1300 El Camino Real Greenheart Project
Draft Infill Environmental Impact Report

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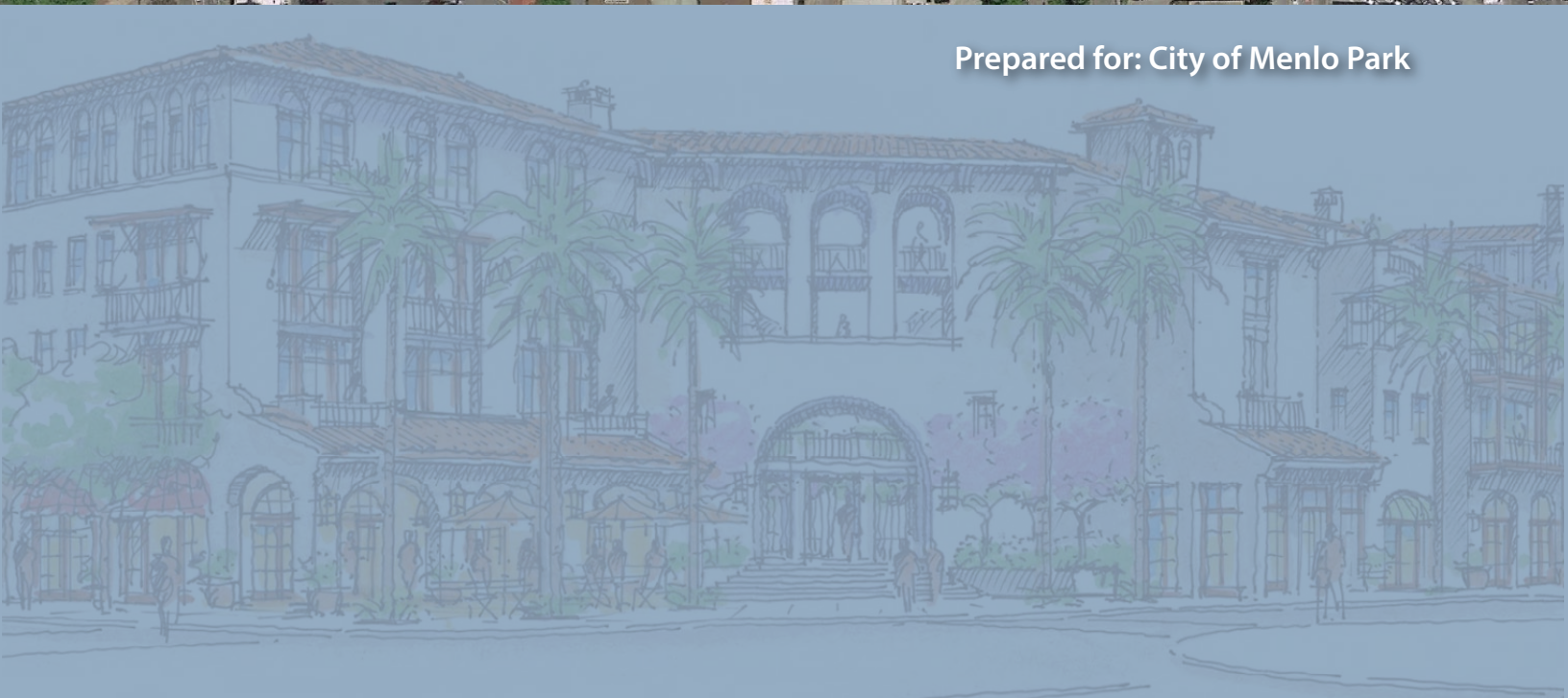
February 2016

Prepared for: City of Menlo Park



DRAFT INFILL ENVIRONMENTAL IMPACT REPORT

1300 EL CAMINO REAL GREENHEART PROJECT

PREPARED FOR:

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February 2016

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Acronyms and Abbreviations

2011 DTSC Order	Imminent and Substantial Endangerment Determination and Order and Remedial Action Order
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACMs	asbestos-containing materials
ADMP	Asbestos Dust Management Plan
ADT	average daily traffic
ARB	California Air Resources Board
ASTM	American Society for Testing and Materials
ATHS	air toxics hot spots
AVR	average vehicle ridership
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
bgs	below ground surface
BMPs	best management practices
C/CAG	City/County Association of Governments
CA-MUTCD	California Manual on Uniform Traffic Control Devices
CAAQS	California Ambient Air Quality Standards
Cal-OSHA	California Division of Occupational Safety and Health
CalARP	California Accidental Release Prevention Program
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CBDP	Comprehensive Bicycle Development Plan
CBPP	Comprehensive Bicycle and Pedestrian Plan
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
City	City of Menlo Park
CMP	Congestion Management Program
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CUPA	Certified Unified Program Agency

cy	cubic yards
dB	decibel
dBA	A-weighted decibels
DCE	dichloroethene
DCP	Dust Control Plan
DEIR	Draft Environmental Impact Report
DOT	U.S. Department of Transportation
DPF	diesel particulate filter
DPM	diesel particulate matter
Draft EIR	Draft Environmental Impact Report
DTSC	Department of Toxic Substances Control
du	dwelling unit
EB	eastbound
ECR NE-R	El Camino Real Northeast – Residential
EIR	Environmental Impact Report
EOC	Emergency Operations Center
EOP	Emergency Operation Plan
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
ETWU	estimated total water use
FAR	floor area ratio
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Authority
G&D	grading and drainage
General Plan	Menlo Park General Plan
GHG	greenhouse gas
HAP	hazardous air pollutants
Hazard Mitigation Plan	Annex to 2010 Association of Bay Area Governments Local Hazard Mitigation Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
HI	hazard index
HMBP	Hazardous Materials Business Plan
Hot Spots Act	Air Toxics “Hot Spots” Information and Assessment Act of 1987
HRA	health risk assessment
in/sec	inches per second
IRIS	Integrated Risk Information System
ITE	Institute of Transportation Engineers
ITS	Intelligent Transportation System

