Freeway Segments

The LOS for freeway segment is estimated based on vehicle density, considering vehicles per mile per lane, peak hour volume in vehicles per hour (vph), number of travel lanes, and average travel speed in miles per hour (mph). The CMP requires that mixed-flow lanes and auxiliary lanes be analyzed separately from high-occupancy vehicle (HOV) lanes (otherwise known as carpool lanes). Freeway LOS criteria are summarized in Table 3.17-2.

Table 3.17-2: Freeway Level of Service Based on Density		
Level of Service	**Description**	**Density** (vehicles/ mile/lane)
A	Average operating speeds at the free-flow speed generally prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	0-11
B	Speeds at the free-flow speed are generally maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.	>11-18
C	Speeds at or near the free-flow speed of the freeway prevail. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more vigilance on the part of the driver.	>18-26
D	Speeds begin to decline slightly with increased flows at this level. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.	>26-46
E	At this level, the freeway operates at or near capacity. Operations in this level are volatile, because there are virtually no usable gaps in the traffic stream, leaving little room to maneuver within the traffic stream.	>46-58
F	Vehicular flow breakdowns occur. Large queues form behind breakdown points.	> 58.0

3.17.1.2 *Regulatory Framework*

Regional

Congestion Management Program

The VTA oversees the CMP, a program aimed at reducing regional traffic congestion. The relevant state legislation requires that all urbanized counties in California prepare a CMP in order to obtain each county's share of the increased gas tax revenues. CMP legislation requires that each CMP contain the following five mandatory elements: 1) a system definition and traffic level of service standard element; 2) a transit service and standards element; 3) a trip reduction and transportation demand management element; 4) a land use impact analysis program element; and 5) a capital improvement element. The Santa Clara County CMP includes the five mandated elements and three additional elements, including: a county-wide transportation model and data base element, an annual monitoring and conformance element, and a deficiency plan element. The VTA has review responsibility for proposed development projects that are expected to affect CMP designated intersections.

Local

Santa Clara General Plan

All future development allowed by the proposed GPA shall be in conformance with adopted City plans and policies. General Plan policies applicable to transportation/traffic include, but are not limited to, the following listed below.

Policies	Description
General Mobility and Transportation Policies	
5.8.1-P3	Identify opportunities to connect people to supportive services, public amenities and transit.
Roadway Network Policies	
5.8.2-P1	Require that new and retrofitted roadways implement "Full-Service Streets" standards, including minimal vehicular travel lane widths, pedestrian amenities, adequate sidewalks, street trees, bicycle facilities, transit facilities, lighting and signage, where feasible.
5.8.2-P2	Discourage widening of existing roadway or intersection rights-of-way without first considering operational improvements, such as traffic signal modifications, turn-pocket extensions and intelligent transportation systems.
5.8.2-P3	Encourage undergrounding of utilities and utility equipment within the public right-of-way and site these facilities to provide opportunities for street trees and adequate sidewalks.
5.8.2-P9	Require all new development to provide streets and sidewalks that meet City goals and standards, including new development in employment areas.
5.8.3-P8	Require new development to include transit stop amenities, such as pedestrian pathways to stops, benches, traveler information and shelters.
5.8.3-P9	Require new development to incorporate reduced on-site parking and provide enhanced amenities, such as pedestrian links, benches and lighting, in order to encourage transit use and increase access to transit services.
5.8.3-P10	Require new development to participate in public/private partnerships to provide new transit options between Santa Clara residences and businesses.
Bicycle and Pedestrian Network Policies	
5.8.4-P6	Require new development to connect individual sites with existing and planned bicycle and pedestrian facilities, as well as with on-site and neighborhood amenities/services, to promote alternate modes of transportation.
5.8.4-P7	Require new development to provide sidewalks, street trees and lighting on both sides of all streets in accordance with City standards, including new developments in employment areas.
5.8.4-P8	Require new development and public facilities to provide improvements, such as sidewalks, landscaping and bicycling facilities, to promote pedestrian and bicycle use.
5.8.4-P9	Encourage pedestrian- and bicycle-oriented amenities, such as bicycle racks, benches, signalized mid-block crosswalks, and bus benches or enclosures.
5.8.4-P10	Encourage safe, secure and convenient bicycle parking and end-of-trip, or bicycle "stop" facilities, such as showers or bicycle repair near destinations for all users, including commuters, residents, shoppers, students and other bicycle travelers.
5.8.4-P13	Promote pedestrian and bicycle safety through "best practices" or design guidelines for sidewalks, bicycle facilities, landscape strips and other buffers, as well as crosswalk design and placement.

Policies	Description
Santa Clara Station Focus Area	
5.8.5-P1	Require new development and City employees to implement transportation demand management programs that can include site-design measures, including preferred carpool and vanpool parking, enhanced pedestrian access, bicycle storage and recreational facilities.
5.8.5-P2	Require development to offer on-site services, such as ATMs, dry cleaning, exercise rooms, cafeterias and concierge services, to reduce daytime trips.
5.8.5-P3	Encourage all new development to provide on-site bicycle facilities and pedestrian circulation.
5.8.5-P4	Encourage new development to participate in shuttle programs to access local transit services within the City, including buses, light rail, Bay Area Rapid Transit, Caltrain, Altamont Commuter Express Yellow Shuttle and Lawrence Caltrain Bowers/Walsh Shuttle services.
5.8.5-P5	Encourage transportation demand management programs that provide incentives for the use of alternative travel modes to reduce the use of single-occupant vehicles.
5.8.5-P6	Encourage transportation demand management programs that include shared bicycle and autos for part-time use by employees and residents to reduce the need for personal vehicles.
5.8.5-P9	Promote transportation demand management programs that provide education, information and coordination to connect residents and employees with alternate transportation opportunities.
5.8.6-P14	Require new multi-family residential and non-residential development to accommodate electric vehicle charging stations in parking lots.

3.17.1.3 *Existing Conditions*

Existing Roadway Network

The existing roadway network serving the project area includes regional facilities and local roadways. Currently, public street access to the project site is provided via Coleman Avenue and Brokaw Road. Regional and local access to the project site is provided via the streets described below and shown on Figure 3.17-1.

Regional Access

US Highway 101 (US 101) is a north/south freeway with six mixed-flow lanes and two HOV lanes through most of Santa Clara and San José. US 101 extends northward through San Francisco and southward through Gilroy. Access to and from the site is provided via interchanges at I-880 and De La Cruz Boulevard/Trimble Road.

Interstate 880 (I-880) is a north/south freeway providing regional access from East Bay cities to San José, where it ultimately becomes SR 17 and extends into Santa Cruz. Within the project vicinity, I-880 primarily is a six-lane freeway. Access to the project site from I-880 is provided via an interchange at Coleman Avenue.

State Route (SR 87) is a six-lane freeway that is aligned in a north-south orientation. SR 87 begins at its interchange with SR 85 and extends northward, terminating at its junction with US 101. SR 87 has two mixed-flow lanes and a HOV lane in each direction. Access to the site is provided via an interchange at Taylor Street.

Local Access

Coleman Avenue is a four- to six-lane arterial that begins at its intersection with De La Cruz Boulevard in Santa Clara and terminates where it becomes North Market Street in San José. Adjacent to the project site, Coleman Avenue is a five- to six-lane facility. Coleman Avenue narrows from three lanes to two lanes in the northbound direction midway between Newhall Drive and Aviation Avenue in San José, and then widens back to three lanes just north of Aviation Avenue. In the southbound direction, Coleman Avenue narrows from three to two lanes at Brokaw Road in Santa Clara and then widens back to three lanes just north of Aviation Avenue. Coleman Avenue provides direct access to the project site.

De La Cruz Boulevard is a six-lane arterial that runs between Central Expressway and El Camino Real. North of Central Expressway, De La Cruz Boulevard transitions to Trimble Road to North San José. De La Cruz Boulevard terminates at and provides access to Coleman Avenue and El Camino Real via an overpass over the train tracks. De La Cruz Boulevard provides access to the site via its connection to Coleman Avenue.

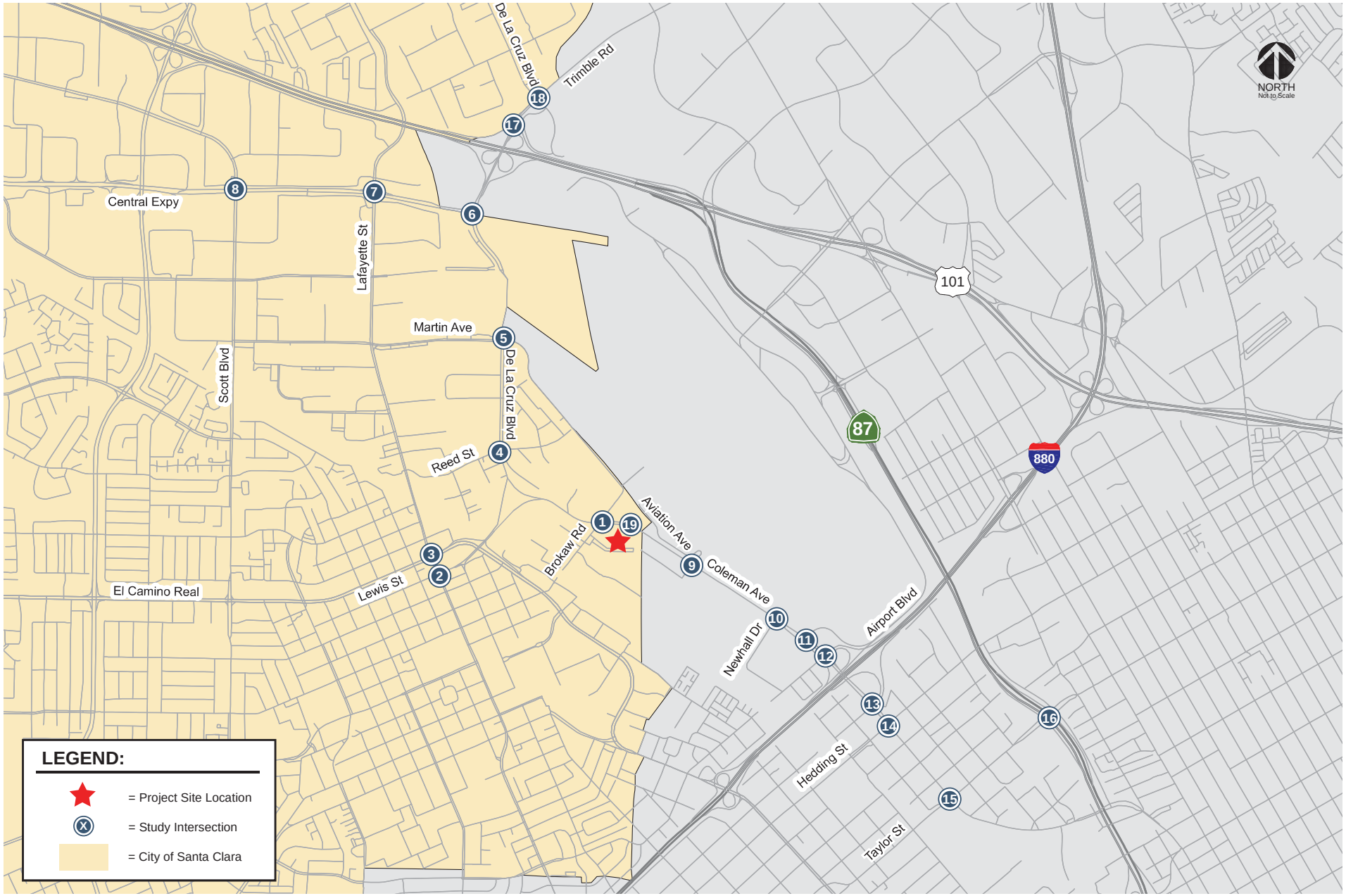
Brokaw Road is a two-lane east-west roadway that begins at the Caltrain railroad tracks and ends just east of Coleman Avenue, where it becomes Martin Avenue. Brokaw Road provides direct access to the project site.

El Camino Real is a six-lane major arterial that is aligned in a west/east orientation in the vicinity of the site. El Camino Real extends northward through San Francisco and southward to Santa Clara. El Camino Real provides access to the site via De La Cruz Boulevard.

The Alameda is generally a four-lane undivided arterial that extends from Santa Clara University in the north to the downtown San José area where it runs east to west, ultimately becoming Santa Clara Street east of Autumn Street. Santa Clara Street is a four-lane arterial street that provides access to downtown San José. The Alameda/Santa Clara Street provides access to the project site via Hedding Street or Taylor Street to Coleman Avenue.

Central Expressway is a four- to six-lane expressway that extends east-west from Alma Street in Palo Alto to De La Cruz Boulevard in San José/Santa Clara. Central Expressway has limited access to surface streets across its span. Central Expressway has signalized intersections with De La Cruz Boulevard, Lafayette Street, and Scott Boulevard in the vicinity of the project site. At De La Cruz Boulevard, Central Expressway is a six-lane facility. Central Expressway provides access to the site via its intersection with De La Cruz Boulevard/Trimble Road.

Lafayette Street is a four-lane arterial that extends north-south from Gold Street north of SR 237 in San José to the project area. North of El Camino Real and in the project vicinity, Lafayette Street is a four-lane arterial. South of El Camino Real Lafayette Street is a three-lane arterial with a reversible center lane between Lewis Street and Homestead Road that operates northbound during the AM peak hour and southbound during the PM peak hour. Lafayette Street is four lanes between Homestead Road and Washington Street. Lafayette Street provides access to the site via De La Cruz Boulevard.



Source: Hexagon Transportation Consultants, Inc., April 28, 2017.

EXISTING ROADWAY NETWORK AND STUDY INTERSECTIONS

FIGURE 3.17-1

Existing Bicycle and Pedestrian Facilities

Bicycle Facilities

There are several bicycle facilities in the vicinity of the project site. The existing bicycle facilities within the study area are described below and shown on Figure 3.17-2.

Class I Trail or Path is an off-street path with exclusive right-of-way for non-motorized transportation used for commuting as well as recreation. There is a Class I bike path that runs along the Guadalupe River and is shared between pedestrians and bicyclists and separated from motor vehicle traffic. The Guadalupe River trail is an 11-mile continuous Class I bikeway from Curtner Avenue in the south to Alviso in the north. This trail system can be accessed via Airport Boulevard in the project vicinity.

Class II Bike Lanes are preferential use areas within a roadway designated for bicycles. Within the project vicinity, Class II bikeways are present on Coleman Avenue between Earthquake Way and SR 87 with a short discontinuity between Hedding Street and Taylor Street, the entire length of Hedding Street east of Spring Street, Taylor Street between Spring Street and First Street, and De La Cruz Boulevard.

Pedestrian Facilities

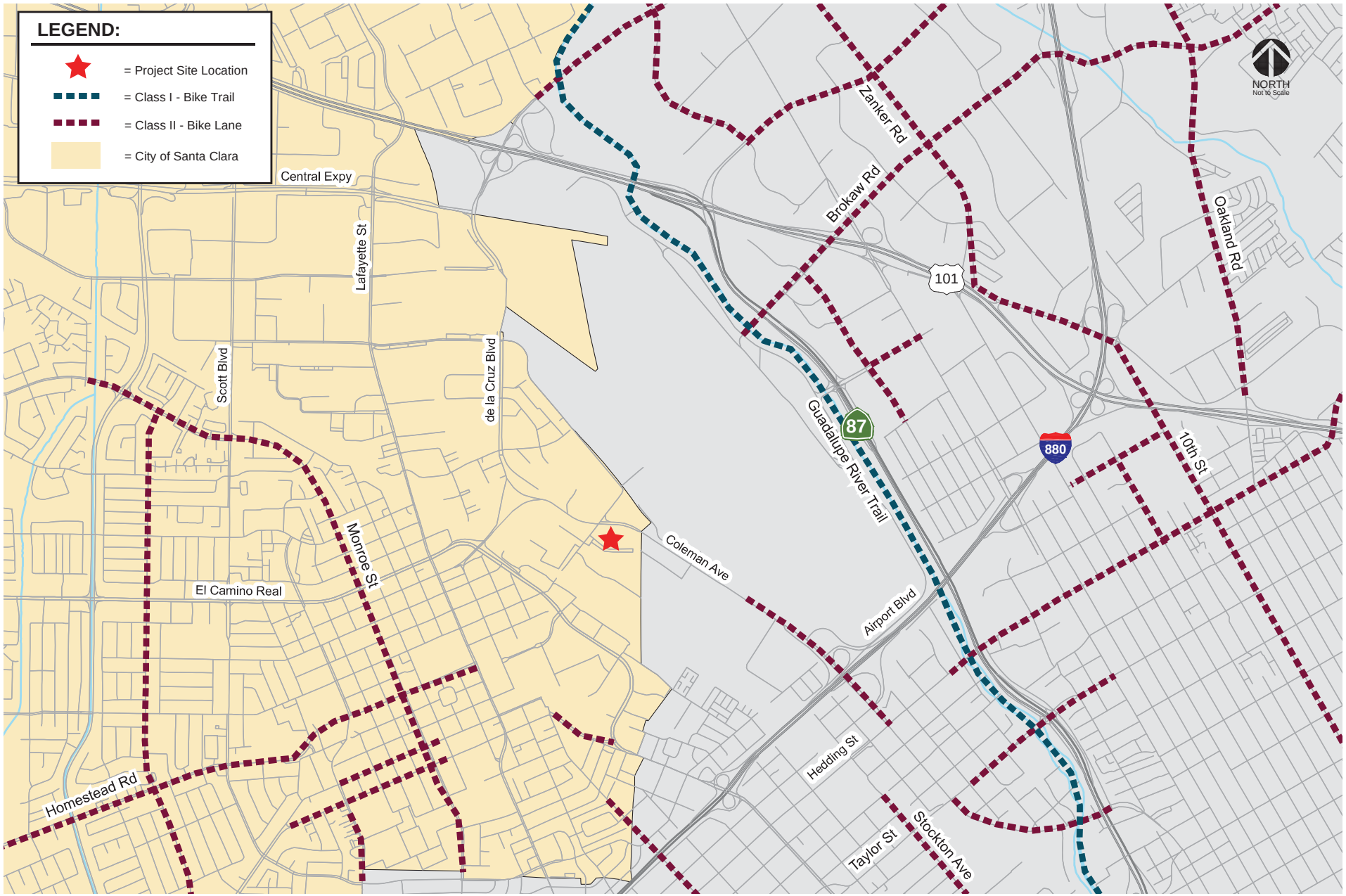
Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. In the project vicinity, sidewalks are provided on the following roadways:

- West side of Coleman Avenue between Aviation Avenue and the De La Cruz overpass
- East side of Coleman Avenue with a short discontinuity just south of Brokaw Road
- Both sides of Brokaw Road, west of Coleman Avenue
- South side of Brokaw Road, east of Coleman Avenue for approximately 250 feet

Crosswalks are provided at the following intersections in the vicinity of the project site:

- Coleman Avenue and Brokaw Road
- Coleman Avenue and Aviation Avenue
- Coleman Avenue and Earthquake Way
- Coleman Avenue and Newhall Drive
- Coleman Avenue and Airport Boulevard

All of the crosswalks at the signalized study intersections include pedestrian signal heads and push buttons. Sidewalks in the project vicinity provide adequate access to the local pedestrian network and the nearby transit facilities. A pedestrian and bicycle undercrossing east of the UPRR tracks was recently completed and provides access from Brokaw Road to the Santa Clara Transit Station.



Source: Hexagon Transportation Consultants, Inc., April 28, 2017.

EXISTING BICYCLE FACILITIES

FIGURE 3.17-2

Existing Transit Service

Existing transit service to the study area is provided by VTA, as described below and shown on Figure 3.17-3.

Bus Services

Local Route 10 provides free shuttle service between the Santa Clara Transit Center and Metro Airport Light Rail Transit (LRT) Station via Coleman Avenue in the vicinity of the project site. Route 10 runs between approximately 5:00 AM and 11:30 PM with 15-minute headways during the weekday commute periods. The bus stop closest to the project site is located at the Coleman Avenue/Brokaw Road intersection.