Cal-OSHA	California Division of Occupational Safety and Health
ksf	thousand square feet
kW	kilowatt
L_{dn}	day-night level
LEED	Leadership in Energy and Environmental Design
L_{eq}	equivalent sound level
L_{eq} 1h	1-hour A-weighted equivalent sound level
LID	low-impact development
L_{max}	maximum sound level
LOS	level of service
LTS	less than significant
MAWA	maximum applied water allowance
MEI	maximally exposed individual
MERV	minimum efficiency reporting value
MMRP	Mitigation Monitoring and Reporting Program
MPEM	Multi-Pollutant Evaluation Method
MPFPD	Menlo Park Fire Protection District
mph	miles per hour
MPPD	Menlo Park Police Department
MTC	Metropolitan Transportation Commission
Municipal Code	City of Menlo Park Municipal Code
NAAQS	National Ambient Air Quality Standards
NB	northbound
NCP	National Contingency Plan
NI	no impact
NIMS	National Incident Management System
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
OEHHA	California Office of Environmental Health Hazard Assessment
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyls
PCE	perchloroethylene
PDA	Planned Development Area
PG&E	Pacific Gas and Electric Company
Phase I ESAs	Phase I Environmental Site Assessments
PM	particulate matter

PM10	particulate matter 10 microns in diameter or less
PM2.5	particulate matter 2.5 microns in diameter or less
PPV	peak particle velocity
PRC	Public Resources Code
Project	1300 El Camino Real Greenheart Project
Project Sponsor	Greenheart Land Company
RAP	Remedial Action Plan
RAW	Removal Action Work Plan
RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Plan
RMS	root mean square
ROGs	reactive organic gases
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Program
RWQCB	Regional Water Quality Control Board
S	significant
SamTrans	San Mateo County Transit District
SARA	Superfund Amendments and Reauthorization Act
SB	southbound
SCS	Sustainable Communities Strategy
SEMS	Standardized Emergency Management System
sf	square feet
SFBAAB	San Francisco Bay Area Air Basin
SFPUC	San Francisco Public Utilities Commission
SIL	significant impact level
SJVAPCD	San Joaquin Air Pollution Control District
SMCEHD	San Mateo County Health Department, Environmental Health Division
SMCTA	San Mateo County Transportation Authority
SMCWPPP	San Mateo Countywide Water Pollution Prevention Program
SOC	Statement of Overriding Considerations
SPCCP	Spill Prevention, Control, and Countermeasure Program
Specific Plan	El Camino Real/Downtown Specific Plan
SR	State Route
SU	significant and unavoidable
SVE	soil vapor extraction
SWPPP	Stormwater Pollution Prevention Plan
TACs	Toxic Air Contaminants
Tanner Act	Toxic Air Contaminant Identification and Control Act
TAZ	traffic analysis zone

TCE	trichloroethene
TDM	Transportation Demand Management
TNM	Traffic Noise Model
TSCA	Toxic Substances Control Act
U.S.C.	United States Code
ULI	Urban Land Institute
v/c	volume to capacity
VdB	vibration level in decibel units
VMT	vehicle miles traveled
vphpl	vehicles per hour per lane
VTA	Santa Clara Valley Transportation Authority
WB	westbound
WBSD	West Bay Sanitary District
WDR	waste discharge requirement
$\mu g/m^3$	micrograms per cubic meter

ES.1 Project Overview

Greenheart Land Company (Project Sponsor) is proposing to redevelop 11 assessor's parcels of land between El Camino Real and the Caltrain right-of-way into a mixed-use development. The Project site includes the former Derry Lane site (3.5 acres), the former 1300 El Camino Real site (3.4 acres), and 1258 El Camino Real (0.3 acres), which add up to approximately 7.2 acres in their current state. These parcels generally consist of vacant, previously developed land in the northern area and commercial buildings along Derry Lane and Oak Grove Avenue in the southern area. The Derry Lane site and the 1300 El Camino Real site were subject to previous development proposals that would have included development of residential, office, and community-serving[1] uses at the two project sites. Both of these proposals obtained environmental impact report (EIR) certification, although the Derry Lane site never received overall project approvals, having been subject to a referendum. The 1300 El Camino Real site's approvals were valid at the point of the Project Sponsor's submittal of the revised application, thus constituting an extension under the City of Menlo Park's (City's) practice.

The Project would demolish the existing structures in the southern portion of the site and construct approximately 420,000 square feet (sf) of mixed uses. In total, the Project would include three mixed-use buildings, a surface parking lot, an underground parking garage, onsite linkages, and landscaping. The uses at the Project site would include approximately 188,900 to 199,300 sf of non-medical office space in two buildings, approximately 202,100 sf of residential space (up to 202 housing units) in one building, and up to 29,000 sf of community-serving space throughout the proposed office and residential buildings. The Project would provide approximately 1,000 parking spaces within parking garage and a surface parking lot. After street abandonment and dedication actions under the Project, the total site area would be approximately 6.4 acres.

The entire Project site is in the El Camino Real/Downtown Specific Plan (Specific Plan) area and the El Camino Real Northeast – Residential (ECR NE-R) District. The Project site is zoned SP-ECR/D. The ECR NE-R District is on the east side of El Camino Real between Oak Grove and Glenwood Avenues and currently characterized by a mix of retail, personal service, office, and residential uses. The ECR NE-R District is in an area with the general plan land use designation of El Camino Real Mixed-Use – Residential, which supports a variety of retail uses, personal services, business and professional offices, and residential uses. The ECR NE-R District provides for higher intensities, with a focus on residential development, given its location near a train station and downtown. The Specific Plan outlines the maximum amount of building intensity permitted in the ECR NE-R District.

[1] Community-serving uses include the following categories of uses, as defined in the Specific Plan and permitted in the ECR NE-R District: banks/other financial institutions, business services, eating/drinking establishments, office/business/professional services (limited to a single real estate office of no more than 2,500 square feet), personal improvement services, and retail sales.

With a Public Benefit Bonus,[2] the Project would be consistent with allowed development in the ECR NE-R District. The permitted floor-area ratio (FAR) is 1.10, but with a Public Benefit Bonus, the FAR can increase to 1.50. In either scenario, a non-medical office is limited to no more than one-half the maximum FAR. In general, maximum heights are permitted to 38 feet. Although 48 feet is permitted with a Public Benefit Bonus, building façades cannot exceed a height of 38 feet. The Project would be constructed at the maximum FAR and height permitted with a Public Benefit Bonus. Up to 32 dwelling units per acre are allowed at the Project site, and up to 50 units per acre are permitted with a Public Benefit Bonus. Therefore, because the Project would develop at an intensity of approximately 31.6 units per acre, a Public Benefit Bonus would not be required for dwelling unit density. All uses proposed under the Project are permitted in the ECR NE-R District.

ES.2 Infill Environmental Checklist

As discussed above, the Project site is within the Specific Plan area. Because the Project's site plan and development parameters are consistent with development anticipated by the Specific Plan, a programmatic Specific Plan EIR is applicable to this Project. Therefore, an Infill Environmental Checklist was prepared for the Project by the City, in conformance with Section 15183.3 of the California Environmental Quality Act (CEQA) Guidelines and Section 21094.5 of the Public Resources Code (PRC), adopted per Senate Bill (SB) 226 (Appendix 1-1). SB 226 was developed by the California legislature to eliminate repetitive analysis of effects of a project that were previously analyzed in a programmatic EIR for a planning-level decision or substantially mitigated by uniformly applied development policies. The checklist was used to limit the scope of the EIR to effects that were determined to be significant, identical to the function of an initial study, as defined in Section 15063 of the CEQA Guidelines.

The Infill Environmental Checklist determined that the Project would have effects that either have not been analyzed in the prior Specific Plan EIR or are more significant than described in the prior EIR and no uniformly applicable development policies would substantially mitigate such effects. Therefore, because the impacts could be significant, this Draft Infill EIR is required to analyze the effects.

ES.3 Areas of Controversy

CEQA Guidelines Section 15123 specifies that a draft EIR summary must identify "areas of controversy" known to the lead agency, including issues raised by agencies and the public, and issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects.

The Project's Infill Environmental Checklist (Appendix 1-1) and Notice of Preparation (NOP) (Appendix 1-2) were released on July 14, 2014, for a 30-day public review period. A public scoping meeting was held on August 4, 2014, before the Planning Commission. The NOP noted that the Project may have a significant effect

[2] The Specific Plan outlines the maximum amount of building intensity permitted in the ECR NE-R District. However, the maximum may be increased with a Public Benefit Bonus, which allows additional development beyond the base intensity and height in exchange for extra public benefits. The Public Benefit Bonus would be expected to increase profits from development in exchange for providing additional benefits to the public. Public Benefit Bonuses require case-by-case discretionary review, and if the Planning Commission and City Council ultimately does not find that the proposed benefits are appropriate, a project can be required to be revised to the base-level development standards.

on the environment and that an EIR would be prepared. Letters received from agencies and members of the public in response to the NOP are included in Appendix 1-2. Major areas of controversy include those listed below.

Transportation

- Requirements of a transportation impact analysis.
- Role of lead agency in implementing mitigation measures.
- Additional vehicle trip reductions.
- Encroachment permits for work within public rights-of-way.
- Consideration of the City's Circulation System Assessment document.
- Avoidance of neighborhood cut-throughs.
- Consideration of improvements to El Camino Real as part of the Project.
- Consideration of traffic from all land uses.
- Explanation of metrics to be used for vehicle miles traveled.
- Queuing analysis and capacity for car storage.
- Changes to the traffic patterns as a result of the opening of Garwood Way.
- Additional intersection and roadway segments to be studied in the EIR.
- Transportation demand management plan for the Project site.
- Consideration of parking spillover into neighborhoods.

Noise

- Placement of proposed sensitive receptors adjacent to noise associated with rail operations on the Caltrain tracks.

Population and Housing

- Jobs/housing balance as a result of the Project.

Alternatives

- Analysis of an alternative that includes more and/or less office and residential use.

ES.4 Project Alternatives

Chapter 5 of this Draft Infill EIR, *Alternatives*, analyzes the following reasonable alternatives to the Project:

- **No-Project Alternative.** Under the No-Project Alternative, existing parcels would remain as is. The six buildings and associated parking areas would remain at the Derry Lane site. It is assumed that the vacant buildings would not be retained because of their deteriorated nature. There are no existing buildings at the 1300 El Camino Real site, but the foundations of demolished buildings and associated parking surfaces remain. It is assumed this site would

remain vacant and the building foundations and paved surfaces would not be removed. There is one building on the 1258 El Camino Real site that was vacated in 2010. It is assumed that this vacant building would not be retenanted because of its deteriorated nature.

- **Base Level Maximum Office Alternative.** This alternative allows for a 1.10 FAR, which meets the base density standards of the Specific Plan for the El Camino Real Northeast zoning district. The development standards stipulate that general office space shall not exceed one-half of the base FAR or public bonus FAR. This alternative does not exceed half of the base FAR. More specifically, this alternative would reduce proposed office square footage by 34,900 sf, from 188,900 sf to 154,000 sf, and reduce residential square footage by 63,100 sf, from 202,100 sf to 139,000 sf (from 202 units to 139 units). The community-serving area would be reduced by 14,000 sf, from 29,000 sf to 15,000 sf. The general layout, as well as ingress and egress, would be the same as that of the Project.
- **Base Level Maximum Residential Alternative.** This alternative allows for a 1.10 FAR, which meets the development standards of the Specific Plan, with 32 dwelling units per acre, for the zoning district El Camino Real Northeast – Residential. The Maximum Residential Alternative would increase residential square footage by only 3,900 sf, from 202,100 sf to 206,000 sf (from 202 units to 206 units), and reduce office square footage by 101,900 sf, from 188,900 sf to 87,000 sf. The community-serving area would be reduced by 14,000 sf, from 29,000 sf to 15,000 sf. The general layout, as well as ingress and egress, would be the same as that of the Project.

ES.5 Impacts and Mitigation Measures

Table ES-1 presents a summary of the impacts of the Project, proposed mitigation and improvement measures, and each impact's level of significance after mitigation. The environmental impacts are identified and classified as "Significant," "Less than Significant," or "No Impact." According to the CEQA Guidelines Section 15382, a significant impact is "… a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project…" CEQA Guidelines Section 15126.4(a)(1) also states that an EIR "… shall describe feasible mitigation measures that could minimize significant adverse impacts…"

ES.6 Draft EIR Conclusions

In accordance with CEQA Guidelines Section 15123(b)(3), this summary section must identify issues to be resolved, including whether or how to mitigate significant effects and the choice among alternatives. Chapter 3, *Environmental Impact Analysis*, of the Draft Infill EIR presents mitigation measures to reduce or avoid the significant impacts that have been identified for the Project. In some instances, the Draft Infill EIR identifies mitigation options that address specific impacts. During the CEQA environmental review process, the City will need to determine which mitigation measures are suitable and whether they can effectively reduce impacts to a less-than-significant level. A Mitigation Monitoring and Reporting Program (MMRP) will be prepared to define the timing for implementation of the measures, the parties who will be responsible for implementation, and the parties who will be responsible for reporting and verifying implementation.