Local Route 22 operates on El Camino Real in the study area. It runs from the Palo Alto Transit Center to the Eastridge Transit Center and operates all hours of the day with 15-minute headways during the weekday commute periods. The bus stop closest to the project site is located at the Santa Clara Transit Center.

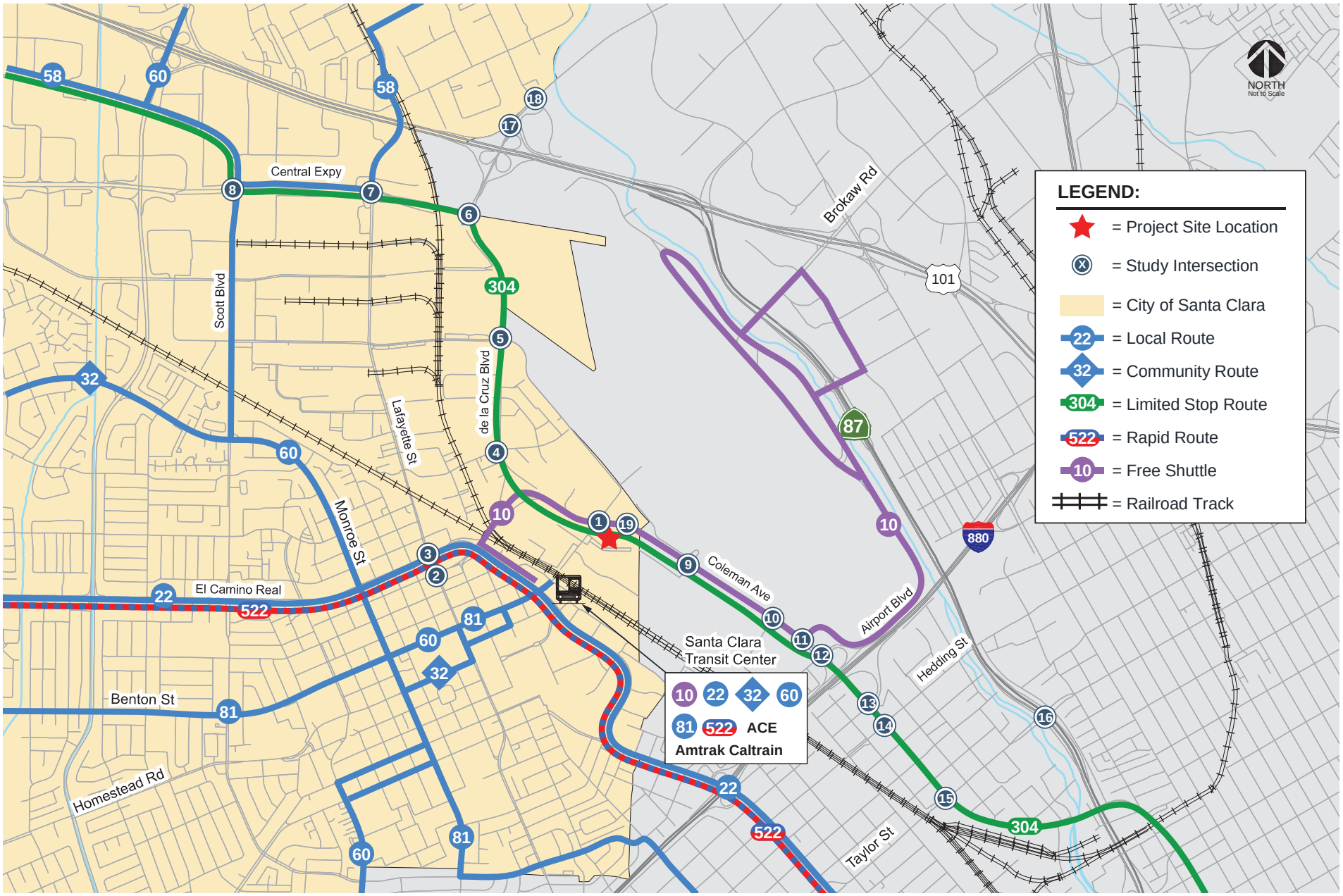
Community Route 32 provides service between the Santa Clara Transit Center and the San Antonio shopping center. It provides weekday service between 6:00 AM and 8:30 PM with 30-minute headways during the weekday commute periods. The bus stop closest to the project site is located at the Santa Clara Transit Center.

Local Route 60 provides service between the Los Gatos Winchester Transit Center and Great America on weekdays between the hours of 5:30 AM and 11:00 PM. It provides service with 15-minute headways during the commute hours. The bus stop closest to the project site is located at the Santa Clara Transit Center.

Local Route 81 runs between East San José/San José State University and Moffett Field/Ames Center. This route runs along Park Avenue, Newhall Street, Monroe Street, and Benton Street in the general vicinity of the project site. Line 81 operates between the hours of 6:00 AM and 9:00 PM, with 30-minute headways during the commute hours. The bus stop closest to the project site is located at the Santa Clara Transit Center.

Limited-Stop Route 304 provides limited service from the Sunnyvale Transit Center, through downtown San José, to the Santa Teresa LRT Station. Route 304 operates four trips with 30- to 50-minute headways during each of the two commute periods. The bus stop closest to the project site is located at the intersection of Coleman Avenue and Brokaw Road.

Rapid Route 522 runs between Eastridge Mall and the Palo Alto Transit Center. It operates on weekdays between 5:00 AM and 9:00 PM and on Saturdays between 6:00 AM and 8:30 PM, with 15-minute headways during the commute hours most of the day. The Route 522 line operates along The Alameda and El Camino Real near the site and provides service to the Santa Clara Transit Center.



Source: Hexagon Transportation Consultants, Inc., April 28, 2017.

EXISTING TRANSIT SERVICES

FIGURE 3.17-3

Caltrain

Caltrain operates a commuter rail service seven days a week between San José and San Francisco. During weekday commuting hours, Caltrain also serves the south county including Gilroy, San Martin, and Morgan Hill. Caltrain provides shuttle service to businesses in the Silicon Valley and on the peninsula. The Santa Clara Caltrain/ACE/Capitol Corridor Station is located at Benton Street/Railroad Avenue and El Camino Real, within the Santa Clara Transit Center. Caltrain provides service with 30-minute headways during commute hours.

Altamount Commuter Express (ACE)

The ACE provides commuter rail service between the Central Valley and Silicon Valley. Four trains are in operation with 60-minute headways during the commute hours with westbound trains heading to San José in the morning and eastbound trains heading to Modesto in the evening. ACE stations are located at the Santa Clara Transit Center. Shuttle service from the stations to employment centers are provided by various public transit agencies.

Amtrak Capitol Corridor Inner-City Rail

Amtrak provides commuter rail service between Sacramento and San José. It operates from 4:30 AM to 12:00 AM with one- to three-hour headways during the commute periods from the Santa Clara Caltrain Station.

Existing Intersections and Freeway Segments

The traffic analysis determined the impacts of the proposed project on key signalized intersections and freeway segments in the vicinity of the project site. The study intersections and freeway segments are identified below and shown on Figure 3.17-1.

Study Intersections

1. Coleman Avenue and Brokaw Road (City of Santa Clara)
2. Lafayette Street and Lewis Street (City of Santa Clara)
3. Lafayette Street and El Camino Real* (City of Santa Clara)
4. De La Cruz Boulevard and Reed Street (City of Santa Clara)
5. De La Cruz Boulevard and Martin Avenue (City of Santa Clara)
6. De La Cruz Boulevard and Central Expressway* (City of Santa Clara)
7. Lafayette Street and Central Expressway* (City of Santa Clara)
8. Scott Boulevard and Central Expressway* (City of Santa Clara)
9. Coleman Avenue and Newhall Drive (City of San José)
10. Coleman Avenue and Airport Boulevard (City of San José)
11. Coleman Avenue and I-880 (N)* (City of San José)
12. Coleman Avenue and I-880 (S)* (City of San José)
13. Coleman Avenue and Hedding Street (City of San José)
14. Coleman Avenue and Taylor Street (City of San José)
15. SR 87 and Taylor Street (City of San José)
16. US 101 and Trimble Road (City of San José)
17. De La Cruz Boulevard and Trimble Road* (City of San José)

18. Coleman Avenue and Project Entrance (Future) (City of Santa Clara)

* denotes CMP intersections

Freeway Segments

- US 101, between I-880 and SR 237 (10 segments)
- I-880, between I-280 to US 101 (seven segments)
- SR 87, between SR 85 to Taylor Street (eight segments)

Freeway Ramps

1. I-880 southbound diagonal on-ramps from southbound Coleman Avenue
2. I-880 northbound diagonal on-ramps from southbound Coleman Avenue
3. US 101 southbound diagonal on-ramp from northbound Trimble Road
4. US 101 northbound loop on-ramp from northbound Trimble Road
5. I-880 northbound loop off-ramp to Coleman Avenue
6. I-880 southbound diagonal off-ramp to Coleman Avenue
7. US 101 northbound diagonal off-ramp to Trimble Road

Traffic Scenarios Analyzed

Traffic conditions at the study intersections were analyzed for both the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour is expected to occur between 7:00 AM and 9:00 AM and the PM peak hour is expected to occur between 4:00 PM and 6:00 PM on a regular weekday. These are the peak commute hours during which most traffic congestion occurs on the roadways. Traffic conditions were evaluated for the following scenarios:

- *Existing Conditions.* Existing conditions are represented by existing peak-hour traffic volumes on the existing roadway network. Existing traffic volumes were obtained from latest available 2016 CMP count data, recently completed traffic studies, and new traffic counts conducted in March 2017.

- *Existing Plus Project Conditions*. Existing plus project conditions represent existing peak-hour traffic volumes with the addition of traffic generated by the proposed project if the project was open and operating today. For this scenario, no trip credit was given for the buildings that were on the site because they were demolished at the time traffic counts were taken. Existing plus project conditions were evaluated relative to existing conditions in order to identify potential deficiencies associated solely with the proposed project.

- *Background Conditions*. Background conditions were represented by future traffic volumes on the future roadway network. Background traffic volumes were estimated by adding to existing peak-hour volumes the projected volumes from approved but not yet constructed developments in the study area. The added traffic from approved but not yet constructed developments was based on the list of approved projects provided by the City of Santa Clara. San José's Approved Trip Inventory (ATI) volumes were also included in background traffic volumes. Background conditions include transportation improvements required as mitigation

for other approved developments and full occupancy of the R&D buildings that were on the site.

- *Background Plus Project Conditions*. Background traffic volumes with the project (hereafter called project traffic volumes) were estimated by adding to background traffic volumes the net new traffic generated by the project. Since the background scenario assumed the (former) buildings on the site are fully occupied, the project received credit for trips associated with the buildings. Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts.

- *Cumulative Conditions*. Cumulative conditions represent future traffic volumes on the future transportation network. Cumulative conditions include traffic growth projected to occur due to the approved development projects, and proposed but not yet approved (pending) development projects in the study area. The added traffic from pending projects was based on the list of pending projects within the City of Santa Clara and pending developments identified by the City of San José.[87] These projects are listed in Table 3.0-1.

- *Cumulative Plus Project Conditions*. Cumulative plus project conditions were estimated by adding to the cumulative traffic volumes the additional traffic estimated to be generated by the proposed project. Cumulative plus project conditions were evaluated relative to cumulative conditions for Santa Clara study intersections and background conditions for San José study intersections in order to determine potential project impacts.

Existing Levels of Service

Existing Intersection Levels of Service

The results of the intersection level of service analysis under existing conditions are summarized in Table 3.17-3. The results show that, measured against the applicable municipal and CMP level of service standards, the following three intersections currently operate at unacceptable levels of service during at least one peak hour under existing conditions.

1. Coleman Avenue and Brokaw Road (City of Santa Clara) – PM Peak Hour
6. De La Cruz Boulevard and Central Expressway (City of Santa Clara)* – PM Peak Hour
18. De La Cruz Boulevard and Trimble Road (City of San José)* – PM Peak Hour

* denotes CMP intersection

The results of the analysis show that the remaining study intersections currently operate at acceptable levels of service during the AM and PM peak hours of traffic.

[87] The list of approved and pending projects was compiled at the time the NOP was circulated.

Table 3.17-3: Existing and Background Intersection Levels of Service					
Study Intersection	**Peak Hour**	**Existing**		**Background**	
		Average Delay (sec)	**LOS**	**Average Delay** (sec)	**LOS**
1. Coleman Avenue and Brokaw Road (City of Santa Clara)	AM	16.6	B	18.4	B
	PM	**84.8**	**F**	**127.7**	**F**
2. Lafayette Street and Lewis Street (City of Santa Clara)	AM	12.7	B	11.8	B
	PM	34.7	C	**72.9**	**E**
3. Lafayette Street and El Camino Real (City of Santa Clara)*	AM	39.2	D	45.9	D
	PM	38.8	D	45.0	D
4. De La Cruz Boulevard and Reed Street (City of Santa Clara)	AM	11.2	B	11.1	B
	PM	18.1	B	18.4	B
5. De La Cruz Boulevard and Martin Avenue (City of Santa Clara)	AM	33.0	C	33.3	c
	PM	30.7	C	30.7	C
6. De La Cruz Boulevard and Central Expressway (City of Santa Clara)*	AM	38.2	D	68.9	E
	PM	**92.2**	**F**	**140.5**	**F**
7. Lafayette Street and Central Expressway (City of Santa Clara)*	AM	52.3	D	78.4	E
	PM	66.9	E	**103.8**	**F**
8. Scott Boulevard and Central Expressway (City of Santa Clara)*	AM	42.1	D	52.9	D
	PM	75.6	E	**103.8**	**F**
9. Coleman Avenue and Aviation Avenue (City of San José)	AM	11.6	B	30.3	C
	PM	7.0	A	11.4	B
10. Coleman Avenue and Newhall Drive (City of San José)	AM	13.0	B	12.6	B
	PM	24.8	C	31.1	C
11. Coleman Avenue and Airport Boulevard (City of San José)	AM	12.2	B	14.3	B
	PM	11.5	B	11.8	B
12. Coleman Avenue and I-880 (N) (City of San José)*	AM	24.7	C	**73.7**	**E**
	PM	19.1	B	22.4	C
13. Coleman Avenue and I-880 (S) (City of San José)*	AM	37.3	D	**68.0**	**E**
	PM	28.4	C	29.4	C
14. Coleman Avenue and Hedding Street (City of San José)	AM	41.0	D	41.2	D
	PM	39.9	D	38.5	D
15. Coleman Avenue and Taylor Street (City of San José)	AM	45.0	D	**59.3**	**E**
	PM	44.7	D	**60.2**	**E**
16. SR 87 and Taylor Street (City of San José)	AM	25.6	C	29.7	C
	PM	29.8	C	33.6	C
17. US 101 and Trimble Road (City of San José)	AM	22.4	C	33.8	C
	PM	13.5	B	18.2	B

Table 3.17-3: Existing and Background Intersection Levels of Service					
Study Intersection	**Peak Hour**	**Existing**		**Background**	
		Average Delay (sec)	**LOS**	**Average Delay** (sec)	**LOS**
18. De La Cruz Boulevard and Trimble Road (City of San José)*	AM	33.8	C	35.4	D
	PM	**55.6**	**E**	**70.5**	**E**
19. Coleman Avenue and Project Entrance (Future) (City of San José)	AM	---	---	---	---
	PM	---	---	---	---
Notes: * Denotes CMP intersection; **Bold** text indicates conditions that exceed the applicable level of service standard.					

Existing Freeway Levels of Service

The existing freeway segment level of service results are shown in Table 3.17-4. The results show that all of the study freeway segments currently operate at LOS F during at least one peak hour with the exception of the following:

21. Northbound SR 87, from Almaden Road to Alma Avenue
22. Northbound SR 87, from Alma Avenue to I-280
25. Northbound SR 87, from Coleman Avenue to Taylor Street
27. Southbound SR 87, from Coleman Avenue to Julian Street
31. Southbound SR 87, from Almaden Road to Curtner Avenue
32. Southbound SR 87, from Curtner Avenue to Capitol Expressway
33. Southbound SR 87, from Capitol Expressway to SR 85
38. Southbound I-880, from The Alameda to North Bascom Avenue
40. Southbound I-880, from Stevens Creek Boulevard to I-280
47. Southbound US 101, from De La Cruz Boulevard to Guadalupe Parkway (SR 87)

Field Observations

Traffic conditions in the field were observed in order to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to intersection level of service, and (2) to identify any locations where the level of service calculation does not accurately reflect level of service in the field.

Overall most study intersections operated adequately (i.e., LOS D or better for Santa Clara and San José intersections and LOS E or better for CMP intersections), during both AM and PM peak hours of traffic, and the level of service analysis appears to accurately reflect actual existing traffic conditions. Refer to Appendix G for more details.

Table 3.17-4: Existing Freeway Levels of Service					
Freeway Segment		**Direction**	**Peak Hour**	**Mixed-Flow Lanes**	**HOV Lane**
				LOS	
US 101	1. I-880 to Old Bayshore highway	NB	AM PM	**F** B	F B
	2. Old Bayshore Highway to North First Street	NB	AM PM	**F** B	F A
	3. North First Street to Guadalupe Parkway (SR 87)	NB	AM PM	**F** B	F A
	4. Guadalupe Parkway (SR 87) to De La Cruz Boulevard	NB	AM PM	**F** C	F A
	5. De La Cruz Boulevard to San Tomas Expressway/Montague Expressway	NB	AM PM	**F** C	F A
	6. San Tomas Expressway/Montague Expressway to Bowers Avenue/Great America	NB	AM PM	**F** D	F A
	7. Bowers Avenue/Great America Parkway to Lawrence Expressway	NB	AM PM	**F** D	F B
	8. Lawrence Expressway to North Fair Oaks Avenue	NB	AM PM	**F** D	F B
	9. North Fair Oaks Avenue to North Mathilda Avenue	NB	AM PM	**F** C	E A
	10. North Mathilda Avenue to SR 237	NB	AM PM	E C	F C
I-880	11. I-280 to Stevens Creek Boulevard	NB	AM PM	**F** A	N/A
	12. Stevens Creek Boulevard to North Bascom Avenue	NB	AM PM	**F** **F**	N/A
	13. North Bascom Avenue to The Alameda	NB	AM PM	**F** **F**	N/A
	14. The Alameda to Coleman Avenue	NB	AM PM	**F** **F**	N/A
	15. Coleman Avenue to SR 87	NB	AM PM	**F** **F**	N/A
	16. SR 87 to North First Street	NB	AM PM	**F** **F**	N/A
	17. North First Street to US 101	NB	AM PM	**F** **F**	N/A
SR 87	18. SR 85 to Capitol Expressway	NB	AM	**F**	F

Table 3.17-4: Existing Freeway Levels of Service					
Freeway Segment		**Direction**	**Peak Hour**	**Mixed-Flow Lanes**	**HOV Lane**
				LOS	
			PM	B	B
	19. Capitol Expressway to Curtner Avenue	NB	AM PM	**F** D	F A
	20. Curtner Avenue to Almaden Road	NB	AM PM	**F** D	F C
	21. Almaden Road to Alma Avenue	NB	AM PM	E D	E B
	22. Alma Avenue to I-280	NB	AM PM	D D	D B
	23. I-280 to Julian Street	NB	AM PM	**F** B	F A
	24. Julian Street to Coleman Avenue	NB	AM PM	**F** D	F B
	25. Coleman Avenue to Taylor Street	NB	AM PM	E C	D A
	26. Taylor Street to Coleman Avenue	SB	AM PM	C **F**	A D
	27. Coleman Avenue to Julian Street	SB	AM PM	D E	A D
	28. Julian Street to I-280	SB	AM PM	B **F**	A D
	29. I-280 to Alma Avenue	SB	AM PM	B **F**	A E
	30. Alma Avenue to Almaden Road	SB	AM PM	D **F**	A E
	31. Almaden Road to Curtner Avenue	SB	AM PM	C E	A D
	32. Curtner Avenue to Capitol Expressway	SB	AM PM	B D	A D
	33. Capitol Expressway to SR 85	SB	AM PM	C D	A C
I-880	34. US 101 to North First Street	SB	AM PM	**F** **F**	N/A
	35. North First Street to SR 87	SB	AM PM	**F** **F**	N/A

Table 3.17-4: Existing Freeway Levels of Service					
Freeway Segment		**Direction**	**Peak Hour**	**Mixed-Flow Lanes**	**HOV Lane**
				LOS	
	36. SR 87 to Coleman Avenue	SB	AM PM	D **F**	N/A
	37. Coleman Avenue to The Alameda	SB	AM PM	D **F**	N/A
	38. The Alameda to North Bascom Avenue	SB	AM PM	D E	N/A
	39. North Bascom Avenue to Stevens Creek Boulevard	SB	AM PM	**F** D	N/A
	40. Stevens Creek Boulevard to I-280	SB	AM PM	C C	N/A
US 101	41. SR 237 to North Mathilda Avenue	SB	AM PM	C **F**	D **F**
	42. North Mathilda Avenue to North Fair Oaks Avenue	SB	AM PM	C **F**	B **F**
	43. North Fair Oaks Avenue to Lawrence Expressway	SB	AM PM	D **F**	B **F**
	44. Lawrence Expressway to Bowers Avenue/Great America Parkway	SB	AM PM	D **F**	B **F**
	45. Bowers Avenue/Great America Parkway to San Tomas Expressway/Montague Expressway	SB	AM PM	C **F**	B **F**
	46. San Tomas Expressway/Montague Expressway to De La Cruz Boulevard	SB	AM PM	C **F**	A **F**
	47. De La Cruz Boulevard to Guadalupe Parkway (SR 87)	SB	AM PM	C E	A D
	48. Guadalupe Parkway (SR 87) to North First Street	SB	AM PM	B **F**	A **F**
	49. North First Street to Old Bayshore Highway	SB	AM PM	B **F**	A **F**
	50. Old Bayshore Highway to I-880	SB	AM PM	B **F**	A **F**

Note: **Bold** text indicates unacceptable level of service. Source: Santa Clara Valley Transportation Authority. *Congestion Management Monitoring Study.* 2016.

3.17.1.4 *Background Conditions*

This section discusses background conditions, which are defined as conditions just prior to completion of the proposed development. Traffic volumes for background conditions comprise volumes from existing traffic counts plus traffic generated by other approved developments in the vicinity of the site. Background traffic volumes also assumed full occupancy of the R&D buildings that were on the site.

Background Transportation Network

It is assumed in this analysis that the transportation network under background conditions would be the same as the existing transportation network with the exception of the following improvement, which is identified by the City of San José to be completed as part of the approved Coleman Highline project.

- Coleman Avenue and Hedding Street – Addition of a second eastbound left-turn lane.

Background Traffic Volumes

Background peak-hour traffic volumes were estimated by adding to existing volumes the estimated traffic from approved, but not yet constructed, developments. A list of approved but not yet constructed developments was provided by the City of Santa Clara and summarized in Table 3.0-1. The City Place development, which was recently approved, may take 10 years or more to complete. Therefore, background conditions include the trips generated by City Place Phases 1, 2, and 3 as identified in that project's EIR. San José's Approved Trip Inventory (ATI) volumes and traffic generated by Phase 1 of the North San José Development Policy were also included in the background traffic volumes. For approved projects where a traffic impact analysis was not prepared or approved trips were not provided by the City, traffic was estimated using rates from the Institute of Transportation Engineer's publication, *Trip Generation Manual, 9th Edition* and assigned to the roadway network based on existing travel patterns and the locations of complementary land uses.

Background Intersection Levels of Service

The results of the intersection level of service analysis under background conditions are summarized in Table 3.17-3. The results show that, measured against applicable level of service standards, the following signalized intersections would operate at an unacceptable level of service during one or both peak hours:

1. Coleman Avenue and Brokaw Road (City of Santa Clara) – PM Peak Hour
2. Lafayette Street and Lewis Street (City of Santa Clara) – PM Peak Hour
6. De La Cruz Boulevard and Central Expressway (City of Santa Clara)* – PM Peak Hour
7. Lafayette Street and Central Expressway (City of Santa Clara)* – PM Peak Hour
8. Scott Boulevard and Central Expressway (City of Santa Clara)* – PM Peak Hour
12. Coleman Avenue and I-880 (N) (City of San José)* – AM Peak Hour
13. Coleman Avenue and I-880 (S) (City of San José)* – AM Peak Hour
15. Coleman Avenue and Taylor Street (City of San José) – AM and PM Peak Hours
18. De La Cruz Boulevard and Trimble Road (City of San José)* – PM Peak Hour

* denotes CMP intersection

The remaining study intersections would operate at acceptable levels of service during both the AM and PM peak hours of traffic under background conditions.

3.17.2 Transportation/Traffic Impacts

3.17.2.1 *Thresholds of Significance*

For the purposes of this EIR, a transportation/traffic impact is considered significant if the project would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; or
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance of safety of such facilities.

Intersection Impact Criteria

For the purpose of this EIR, the significance criteria used to determine significant impacts on intersections for this analysis are based on the cities of Santa Clara and San José and CMP level of service standards.

City of Santa Clara Definition of Significant Intersection Impacts

The project is said to create a significant adverse impact on traffic conditions at a signalized intersection in the City of Santa Clara if for either peak hour:

1. The level of service at the intersection degrades from an acceptable level (LOS D or better at all City-controlled intersections and LOS E or better at all expressway intersections) under conditions without project traffic to an unacceptable level (LOS E or F at City-controlled intersections and LOS F at expressway intersections) under conditions with project traffic, or

2. The level of service at the intersection is an unacceptable level (LOS E or F at City-controlled intersections and LOS F at expressway intersections) under conditions without project traffic and the addition of project trips causes the average critical delay to increase by four (4) or more seconds *and* the volume-to-capacity ratio (V/C) to increase by 0.01.

An exception to this rule applies when the addition of project traffic reduces the amount of average delay for critical movements (i.e., the change in average delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by 0.01 or more.

A significant impact by the City of Santa Clara standards is determined to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to an acceptable level or no worse than conditions without project traffic.

City of San José Definition of Significant Intersection Impacts

The project is said to create a significant adverse impact on traffic conditions at a signalized intersection in the City of San José, including CMP intersections within San José, if for either peak hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better under conditions without project traffic to an unacceptable LOS E or F under conditions with project traffic, or

2. The level of service at the intersection is an unacceptable LOS E or F under conditions without project traffic and the addition of project trips causes both the critical-movement delay at the intersection to increase by four (4) or more seconds *and* the V/C increases by one percent (.01) or more.

An exception to criteria 2 applies when the addition of project traffic reduces the amount of average stopped delay for critical movements (i.e., the change in average stopped delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by .01 or more.

A significant impact by City of San José standard is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to conditions without project traffic or better.

CMP Definition of Significant Intersection LOS Impacts (except within the City of San José)

The definition of a significant impact at a CMP intersection is the same as for each of the cities, except that the CMP standard for acceptable level of service at a CMP intersection is LOS E or better. A significant impact by CMP standard is said to be satisfactorily mitigated when measures are implemented that would restore intersection conditions to an acceptable level or no worse than conditions without project traffic.

CMP Definition of Significant Freeway Segment Impacts

A freeway segment impact from the project is considered significant at a CMP freeway segment if for either peak hour:

1. The level of service on the freeway segment degrades from an acceptable LOS E or better under existing conditions to an unacceptable LOS F under project conditions; or

2. The level of service on the freeway segment is an unacceptable LOS F under project conditions *and* the number of project trips added to that segment constitutes at least one percent of capacity.

3.17.2.2 *Trip Generation Estimates*

The following discussion describes the traffic analysis that was completed using trips generated by Option 2, which would generate more trips than Option 1. The TIA also contains an analysis of the trips that would be generated under Option 1, and as described in the TIA, the significance conclusions under Option 1 are identical to those of Option 2. For simplicity and to provide a conservative analysis, only Option 2 is discussed below.

The magnitude of traffic produced by a new development and the locations where that traffic would appear were estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic entering and exiting the site is estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel were estimated. In the project trip assignment, the project trips were assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Through empirical research, data have been collected that indicate the amount of traffic that can be expected to be generated by common land uses. The standard trip generation rates can be applied to help predict the future traffic increases that would result from a new development. The standard trip generation rates are published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual.*

<u>Project Trip Generation</u>

The trip estimates for each of the land use components of the proposed project were reduced to account for internalization, or trips made between each of the proposed land uses. The reductions are based on the assumption that vehicle trips to each of the proposed land uses at the site would be reduced due to internalization of trips. Reductions were applied for the internalization, or trips made between residential and retail uses (15 percent), and trips made between hotel and retail (10 percent) as recommended by VTA.

In addition, trip generation for retail uses is typically adjusted to account for pass-by-trips. Pass-by-trips are trips that would already be on the adjacent roadways (and are therefore already counted in the existing traffic) but would turn into the site while passing by. Justification for applying the pass-by-trip reduction is founded on the observation that such retail traffic is not actually generated by the retail development, but is already part of the ambient traffic levels. Pass-by-trips are therefore excluded from the traffic projections (although pass-by traffic is accounted for at the site entrances). A typical pass-by trip reduction of 25 percent for retail development within Santa Clara County was applied to the retail component of the proposed project.

Furthermore, a nine-percent transit reduction was applied to the trips estimated to be generated by the proposed residential uses due to the project site's proximity to the Caltrain station at the Santa Clara Transit Center, as prescribed by the VTA guidelines. The recently completed pedestrian undercrossing provides a connection between Brokaw Road and Santa Clara Transit Center.

Based on the ITE trip generation rates and applicable reductions, it is estimated that the proposed project would generate 12,044 daily trips, with 881 trips (231 inbound and 650 outbound) occurring during the AM peak hour and 1,070 trips (672 inbound and 398 outbound) occurring during the PM peak hour.

Former Project Site Trip Generation

Trips associated with the former 272,840 square-foot R&D buildings on the project site are subtracted from the estimated trips to be generated by the proposed project to determine the project's net trip generation. Based on the ITE trip generation rates, the former R&D buildings would have generated approximately 2,213 daily trips, with 333 trips (276 inbound and 57 outbound) occurring during the AM peak hour and 292 trips (44 inbound and 248 outbound) occurring during the PM peak hour.

Net Project Trip Generation

Based on the ITE trip generation rates, applicable reduction, and credit for former use on the project site, it is estimated that the proposed project would generate an additional 9,831 net daily trips, with 548 net trips (-45 inbound and 593 outbound) occurring during the AM peak hour and 778 net trips (628 inbound and 150 outbound) occurring during the PM peak hour. The trip generation estimates for the proposed project are presented in Table 3.17-5. Note as part of the project, the City shall require project trips to be reduced by a total of 20 percent (see *Section 2.2.1.4* regarding the VMT Reduction Plan). To be conservative, the project's net trip generation does not reflect the full 20 percent trip reduction.

The future Santa Clara BART station would be located on Brokaw Road and adjacent to the project site, which could further reduce the net project trip generation by offering residents and hotel guests another mode of travel.

Trip Distribution and Assignment

The trip distribution pattern for the project was estimated based on existing travel patterns on the surrounding roadway network, the locations of complementary land uses, and previous traffic impact reports in the study area. The peak-hour trips generated by the project were assigned to the roadway network in accordance with the project trip distribution pattern. The trip distribution patterns for the project are shown in Appendix G of this EIR.

Table 3.17-5: Project Trip Generation Estimates											
Land Use	**Size**	**Daily**		**AM Peak Hour**				**PM Peak Hour**			
		Rate[1]	**Trips**	**Rate[1]**	**In**	**Out**	**Total**	**Rate[1]**	**In**	**Out**	**Total**
Proposed (Option 2)											
Residential	1,600 du	6.65	10,640	0.51	163	653	816	0.62	645	347	992
15% housing and retail mixed-use reduction[1]			-96		-1	-1	-2		-4	-4	-8
9% housing near Caltrain station[4]			-949		-15	-59	-74		-58	-31	-89
Hotel	250 rooms	8.17	2,043	0.53	78	55	133	0.60	77	73	150
10% hotel and retail mixed-use reduction[2]			-64		-1	-1	-2		-3	-3	-6
Retail	15,000 sf	42.70	641	0.96	9	5	14	3.71	27	29	56
15% housing and retail reduction[1]			-96		-1	-1	-2		-4	-4	-8
10% hotel and retail mixed-use reduction[2]			-64		-1	-1	-2		-3	-3	-6
25% pass-by reduction[3]			-11		0	0	0		-5	-6	-11
Project Trips After Reductions			*12,044*		*231*	*650*	*881*		*672*	*398*	*1,070*
Former Land Use											
R&D	272,840 sf	8.11*	2,213	1.22*	276	57	333	1.07*	44	248	292
Net Project Trip (Proposed – Former Land Uses):			***9,831***		***-45***	***593***	***548***		***628***	***150***	***778***

Notes: du = dwelling units; sf = square feet; * denotes rate per 1,000 sf

[1]As prescribed by the VTA Transportation Impact Analysis Guidelines (October 2014), the maximum trip reduction for a mixed-use development project with housing and retail components is equal to 15 percent off the similar trip generator (retail component generates less trips than the housing component).

[2]As prescribed by the VTA Transportation Impact Analysis Guidelines (October 2014), the maximum trip reduction for a mixed-use development project with hotel and retail components is equal to 10 percent off the similar trip generator (retail component generates less trips than the housing component).

[3]A 25 percent PM pass-by reduction is typically applied for retail development within Santa Clara County.

[4]As prescribed by the VTA Transportation Impact Analysis Guidelines (October 2014), the maximum trip reduction for housing located within 2,000-foot walk of a Caltrain station is 9 percent. (The project will have access to the Santa Clara Transit Center from Brokaw Road via the pedestrian undercrossing currently under construction).

3.17.2.3 *Existing Plus Project Conditions*

Existing Plus Project Transportation Network

It is assumed in this analysis that the transportation networks under existing plus project would be the same as existing conditions.

Existing Plus Project Traffic Volumes

Project impacts were evaluated relative to existing traffic volumes. For the existing plus project scenario, the new trips generated by the project (without the R&D trip credit) were added to the existing traffic volumes to derive the existing plus project traffic volumes.[88]

Existing Plus Project Intersection Levels of Service

The results of the intersection level of service analysis under existing plus project conditions are summarized in Table 3.17-6. The results of the intersection level of service analysis under existing plus project conditions show that, measured against the applicable municipal level of service standards, the three study intersections are projected to operate at an unacceptable levels of service during the PM peak hour under existing plus project conditions (see Table 3.17-6).

Based on applicable municipal and CMP significance criteria, two of the three intersections would be significantly impacted by the project:

1. Coleman Avenue and Brokaw Road (City of Santa Clara) – PM Peak Hour
6. De La Cruz Boulevard and Central Expressway (City of Santa Clara)* – PM Peak Hour

* denotes CMP intersection

All the other study intersections are projected to continue to operate at acceptable levels of service, according to applicable municipal and CMP standards under existing plus project conditions.

Impact TRAN-1: The project (under either option) would have a significant impact under existing plus project conditions at the following two intersections: 1. Coleman Avenue/Brokaw Road (City of Santa Clara) and 6. De La Cruz Boulevard/Central Expressway (City of Santa Clara/CMP). **(Significant Impact)**

<u>Mitigation Measures:</u> The project proposes to implement the following mitigation measures to reduce the project's significant level of service impacts:

MM TRAN-1.1: 1. Coleman Avenue/Brokaw Road (City of Santa Clara) – This intersection is under the jurisdiction of the City of Santa Clara. The improvement includes changing the signal for Brokaw Road (the east and west legs of this intersection) from protected left-turn phasing to split phase, adding a shared through/left turn lane to the east and west approaches within the existing right-of-way, changing the existing shared through/right-turn lanes to right-turn only lanes on the east and west approaches, changing the eastbound right-turn coding from "include" to

[88] The R&D trip credit was not included because the R&D building were demolished at the time traffic counts were conducted. For this reason, the trips associated with the former R&D use on the site were not on the roadways.

"overlap" indicating that eastbound right turns would be able to turn right on red, prohibiting U-turns on northbound Coleman Avenue, and adding a third southbound through lane on Coleman Avenue by removing the pork chop island, squaring off the corner, and restriping to provide exclusive southbound through and right turn lanes.

The above described improvements are not fully designed but it is anticipated that the improvements could be accommodated within the existing right-of-way. However, the addition of the proposed bike lanes on Brokaw Road could require approximately 10 feet of additional right-of-way along Brokaw Road. MM TRAN-2.1 could result in short-term construction-related impacts, removal of trees, and impacts to unknown buried cultural resources.

With implementation of this improvement, the intersection of Coleman Avenue/Brokaw Road would operate at an acceptable LOS C during the PM peak hour, and the average delay would improve over existing conditions. For this reason, the project, with the implementation of MM TRAN-1.1, would result in a less than significant impact at this intersection. **(Less than Significant Impact with Mitigation Incorporated)**

MM TRAN-1.2: 6. De La Cruz Boulevard/Central Expressway (City of Santa Clara/CMP) – This intersection is located in the City of Santa Clara and under the jurisdiction of Santa Clara County. The Comprehensive County Expressway Planning Study identifies the conversion of the single HOV lane in each direction to mixed-flow lanes on Central Expressway as a Tier 1A project.[89] The approved City Place development also identifies adding a second southbound right-turn lane and a third northbound left-turn lane as a mitigation measure.[90] The project shall make a fair-share contribution towards the HOV lane conversion and additional turn lanes identified as mitigation for the City Place project.

With implementation of the improvements identified in MM TRAN-1.2, the intersection of De La Cruz Boulevard/Central Expressway would operate at an acceptable LOS E during the PM peak hour and the average delay would be better than existing conditions. The project shall implement MM TRAN-1.2, however, the impact is concluded to be significant unavoidable because the improvement at this intersection is not under the jurisdiction of the City of Santa Clara and the City cannot guarantee the implementation of the improvement concurrent with the proposed project. **(Significant Unavoidable with Mitigation Incorporated)**

[89] Tier 1A improvements are the County's highest priority improvements in the Comprehensive County Expressway Planning Study and will be fully funded in the near-term.
[90] The City Place project (including identified mitigation) is approved and will be implemented in the near-term.