The Draft Infill EIR identifies impacts that will remain significant and unavoidable, even after implementation of the proposed mitigation measures. Consequently, the City will need to determine

whether to approve the Project as proposed and, if so, provide its rationale in a Statement of Overriding Considerations.

As outlined above, Chapter 5, *Alternatives*, presents alternatives to the Project. Although the Reduced-Intensity Alternatives would meet some Project objectives, none of the alternatives would avoid all the significant and unavoidable impacts of the Project. The City will need to determine whether these options, or others that have not been considered, are preferable from an environmental and community perspective compared with the Project.

ES.7 How to Comment on This Draft EIR

This Draft Infill EIR is considered a draft under CEQA because it must be reviewed and commented upon by public agencies, organizations, and individuals before being finalized. This document is being distributed for a 45-day (minimum) public review and comment period. Readers are invited to submit written comments on the document. Comments are most helpful when they suggest specific alternatives or measures that better mitigate significant environmental effects.

Written comments should be submitted to:

Thomas Rogers, Principal Planner
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Community Development Department, Planning Division
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To consider oral comments on the Draft Infill EIR, a public hearing will be held before the Planning Commission on March 21, 2016. Hearing notices will be mailed to responsible agencies and interested individuals.

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
3.1 Transportation			
Impact TRA-1: Impacts on Intersections under Near-Term 2020 plus-Project Conditions. Increases in traffic associated with the Project under near-term 2020 plus-Project conditions would result in increased peak-hour delays at five intersections. Intersection impacts at the four of the five intersections would remain significant and unavoidable because improvements would require obtaining additional rights-of-way, would violate existing City/town policies, or would be outside the City's jurisdiction.	S	***TRA-1.1: Implement Intersection Improvements to Address Near-Term 2020 plus-Project Effects.*** Operations at Ravenswood Avenue/Laurel Street (#11) could be improved by modifying the intersection geometry to provide additional capacity. Impacts on this intersection were noted in the Specific Plan's Environmental Impact Report (EIR). Acceptable operations could be achieved at the intersection of Ravenswood Avenue/Laurel Street by reconfiguring the southbound Laurel Street approach to have a left-turn lane and a shared through/right-turn lane. This mitigation measure was not specified in the Specific Plan EIR. Conceptual schematics of the recommended feasible mitigation measures are provided in Appendix 3.1-G. A summary of the intersection analysis with mitigation measures is provided in Table 3.1-13. It may be possible to implement this mitigation measure within the existing right-of-way while maintaining the bicycle lanes, but it would require removal of on-street parking and 10-foot-wide travel lanes. With this mitigation measure, the impact would be reduced to a less-than-significant level. ***TRA-1.2: Implement Intersection Improvements to Address Near-Term 2020 plus-Project Effects.*** Operations at four intersections could be improved by modifying intersection geometry to provide additional capacity. Some of these modifications may require additional rights-of-way to add travel lanes. Conceptual schematics of the recommended feasible mitigation measures are provided in Appendix 3.1-G. A summary of the intersection analysis with mitigation measures is provided in Table 3.1-13. a. Middlefield Road/Glenwood Avenue-Linden Avenue (#3) Impacts on this intersection were noted in the Specific Plan EIR. Acceptable operations could be achieved at Middlefield Road/Glenwood Avenue-Linden Avenue with signalization of the intersection. This mitigation measure would be consistent with the mitigation measure noted in the Specific Plan EIR. No additional mitigation measures beyond those identified in the Specific Plan EIR	SU

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		would be required to achieve acceptable operations at this intersection. This mitigation measure is specified in the Supplemental Transportation Impact Fee. Although traffic volumes at this intersection would not satisfy peak-hour traffic signal warrant criteria, as discussed in the Traffic Signal Warrants section, the impact would be reduced to a less-than-significant level with implementation of this mitigation measure. However, this mitigation measure may require the acquisition of additional rights-of-way to install traffic signal equipment and modify the Glenwood Gate, a physical gate at the east Linden Avenue leg of the intersection that restricts the Linden Avenue approach to a two-way, one-lane road. Additionally, because the measure would require approval from the Town of Atherton, its implementation cannot be guaranteed; therefore, the impact would be significant and unavoidable. The Project is required to contribute a fair share financial contribution toward a traffic signal at this location, based the percentage of project-generated trips compared to the total number of trips passing through the intersection. The funds would be available to the Town of Atherton for a 5-year period. The Project's fair share contribution would be 3.7 percent of the cost of the improvement, as shown in Appendix 3.1-H. b. Oak Grove Avenue/Alma Street (#13) Acceptable operations would be achieved at the intersection of Oak Grove Avenue/Alma Street with implementation of Mitigation Measure TRA-1.2.c at Oak Grove Avenue/Derry Lane (Garwood Way)-Merrill Street. The mitigation measure includes a southbound peak-hour left-turn restriction at Oak Grove Avenue/Derry Lane (Garwood Way)-Merrill Street, which would reduce the amount of traffic entering eastbound Oak Grove Avenue at Alma Street. However, the City's experience has found that turn restrictions are ineffective because turn restrictions are ignored by drivers. Consequently, they would not mitigate the impact. Installation of a traffic signal at this intersection was not considered because traffic volumes at this intersection would not satisfy peak-hour signal warrant criteria, as discussed in the Traffic Signal Warrants section. Additionally, a traffic	