Table 3.17-6: Existing and Existing + Project Intersection Levels of Service

Study Intersection	Peak Hour	Existing		Existing + Project				Mitigated	
		Average Delay (sec)	**LOS**	**Average Delay** (sec)	**LOS**	**Increase in Critical Delay** (sec)	**Increase in Critical V/C**	**Average Delay** (sec)	**LOS**
1. Coleman Avenue and Brokaw Road (City of Santa Clara)	AM	16.6	B	25.4	C	11.4	0.147	19.2	B
	PM	**84.8**	**F**	**104.5**	**F**	**34.6**	**0.086**	28.0	C
2. Lafayette Street and Lewis Street (City of Santa Clara)	AM	12.7	B	13.2	B	0.6	0.004		
	PM	34.7	C	35.4	D	1.1	0.006		
3. Lafayette Street and El Camino Real (City of Santa Clara)*	AM	39.2	D	39.2	D	0.0	0.000		
	PM	38.8	D	39.0	D	0.2	0.005		
4. De La Cruz Boulevard and Reed Street (City of Santa Clara)	AM	11.2	B	11.0	B	0.3	0.047		
	PM	18.1	B	17.6	B	0.0	0.050		
5. De La Cruz Boulevard and Martin Avenue (City of Santa Clara)	AM	33.0	C	32.2	C	-0.8	0.045		
	PM	30.7	C	30.5	C	0.5	0.052		
6. De La Cruz boulevard and Central Expressway (City of Santa Clara)*	AM	38.2	D	42.3	D	7.6	0.036	29.4	C
	PM	**92.2**	**F**	**107.3**	**F**	**-0.2**	**0.011**	66.4	E
7. Lafayette Street and Central Expressway (City of Santa Clara)*	AM	52.3	D	52.8	D	-0.3	0.004		
	PM	66.9	E	67.7	E	1.9	0.013		
8. Scott Boulevard and Central Expressway (City of Santa Clara)*	AM	42.1	D	41.9	D	-0.1	0.008		
	PM	75.6	E	76.8	E	0.6	0.008		
9. Coleman Avenue and Aviation Avenue (City of San José)	AM	11.6	B	12.4	B	2.3	0.037		
	PM	7.0	A	6.9	A	0.3	0.042		
10. Coleman Avenue and Newhall Drive (City of San José)	AM	13.0	B	12.9	B	-0.1	0.024		
	PM	24.8	C	23.6	C	0.3	0.042		

Table 3.17-6: Existing and Existing + Project Intersection Levels of Service

Study Intersection	Peak Hour	Existing		Existing + Project				Mitigated	
		Average Delay (sec)	**LOS**	**Average Delay** (sec)	**LOS**	**Increase in Critical Delay** (sec)	**Increase in Critical V/C**	**Average Delay** (sec)	**LOS**
11. Coleman Avenue and Airport Boulevard (City of San José)	AM	12.2	B	12.1	B	0.4	0.025		
	PM	11.5	B	11.3	B	0.2	0.028		
12. Coleman Avenue and I-880 (N) (City of San José)*	AM	24.7	C	26.4	C	3.1	0.037		
	PM	19.1	B	22.0	C	3.2	0.089		
13. Coleman Avenue and I-880 (S) (City of San José)*	AM	37.3	D	41.9	D	6.6	0.056		
	PM	28.4	C	28.1	C	5.3	0.189		
14. Coleman Avenue and Hedding Street (City of San José)	AM	41.0	D	41.1	D	1.3	0.021		
	PM	39.9	D	40.0	D	0.7	0.049		
15. Coleman Avenue and Taylor Street (City of San José)	AM	45.0	D	46.9	D	3.0	0.041		
	PM	44.7	D	45.7	D	0.1	0.008		
16. SR 87 and Taylor Street (City of San José)	AM	25.6	C	25.9	C	1.1	0.020		
	PM	29.8	C	32.4	C	4.3	0.047		
17. US 101 and Trimble Road (City of San José)	AM	22.4	C	23.2	C	1.3	0.018		
	PM	13.5	B	14.3	B	1.1	0.026		
18. De La Cruz Boulevard and Trimble Road (City of San José)*	AM	33.8	C	33.7	C	0.2	0.005		
	PM	**55.6**	**E**	**55.9**	**E**	**0.7**	**0.014**		
19. Coleman Avenue and Project Entrance (Future) (City of San José)	AM	---	---	16.0	B	---	---		
	PM	---	---	22.4	C	---	---		

Note: * Denotes CMP intersection; **Bold** text indicates conditions that exceed the applicable level of service standard. **Bold and shaded** indicate significant project impact.

Existing Plus Project Freeway Segment Levels of Service

Traffic volumes on the study freeway segments under existing plus project conditions were estimated by adding project trips (without the former R&D trip credit) to the existing volumes obtained from the 2016 CMP Annual Monitoring Report.[91] The results of the freeway segment analysis are summarized in Table 3.17-7. The results show that, based on the CMP freeway segment criteria, the project would have a significant impact on the following mixed-flow lanes on 21 directional freeway segments during a peak hour:

5. Northbound US 101, from De La Cruz Boulevard to San Tomas Expressway/Montague Expressway (AM Peak Hour)
6. Northbound US 101, from San Tomas Expressway/Montague Expressway to Bowers Avenue/Great America Parkway (AM Peak Hour)
7. Northbound US 101, from Bowers Avenue/Great America Parkway to Lawrence Expressway (AM Peak Hour)
8. Northbound US 101, from Lawrence Expressway to North Fair Oaks Avenue (AM Peak Hour)
9. Northbound US 101, from North Fair Oaks Avenue to North Mathilda Avenue (AM Peak Hour
12. Northbound I-880, from Stevens Creek Boulevard to North Bascom Avenue – PM Peak Hour
13. Northbound I-880, from North Bascom Avenue to The Alameda – PM Peak Hour
14. Northbound I-880, from The Alameda to Coleman Avenue – PM Peak Hour
15. Northbound I-880, from Coleman Avenue to SR 87 – AM Peak Hour
16. Northbound I-880, from SR 87 to North First Street – AM Peak Hour
17. Northbound I-880, from North First Street to US 101 – AM Peak Hour
34. Southbound I-880, from US 101 to North First Street – PM Peak Hour
35. Southbound I-880, from North First Street to SR 87 – PM Peak Hour
36. Southbound I-880, from SR 87 to Coleman Avenue – PM Peak Hour
39. Southbound I-880, from North Bascom Avenue to Stevens Creek Boulevard – AM Peak Hour
41. Southbound US 101, from SR 237 to North Mathilda Avenue – PM Peak Hour
42. Southbound US 101, from North Mathilda Avenue to North Fair Oaks Avenue – PM Peak Hour
43. Southbound US 101, from North Fair Oaks Avenue to Lawrence Expressway – PM Peak Hour
44. Southbound US 101, from Lawrence Expressway to Bowers Avenue/Great America Parkway – PM Peak Hour
45. Southbound US 101, from Bowers Avenue/Great America Parkway to San Tomas Expressway/Montague Expressway – PM Peak Hour
46. Southbound US 101, from San Tomas Expressway/Montague Expressway to De La Cruz Boulevard – PM Peak Hour

Impact TRAN-2: The project (under either option) would result in a significant impact to mixed-flow lanes on 21 directional freeway segments during at a peak hour. **(Significant Impact)**

[91] Note that background freeway conditions are not on record or otherwise available. For this reason, the project's freeway level of service impacts are based on comparing existing freeway levels of service to existing freeway levels of service with project traffic.

Table 3.17-7: Freeway Segment Levels of Service											
Freeway Segment		Direction	Peak Hour	Existing Plus Project				Project Trips			
				Mixed-Flow Lanes		HOV Lanes		Mixed-Flow Lanes		HOV Lanes	
				Capacity	LOS	Capacity	LOS	Volume	% Capacity	Volume	% Capacity
US 101	1. I-880 to Old Bayshore Highway	NB	AM	6,900	**F**	1,650	**F**	12	0.17	0	0.00
			PM	6,900	B	1,650	B	34	0.49	0	0.00
	2. Old Bayshore Highway to North First Street	NB	AM	6,900	**F**	1,650	**F**	12	0.17	0	0.00
			PM	6,900	B	1,650	A	34	0.49	0	0.00
	3. North First Street to Guadalupe Parkway (SR 87)	NB	AM	6,900	**F**	1,650	**F**	12	0.17	0	0.00
			PM	6,900	B	1,650	A	34	0.49	0	0.00
	4. Guadalupe Parkway (SR 87) to De La Cruz Boulevard	NB	AM	6,900	**F**	1,650	**F**	0	0.00	0	0.00
			PM	6,900	C	1,650	A	0	0.00	0	0.00
	5. De La Cruz Boulevard to San Tomas Expressway/Montague Expressway	NB	AM	6,900	**F**	1,650	**F**	**98**	**1.42**	0	0.00
			PM	6,900	C	1,650	A	60	0.87	0	0.00
	6. San Tomas Expressway/Montague Expressway to Bowers Avenue/Great America Parkway	NB	AM	6,900	**F**	1,650	**F**	**98**	**1.42**	0	0.00
			PM	6,900	D	1,650	A	60	0.87	0	0.00
	7. Bowers Avenue/Great America Parkway to Lawrence Expressway	NB	AM	6,900	**F**	1,650	**F**	**98**	**1.42**	0	0.00
			PM	6,900	D	1,650	B	60	0.87	0	0.00
	8. Lawrence Expressway to North Fair Oaks Avenue	NB	AM	6,900	**F**	1,650	**F**	**85**	**1.23**	0	0.00
			PM	6,900	D	1,650	B	52	0.75	0	0.00
	9. North Fair Oaks Avenue to North Mathilda Avenue	NB	AM	6,900	**F**	1,650	E	**85**	**1.23**	0	0.00
			PM	6,900	C	1,650	A	52	0.75	0	0.00
	10. North Mathilda Avenue to SR 237	NB	AM	6,900	E	1,650	**F**	72	1.04	0	0.00
			PM	6,900	C	1,650	C	44	0.64	0	0.00

Table 3.17-7: Freeway Segment Levels of Service											
Freeway Segment		Direction	Peak Hour	Existing Plus Project				Project Trips			
				Mixed-Flow Lanes		HOV Lanes		Mixed-Flow Lanes		HOV Lanes	
				Capacity	LOS	Capacity	LOS	Volume	% Capacity	Volume	% Capacity
I-880	11. I-280 to Stevens Creek Boulevard	NB	AM	6,900	**F**	---	---	35	0.51	---	---
			PM	6,900	B	---	---	101	1.46	---	---
	12. Stevens Creek Boulevard to North Bascom Avenue	NB	AM	6,900	**F**	---	---	35	0.51	---	---
			PM	6,900	**F**	---	---	**101**	**1.46**	---	---
	13. North Bascom Avenue to The Alameda	NB	AM	6,900	**F**	---	---	35	0.51	---	---
			PM	6,900	**F**	---	---	**101**	**1.46**	---	---
	14. The Alameda to Coleman Avenue	NB	AM	6,900	**F**	---	---	35	0.51	---	---
			PM	6,900	**F**	---	---	**101**	**1.46**	---	---
	15. Coleman Avenue to SR 87	NB	AM	6,900	**F**	---	---	**98**	**1.42**	---	---
			PM	6,900	**F**	---	---	60	0.87	---	---
	16. SR 87 to North First Street	NB	AM	6,900	**F**	---	---	**98**	**1.42**	---	---
			PM	6,900	**F**	---	---	60	0.87	---	---
	17. North First Street to US 101	NB	AM	6,900	**F**	---	---	**98**	**1.42**	---	---
			PM	6,900	**F**	---	---	60	0.87	---	---
SR 87	18. SR 85 to Capitol Expressway	NB	AM	4,400	**F**	1,650	**F**	9	0.20	0	0.00
			PM	4,400	B	1,650	B	27	0.61	0	0.00
	19. Capitol Expressway to Curtner Avenue	NB	AM	4,400	**F**	1,650	**F**	12	0.27	0	0.00
			PM	4,400	D	1,650	A	34	0.77	0	0.00
	20. Curtner Avenue to Almaden Road	NB	AM	4,400	**F**	1,650	**F**	14	0.32	0	0.00
			PM	4,400	D	1,650	C	40	0.91	0	0.00

Table 3.17-7: Freeway Segment Levels of Service										
Freeway Segment	Direction	Peak Hour	Existing Plus Project				Project Trips			
			Mixed-Flow Lanes		HOV Lanes		Mixed-Flow Lanes		HOV Lanes	
			Capacity	LOS	Capacity	LOS	Volume	% Capacity	Volume	% Capacity
21. Almaden Road to Alma Avenue	NB	AM	4,400	E	1,650	E	16	0.36	0	0.00
		PM	4,400	E	1,650	B	47	1.07	0	0.00
22. Alma Avenue to I-280	NB	AM	4,400	D	1,650	D	16	0.36	0	0.00
		PM	4,400	D	1,650	B	47	1.07	0	0.00
23. I-280 to Julian Street	NB	AM	4,400	**F**	1,650	**F**	23	0.52	0	0.00
		PM	4,400	B	1,650	A	67	1.52	0	0.00
24. Julian Street to Coleman Avenue	NB	AM	4,400	**F**	1,650	**F**	23	0.52	0	0.00
		PM	4,400	D	1,650	B	67	1.52	0	0.00
25. Coleman Avenue to Taylor Street	NB	AM	4,400	E	1,650	D	23	0.52	0	0.00
		PM	4,400	C	1,650	A	67	1.52	0	0.00
26. Taylor Street to Coleman Avenue	SB	AM	4,400	C	1,650	A	65	1.48	0	0.00
		PM	4,400	**F**	1,650	D	40	0.91	0	0.00
27. Coleman Avenue to Julian Street	SB	AM	4,400	D	1,650	A	65	1.48	0	0.00
		PM	4,400	E	1,650	D	40	0.91	0	0.00
28. Julian Street to I-280	SB	AM	4,400	B	1,650	A	65	1.48	0	0.00
		PM	4,400	**F**	1,650	D	40	0.91	0	0.00
29. I-280 to Alma Avenue	SB	AM	4,400	B	1,650	A	46	1.05	0	0.00
		PM	4,400	**F**	1,650	E	28	0.64	0	0.00
30. Alma Avenue to Almaden Road	SB	AM	4,400	D	1,650	A	46	1.05	0	0.00
		PM	4,400	**F**	1,650	E	28	0.64	0	0.00
31. Almaden Road to Curtner Avenue	SB	AM	4,400	C	1,650	A	39	0.89	0	0.00

Table 3.17-7: Freeway Segment Levels of Service											
Freeway Segment		Direction	Peak Hour	Existing Plus Project				Project Trips			
				Mixed-Flow Lanes		HOV Lanes		Mixed-Flow Lanes		HOV Lanes	
				Capacity	LOS	Capacity	LOS	Volume	% Capacity	Volume	% Capacity
			PM	4,400	E	1,650	D	24	0.55	0	0.00
	32. Curtner Avenue to Capitol Expressway	SB	AM	4,400	B	1,650	A	33	0.75	0	0.00
			PM	4,400	D	1,650	D	20	0.45	0	0.00
	33. Capitol Expressway to SR 85	SB	AM	4,400	C	1,650	A	26	0.59	0	0.00
			PM	4,400	D	1,650	C	16	0.36	0	0.00
I-880	34. US 101 to North First Street	SB	AM	6,900	**F**	---	---	35	0.51	---	---
			PM	6,900	**F**	---	---	**101**	**1.46**	---	---
	35. North First Street to SR 87	SB	AM	6,900	**F**	---	---	35	0.51	---	---
			PM	6,900	**F**	---	---	**101**	**1.46**	---	---
	36. SR 87 to Coleman Avenue	SB	AM	6,900	D	---	---	35	0.51	---	---
			PM	6,900	**F**	---	---	**101**	**1.46**	---	---
	37. Coleman Avenue to The Alameda	SB	AM	6,900	D	---	---	98	1.42	---	---
			PM	6,900	**F**	---	---	60	0.87	---	---
	38. The Alameda to North Bascom Avenue	SB	AM	6,900	D	---	---	98	1.42	---	---
			PM	6,900	E	---	---	60	0.87	---	---
	39. North Bascom Avenue to Stevens Creek Boulevard	SB	AM	6,900	**F**	---	---	**98**	**1.42**	---	---
			PM	6,900	D	---	---	60	0.87	---	---
	40. Stevens Creek Boulevard to I-280	SB	AM	6,900	C	---	---	98	1.42	---	---
			PM	6,900	C	---	---	60	0.87	---	---
US 101	41. SR 237 to North Mathilda Avenue	SB	AM	6,900	C	1,650	D	25	0.36	-4	0.00
			PM	6,900	**F**	1,650	**F**	**74**	**1.07**	23	0.00

Table 3.17-7: Freeway Segment Levels of Service

Freeway Segment	Direction	Peak Hour	Existing Plus Project				Project Trips			
			Mixed-Flow Lanes		HOV Lanes		Mixed-Flow Lanes		HOV Lanes	
			Capacity	LOS	Capacity	LOS	Volume	% Capacity	Volume	% Capacity
42. North Mathilda Avenue to North Fair Oaks Avenue	SB	AM	6,900	C	1,650	B	30	0.43	-3	0.00
		PM	6,900	**F**	1,650	**F**	**87**	**1.26**	22	0.00
43. North Fair Oaks Avenue to Lawrence Expressway	SB	AM	6,900	D	1,650	B	30	0.43	-3	0.00
		PM	6,900	**F**	1,650	**F**	**87**	**1.26**	26	0.00
44. Lawrence Expressway to Bowers Avenue/Great America Parkway	SB	AM	6,900	D	1,650	B	35	0.51	-2	0.00
		PM	6,900	**F**	1,650	**F**	**101**	**1.46**	33	0.00
45. Bowers Avenue/Great America Parkway to San Tomas Expressway/Montague Expressway	SB	AM	6,900	C	1,650	B	35	0.51	-3	0.00
		PM	6,900	**F**	1,650	**F**	**101**	**1.46**	33	0.00
46. San Tomas Expressway/Montague Expressway to De La Cruz Boulevard	SB	AM	6,900	C	1,650	A	35	0.51	-2	0.00
		PM	6,900	**F**	1,650	**F**	**101**	**1.46**	34	0.00
47. De La Cruz Boulevard to Guadalupe Parkway (SR 87)	SB	AM	6,900	C	1,650	A	33	0.48	2	0.00
		PM	6,900	E	1,650	D	20	0.29	2	0.00
48. Guadalupe Parkway (SR 87) to North First Street	SB	AM	6,900	B	1,650	A	33	0.48	2	0.00
		PM	6,900	**F**	1,650	**F**	20	0.29	2	0.00
49. North First Street to Old Bayshore Highway	SB	AM	6,900	B	1,650	A	33	0.48	2	0.00
		PM	6,900	**F**	1,650	**F**	20	0.29	3	0.00
50. Old Bayshore Highway to I-880	SB	AM	6,900	B	1,650	A	33	0.48	3	0.00
		PM	6,900	**F**	1,650	F	20	0.29	3	0.00

Note: **Bold** text indicates unacceptable level of service. **Bold** and Shaded indicate significant project impact. Source: Santa Clara Valley Transportation Authority. *Congestion Management Monitoring Study*. 2011.

Mitigation Measure: The project proposes to implement the following mitigation measure to reduce its impact to freeway segments:

MM TRAN-2.1: The project shall pay a fair-share contribution towards the VTA's Valley Transportation Plan (VTP) 2040 express lane program along US 101.

The VTA's VTP 2040 identifies freeway express lane projects along US 101 between Cochrane Road and Whipple Avenue, and along all of SR 87. On all identified freeway segments, the existing HOV lanes are proposed to be converted to express lanes. On US 101, a second express lane is proposed to be implemented in each direction for a total of two express lanes. Converting the HOV lanes to express lanes on I-880 and SR 87 would not mitigate the project's impact. On US 101, converting the existing HOV lane to an express lane and adding an express lane in each direction would increase the capacity of the freeway and would fully mitigate the project's freeway impacts. The project shall pay a fair-share contribution towards the express lane program along US 101; however, the impact is concluded to be significant unavoidable because the express lane project is not fully funded, not under the jurisdiction of the City of Santa Clara, and the City cannot guarantee the implementation of the improvement concurrent with the proposed project. **(Significant Unavoidable Impact with Mitigation Incorporated)**

3.17.2.4 *Background Plus Project Conditions*

Background Plus Project Transportation Network

It is assumed in this analysis that the transportation network under background plus project conditions would be the same as background conditions.

Background Plus Project Traffic Volumes

Project impacts were evaluated relative to background traffic volumes. For the background plus project scenario, the net new trips generated by the project (with the R&D trip credit) were added to the background traffic volumes to derive the background plus project traffic volumes. Since the background scenario assumed the (former) buildings on the site are fully occupied, the project received credit for trips associated with the buildings.

Background Plus Project Intersection Levels of Service

The results of the intersection level of service analysis under background plus project conditions are summarized in Table 3.17-8. The results show that, measured against the applicable municipal and CMP level of service standards, the nine intersections are projected to operate at an unacceptable LOS during at least one hour under background plus project conditions (see Table 3.17-8).

Table 3.17-8: Background and Background + Project Intersection Levels of Service									
Study Intersection	**Peak Hour**	**Background**		**Background + Project**				**Mitigated**	
		Average Delay (sec)	**LOS**	**Average Delay** (sec)	**LOS**	**Increase in Critical Delay** (sec)	**Increase in Critical V/C**	**Average Delay** (sec)	**LOS**
1. Coleman Avenue and Brokaw Road (City of Santa Clara)	AM	18.4	B	28.5	C	14.4	0.133	20.1	C
	PM	**127.7**	**F**	**135.8**	**F**	**18.6**	**0.051**	**28.9**	**C**
2. Lafayette Street and Lewis Street (City of Santa Clara)	AM	11.8	B	12.3	B	2.6	**0.007**		
	PM	**72.9**	**E**	**74.1**	**E**	**1.8**	**0.005**		
3. Lafayette Street and El Camino Real (City of Santa Clara)*	AM	45.9	D	45.9	D	0.0	0.000		
	PM	45.0	D	45.2	D	0.0	0.000		
4. De La Cruz Boulevard and Reed Street (City of Santa Clara)	AM	11.1	B	11.3	B	0.4	0.043		
	PM	18.4	B	18.6	B	0.7	0.047		
5. De La Cruz Boulevard and Martin Avenue (City of Santa Clara)	AM	33.3	C	32.7	C	-0.1	0.042		
	PM	30.7	C	31.8	C	2.1	0.049		
6. De La Cruz Boulevard and Central Expressway (City of Santa Clara) *	AM	68.9	E	74.7	E	11.3	0.016	36.3	D
	PM	**140.5**	**F**	**162.6**	**F**	**7.4**	**0.033**	**111.6**	**F**
7. Lafayette Street and Central Expressway (City of Santa Clara)*	AM	78.4	E	**81.2**	**F**	**5.1**	**0.011**	**59.7**	**E**
	PM	**103.8**	**F**	**105.6**	**F**	**4.1**	**0.012**	**92.3**	**F**
8. Scott Boulevard and Central Expressway (City of Santa Clara)*	AM	52.9	D	53.0	D	0.0	0.007		
	PM	**103.8**	**F**	**106.7**	**F**	**2.2**	**0.007**		
9. Coleman Avenue and Aviation Avenue (City of San José)	AM	30.3	C	26.4	C	-3.7	-0.013		
	PM	11.4	B	11.1	B	0.1	0.012		
10. Coleman Avenue and Newhall Drive (City of San José)	AM	12.6	B	12.5	B	-0.1	-0.008		
	PM	31.1	C	30.7	C	1.5	0.012		
11. Coleman Avenue and Airport Boulevard (City of San José)	AM	14.3	B	14.4	B	0.6	0.001		
	PM	11.8	B	12.1	B	0.7	0.018		

Table 3.17-8: Background and Background + Project Intersection Levels of Service									
Study Intersection	**Peak Hour**	**Background**		**Background + Project**				**Mitigated**	
		Average Delay (sec)	**LOS**	**Average Delay** (sec)	**LOS**	**Increase in Critical Delay** (sec)	**Increase in Critical V/C**	**Average Delay** (sec)	**LOS**
12. Coleman Avenue and I-880 (N) (City of San José)*	AM	**73.7**	**E**	**67.2**	**E**	**-5.5**	**-0.013**		
	PM	22.4	C	27.2	C	6.4	0.067		
13. Coleman Avenue and I-880 (S) (City of San José)*	AM	**68.0**	**E**	**73.1**	**E**	**8.3**	**0.019**	37.5	D
	PM	29.4	C	32.1	C	0.7	0.054	26.4	C
14. Coleman Avenue and Hedding Street (City of San José)	AM	41.2	D	40.8	D	0.5	0.002		
	PM	38.5	D	39.1	D	11.1	0.014		
15. Coleman Avenue and Taylor Street (City of San José)	AM	**59.3**	**E**	**63.5**	**E**	**6.5**	**0.024**	50.4	D
	PM	**60.2**	**E**	**63.8**	**E**	**7.9**	**0.029**	47.4	D
16. SR 87 and Taylor Street (City of San José)	AM	29.7	C	30.0	C	1.0	0.008		
	PM	33.6	C	37.5	D	6.4	0.043		
17. US 101 and Trimble Road (City of San José)	AM	33.8	C	35.7	D	3.1	0.013		
	PM	18.2	B	20.3	C	3.5	0.025		
18. De La Cruz Boulevard and Trimble Road (City of San José) *	AM	35.4	D	35.5	D	0.5	0.005		
	PM	**70.5**	**E**	**72.9**	**E**	**3.8**	**0.014**		
19. Coleman Avenue and Project Entrance (Future) (City of San José)	AM	---	---	15.8	B	--	--		
	PM	---	---	24.9	C	--	--		

Note: * Denotes CMP intersection; **Bold** text indicates unacceptable levels of service. **Bold** and shaded text indicates a significant project impact.

Based on applicable municipal and CMP significance criteria, five of the nine intersections would be significantly impacted by the project:

1. Coleman Avenue and Brokaw Road (City of Santa Clara) – PM Peak Hour
6. De La Cruz Boulevard and Central Expressway (City of Santa Clara)* – PM Peak Hour
7. Lafayette Street and Central Expressway (City of Santa Clara)* – AM and PM Peak Hours (Impacts)
13. Coleman Avenue and I-880 (S) (City of San José)* – AM Peak Hour
15. Coleman Avenue and Taylor Street (City of San José) – AM and PM Peak Hours

* denotes CMP intersections

All other study intersections are projected to operate at acceptable levels during both the AM and PM peak hours of traffic when measured against the applicable municipal and CMP level of service standards.

Impact TRAN-3: The project (under either option) would have a significant impact under background plus project conditions at the following five intersections: 1. Coleman Avenue/Brokaw Road (City of Santa Clara); 6. De La Cruz Boulevard/Central Expressway (City of Santa Clara/CMP); 7. Lafayette Street/Central Expressway (City of Santa Clara/CMP); 13. Coleman Avenue/I-880 (S) (City of San José/CMP); and 15. Coleman Avenue/Taylor Street (City of San José). **(Significant Impact)**

Mitigation Measures: The project proposes to implement MM TRAN-1.1 and -1.2 and the following mitigation measures to reduce the project's significant level of service impacts:

MM TRAN-3.1: 7. Lafayette Street/Central Expressway (City of Santa Clara/CMP) – This intersection is located in the City of Santa Clara and under the jurisdiction of Santa Clara County. The Comprehensive County Expressway Planning Study identifies the conversion of the single HOV lane in each direction to mixed-flow lanes on Central Expressway as a Tier 1A project.[92] The project shall make a fair-share contribution towards this improvement.

With the implementation of the improvement identified in MM TRAN-3.1, the intersection of Lafayette Street/Central Expressway would operate at an acceptable LOS E during the AM peak hour and an unacceptable LOS F during the PM peak hour, but the average delay during the PM peak hour would improve over background conditions. The project shall implement MM TRAN-3.1, however, the impact is concluded to be significant unavoidable because the improvement at this intersection is not under the jurisdiction of the City of Santa Clara and the City cannot guarantee the implementation of the improvement concurrent with the proposed project. **(Significant Unavoidable with Mitigation Incorporated)**

[92] The HOV conversion is under a trial program.

MM TRAN-3.2: 13. Coleman Avenue/I-880 (S) (City of San José/CMP) – This intersection is located in the City of San José and under the jurisdiction of the City of San José. This improvement includes restriping one of the left-turn lanes to a shared left- or right-turn lane, effectively creating three right-turn lanes. Three receiving lanes currently exist on the north leg of Coleman Avenue.

With implementation of this improvement, the intersection of Coleman Avenue/I-880 (S) would operate at an acceptable LOS D during the AM peak hour. The project shall implement MM TRAN-3.2, however, the impact is concluded to be significant unavoidable because the improvement at this intersection is not under the jurisdiction of the City of Santa Clara and the City cannot guarantee the implementation of the improvement concurrent with the proposed project. **(Significant Unavoidable with Mitigation Incorporated)**

MM TRAN-3.3: 15. Coleman Avenue/Taylor Street (City of San José) – This intersection is located in and under the jurisdiction of the City of San José. The widening of Coleman Avenue has been identified as a Downtown Strategy 2000 improvement by the City of San José and is an approved project that will be implemented in the near-term. The project shall make a fair-share contribution towards this improvement.

With implementation of the improvement identified in MM TRAN-3.3, the intersection of Coleman Avenue/Taylor Street would operate at an acceptable LOS D during both the AM and PM peak hours. The project shall implement MM TRAN-3.3, however, the impact is concluded to be significant unavoidable because the improvement at this intersection is not under the jurisdiction of the City of Santa Clara and the City cannot guarantee the implementation of the improvement concurrent with the proposed project. **(Significant Unavoidable with Mitigation Incorporated)**

With implementation of MM TRAN-1.1, the intersection of Coleman Avenue/Brokaw Road would operate at an acceptable LOS C during the PM peak hour (as well as the AM peak hour), and the average delay would improve over background conditions. For this reason, the project, with the implementation of MM TRAN-1.1, would result in a less than significant impact at this intersection. **(Less than Significant Impact with Mitigation Incorporated)**

With implementation of the improvements identified in MM TRAN-1.2, the intersection of De La Cruz Boulevard/Central Expressway would operate at an unacceptable LOS F during the PM peak hour, but the average delay would be better than background conditions. The project shall implement MM TRAN-1.2, however, the impact is concluded to be significant unavoidable because the improvement at this intersection is not under the jurisdiction of the City of Santa Clara and the City cannot guarantee the implementation of the improvement concurrent with the proposed project. **(Significant Unavoidable with Mitigation Incorporated)**

3.17.2.5 *Construction-Related Traffic Impacts*

Construction of the project under either option is estimated to take approximately seven years to complete. The project would include construction activities, including clearing, excavation, and grading operations, import/export of fill material, and construction vehicle travel during the construction period. Traffic from these activities would be ongoing throughout the demolition, building, and rehabilitation process for the project site. The project proposes a temporary traffic control plan with a flagger during the construction phase. The construction workers would park on-site within the staging area adjacent to the western site boundary. The project would excavate approximately 90,000 cubic yards of soil. The average commercial dump truck can hold approximately 10 cubic yards of soil. Assuming that the excavation activities take five months, this is an average of 82 dump trucks per day. The construction of the project is not anticipated to result in any road closure, but may require a lane reduction along the project site's frontages.

Therefore, there is potential for temporary traffic related impacts from construction activities at the site. The project shall prepare a Construction Management Plan which would include, but is not limited to the following conditions, subject to City's approval:

- Truck haul routes for construction trucks.
- Signs shall be posed along roads identifying construction traffic access or flow limitations due to lane restrictions during periods of truck traffic.

The effect of construction traffic would only be temporary, and with implementation of the standard measures to prepare a Construction Management Plan, the project (under either option), would not result in a significant construction related traffic impact. **(Less than Significant Impact)**

3.17.2.6 *Pedestrian Facilities Impacts*

A pedestrian connection between Brokaw Road and the Santa Clara Transit Center (located on El Camino Real, west of the project site) was recently constructed. It consists of an underground pedestrian pathway that begins at the western end of Brokaw Road and will end at the Santa Clara Transit Center, on the west side of the railroad tracks. The pedestrian connection provides a direct connection between the project site and the Santa Clara Transit Center and other existing services along El Camino Real.

The project would include sidewalks on both sides of the internal streets on-site, providing a connection between the project site and the existing sidewalks on Brokaw Road and Coleman Avenue. The project includes sidewalk improvements along Brokaw Road and Coleman Avenue fronting the project site that consist of replacing, widening, restriping of the existing sidewalks, and installation of park strips, consistent with City standards. Additionally, the intersection of Coleman Avenue and Brokaw Road provides existing marked crosswalks and pedestrian signal heads that facilitate pedestrian access from the project site to the adjacent shopping center located north of the project site. The project, therefore, would not significantly impact the effectiveness of pedestrian facilities and would improve pedestrian safety. **(Less than Significant Impact)**

3.17.2.7 *Bicycle Facilities Impacts*

The project site is not directly served by bike lanes. However, the cities of Santa Clara and San José bicycle plans identify bike lanes on Coleman Avenue and De La Cruz Boulevard that will connect to other existing bike lanes.[93,94] The project includes widening Coleman Avenue along the project site's frontage, which includes providing sufficient space for a new bike lane as described in *Section 1.2*. The project also includes bike lanes on Brokaw Road, west of Coleman Avenue. For these reasons, the project would not conflict with existing bicycle plans or significantly impact the effectiveness of existing bicycle facilities and would improve bicycle access and connectivity. **(Less than Significant Impact)**

3.17.2.8 *Transit Facilities Impacts*

The project site is currently served directly by two bus lines (VTA Bus Lines 10 and 304), with the nearest bus stops located at the intersection of Coleman Avenue/Brokaw Road. Additionally, the recently completed pedestrian undercrossing provides access to the Santa Clara Transit Center from Brokaw Road. As a result, the project site would be served by all the bus lines and commuter rail services available at the Santa Clara Transit Center. The project also proposes improvements to the existing bus stop on southbound Coleman Avenue, south of Brokaw Road in coordination with VTA.

An evaluation of the effects of project traffic on transit vehicle delay was completed. The analysis shows that for most transit routes evaluated, the traffic associated with the proposed project would increase delay to transit service by three minutes or less. Neither the City nor VTA has established policies or significance criteria related to transit vehicle delay. Thus, this data is provided for informational purposes.

Based on the discussion above, the project would not significantly impact the effectiveness of transit facilities. **(Less than Significant Impact)**

3.17.2.9 *Other Impacts*

Air Traffic Patterns

As discussed in *Section 3.9 Hazards and Hazardous Materials,* given the proximity of the site to the Airport, development on-site may penetrate FAR Part 77 surfaces. the project site is located within the Airport Safety Zone TPZ. FAA issuance of a "Determination of No Hazard" would ensure that the project would not be a potential aviation hazard. For this reason, the project (under either option) would not result in a significant impact to air traffic patterns. **(Less than Significant Impact)**

Design Hazards and Emergency Access

The project design does not include sharp curves or dangerous intersections that could result in safety hazards; nor does the project propose incompatible uses, such as farm equipment. The project proposes land uses consistent with the land uses allowed on-site by the General Plan[95] and consistent with the surrounding mix of land uses.

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[93] City of Santa Clara. *Bicycle Plan Update 2009*. September 2009.
[94] City of San José. *San José Bicycle Plan 2020*. November 2009.
[95] The existing General Plan land use designation on the project site are *Santa Clara Station Very High Density Residential, Santa Clara Station High Density Residential,* and *Santa Clara Station Regional Commercial,* which

A review of site access and circulation was completed and recommendations to facilitate better on-site operation and circulation are detailed in Appendix G and include the following:

- Restrict Driveway 1 to right-in and -out access only;
- Restrict Driveway 2 to right turns only;
- Signalize the intersection of Costco/project Driveway 3 and Brokaw Road;
- Strip a median left-turn for Driveway 4; and
- Assign all tandem parking.

The project shall implement the recommendations. All new internal roadways, site driveways and access point shall be designed and constructed per City standards to ensure adequate site distance and configurations (including adequate width and turn radii for continuous unimpeded circulation through the site for passenger vehicles, emergency vehicles, and large trucks). The final design of roadways, driveways, and access points shall be approved by the City. For these reasons, the project would not substantially increase hazards due to a design feature or incompatible land use. **(Less than Significant Impact)**

3.17.2.10 *Consistency with Plans*

Santa Clara General Plan

The project is consistent with applicable General Plan policies by dedicating right-of-way along Coleman Avenue for improvements (including a bike lane), proposing improvements to the existing sidewalks along the project site frontage on Coleman Avenue and Brokaw Road, and proposing improvements to the existing bus stop. The project also proposes pedestrian and bicycle amenities on-site (including landscaping and bicycle parking), a TDM program, and a mix of uses that offers trip internalization.

3.17.2.11 *Cumulative Impacts*

Cumulative traffic conditions represent future traffic conditions with expected growth in the area. The expected future traffic growth conditions include approved and pending projects in Santa Clara and San José (refer to Table 3.0-1). Cumulative conditions also include trips associated with development of Phases 4 – 8 (full buildout) of the City Place project and Phase 2 of the approved North San José Development Policy.[96,97]

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allow for residential, commercial, hotel, and office uses. The project requires amendments to the General Plan to reflect the proposed density and location of uses proposed, however, the uses proposed (residential, commercial, and hotel) are allowed by the existing General Plan land use designations.

[96] The City Place project includes a total of 9,164,400 square feet of development on a 227-acre site, which would be constructed in eight phases. The construction of Phase 4 would start in 2020 and includes 1,095,900 square feet of development. Phase 5 would include development of 720,000 square feet, Phase 6 would include development of 1,200,000 square feet, Phase 7 would include development of 1,080,000 square feet, and Phase 8 would develop 1,080,000 square feet, which would end in 2031.

[97] North San José Development Policy is a policy document prepared by the City of San José to guide ongoing growth and development of the North San José area, along with the City's General Plan. The Policy supports growth of North San José as an employment center through a pool of 26.7 million square feet industrial development capacity that can be allocated to specific properties in the Policy area. The plan contains four phases. Phase 2, where traffic is accounted for in the cumulative conditions, involves up to a maximum of 16,000 dwelling units and 200,000 square feet of commercial space.

Cumulative Transportation Network

It is assumed in this analysis that the transportation network under cumulative conditions and cumulative plus project conditions would be the same as described under background conditions and background plus project conditions, respectively.

Cumulative Traffic Volume

Traffic volumes under cumulative conditions were estimated by adding to the background traffic volumes the trips from proposed, but not yet approved (pending), development projects within the cities of Santa Clara and San José. In addition to pending projects, cumulative conditions reflect full buildout of the City Place project, which was recently approved and is expected to be constructed over a period of 10 years or more, and traffic associated with the future BART extension to Santa Clara. With the BART extension, there is a planned 500-space parking garage to be located at the end of Brokaw Road, with connection through a pedestrian tunnel to the BART station. Overall, the new BART station would offer another mode of travel and decrease the amount of traffic on the surrounding roadways due to the transportation demand mode shift from driving to taking BART.

Traffic generated by Phase 2 of the North San José Development Policy was also included in cumulative traffic volumes. For pending projects where a traffic impact analysis was not available or a trip assignment was not provided by a public agency, traffic was estimated using rates from the Institute of Transportation Engineer's publication, *Trip Generation Manual*, 9th edition and assigned to the roadway network based on existing travel patterns and the locations of complementary land uses.

City of Santa Clara Significant Cumulative Threshold of Significance

The project would create a significant adverse cumulative impact on traffic conditions at a signalized intersection in the City of Santa Clara if for either peak hour:

1. The level of service at the intersection degrades from an acceptable level (LOS D or better at all City-controlled intersections and LOS E or better at all expressway intersections) under cumulative conditions to an unacceptable level (LOS E or F at City-controlled intersections and LOS F at expressway intersections) under cumulative plus project conditions, or

2. The level of service at the intersection is an unacceptable level (LOS E or F at City-controlled intersections and LOS F at expressway intersections) under cumulative conditions and the addition of project trips causes the average critical delay to increase by four (4) or more seconds *and* V/C increases by one percent (.01) or more.

An exception to this rule applies when the addition of project traffic reduces the amount of average stopped delay for critical movements (i.e., the change in average stopped delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by .01 or more.

A significant impact by the City of Santa Clara standard is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to an acceptable level or no worse than cumulative conditions.

City of San José Significant Cumulative Threshold of Significance

The cumulative projects collectively would create a significant adverse impact on traffic conditions at a signalized intersection in the City of San José, including CMP intersections within San José, if during either the AM or PM peak hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better under background conditions to an unacceptable LOS E or F under cumulative plus project conditions, or

2. The level of service at the intersection is an unacceptable LOS E or F under background conditions and the addition of cumulative project trips causes both the critical-movement delay at the intersection to increase by four (4) or more seconds and V/C increases by 0.01 or more.

An exception to criteria 2 applies when the addition of project traffic reduces the amount of average stopped delay for critical movements (i.e., the change in average stopped delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by .01 or more.

A significant impact by City of San José standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to background conditions or better.

In addition, a single project's contribution to a cumulative intersection impact is deemed considerable in the City of San José if the proportion of project traffic represents 25 percent or more of the increase in total volume from background traffic conditions to cumulative plus project traffic conditions.

CMP Significant Cumulative Threshold of Significance (except within the City of San José)

The definition of a significant impact at a CMP intersection is the same as for the local intersections, except that the CMP standard for acceptable level of service at a CMP intersection is LOS E or better.

The project would create a significant adverse cumulative impact on traffic conditions at a CMP-designated signalized intersection if for either peak hour:

- The level of service at the intersection degrades from an acceptable LOS E or better under cumulative conditions to an unacceptable LOS F under cumulative plus project conditions, or

- The level of service at the intersection is an unacceptable LOS F under cumulative conditions and the addition of project trips under cumulative plus project conditions causes both the critical-movement delay at the intersection to increase by four (4) or more seconds *and* V/C increases by one percent (.01) or more.