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		signal at this intersection is infeasible because of the immediate proximity of the Caltrain railroad tracks to the east and the potential for queuing to extend onto the tracks. Grade separation for the railroad tracks and Oak Grove Avenue would modify the Alma Street intersection and may mitigate this impact. However, grade separation is a large-scale, long-term project. It is not expected that it would be funded by one development. In addition, a design is still to be completed. Therefore, this impact would remain significant and unavoidable. A partial mitigation measure to reduce the impact on this intersection would be to construct Class II bicycle lanes on Oak Grove Avenue between El Camino Real and the east city limits. This improvement was identified in the City's Specific Plan. It could require parking spaces to be removed along Oak Grove Avenue. The Project is required to implement the Class II bicycle lanes on Oak Grove Avenue as a partial mitigation measure. c. Oak Grove Avenue/Derry Lane (Garwood Way)-Merrill Street (#15) Although traffic volumes at this intersection would satisfy peak-hour signal warrant criteria, as discussed in the Traffic Signal Warrants section, a traffic signal is not recommended. It is infeasible because of the immediate proximity of the Caltrain railroad tracks to the east and the potential for queuing to extend onto the tracks. Acceptable operations could be achieved at the intersection of Oak Grove Avenue/Derry Lane (Garwood Way)-Merrill Street with implementation of southbound left-turn restrictions during the morning peak period (7:00–9:00 a.m.) and the afternoon peak period (4:00–6:00 p.m.). The City's experience has found that turn restrictions are ineffective because turn restrictions are ignored by drivers, and they would not mitigate the impact. As part of the Garwood Way extension, the Project would provide a two-lane approach at the Oak Grove Avenue intersection. While this widening would reduce the delay expected at this intersection, the impact would remain significant. As discussed in TRA-1.2b, although it may mitigate this impact, grade separation is considered a large-scale, long-term project. It is not	

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		expected that it would be funded by one development. Therefore, the impact would remain significant and unavoidable. A partial mitigation measure to reduce the impact on this intersection would be to construct Class II bicycle lanes on Oak Grove Avenue between El Camino Real and the east city limits. This improvement was identified in the City's Specific Plan. It could require parking spaces to be removed along Oak Grove Avenue. As noted in TRA 1.2b, the Project is required to implement the Class II bicycle lanes on Oak Grove Avenue as a partial mitigation measure. d. El Camino Real/Ravenswood Avenue-Menlo Avenue (#20) Impacts on this intersection were noted in the Specific Plan EIR. Acceptable operations could be achieved at El Camino Real/Ravenswood Avenue-Menlo Avenue with the addition of a third northbound through travel lane along El Camino Real; this mitigation measure is consistent with the mitigation measure noted in the Specific Plan EIR. This improvement is specified in the City's Transportation Impact Fee (TIF) program. The measure is consistent with one of the alternatives that is currently being considered in the El Camino Real Corridor Study and would not preclude implementation of potential alternatives. However, widening would likely require removal of some of the trees located at the southeast corner and affect access to the 1000 El Camino Real property. This measure would have potentially significant secondary effects on bicyclists because they would be required to cross additional lanes of traffic to make a left turn or proceed through the intersection. This improvement would also affect pedestrians by increasing the crossing distance, exacerbating the multiple-threat scenario (where vehicles block sight lines between drivers in adjacent lanes and crossing pedestrians), and increasing their exposure time to vehicles. Because the intersection is controlled by Caltrans, this measure would require coordination with and approval by Caltrans, which cannot be guaranteed. Furthermore, because of the mitigation measures' secondary and access impacts, it is considered infeasible. There are no other feasible mitigation measures that would fully mitigate the	

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		impact on the intersection of El Camino Real/Ravenswood Avenue-Menlo Avenue. ***TRA-1.3: Implement Transportation Demand Management Program to Partially Reduce Near-Term 2020 plus Project Effects.*** Several intersections would experience a significant and unavoidable impact under Near-Term 2020 plus-Project conditions. To partially alleviate the effects of the Project, the applicant would be required to implement a TDM program, as required by the Specific Plan. A partial mitigation measure, to reduce the impacts of the Project at several intersections under the Near-Term 2020 plus-Project conditions, would be to implement a TDM program, as required by the Specific Plan. The proposed TDM program could reduce peak-hour and daily trip generation. However, although the TDM program could reduce the number of vehicular trips by 2 to 30 percent and reduce the intersection impacts, the effectiveness of the TDM program cannot be reliably predicted. Furthermore, the maximum 30 percent would not be enough to reduce impacts to a less-than-significant level. Therefore, the impacts would remain significant and unavoidable. a. Oak Grove Avenue between El Camino Real and Laurel Street (#10) A partial mitigation measure to reduce the impact on this roadway segment would be to construct Class II bicycle lanes on Oak Grove Avenue between El Camino Real and Laurel Street. This improvement was identified in the City's Specific Plan. It could require parking spaces to be removed along Oak Grove Avenue. b. Oak Grove Avenue between Laurel Street and Middlefield Road (#11) A partial mitigation measure to reduce the impact on this roadway segment would be to construct Class II bicycle lanes on Oak Grove Avenue between Laurel Street and the east city limits. This improvement was identified in the City's Specific Plan. It could require parking spaces to be removed along Oak Grove Avenue. c. Garwood Way between Glenwood Avenue and Oak Grove Avenue (#13) A partial mitigation measure to reduce the impact on this roadway	

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		segment would be to sign a Class III bicycle route on Garwood Way between Glenwood Avenue and Oak Grove Avenue. This improvement was identified in the City's Specific Plan. d. Transportation Demand Management Impacts on roadway segments would be partially reduced by implementing the trip reduction measures proposed in the Project's TDM program, as required by the Specific Plan. The TDM program could reduce the number of vehicular trips by 2 to 30 percent, but even at the maximum of 30 percent, impacts on the four segments, although reduced, would still remain significant and unavoidable.	
Impact TRA-2: Impacts on Roadway Segments under Near-Term 2020 plus-Project Conditions. Increases in traffic associated with the Project under near-term 2020 plus-Project conditions would result in increased ADT volumes on area roadway segments.	S	***TRA-2.1: Implement Roadway Segment Improvements to Address Near-Term 2020 plus-Project Effects.*** The mitigation measures below are recommended to reduce potentially significant impacts on study area roadway segments. a. Oak Grove Avenue between El Camino Real and Laurel Street (#10) A partial mitigation measure to reduce the impact on this roadway segment would be to construct Class II bicycle lanes on Oak Grove Avenue between El Camino Real and Laurel Street. This improvement was identified in the City's Specific Plan. It could require parking spaces to be removed along Oak Grove Avenue. b. Oak Grove Avenue between Laurel Street and Middlefield Road (#11) A partial mitigation measure to reduce the impact on this roadway segment would be to construct Class II bicycle lanes on Oak Grove Avenue between Laurel Street and the east city limits. This improvement was identified in the City's Specific Plan. It could require parking spaces to be removed along Oak Grove Avenue. c. Garwood Way between Glenwood Avenue and Oak Grove Avenue (#13) A partial mitigation measure to reduce the impact on this roadway segment would be to sign a Class III bicycle route on Garwood Way between Glenwood Avenue and Oak Grove Avenue. This improvement was identified in the City's Specific Plan.	SU