An exception to this rule applies when the addition of project traffic reduces the amount of average delay for critical movements (i.e., the change in average delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by .01 or more. A significant impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to cumulative conditions or better.

Cumulative Plus Project Intersection Levels of Service

Cumulative plus project conditions were evaluated relative to cumulative conditions for City of Santa Clara study intersections and to background conditions for City of San José intersections to determine potential project impacts. Level of service results for cumulative conditions are summarized in Table 3.17-9.

The results show that, measured against applicable municipal and CMP level of service level of service impact criteria, 10 study intersections (five intersections in City of Santa Clara and five intersections in the City of San José) would operate at unacceptable levels under cumulative conditions. Based on applicable municipal and CMP significance criteria, the project would have a cumulatively considerable contribution to seven of the 10 cumulatively significant impacted intersections. Table 3.17-10 summarizes the cumulatively significantly impacted intersections.

All other study intersections are projected to operate at acceptable levels during both the AM and PM peak hours of traffic when measured against the applicable municipal and CMP level of service standards.

Impact C-TRAN-1: The project would have a cumulatively considerable contribution to significant cumulative impacts at the following intersections: 1. Coleman Avenue/Brokaw Road (City of Santa Clara); 6. De La Cruz Boulevard/Central Expressway (City of Santa Clara/CMP); 7. Lafayette Street/Central Expressway (City of Santa Clara/CMP); 8. Scott Boulevard/Central Expressway (City of Santa Clara/CMP); 12. Coleman Avenue/I-880 (N) (City of San José/CMP); 13. Coleman Avenue/I-880 (S) (City of San José/CMP); and 15. Coleman Avenue/Taylor Street (City of San José). **(Significant Cumulative Impact)**

Table 3.17-9: Background, Cumulative, and Cumulative + Project Intersection Levels of Service												
		Background		**Cumulative**		**Cumulative Plus Project**					**Mitigated**	
Study Intersection	**Peak Hour**	**Average Delay** (sec)	**LOS**	**Average Delay** (sec)	**LOS**	**Average Delay** (sec)	**LOS**	**Increase in Critical Delay** (sec)	**Increase in Critical V/C**	**% of Project Contribution**	**Average Delay** (sec)	**LOS**
1. Coleman Avenue and Brokaw Road (City of Santa Clara)	AM	18.4	B	24.3	C	40.2	D	26.9	0.133	---	24.2	C
	PM	**127.7**	**F**	**193.8**	**F**	**210.2**	**F**	**22.3**	**0.051**	---	53.7	**D**
2. Lafayette Street and Lewis Street (City of Santa Clara)	AM	11.8	B	11.7	B	12.1	B	0.3	0.004			
	PM	**72.9**	**E**	**103.2**	**F**	**104.4**	**F**	**2.0**	**0.005**			
3. Lafayette Street and El Camino Real (City of Santa Clara)*	AM	45.9	D	53.0	D	53.1	D	0.0	0.000			
	PM	45.0	D	56.3	E	56.6	E	0.0	0.000			
4. De La Cruz Boulevard and Reed Street (City of Santa Clara)	AM	11.1	B	11.3	B	11.5	B	0.5	0.043			
	PM	18.4	B	18.7	B	19.3	B	1.1	0.047			
5. De La Cruz Boulevard and Martin Avenue (City of Santa Clara)	AM	33.3	c	34.4	C	34.1	C	0.3	0.042			
	PM	30.7	C	31.1	C	32.7	C	2.9	0.049			
6. De La Cruz Boulevard and Central Expressway (City of Santa Clara)*	AM	68.9	E	**88.6**	**F**	**94.2**	**F**	**11.5**	**0.016**	---	44.8	D
	PM	**140.5**	**F**	**167.4**	**F**	**191.1**	**F**	**13.8**	**0.033**	---	**127.5**	**F**
7. Lafayette Street and Central Expressway (City of Santa Clara)*	AM	78.4	E	**101.9**	**F**	**104.7**	**F**	**5.0**	**0.011**	---	76.3	E
	PM	**103.8**	**F**	**152.1**	**F**	**153.7**	**F**	**1.6**	**0.010**	---	**136.0**	**F**
8. Scott Boulevard and Central Expressway (City of Santa Clara)*	AM	52.9	D	53.9	D	54.1	D	0.2	0.007	---	48.2	D
	PM	**103.8**	**F**	**116.9**	**F**	**120.1**	**F**	**6.3**	**0.012**	---	**97.4**	**F**

Table 3.17-9: Background, Cumulative, and Cumulative + Project Intersection Levels of Service												
		Background		**Cumulative**		**Cumulative Plus Project**					**Mitigated**	
Study Intersection	**Peak Hour**	**Average Delay** (sec)	**LOS**	**Average Delay** (sec)	**LOS**	**Average Delay** (sec)	**LOS**	**Increase in Critical Delay** (sec)	**Increase in Critical V/C**	**% of Project Contribution**	**Average Delay** (sec)	**LOS**
9. Coleman Avenue and Aviation Avenue (City of San José)	AM	30.3	C	51.7	D	44.9	D	23.9	0.060			
	PM	11.4	B	11.6	B	11.5	B	0.9	0.064			
10. Coleman Avenue and Newhall Drive (City of San José)	AM	12.6	B	12.6	B	12.3	B	0.3	0.037			
	PM	31.1	C	36.0	D	36.5	D	9.3	0.057			
11. Coleman Avenue and Airport Boulevard (City of San José)	AM	14.3	B	15.0	B	15.0	B	1.3	0.039			
	PM	11.8	B	12.0	B	12.3	B	1.2	0.069			
12. Coleman Avenue and I-880 (N) (City of San José)*	AM	**73.7**	**E**	**98.2**	**F**	**90.7**	**F**	**25.5**	**0.059**	**34**	34.5	C
	PM	22.4	C	27.5	C	37.2	D	21.7	0.153		18.5	B
13. Coleman Avenue and I-880 (S) (City of San José)*	AM	**68.0**	**E**	**79.5**	**E**	**84.8**	**F**	**23.4**	**0.058**	**52**	40.4	D
	PM	29.4	C	29.8	C	32.3	C	1.5	0.067		26.2	C
14. Coleman Avenue and Hedding Street (City of San José)	AM	41.2	D	44.4	D	44.0	D	4.8	0.042			
	PM	38.5	D	39.1	D	39.7	D	1.7	0.053			
15. Coleman Avenue and Taylor Street (City of San José)	AM	**59.3**	**E**	**65.2**	**E**	**69.8**	**E**	**16.2**	**0.061**	**42**	52.0	D
	PM	**60.2**	**E**	**68.8**	**E**	**73.4**	**E**	**24.1**	**0.085**	**39**	49.2	D
16. SR 87 and Taylor Street (City of San José)	AM	29.7	C	29.5	C	29.7	C	0.3	0.004			
	PM	33.6	C	33.0	C	36.7	D	5.8	0.039			
17. US 101 and Trimble Road (City of San José)	AM	33.8	C	**58.5**	**E**	**62.2**	**E**	**35.2**	**0.109**	18		
	PM	18.2	B	34.4	C	37.9	D	28.7	0.125			

Table 3.17-9: Background, Cumulative, and Cumulative + Project Intersection Levels of Service												
Study Intersection	**Peak Hour**	**Background**		**Cumulative**		**Cumulative Plus Project**					**Mitigated**	
		Average Delay (sec)	**LOS**	**Average Delay** (sec)	**LOS**	**Average Delay** (sec)	**LOS**	**Increase in Critical Delay** (sec)	**Increase in Critical V/C**	**% of Project Contribution**	**Average Delay** (sec)	**LOS**
18. De La Cruz Boulevard and Trimble Road (City of San José)*	AM	35.4	D	50.4	D	50.9	D	1.5	0.005			
	PM	**70.5**	**E**	**89.8**	**F**	**93.2**	**F**	**5.2**	**0.014**	8		
19. Coleman Avenue and Project Entrance (Future) (San José)	AM	---	---	---	---	16.0	B	---	---			
	PM	---	---	---	---	29.0	C	---	---			

Note: * Denotes CMP intersection; **Bold** text indicates unacceptable levels of service. **Bold** and Shaded text indicates a significant project impact.

Table 3.17-10: Summary of Cumulatively Significantly Impacted Intersections	
Cumulative Significantly Impacted Intersection	**Cumulatively Considerable Project Contribution?**
1. Coleman Avenue and Brokaw Road (City of Santa Clara) – PM Peak Hour	Yes
2. Lafayette Street and Lewis Street (City of Santa Clara) – PM Peak Hour	No
6. De La Cruz Boulevard and Central Expressway (City of Santa Clara)* – AM and PM Peak Hours	Yes
7. Lafayette Street and Central Expressway (City of Santa Clara)* – AM and PM Peak Hours	Yes, AM peak hour only
8. Scott Boulevard and Central Expressway (City of Santa Clara)* – PM Peak Hour	Yes
12. Coleman Avenue and I-880 (N) (City of San José)* – AM Peak Hour	Yes
13. Coleman Avenue and I-880 (S) (City of San José)* – AM Peak Hour	Yes
15. Coleman Avenue and Taylor Street (City of San José) – AM and PM Peak Hours	Yes
17. US 101 and Trimble Road (City of San José) – AM Peak Hour	No
18. De La Cruz Boulevard and Trimble Road (City of San José)* – PM Peak Hour	No
Note: * Denotes CMP intersections	

Mitigation Measures: The project proposes to implement MM TRAN-1.1, -1.2, -3.1 through -3.3 and the following mitigation measures to reduce its contribution to cumulatively significant impacted intersections:

MM C-TRAN-1.1: 8. Scott Boulevard/Central Expressway – This intersection is located in the City of Santa Clara and under the jurisdiction of the County of Santa Clara. The Comprehensive County Expressway Planning Study identifies the conversion of HOV to mixed-flow lanes on Central Expressway as a Tier 1A project. The project shall make a fair-share contribution to this improvement.

With implementation of this improvement, the intersection of Scott Boulevard/Central Expressway would operate at an unacceptable LOS F during the PM peak hour, but the average delay would be better than under cumulative conditions. The project shall implement MM C-TRAN-1.1, however, the impact is concluded to be significant unavoidable because the improvement at this intersection is not under the jurisdiction of the City of Santa Clara and the City cannot guarantee the implementation of the improvement concurrent with the proposed project. **(Significant Unavoidable Cumulative Impact with Mitigation Incorporated)**

MM C-TRAN-1.2: 12. Coleman Avenue/I-880 (N) – This intersection is located in the City of San José and under the jurisdiction of the City of San José. This improvement would include restriping one of the left-turn lanes to a shared left- or right-turn lane, effectively creating three right-turn lanes. Three receiving lanes currently exist on the north leg of Coleman Avenue.

With implementation of this improvement, the intersection would operate at better than background conditions at LOS C during the AM peak hour. The project shall implement MM C-TRAN-1.2, however, the impact is concluded to be significant unavoidable because the improvement at this intersection is not under the jurisdiction of the City of Santa Clara and the City cannot guarantee the implementation of the improvement concurrent with the proposed project. **(Significant Unavoidable Cumulative Impact with Mitigation Incorporated)**

The project (under either option), with the implementation of MM TRAN-1.1, would improve intersection operations to better than cumulative conditions at LOS D during the PM peak hour and would reduce its cumulative contribution to the significant cumulative impact at Coleman Avenue/Brokaw Road to a less than significant level. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

The project (under either option) shall implement MM TRAN-1.2 and -3.1 through -3.3 to reduce its cumulative contribution to the significant cumulative impacts at intersections: 6. De La Cruz Boulevard/Central Expressway (City of Santa Clara/CMP); 7. Lafayette Street/Central Expressway (City of Santa Clara/CMP); 13. Coleman Avenue/I-880 (S) (City of San José/CMP); and 15. Coleman Avenue/Taylor Street (City of San José) to cumulative conditions or better for CMP intersections and background conditions or better for City of San José intersections. However, the impacts are concluded to be significant unavoidable because the improvement at these intersections are not under the jurisdiction of the City of Santa Clara and the City cannot guarantee the implementation of the improvement concurrent with the proposed project. **(Significant Unavoidable Cumulative Impact with Mitigation Incorporated)**

3.17.3 Conclusion

Impact TRAN-1: The project (under either option), with the implementation of MM TRAN-1.1, would reduce its significant level of service impact at the intersection of Coleman Avenue/Brokaw Road under existing plus project conditions to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

The project (under either option), with the implementation of MM TRAN-1.2, would reduce its significant level of service impact at the intersection of De La Cruz Boulevard/Central Expressway under existing plus project conditions. However, the impact is concluded to be significant unavoidable because the improvement at this intersection is not under the jurisdiction of the City of Santa Clara and the City cannot guarantee the implementation of the improvement concurrent with the proposed project. **(Significant Unavoidable with Mitigation Incorporated)**

Impact TRAN-2: The project (under either option), with the implementation of MM TRAN-2.1, would reduce the project's significant impacts to mixed-flow lanes on 21 directional freeway segments; however, the impact is concluded to be significant unavoidable because the mitigation is not under the jurisdiction of the City of Santa Clara and the City cannot guarantee the implementation of the improvement concurrent with the proposed project. **(Significant Unavoidable Impact with Mitigation Incorporated)**

Impact TRAN-3: The project (under either option), with the implementation of MM TRAN-1.1, would reduce its significant level of service impact at the intersection of Coleman Avenue/Brokaw Road under background plus project conditions to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

The project (under either option), with the implementation of MM TRAN-1.2, -3.1 through -3.3, would reduce its impact at the intersections of 6. De La Cruz Boulevard/Central Expressway (City of Santa Clara/CMP); 7. Lafayette Street/Central Expressway (City of Santa Clara/CMP); 13. Coleman Avenue/I-880 (S) (City of San José/CMP); and 15. Coleman Avenue/Taylor Street (City of San José) under background plus project conditions. However, the project's impacts are concluded to be significant unavoidable because the improvements at these intersections are not under the jurisdiction of the City of Santa Clara and the City cannot guarantee the implementation of the improvement concurrent with the proposed project. (**Significant Unavoidable with Mitigation Incorporated)**

The proposed project (under either option) would not result in other significant transportation impacts (i.e., change in air traffic patterns, design hazards, inadequate emergency access, and conflicts with the General Plan). **(Less than Significant Impact)**

Impact C-TRAN-1: The project (under either option), with the implementation of MM TRAN-1.1, would reduce its cumulative contribution to the significant cumulative impact at Coleman Avenue/Brokaw Road to a less than significant level. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

The project (under either option), with the implementation of MM TRAN-1.2, -3.1 through -3.3, C-TRAN-1.1, and C-TRAN-1.2, would reduce its cumulative contribution to the significant cumulative impacts at the intersections of 6. De La Cruz Boulevard/Central Expressway (City of Santa Clara/CMP); 7. Lafayette Street/Central Expressway (City of Santa Clara/CMP); 8. Scott Boulevard/Central Expressway (City of Santa Clara/CMP); 12. Coleman Avenue/I-880 (N) (City of San José/CMP); 13. Coleman Avenue/I-880 (S) (City of San José/CMP); and 15. Coleman Avenue/Taylor Street (City of San José). However, the impacts are concluded to be significant unavoidable because the improvement at these intersections are not under the jurisdiction of the City of Santa Clara and the City cannot guarantee the implementation of the improvement concurrent with the proposed project. **(Significant Unavoidable Cumulative Impact with Mitigation Incorporated)**

The proposed project (under either option) would not have a considerable contribution towards other significant cumulative transportation impacts (i.e., change in air traffic patterns, design hazards, inadequate emergency access, and conflicts with the General Plan). **(Less than Significant Cumulative Impact)**

3.18 UTILITIES AND SERVICE SYSTEMS

The following discussion is based in part on a Water Supply Assessment (WSA) prepared by the City's Water Utility and approved by the City Council in August 2017. A copy of the WSA is included in Appendix H.

3.18.1 Environmental Setting

3.18.1.1 *Regulatory Framework*

State and Regional

Urban Water Management Plan

Pursuant to State Water Code requirements, water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (approximately 980 million gallons) of water annually must prepare and adopt an urban water management plan (UWMP) and update it every five years. The State Water Code requires water agencies to evaluate and describe their water resource supplies and projected needs over a 20-year planning horizon, and to address a number of related subjects including water conservation, water service reliability, water recycling, opportunities for water transfers, and contingency plans for drought events. The City of Santa Clara adopted its most recent Urban Water Management Plan in November 2016.

Senate Bill 610

Senate Bill 610 (SB 610), codified at Water Code Section 10910 et seq., requires that certain water supply and demand information be prepared for "projects" which are the subject of an EIR. Water Codes Section 10912 defines a "project" as, among other things, a proposed residential development of more than 500 dwelling units.

Wastewater

The San Francisco Bay Regional Water Quality Board (RWQCB) includes regulatory requirements that each wastewater collection system agency shall, at a minimum, develop goals for the Sewer System Management Plan (SSMP) to provide adequate capacity to convey peak flows. Other RWQCB regulatory requirements include the General Waste Discharge Requirements (GWDR), which regulates the discharge from wastewater treatment plants.

Assembly Bill 341

Assembly Bill 341 (2011) (AB 341) sets forth the requirements of the statewide mandatory commercial recycling program in the Public Resources Code. All businesses that generate four or more cubic yards of garbage per week and multi-family dwellings with five or more units in California are required to recycle. The purpose of the law is to reduce garbage sent to landfills and reduce GHG emissions. AB 341 sets a statewide goal for 75 percent disposal reduction by the year 2020.

Local

General Plan

General Plan policies applicable to utilities and service systems include, but are not limited to, the following listed below.

Policies	Description
Prerequisite Policies	
5.1.1-P3	Prior to the implementation of Phase III of the General Plan, undertake a comprehensive assessment of water, sanitary sewer conveyance, wastewater treatment, solid waste disposal, storm drain, natural gas, and energy demand and facilities in order to ensure adequate capacity and funding to implement the necessary improvements to support development in the next phase.
5.1.1-P8	Prior to approval of residential development for Phase III in any Future Focus Area, complete a comprehensive plan for infrastructure and utilities, that specifies: • With provisions for sufficient storm drain, sanitary sewer conveyance, wastewater treatment, water, solid waste disposal and energy capacity.
5.1.1-P21	Prior to 2023, identify and secure adequate solid waste disposal facilities to serve development in Phase III.
5.10.1-P6	Require adequate wastewater treatment and sewer conveyance capacity for all new development.
General Land Use	
5.3.1-P9	Require that new development provide adequate public services and facilities, infrastructure, and amenities to serve the new employment or residential growth.
5.3.1-P11	Encourage new developments proposed within a reasonable distance of an existing or proposed recycled water distribution system to utilize recycled water for landscape irrigation, industrial processes, cooling and other appropriate uses to reduce water use consistent with the CAP.
5.3.1-P17	Promote economic vitality by maintaining the City's level of service for public facilities and infrastructure, including affordable utilities and high quality telecommunications.
5.3.1-P27	Encourage screening of above-ground utility equipment to minimize visual impacts.
5.3.1-P28	Encourage undergrounding of new utility lines and utility equipment throughout the City.
Safety	
5.10.5-P20	Maintain, upgrade and replace storm drains throughout the City to reduce potential flooding.
5.10.5-P21	Require that storm drain infrastructure is adequate to serve all new development and is in place prior to occupancy.

3.18.1.2 *Existing Conditions*

Wastewater/Sanitary Sewer System

Wastewater from the City of Santa Clara is treated at the San José-Santa Clara Regional Wastewater Facility (RWF). RWF is owned jointly by the cities of Santa Clara and San José and is operated by the City of San Jose's Department of Environmental Services. RWF is one of the largest advanced wastewater treatment facilities in California and serves over 1,400,000 people in Santa Clara, San

José, Milpitas, Campbell, Cupertino, Los Gatos, Saratoga, and Monte Sereno.[98] RWF provides primary, secondary, and tertiary treatment of wastewater and has the capacity to treat 167 mgd of wastewater.