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		d. Transportation Demand Management Impacts on roadway segments would be partially reduced by implementing the trip reduction measures proposed in the Project's TDM program, as required by the Specific Plan. The TDM program could reduce the number of vehicular trips by 2 to 30 percent, but even at the maximum of 30 percent, impacts on the four segments, although reduced, would still remain significant and unavoidable.	
Impact TRA-3: Impacts on Routes of Regional Significance under Near-Term 2020 plus-Project Conditions. Increases in traffic associated with the Project under near-term 2020 plus-Project conditions would result in significant impacts on several Routes of Regional Significance.	S	***TRA-3.1: Implement Routes of Regional Significance Improvements to Address Near-Term 2020 plus-Project Effects.*** The mitigation measures below were considered to reduce potentially significant impacts on Regional Routes of Significance. Routes of Regional Significance could be widened to add travel lanes; however, the routes are under the jurisdiction of Caltrans. Although adding a travel lane would increase capacity, constructing additional lanes is not a feasible mitigation measure because of right-of-way constraints. Therefore, impacts at the following locations would remain significant and unavoidable: • Willow Road – US 101 to Bayfront Expressway (northbound) • Willow Road – Bayfront Expressway to US 101 (southbound) • Bayfront Expressway – University Avenue to Willow Road (westbound) • Bayfront Expressway – Willow Road to University Avenue (eastbound) Partial mitigation measures are identified to reduce impacts of the Project on Routes of Regional Significance under near-term 2020 plus-Project conditions. The Project includes a TDM program that could reduce its peak-hour and daily trip totals. Impacts on Routes of Regional Significance would be partially reduced by implementing the trip reduction measures proposed in the Project's TDM program, as required by the Specific Plan. The TDM program could reduce the number of vehicular trips by 2 to 30 percent, but even at the maximum of 30 percent, impacts on three of the four segments, although reduced, would still remain significant. With a full 30 percent	SU

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		trip reduction, the TDM program would reduce the impact on northbound Willow Road between US 101 and Bayfront Expressway to a less-than-significant level. However, because the reduction cannot be quantified and the effectiveness of the TDM program is uncertain, impacts to all four of the roadway segments would remain significant and unavoidable, as described below.	
Impact C-TRA-4: Impacts on Intersections under Cumulative 2040 plus-Project Conditions. Increases in traffic associated with the Project under cumulative 2040 plus-Project conditions would result in increased peak-hour delays at 13 intersections. Intersection impacts at nine of the intersections would be significant and unavoidable because improvements would require obtaining additional rights-of-way, would violate existing City/town policies, or would be outside the City's jurisdiction.	S	***C-TRA-4.1: Implement Intersection Improvements to Mitigate Cumulative 2040 plus-Project Effects.*** Operations at several intersections could be improved by modifying intersection geometry to provide additional capacity. Some of these modifications may be made by restriping the existing roadway. Conceptual schematics of the recommended feasible mitigation measures are provided in Appendix 3.1-G. A summary of the intersection analysis with mitigation measures is provided in Table 3.1-21. a. Oak Grove Avenue/University Drive (#25) Acceptable operations could be achieved at the intersection of Oak Grove Avenue/University Drive by reconfiguring the westbound Oak Grove approach to have one exclusive left-turn lane and one exclusive right-turn lane. It may be possible to implement this mitigation measure within the existing right-of-way, but it would require removing on-street parking. This mitigation measure would not affect planned bike lanes along Oak Grove Avenue. However, removal of several parking spaces on the south side of Oak Grove Avenue would be required to incorporate both this mitigation measure and planned bike lanes at the Oak Grove Avenue approach to this intersection. With this mitigation measure, the impact would be reduced to a less-than-significant level. The Project would be required to contribute a fair share toward lane reconfigurations at this location. The Project's fair share would be 16.3 percent of the total cost of improvements, as determined in Appendix 3.1-H. b. Santa Cruz Avenue/University Drive (North) (#26) Impacts on this intersection were noted in the Specific Plan EIR. Acceptable operations would be achieved at Santa Cruz Avenue/University Drive (North) with signalization of the	SU

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		intersection. This mitigation measure is consistent with the mitigation measure noted in the Specific Plan EIR. No additional mitigation measures beyond those identified in the Specific Plan EIR would be required to achieve acceptable operations at this intersection. This mitigation measure is also specified in the Supplemental Transportation Impact Fee. It is noted that traffic volumes at this intersection would satisfy peak-hour traffic signal warrant criteria, as discussed in the Traffic Signal Warrants section. Because of the proximity of the nearby traffic signal at Santa Cruz Avenue/University Drive (South), the two signals should be interconnected, and coordinated timing should be implemented. It may be possible to implement this mitigation measure within the existing right-of-way. The design locations for signal equipment, such as poles and controller cabinets, cannot be determined until the intersection has been potholed, which would typically occur during the preliminary engineering phase of the Project. However, the City's recent traffic signal installation and modification projects did not require additional rights-of-way, were built within the public right-of-way, and were not restricted by underground utilities. Therefore, it may reasonably be concluded that the experience would be similar at this location. With this mitigation measure, the impact would be reduced to a less-than-significant level. The Project is required to contribute a fair share toward a traffic signal at this location. The Project's fair share would be 32.6 percent of the total cost of improvements, as determined in Appendix 3.1-H. ***C-TRA-4.2: Implement Intersection Improvements to Reduce Cumulative 2040 plus-Project Effects.*** Operations at several intersections could be improved by modifying intersection geometry to provide additional capacity. Some of these modifications may require additional rights-of-way to add travel lanes. However, impacts would remain significant and unavoidable because the improvements would require obtaining additional rights-of-way, and some intersections are not under the City's jurisdiction. Conceptual schematics of the recommended feasible mitigation measures are provided in Appendix 3.1-G. A summary of the intersection analysis	