RWF is currently operating under a 120 mgd dry weather effluent flow constraint. This requirement is based upon the SWRCB and the RWQCB concerns over the effects of additional freshwater discharges from RWF on the saltwater marsh habitat and pollutant loading to the Bay. Approximately 10 percent of the RWF's effluent is recycled for non-potable uses and the remainder flows into San Francisco Bay. The NPDES permit for RWF includes wastewater discharge requirements.

Existing sanitary sewer lines located in Coleman Avenue and Brokaw Road serve the project site and are maintained by the City's Sewer Utility.

Stormwater Drainage System

The City of Santa Clara owns and maintains the municipal storm drainage system which serves the project site. There are existing storm drain lines in Coleman Avenue and Brokaw Road that serve the project site. These lines are part of a network of storm drain lines that eventually discharge to the Guadalupe River, which ultimately flows to the San Francisco Bay.

Water Supply

The City of Santa Clara has four sources of water. These sources include two treated water sources from SCVWD and the San Francisco Public Utilities Commission, groundwater pumped from the Santa Clara sub-basin through the City's owned and operated groundwater wells, and recycled water purchased from South Bay Water Recycling (SBWR).[99] SBWR provides advanced tertiary treated water from the RWF. The City's recycled water program delivers recycled water throughout the City for landscaping, parks, public services and businesses. Additional details regarding the City's water supply is included in Appendix H.

Water services to the site are provided by the City of Santa Clara Department of Water and Sewer Utilities. In 2015, the City had an average demand of approximately 16.8 mgd for potable water and 3.2 mgd for recycled water.[100]

Existing water lines in Coleman Avenue and Brokaw Road serve the project site and are maintained by the City's Water Utility. There is a recycled water line in De La Cruz Boulevard/Coleman Road. Historically (2011-2015), the project site had a water demand of approximately 13,110 mgd (or approximately 15 acre feet per year).[101] Additional details regarding the project site's historic water demand is included in Appendix H.

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[98] City of Santa Clara Environment website. "San Jose-Santa Clara Regional Wastewater Facility". Accessed on April 19, 2017. Available at: http://www.sanjoseca.gov/index.aspx?NID=1663.
[99] South Bay Recycled Water provides advanced tertiary treated water from the San José-Santa Clara Regional Wastewater Facility (Facility). The City's recycled water program delivers recycled water throughout the City for landscaping, parks, public services and businesses.
[100] City of Santa Clara. *2015 Urban Water Management Plan, City of Santa Clara Water Utility.* Adopted May 2011. Pages 31-32.
[101] City of Santa Clara. *Water Supply Assessment/Gateway Crossings-1205 Coleman Avenue.* Approved August 22, 2018. Pages 16-17.

Solid Waste

The Santa Clara County's Integrated Waste Management Plan (IWMP) was approved by the California Integrated Waste Management Board (CIWMB) in 1996 and has since been reviewed in 2004, 2007, and 2011. According to the IWMP, the County has adequate disposal capacity beyond 2026.[102] Solid waste generated within the County is landfilled at Guadalupe Mines, Kirby Canyon, Newby Island, Zanker Road Materials Processing Facility, and Zanker Road landfills.

Mission Trail Waste System provides solid waste collection services in the City of Santa Clara. Solid waste collected in Santa Clara is disposed of at Newby Island Sanitary Landfill (NISL) located in San José. The City has a contract with the owners of the NISL to dispose of solid waste through 2024. As of January 2017, NISL has approximately 18 million cubic yards of remaining capacity. Recycling services in the City are provided by Stevens Creek Disposal and Recycling.

3.18.2 Utilities and Service Systems Impacts

3.18.2.1 *Thresholds of Significance*

For the purposes of this EIR, a utilities and service systems impact is considered significant if the project would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new waste or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Comply with federal, state, and local statutes and regulations related to solid waste.

3.18.2.2 *Wastewater/Sanitary Sewer System Impacts*

Wastewater Treatment Requirements

Sewage generated by the proposed project would be treated at RWF in accordance with RWF's existing NPDES permit. It is not anticipated that the sewage generated by the proposed residential and commercial project would exceed the wastewater treatment requirements of the RWQCB. **(Less than Significant Impact)**

[102] Santa Clara County. *Five-Year CIWMP/RAIWMP Review Report.* May 2011.

Wastewater Treatment/Sanitary Sewer Facilities

As of 2017, the City has a treatment allocation at the RWF of approximately 25.0 mgd, and has a peak week dry weather flow of approximately 16.2 mgd.[103] The proposed project is anticipated to generate approximately 0.3 mgd (280,395 gallons per day [gpd]) of sewage.[104] Given the capacity at RWF (167 mgd), the City's treatment allocation at RWF (approximately 25.0 mgd), the City's peak week dry weather flow (approximately 16.2 mgd), and the project's estimated sewage generation (0.3 mgd), there is sufficient capacity at the RWF and within the City's existing treatment allocation to serve the project.

Sewage generated by the project would flow to the existing 18-inch sewer line in Brokaw Road (which would then flow to the existing 10-inch line in Coleman Avenue) and 10-inch line in Coleman Avenue. Sewer flow monitoring was completed in June 2017 of the 10-inch sewer line in Coleman Avenue by *V&A Consulting Engineers*. A copy of this report is included in Appendix H of this EIR. The 10-inch sewer line has a capacity of 333 gallons per minute (gpm), based on the City's allowable peak flow level of 75 percent of the pipe's 100 percent capacity. The results of the sewer flow monitoring show that the 10-inch sewer line in Coleman Avenue has an available capacity of 297 gpm. Given the available capacity in the 10-inch sewer line (297 gpm) and the project's estimated sewage generation of 195 gpm, there is sufficient capacity in the local sewer line to serve the project. No downstream capacity issues are anticipated.[105]

Based on the above discussion, the project would not require the construction of new or expanded wastewater treatment facilities and there is sufficient capacity at the RWF to serve the project's projected demand. **(Less than Significant Impact)**

3.18.2.3 *Stormwater Drainage System Impacts*

As discussed in greater detail in *Section 3.10 Hydrology and Water Quality*, with implementation of the proposed project, the amount of impervious surfaces on-site would decrease by approximately eight percent when compared to previous development on the site. With the decrease in impervious surfaces from the proposed project, the overall volume of runoff entering the storm drainage system would also decrease. For this reason, it is assumed that the existing storm drain system has sufficient capacity to serve the project. In addition, the stormwater treatment controls would regulate the volume of water entering the system. As a result, the project would not cause stormwater runoff to exceed the available capacity of the system and new or expanded stormwater facilities are not required. **(Less than Significant Impact)**

3.18.2.4 *Water Supply Impacts*

The water demand for the proposed project is estimated to be 335 acre feet per year. Compared to historic water demand, it is estimated that the project would increase water demand on-site by approximately 320 acre feet per year.[106] The project proposes to connect to the existing recycled water system for landscape irrigation, which would result in an approximately 18 acre feet per year

[103] City of San José, Environmental Services Department. *Tributary Agencies' Estimated Available Plant Capacity – 2017*. December 20, 2017.
[104] V&A Consulting Engineers. *City of Santa Clara Gateway Crossing Mixed Use Sewer Capacity Study*. June 2017.
[105] Fernandez, Debby. Project Planner, City of Santa Clara. Personal Communications. July 10, 2017.
[106] City of Santa Clara. *Water Supply Assessment/ Gateway Crossings – 1205 Coleman Avenue*. August 22, 2017.

reduction in potable water demand. As a result, the project's net potable water demand is estimated to be 302 acre feet per year.

The WSA completed for the project conservatively assumed all water demand for the project as potable water demand. The WSA concluded that the increase in water demand from the proposed project is within the growth projections in the City's current 2015 *Urban Water Management Plan* (UWMP). In addition, the City's Water Utility has sufficient water supplies to meet the projected water demand of the City (including water demand from existing uses and projected growth) and the proposed project during normal, single dry year, and multiple dry year scenarios (refer to Appendix H for more detail). Therefore, new or expanded water entitlements are not required to serve the proposed project. **(Less than Significant Impact)**

3.18.2.5 *Solid Waste Impacts*

Landfill Capacity

It is estimated that the project would generate approximately 890 tons (or 3,560 cubic yards) of solid waste per year.[107] The City has a contract with NISL to provide disposal capacity through 2024. The City has not secured solid waste disposal capacity at a landfill beyond 2024. General Plan policies 5.1.1-P3 and 5.1.1-P21, however, require the City complete an assessment of infrastructure and utility demand (including solid waste disposal) to ensure adequate capacity and funding to implement the necessary improvements to support development. Secure, adequate solid waste disposal facilities to serve development must be identified.

According to the IWMP, the County has adequate disposal capacity beyond 2026 and as of January 2017, NISL has approximately 18 million cubic yards of remaining capacity. There is existing capacity at local landfills, including NISL, to accommodate project generated waste post 2024. For this reason, the project would be served by a landfill with sufficient permitted capacity. **(Less than Significant Impact)**

Waste Regulation

Construction and operation of the proposed project (including disposal of contaminated soil if found) would comply with applicable federal, state, and local regulations and policies related to diversion of materials from disposal, then appropriate disposal of solid waste. **(Less than Significant Impact)**

3.18.2.6 *Consistency with Plans*

The project is consistent with applicable General Plan policies by being served by adequate utility and service systems (sanitary sewer/wastewater, storm drain, and water), as discussed above. As identified in the General Plan, the City shall initiate and identify a plan to provide adequate solid waste disposal post 2024.

[107] Sources: 1) Illingworth & Rodkin, Inc. *Gateway Crossing Project Air Quality & Greenhouse Gas Emissions Assessment.* May 2017. Attachment 2. 2) A common conversion factor used for municipal solid waste as it is collected and transported in compaction vehicles is 500 pounds/cubic yard (Lacaze, Skip. Personal communication with City of San José, Department of Environmental Services. June 3, 2013).

3.18.2.7 *Cumulative Impacts*

The geographic area for cumulative utility and service systems is the City boundaries.

Wastewater Treatment/Sanitary Sewer System

Buildout of the General Plan would result in an increase in sewage generated within the City. As discussed in the certified General Plan EIR, the average dry weather flows projected from the full buildout of the General Plan were projected to be within the City's allocated treatment capacity at RWF, which at the time of the certification of the General Plan EIR was 20.1 mgd[108] and below the City's 2017 flow allocation of approximately 20.5 mgd.

Since the certification date of the General Plan EIR, however, the City has approved development applications that have included General Plan amendments, each of which have incrementally increased the potential sewage generation at full buildout. Consequently, it is conceivable that at some point prior to 2035, the City could exceed its current capacity allocation, and the proposed project is anticipated to generate an additional 0.3 mgd.[109] The RWF has excess flow capacity of approximately 59.7 mgd and the City has a process to obtain additional capacity rights at the RWF should the need arise.[110]

Based on the above discussion, there is sufficient treatment capacity at the RWF to serve the buildout of the General Plan and the cumulative projects (including the proposed project). The cumulative projects (including the proposed project) would not result in a significant cumulative impact on wastewater treatment capacity. **(Less than Significant Cumulative Impact)**

The sewage generated from the proposed project would be conveyed to the existing 10-inch sewer in Coleman Avenue. As discussed in *Section 3.18.2.2*, there is sufficient capacity in the existing 10-inch sewer line to accommodate the project's estimated sewage generation and there are no downstream constraints. There are no cumulative projects that would contribute sewage to the same sewer lines conveying project flows. The Coleman Highline project east of the project site, would connect to a different sewer main in the City of San José. **(Less than Significant Cumulative Impact)**

Storm Drainage System

As discussed in *Section 3.18.2.3* above, the implementation of the project (under either option) would result in a decrease in the amount of impervious surfaces on-site compared to when the site was developed in 2016. A decrease in impervious surfaces results in a decrease in stormwater runoff from the site. For this reason, the existing storm drain system has sufficient capacity to serve the project. The project would not have a considerable contribution to a cumulative impact to the City's storm drainage system. **(Less than Significant Cumulative Impact)**

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[108] City of Santa Clara. *2010-2035 General Plan Integrated Final Environmental Impact Report.* SCH# 2008092005. January 2011. Page 228.

[109] V&A Consulting Engineers. *City of Santa Clara Gateway Crossing Mixed Use Sewer Capacity Study.* June 2017.

[110] The total flow capacity at the RWF is 167 mgd, and the joint owners (Santa Clara and San José) have agreements with several tributary agencies, which have capacity rights of approximately 35 mgd. Pursuant to Section V.B.3 of the 1983 agreements with the tributary agencies, Santa Clara can purchase additional capacity from those tributary agencies.

Water Supply

As discussed in *Section 3.18.2.4*, the WSA completed for the project determined there is sufficient water supply to meet the projected water demands of the City (including water demand from existing uses and projected growth) and the proposed project (refer to Appendix H for more detail). **(Less than Significant Cumulative Impact)**

Solid Waste

Buildout of the City and the proposed project would generate solid waste that would need to be disposed of appropriately. Consistent with the conclusion in the certified General Plan Final EIR and City Place Santa Clara Project Final EIR,[111] without a specific plan for disposing of solid waste beyond 2024, the solid waste generated by development in the City post 2024 (including waste from the proposed project and other cumulative projects such as City Place Santa Clara) would result in a significant unavoidable impact. **(Significant Unavoidable Cumulative Impact)**

Impact C-UTIL-1: Without a specific plan for disposing of solid waste beyond 2024, solid waste generated by development in the City post 2024 (including waste from the proposed project) would result in a significant unavoidable cumulative impact. **(Significant Unavoidable Cumulative Impact)**

3.18.3 Conclusion

The proposed project (under either option) would not result in significant impacts to utilities and service systems (i.e., exceedance of wastewater treatment/requirements, expansion/construction of new utility facilities, requirement for new/expanded water supply entitlements, and exceedances of utility/solid waste facility capacities). **(Less than Significant Impact)**

Impact C-UTIL-1: Consistent with the conclusion in the certified General Plan Final EIR and City Place Santa Clara Project Final EIR, without a specific plan for disposing of solid waste beyond 2024, solid waste generated by development in the City post 2024 (including waste from the proposed project) would result in a significant unavoidable cumulative impact. **(Significant Unavoidable Cumulative Impact)**

The proposed project (under either option) would not have a considerable contribution towards other significant cumulative utilities and service system impacts (i.e., exceedance of wastewater treatment/requirements, expansion/construction of new utility facilities, and requirement for new/expanded water supply entitlements). **(Less than Significant Cumulative Impact)**

[111] City of Santa Clara. *City Place Santa Clara Project Draft Environmental Impact Report.* SCH# 2014072078. Certified June 2016. Pages 3.14-38 and 3.14-39.

SECTION 4.0 GROWTH-INDUCING IMPACTS

The CEQA Guidelines require that an EIR identify the likelihood that a proposed project could "foster" or stimulate "economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment" (Section 15126.2(d)). This section of the EIR is intended to evaluate the impacts of such growth in the surrounding environment.

The proposed project is considered an "infill" project, meaning that the project site is within the City's existing boundaries, already served by existing infrastructure, and planned for urban uses even though the site is currently vacant and undeveloped.

As discussed in Section 2.1, the project site is part of the Santa Clara Station Focus Area. The net new development from the Santa Clara Station Area Plan is 1,663 dwelling units and 1,490,000 square feet of office space. Under the existing General Plan land use designations, 758 to 1,279 dwelling units and up to 1,025,838 square feet of commercial uses could be developed on-site. The project proposes 1,400-1,600 dwelling units and 215,000 square feet of commercial uses. The project proposes up to 322 more dwelling units and 810,838 square feet less of commercial space than what is currently allowed.

For these reasons, the proposed project would not result in significant growth-inducing impacts, beyond what is anticipated for the Santa Clara Station Focus Area in the City's General Plan. **(Less than Significant Impact)**

Table 4.0-1: Allowed and Proposed Development

	Santa Clara Station Focus Area Net New Development	Allowed On-Site by General Plan Land Use Designations	Proposed On-Site
Residential Units	1,663	758-1,278	1,400-1,600
Commercial Square Footage	1,490,000	1,025,838	215,000
Office Square Footage	550,000	0	0

SECTION 5.0 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

This section was prepared pursuant to CEQA Guidelines Section 15126.2(c), which requires a discussion of the significant irreversible changes that would result from the implementation of a proposed project. Significant irreversible changes include the use of nonrenewable resources, the commitment of future generations to similar use, irreversible damage resulting from environmental accidents associated with the project, and irretrievable commitments of resources. Applicable environmental changes are described in more detail below.

5.1 USE OF NONRENEWABLE RESOURCES

The proposed project (under either option), during construction and operation, would require the use and consumption of nonrenewable resources. Renewable resources, such as lumber and other wood byproducts, could also be used. Unlike renewable resources, nonrenewable resources cannot be regenerated over time. Nonrenewable resources include fossil fuels and metals.

Energy would be consumed during both the construction and operational phases of the project under either option. The construction phase would require the use of nonrenewable construction material, such as concrete, metals, and plastics, and glass. Nonrenewable resources and energy would also be consumed during the manufacturing and transportation of building materials, preparation of the site, and construction of the buildings. The operational phase would consume energy for multiple purposes including, building heating and cooling, lighting, appliances, and electronics. Energy, in the form of fossil fuels, will be used to fuel vehicles traveling to and from the project site.

The project would result in a substantial increase in demand for nonrenewable resources. However, the project is subject to the standard California Code of Regulations Title 24 Part 6 and CALGreen energy efficiency requirements.

As discussed in *Section 3.6 Energy*, the project is consistent with the City's General Plan policies regarding energy use, which fosters development that reduces the use of nonrenewable energy resources in transportation, buildings, and urban services (utilities).

5.2 COMMITMENT OF FUTURE GENERATIONS TO SIMILAR USE

The project proposes residential and commercial uses. The development of the proposed project (under either option) would commit a substantial amount of resources to prepare the site, construct the buildings, and operate them.

5.3 IRREVERSIBLE DAMAGE RESULTING FROM ENVIRONMENTAL ACCIDENTS ASSOCIATED WITH THE PROJECT

The project does not propose any new or uniquely hazardous uses, and its operation would not be expected to cause environmental accidents that would impact other areas. As discussed in *Section 3.9 Hazards and Hazardous Materials*, the project site is under the regulatory oversight of the RWQCB and construction workers, future occupants, and the surrounding environment could be exposed to on-site contaminated soils and soil vapor intrusion. However, a SMP shall be implemented by the project to mitigate potential risks to construction workers, future occupants, and the environment from potential exposure to hazardous substances. There are no significant unmitigatable on-site or off-site sources of contamination that would substantially affect the proposed uses on the project site. There are no significant geology and soils impacts from implementation of the project.

Based on the discussion above, the project (under either option) would not likely result in irreversible damage that may result from environmental accidents.

SECTION 6.0 SIGNIFICANT UNAVOIDABLE IMPACTS

The project under either option, unless noted otherwise, would result in the following significant unavoidable impacts:

- Greenhouse gas emissions (Option 1 only)
- Noise (exterior noise, including aircraft noise)
- Transportation (intersection and freeway levels of service)

The project would also result in the following significant unavoidable cumulative impacts:

- Greenhouse gas emissions (Option 1 only)
- Transportation (intersection levels of service)
- Utilities (landfill capacity)

SECTION 7.0 ALTERNATIVES

CEQA requires that an EIR identify alternatives to a project as it is proposed. The CEQA Guidelines specify that the EIR should identify alternatives 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." The purpose of this section is to determine whether there are alternatives of design, scope, or location which would substantially lessen the significant impacts, even if those alternatives "impede to some degree the attainment of the project objectives" or are more expensive (Section 15126.6).

In order to comply with the purposes of CEQA, it is important to identify alternatives that reduce the significant impacts which are anticipated to occur if the project is implemented, but to try to meet as many of the project's objectives as possible. The Guidelines emphasize a common sense approach – the alternatives should be reasonable, "foster informed decision making and public participation," and focus on alternatives that avoid or substantially lessen the significant impacts. The range of alternatives selected for analysis is governed by the "rule of reason" which requires the EIR to discuss only those alternatives necessary to permit a reasoned choice.