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		with mitigation measures is provided in Table 3.1-21. a. Middlefield Road/Encinal Avenue (#2) Impacts on this intersection were noted in the Specific Plan EIR. Acceptable operations could be achieved at the intersection of Middlefield Road/Encinal Avenue with an additional right-turn lane on the southbound Middlefield Road and eastbound Encinal Avenue approaches. The additional right-turn lane on the eastbound Encinal Avenue approach is consistent with the mitigation measure noted in the Specific Plan EIR. However, the additional right-turn lane on southbound Middlefield Road is beyond what was identified in the Specific Plan EIR as necessary to maintain acceptable operations. Although the impact would be reduced to a less-than-significant level with implementation of this intersection improvement, acquisition of additional rights-of-way would be required. Furthermore, because construction of the improvement would require approval from the Town of Atherton, its implementation cannot be guaranteed; therefore, the impact remains significant and unavoidable. The Project is required to pay the Supplemental Transportation Impact Fee and contribute a fair share toward the additional right-turn lanes on the southbound Middlefield Road and approach at this location which was not identified in the Specific Plan EIR mitigation measure. The funds would be available to the Town of Atherton for a 5-year period. The Project's fair share contribution would be 1.6 percent of the cost of the improvement, as shown in Appendix 3.1-H. b. Middlefield Road/Glenwood Avenue-Linden Avenue (#3) It is noted that, for this scenario, traffic volumes at this intersection satisfy peak-hour traffic signal warrant criteria, as discussed in the Traffic Signal Warrants section. The peak-hour warrant would not be satisfied under near-term 2020 plus-Project conditions (see TRA-1.1.a, which is paraphrased below for reference). Impacts on this intersection were noted in the Specific Plan EIR. Acceptable operations could be achieved at the intersection with signalization. This mitigation measure is consistent with the mitigation measure noted in the Specific Plan EIR. No additional	

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		mitigation measures beyond those identified in the Specific Plan EIR are required to achieve acceptable operations at this intersection. This mitigation measure is also specified in the Supplemental Transportation Impact Fee. Although signalization would reduce the impact to a less-than-significant level, this mitigation measure may require the acquisition of additional rights-of-way to install traffic signal equipment and modify the Glenwood Gate. Additionally, because the measure would require approval from the Town of Atherton, its implementation cannot be guaranteed; therefore, the impact would be significant and unavoidable. The Project is required to contribute a fair share toward a traffic signal at this location. The funds would be available to the Town of Atherton for a 5-year period. The Project's fair share contribution would be 3.7 percent of the cost of the improvement, as noted in TRA-1.2.a and as shown in Appendix 3.1-H. c. Middlefield Road/Ravenswood Avenue (#5) Impacts on this intersection were noted in the Specific Plan EIR. Acceptable operations could be achieved at Middlefield Road/Ravenswood Avenue with the addition of a second northbound left-turn lane and a corresponding receiving lane on the west leg. This measure would require coordination with the Town of Atherton. Although this mitigation measure differs from the mitigation measures noted in the Specific Plan EIR, this measure is specified in the City's TIF program. The applicant should pay traffic impact fees per the current TIF schedule. This measure has potentially significant secondary effects on bicyclists because it would require them to cross additional lanes of traffic to make a left turn or proceed through the intersection. This improvement would also affect pedestrians by increasing the crossing distance, exacerbating the multiple-threat scenario (where vehicles block sight lines between drivers in adjacent lanes and crossing pedestrians), and increasing their exposure time to vehicles. This improvement would therefore be required to include enhancements to bicycle and pedestrian infrastructure. These enhancements would include adding a "jughandle" left turn for bikes on the east side of the	

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		intersection, adding a bicycle signal for crossing Middlefield Road, and making modifications to signal timing to provide adequate time for crossings. The modifications would also include warning signs and markings to comply with the CA-MUTCD. The Project is required to contribute a fair share toward enhancements to bicycle and pedestrian infrastructure noted above, which are not included in the City's TIF program. The Project's fair share contribution would be 12 percent of the cost of the improvement, as shown in Appendix 3.1-H. The impact would be reduced to a less-than-significant level with this measure. However, this measure would require coordination with and approval by the Town of Atherton, which cannot be guaranteed. Therefore, this intersection would experience a significant and unavoidable impact. d. Middlefield Road/Willow Road (#7) Impacts on this intersection were noted in the Specific Plan EIR. Acceptable operations could be achieved at Middlefield Road/Willow Road with the following improvements: • Widening the eastbound Willow Road approach to provide an additional through lane. • Widening the westbound Willow Road approach to provide an additional left-turn lane and re-striping the existing shared through/left-turn lane to a through-only lane. • Widening the southbound Middlefield Road approach to include an exclusive through lane and re-striping the existing shared through/left-turn lane to a through-only lane. This mitigation measure is consistent with the mitigation measure noted in the Specific Plan EIR. Although the improvements to the westbound and eastbound approaches are beyond the scope of the mitigation measures identified in the Specific Plan, these improvements are specified in the City's TIF program. The applicant should pay traffic impact fees per the current TIF schedule. This measure would have potentially significant secondary effects on bicyclists because it would require them to cross additional lanes of traffic to make a left turn or proceed through the intersection. This	

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		improvement would also affect pedestrians by increasing the crossing distance, exacerbating the multiple-threat scenario (where vehicles block sight lines between drivers in adjacent lanes and crossing pedestrians), and increasing their exposure time to vehicles. This improvement would therefore be required to include enhancements to bicycle and pedestrian infrastructure. These enhancements would include modifications to signal timing to provide adequate time for crossings as well as the installation of warning signs and markings to comply with the CA-MUTCD. e. Laurel Street/Glenwood Avenue (#9) Acceptable operations would be achieved at Laurel Street/Glenwood Avenue by signalizing the intersection. It is noted that traffic volumes at this intersection would satisfy peak-hour traffic signal warrant criteria, as discussed in the Traffic Signal Warrants section. The Project is required to provide a fair-share contribution toward a traffic signal at this location. The Project's fair share contribution would be 1.4 percent of the cost of the improvement, as shown in Appendix 3.1-H. Because this measure would require coordination with and approval by Town of Atherton, its implementation cannot be guaranteed. No other mitigation measure was identified that would fully mitigate the impact. Therefore, this impact would be significant and unavoidable. f. Ravenswood Avenue/Laurel Street (#11) Impacts on this intersection were noted in the Specific Plan EIR. Improvements noted in TRA-1.1, which include reconfiguring the southbound Laurel Street approach to have a left-turn lane and a shared through/right-turn lane, would only partially mitigate the impact at Ravenswood Avenue/Laurel Street. No feasible mitigations would fully mitigate the impact. Therefore, this impact would be significant and unavoidable. g. Oak Grove Avenue/Alma Street (#13) (See TRA-1.2.b, which is paraphrased below for reference). It is noted that, for the cumulative 2040 plus-Project scenario, traffic volumes at this intersection would satisfy peak-hour traffic signal	