The three critical factors to consider in selecting and evaluating alternatives are, therefore: 1) the significant impacts from the proposed project which could be reduced or avoided by an alternative, 2) the project's objectives, and 3) the feasibility of the alternatives available. Each of these factors is discussed below.

7.1 SIGNIFICANT IMPACTS OF THE PROJECT

As mentioned above, the CEQA Guidelines advise that the alternatives analysis in an EIR should be limited to alternatives that would avoid or substantially lessen any of the significant effects of the project and would achieve most of the project objectives. The project has significant unavoidable impacts regarding GHG emissions (Option 1 only), noise (exterior noise, including aircraft noise), and transportation (intersection and freeway). The project would also have significant unavoidable cumulative GHG emissions (Option 1 only), transportation (intersection levels of service), and utilities (landfill) impacts.

Alternatives may also be considered if they would further reduce impacts that are already less than significant because the project is proposing mitigation. Impacts that would be significant, but for which the project includes mitigation to reduce them to less than significant levels include impacts to air quality (construction-related emissions), nesting birds, cultural resources, hazards and hazardous materials, and construction-related noise. The alternatives discussion does not focus on project impacts that are less than significant.

CEQA encourages consideration of an alternative site when impacts of the project might be avoided or substantially lessened. Only locations that would avoid or substantially lessen any of the impacts of the project and meet most of the project objectives need to be considered for inclusion in the EIR.

7.2 OBJECTIVES OF THE PROJECT

While CEQA does not require that alternatives must be capable of meeting all of the project objectives, their ability to meet most of the objectives is considered relevant to their consideration. As identified in *Section 2.3*, the applicant's objectives for the project are as follows:

1. Develop the 24-acre project site at the corner of Coleman Avenue and Brokaw Road in Santa Clara into an economically viable mixed use project consisting of commercial spaces and a vibrant residential community, providing a range of product types that will support the diversity of Santa Clara and is designed to be inviting to all.
2. Provide the on-site residential community and public access to a pedestrian friendly site with a variety of on-site recreational amenities including a neighborhood park, BBQ area, children's playground, dog park, and various lounge areas.
3. Develop an on-site commercial component of approximately 215,000 square feet, consisting of a hotel and ancillary commercial uses, that will provide services to both the residential community and public at large and will generate tax revenues for the City.
4. Create a transit-oriented development that supports alternative modes of transportation with a direct connection to the Santa Clara Transit Station.
5. Comply with and advance the General Plan goals and policies for the Santa Clara Station Focus Area (General Plan Section 5.4.3).

The City's objectives for this key site within the Santa Clara Station Focus Area are as follows:

1. Create a mixed-use neighborhood of high density residential development combined with commercial services to support the residents, businesses and visitors within and around the plan area as well as the users of the abutting Santa Clara Caltrain/BART heavy rail transit node.
2. Promote long term sustainability with an array and arrangement of complementary uses by achieving LEED certification (or equivalent), minimizing vehicle miles traveled, capitalizing on efficient public infrastructure investment and providing convenient amenities for residents and users of the plan area.
3. Maximize housing unit yield on a site with minimal impact on existing neighborhoods that will address the jobs/housing balance, create a critical mass of housing to justify commercial services, particularly retail services, and provide a variety of housing unit types.
4. Provide a suitable affordable housing component that addresses the City's lower income housing needs in close proximity to transit services and commercial services and jobs.
5. Provide a significant hotel component and retail services that support the business travel market, enhance the tax base and contribute other revenues to support City services that serve the development.

7.3 FEASIBILITY OF ALTERNATIVES

CEQA, the CEQA Guidelines, and the case law on the subject have found that feasibility can be based on a wide range of factors and influences. The Guidelines advise that such factors *can* include (but are not necessarily limited to) the suitability of an alternate site, economic viability, availability of infrastructure, consistency with a general plan or with other plans or regulatory limitations, jurisdictional boundaries, and whether the project proponent can "reasonably acquire, control or otherwise have access to the alternative site (Section 15126.6[f][1])."

7.4 SELECTION OF ALTERNATIVES

7.4.1 Alternatives Considered But Rejected

The City considered an alternative location for the proposed project that would lessen or avoid the project's nesting bird, construction-related air quality, cultural resources, hazards and hazardous materials, and/or construction-related noise impacts. The alternative location needed to be of similar size to the project site, within the urban service area of the City, near existing transit, and have the appropriate General Plan land use designation(s). There are no vacant or available sites of approximately 24 acres in the City. In addition, there are no sites of similar size that have the appropriate land use designation. Further, the project applicant does not have control of alternative sites of similar size in the City. For these reasons, an alternative location to the project was considered but rejected as infeasible.

7.4.2 Alternatives Selected

In addition to "No Project," the CEQA Guidelines advise that the range of alternatives discussed in the EIR should be limited to those that "would avoid or substantially lessen any of the significant effects of the project" (Section 15126.6[f]). The discussion below addresses alternatives which could reduce project impacts and are feasible from a physical land use, and infrastructure perspective. This EIR does not evaluate the financial or economic feasibility.

Given the factors discussed above, the following evaluation of possible alternatives to the project as it is proposed includes: 1) No Project Alternatives as required by CEQA and 2) a Reduced Development Alternative. The components of these alternatives are described below, followed by a discussion of their impacts and how they would differ from those of the proposed project. A summary of the environmental impacts of the proposed project and the project alternatives are provided in Table 7.5-2 at the end of this section.

7.5 PROJECT ALTERNATIVES

7.5.1 No Project Alternatives

The CEQA Guidelines specifically require consideration of a "No Project" Alternative. The purpose of including a No Project Alternative is to allow decision makers to compare the impacts of approving the project with the impacts of not approving the project. The Guidelines specifically advise that the No Project Alternative is "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services." The Guidelines emphasize that an EIR should take

a practical approach, and not "…create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment (Section 15126.6[e][3][B])."

While the site was previously developed with R&D uses, currently, the project site is undeveloped. Under the No Project Alternative, the project site could remain as it is or it could be developed with uses consistent with the existing Light Industrial (ML) zoning designation. The existing ML zoning allows for the development of 605,070 square feet of industrial and/or office/R&D uses. For these reasons, there are two logical No Project alternatives for the project: 1) a No Project/No Development Alternative and 2) a No Project/Development Alternative.

7.5.1.1 *No Project/No Development Alternative*

The No Project/No Development Alternative assumes that the project site would remain as it is today; undeveloped and unoccupied. The project site is, however, designated for development in the City's General Plan.

Comparison of Environmental Impacts

The No Project/No Development Alternative would avoid all of the project's environmental impacts.

Relationship to Project Objectives

The No Project/No Development Alternative would not meet any of the project objectives.

Conclusion

Because the No Project/No Development Alternative would not result in any development on the site, this Alternative would avoid all of the environmental impacts of the project. However, this Alternative would not meet any of the applicant's or City's project objectives.

7.5.1.2 *No Project/Development Alternative*

This alternative assumes that the proposed project is not approved, but that another project is built consistent with the existing ML zoning designation. Under the existing ML zoning designation, 605,070 square feet of industrial and/or office/R&D uses could be developed on-site. For the purposes of this EIR, the No Project/Development Alternative assumes the project site would be developed with 605,070 square feet of R&D uses.

Comparison of Environmental Impacts

The No Project/Development Alternative would result in a different land use (R&D) than the proposed project (residential and commercial) onsite. Developing 605,070 square feet of R&D uses onsite would be consistent with the existing zoning designation and, therefore, would not require rezoning or amendments to the General Plan. For this reason, the No Project/Development Alternative would have lesser land use and planning impacts than the proposed project (which requires amendments to the General Plan and zoning).

The No Project/Development Alternative has less development and, therefore, would be less dense than the proposed project. The No Project/Development Alternative assumes 605,070 square feet of R&D development and proposed project would have approximately 3.0 million square feet of

residential development and up to 215,000 square feet of commercial development. As a result, the No Project/Development Alternative would result in lesser aesthetics, construction air pollutant emissions, energy, construction noise, population and housing, public services, recreation, and utilities and service systems impacts compared to the proposed project. A summary of the project and No Project/Development Alternative estimated air pollutant and GHG emissions, daily trips, energy demand, and utility demands is provided in Table 7.5-1.

The No Project/Development Alternative generates approximately 25 percent of project's vehicle trips (see Table 7.5-1). The No Project/Development, therefore, would result in lesser traffic impacts than the proposed project. In addition, a development's vehicle trips are a primary source of operational air pollutant emissions. The Alternative's fewer vehicle trips would result in fewer operational air pollutant emissions compared to the proposed project (see Table 7.5-1).

The No Project/Development Alternative would result in the same or similar impacts as the proposed project related to physical conditions of the site. These include agricultural and forestry resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, mineral resources, and exterior noise.

While the No Project/Development Alternative would result in lower total GHG emissions than the proposed project (approximately 7,018 MT/year compared to 12,150 MT/year for Option 1, which is the project option that would result in a significant GHG impact), the No Project Development Alternative is less dense and would result in greater GHG emissions per service population than the proposed project (see Table 7.5-1). The No Project/Development Alternative would result in approximately 5.2 MT of CO_2 per service population per year, which is greater than Option 1's 2.9 MT of CO_2 per service population per year and also exceeds the 2.6 MT of CO2 per service population per year threshold identified in *Section 3.8*. For this reason, the No Project/Development Alternative would have a greater GHG emissions impact than the proposed project.

Relationship to Project Objectives

The No Project/Development Alternative could meet applicant objective 4 of creating a transit-oriented development. The Alternative would not meet applicant objectives 1, 2, 3, or 5 because it would not develop a residential and commercial mixed-use project. The Alternative would not meet any of the City's objectives, which focus on transit-oriented residential mixed-used development.

Conclusion

The No Project/Development Alternative would result in lesser land use and planning, aesthetics, air quality, energy, land use and planning, construction noise, population and housing, public services, recreation, transportation, and utilities and service systems impacts compared to the proposed project. The No Project/Development Alternative would result in the same or similar impacts to agricultural and forestry resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, mineral resources, and exterior noise. The No Project/Development Alternative would have greater GHG impacts than the proposed project. The No Project/Development Alternative could meet project objective 4; however, it would not meet project objectives 1, 2, 3, or 5 which stipulate residential and commercial mixed-use development. The Alternative would not meet any of the City's objectives, which focus on transit-oriented residential mixed-used development.

Table 7.5-1: Summary of Project and No Project/Development Alternative Estimated Air Pollutant and GHG Emissions, Daily Trips, Energy Demand, and Utility Demands		
	Proposed Project (Option 2, unless otherwise noted)[a]	**No Project/Development Alternative**[b]
Estimated Construction Criteria Air Pollutant Emissions		
ROG (pounds/day)	24.8	21.7
NO_X (pounds/day)	45.5	43.7
PM_{10} Exhaust (pounds/day)	1.9	1.8
$PM_{2.5}$ Exhaust (pounds/day)	1.8	1.7
Estimated Operational Air Pollutant Emissions		
ROG (tons per year)	11.78	3.6
NO_X (tons per year)	10.09	4.2
PM_{10} (tons per year)	9.92	4.4
$PM_{2.5}$ (tons per year)	2.85	1.2
GHG (MT CO_2/service population/year)	2.9 (Option 1, which is the option with highest rate)	5.2*
Estimated Transportation		
Net Average Daily Trips	9,831	2,400
Estimated Energy and Utilities		
Annual Energy Demand	18 GWh of electricity 34 billion Btu of natural gas	5 GWh of electricity 16 billion Btu of natural gas
Sewage Generation (gpd)	280,395	90,850
Total Water Demand (gpd)	299,069	104,478
Solid Waste Generation (cubic yards)	3,560	184

Notes: MT = metric ton; MT/year = metric ton/year; gpd = gallons per day

[a] Numbers for the proposed project are referenced in *Sections 3.3 Air Quality, 3.6 Energy, 3.8 Greenhouse Gas Emissions, 3.17 Transportation/Traffic,* and *3.18 Utilities and Service Systems*.

[b] Sources: 1) Construction Criteria Air Pollutant Emissions and Operational Air Pollutant Emissions: CalEEMod Version: CalEEMod.2016.3.2. *Gateway Crossings No Project/Development Alternative with Zoning Buildout*. February 27, 2018. (See Appendix B). 2) Transportation: Institute of Transportation Engineers. *Trip Generation Manual 9th Edition*. 2012. 3) Energy Demand and Solid Waste Generation: CalEEMod Version: CalEEMod.2016.3.2. *Gateway Crossings No Project/Development Alternative with Zoning Buildout*. February 27, 2018. (See Appendix B). 4) Sewage generation: Based on a rate of 0.15 gpd/sf for R&D uses. V&A Consulting Engineers. *Gateway Crossings Mixed Use Sewer Capacity Study*. June 2017. 5) Water Demand: Assumes sewage generation equates to 85 percent of water use.

* No Project/Development Alternative GHG: Service Population = (605,070 sf R&D *one employee/450 R&D sf) = 1,345; Estimated Annual GHG Emission = 7,018 MT CO_2

7.5.2 Reduced Development Alternative

The purpose of the Reduced Development Alternative is to avoid the project's significant transportation impacts. As discussed in *Section 3.17 Transportation/Traffic*, the project would result in significant freeway and intersection level of service impacts. A sensitivity analysis was completed by *Hexagon Transportation Consultants, Inc.* to determine what percent reduction in total project trips was needed to avoid the project's significant unavoidable freeway and intersection (under existing plus project and background plus project conditions) level of service impacts.

To avoid the project's significant unavoidable freeway and intersection (under existing plus project and background plus project conditions) level of service impacts, total project trips would need to be reduced by 45 percent.[112] A 45 percent reduction in total project trips corresponds to a 45 percent reduction development. Therefore, 880 residential units and 118,250 square feet of commercial uses could be developed without resulting in significant unavoidable freeway or intersection (under background plus project conditions) level of service impacts. The Reduced Development Alternative, therefore, assumes the development of 880 residential units and 118,250 square feet of commercial uses.

Comparison of Environmental Impacts

As discussed above, the Reduced and Development Alternative would avoid the project's significant unavoidable freeway and intersection (under existing plus project and background plus project conditions) level of service impacts.

Since the Reduced and Development Alternative is 45 percent less development compared to the proposed project, the Reduced Development Alternative would be of less mass and density compared to the proposed project, resulting in lesser aesthetic impacts. The Reduced Development Alternative would also use fewer resources (i.e., energy, public services, and utilities) and generate fewer air pollutant emissions than the proposed project. The Reduced Development Alternative would result in lesser construction-related noise and population and housing impacts given the reduction in development on-site.

The Reduced Development Alternative would have the same or similar impacts as the proposed project to agricultural and forestry resources, nesting birds, cultural resources, geology and soils, GHG emissions per service population,[113] hazards and hazardous materials, hydrology and water quality, land use, mineral resources, and exterior noise.

Relationship to Project Objectives

The Reduced Development Alternative could meet the applicant's objectives of developing a transit-oriented mixed use project with amenities (objectives 1, 2, and 4). The Reduced Development Alternative, however, includes 45 percent less commercial square footage than identified in applicant objective 3 and would not fully meet the City's General Plan Santa Clara Station Focus Area Goal 5.4.3-G1 of developing high-intensity uses (Goal 5.4.3-G1) or General Plan Santa Clara Station

[112] Hexagon Transportation Consultants, Inc. *Gateway Crossings Option 2 Intersection LOS*. May 10, 2017.
[113] Because the Reduced Development Alternative is 45 percent of the proposed project, it would result in a proportional reduction in GHG emissions and service population. As a result, the GHG emissions per service population for the Reduced Development Alternative is the same as the proposed project.

Focus Area Policy 5.4.3-P2 of maximizing residential development in proximity to the Santa Clara Station (objective 5).

It is possible the Reduced Development Alternative could meet City objectives 2 and 4 of providing sustainable residential mixed-use development with affordable housing. The Reduced Development Alternative would not meet City objectives 1, 3, and 5 of providing high-density residential development and a significant commercial/retail component on-site.

Conclusion

The Reduced Development Alternative would avoid the project's significant unavoidable freeway and intersection impacts (under background plus project conditions). The Reduced Development Alternative would result in lesser aesthetics, energy, public services, utilities, air quality, GHG, construction-related noise, and population and housing impacts compared to the proposed project. The Reduced Development Alternative would result in the same or similar impacts to the proposed project for all other resource areas (i.e., agricultural and forestry resources, nesting birds, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, mineral resources, and exterior noise).

The Reduced Development Alternative could meet applicant objectives 1, 2, and 4 but would not meet applicant objective 5 of advancing the General Plan goals and policies for the Santa Clara Station Focus Area (which include developing high-intensity uses and maximizing residential development) to the same extent as the proposed project. It is possible the Reduced Development Alternative could meet City objectives 2 and 4 but would not meet City objectives 1, 3, and 5 of providing high-density residential development and a significant commercial/retail component on-site.

7.5.3 Environmentally Superior Alternative

The CEQA Guidelines state that an EIR shall identify an environmentally superior alternative. Based on the above discussion, the environmentally superior alternative to the proposed project is the No Project/No Development Alternative because all of the project's significant environmental impacts would be avoided. However, Section 15126.6(e)(2) states that "if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." In addition to the No Project/No Development Alternative (as well as the No Project/Development Alternative), the Reduced Development Alternative would avoid or result in lesser impacts than the proposed project.

Table 7.5-2: Summary of Project and Project Alternative Impacts				
Impacts	**Proposed Project**	**No Project Alternatives**		**Reduced Development Alternative**
		No Development	**Development**	
Aesthetics	LTS	**NI**	**LTS**	**LTS**
Agricultural and Forestry Resources	NI	NI	NI	NI
Air Quality				
• Construction-Related Air Pollutants	SM	**NI**	**SM**	**SM**
• Operational Air Pollutant Emissions	LTS/SM*	**NI**	**LTS**	**LTS**
• Cumulative Operational Air Pollutant Emissions	SM	**NI**	**LTS**	**LTS**
Biological Resources (Nesting Birds)	SM	**NI**	SM	SM
Cultural Resources	SM	**NI**	SM	SM
Energy				
• Electricity and Natural Gas	LTS	**NI**	**LTS**	**LTS**
• Gasoline	LTS	**NI**	**LTS**	**LTS**
Geology and Soils	LTS	NI	LTS	LTS
Greenhouse Gas Emissions				
• Operational GHG Emissions	LTS/SU†	**NI**	SU	LTS
• Cumulative GHG Emissions	LTS/SU†	**NI**	SU	LTS
Hazards and Hazardous Materials	SM	**NI**	SM	SM
Hydrology and Water Quality	LTS	**NI**	LTS	LTS
Land Use	LTS	**NI**	**LTS**	LTS
Mineral Resources	NI	NI	NI	NI
Noise and Vibration				
• Aircraft noise	SU	**NI**	SU	SU
• Construction related noise	SM	**NI**	**SM**	**SM**
Population and Housing	LTS	**NI**	**LTS**	**LTS**
Public Services	LTS	**NI**	**LTS**	**LTS**
Transportation/Traffic				
• Freeway Impacts	SU	**NI**	**LTS**	**LTS**
• Intersection LOS	SM	**NI**	**LTS**	**LTS**
• Cumulative Intersection LOS	SU	**NI**	**LTS**	**LTS**

Table 7.5-2: Summary of Project and Project Alternative Impacts				
Impacts	**Proposed Project**	**No Project Alternatives**		**Reduced Development Alternative**
		No Development	**Development**	
Utilities and Service Systems				
• Other utilities	LTS	**NI**	**LTS**	**LTS**
• Cumulative solid waste	SU	**NI**	**SU**	**SU**
Meets Applicant's Objectives?	Yes	No	Partially	Partially
Meets City's Objectives?	Yes	No	No	Partially

Notes: SU = Significant unavoidable impact; SM = Significant impact, but can be mitigated to a less than significant level; LTS = Less than significant impact; and NI = No impact.

* Option 1 would result in LTS operational air pollutant emissions and Option 2 would result in SM operational air pollutant emissions.

† Option 2 would result in LTS operational and cumulative GHG emissions and Option 1 would result in SU operational and cumulative GHG emissions.

Bold text indicates being environmentally superior to the proposed project.

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