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		warrant criteria, as discussed in the Traffic Signal Warrants section. However, the peak-hour warrant would not be satisfied at this intersection under near-term 2020 plus-Project conditions Although traffic volumes at this intersection would satisfy peak-hour signal warrant criteria, as discussed in the Traffic Signal Warrants section, a traffic signal is not recommended because it is infeasible given the immediate proximity of the Caltrain railroad tracks to the west and potential for queuing to extend onto the tracks. Acceptable operations could be achieved at the intersection of Oak Grove Avenue/Alma Street with the implementation of peak-hour left-turn restrictions on northbound Alma Street from 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m. (as is currently being done on a trial basis along Ravenswood Avenue with use of a temporary median). However, as noted in TRA-1.2b, the City's experience has found that turn restrictions are ineffective because turn restrictions are ignored by drivers. Consequently, they would not mitigate the impact. Grade separation for the railroad tracks and Oak Grove Avenue would modify the Alma Street intersection and may mitigate this impact. However, grade separation is a large-scale, long-term project. It is not expected to be funded by one development. In addition, a design is still to be completed. No other feasible mitigation measures were identified that would fully mitigate the impact. Therefore, this impact would remain significant and unavoidable. A partial mitigation measure to reduce the impact on this intersection would be to construct Class II bicycle lanes on Oak Grove Avenue between El Camino Real and the east city limits. This improvement was identified in the City's Specific Plan. It could require parking spaces to be removed along Oak Grove Avenue. h. Oak Grove Avenue/Garwood Way-Merrill Street (#15) Although traffic volumes at this intersection would satisfy peak-hour signal warrant criteria, as discussed in the Traffic Signal Warrants section, a traffic signal is not recommended because it is infeasible given the immediate proximity of Caltrain railroad tracks 90 feet to the east and potential for queuing to extend onto the tracks.	

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		Acceptable operations could be achieved at the intersection of Oak Grove Avenue/Garwood Way-Merrill Street with implementation of southbound left-turn restrictions on Garwood Way at Oak Grove Avenue, as noted in Mitigation Measure TRA-1-1.c. However, the City has found turn restrictions to be ineffective because turn restrictions are ignored by drivers. Additionally, the mitigation measure is not recommended under cumulative 2040 conditions because the increase in vehicular traffic that would be turning right at southbound Garwood Way would result in additional traffic at nearby intersections on El Camino Real. These intersections are expected to operate unacceptably under cumulative 2040 plus Project conditions. As discussed in TRA-1.2c, the Garwood Way extension would have a two-lane approach at the Oak Grove Avenue intersection. While this widening would reduce the delays at this intersection, the impact would not be reduced to less than significant. As discussed in TRA-1.2c, although it may mitigate this impact, grade separation is a large-scale, long-term project. It is not expected that it would be funded by one development. No other feasible mitigation measures were identified that would fully mitigate the impact. Therefore, this impact would be significant and unavoidable. A partial mitigation measure to reduce the impact on this intersection would be to construct Class II bicycle lanes on Oak Grove Avenue between El Camino Real and the east city limits. This improvement was identified in the City's Specific Plan. It could require parking spaces to be removed along Oak Grove Avenue. i. El Camino Real/Glenwood Avenue-Valparaiso Avenue (#17) Impacts to this intersection were noted in the Specific Plan EIR. Acceptable operations could be achieved at El Camino Real/Glenwood Avenue-Valparaiso Avenue with the following improvements: • Widening the westbound Glenwood Avenue approach to provide an exclusive right-turn lane, • Changing the northbound and southbound right-turn lanes to shared through/right-turn lanes, and • Widening El Camino Real to provide additional receiving lanes in	

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		both the northbound and southbound directions. This improvement would conflict with the Specific Plan goals to provide enhanced pedestrian crossing and sidewalks along El Camino Real by increasing the crossing distance, exacerbating the multiple threat scenario (where vehicles block sight lines between drivers in adjacent lanes and crossing pedestrians), increasing exposure time to vehicle traffic, and placing pedestrians closer to moving vehicle traffic. These improvements would have secondary effects on bicyclists because they would be required to cross additional lanes of traffic to make a left-turn or proceed through the intersection. The improvements would also preclude a future bicycle lane on El Camino Real. Improvements that would partially mitigate the impact at El Camino Real/Glenwood Avenue-Valparaiso Avenue include widening the westbound Glenwood Avenue approach to provide an exclusive right-turn lane. This improvement is identified in the City's TIF program and payment of the TIF would be used for construction. Because the intersection is controlled by Caltrans, this measure would require coordination with and approval by Caltrans, which cannot be guaranteed. Therefore, this intersection would experience a significant and unavoidable impact. j. El Camino Real/Oak Grove Avenue (#18) Acceptable operations could be achieved at the intersection of El Camino Real/Oak Grove Avenue by reconfiguring the northbound right-turn lane into a shared through/right-turn lane and adding a corresponding receiving lane. Although the impact would be reduced to a less than significant level with the implementation of this improvement, this measure would have secondary impacts to bicyclists by increasing the crossing distance and precluding a future bicycle lane on El Camino Real. In addition, this measure would conflict with the Specific Plan goals to provide enhanced pedestrian crossings and sidewalks along El Camino Real. Furthermore, the measure would require coordination with and approval from Caltrans, which cannot be guaranteed. No other feasible mitigation measures were identified that would fully mitigate the impact. Therefore, the	

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		impact would be significant and unavoidable. k. El Camino Real/Ravenswood Avenue-Menlo Avenue (#17) Impacts on this intersection were noted in the Specific Plan EIR. Acceptable operations could be achieved at El Camino Real/Ravenswood Avenue-Menlo Avenue with the following improvements: • Widening the eastbound Menlo Avenue approach to provide an exclusive left-turn lane, • Widening the northbound El Camino Real approach to provide an additional through lane, • Widening the northbound El Camino Real approach to provide an additional left-turn lane and widening Menlo Avenue to provide an additional receiving lane, • Widening the southbound El Camino Real approach to provide an additional left-turn lane, and • Re-striping the existing southbound El Camino Real right-turn lane to become a through/right-turn lane. Although the additional northbound left-turn lane and corresponding receiving lane is not identified as part of the mitigation measure noted in the Specific Plan EIR, the improvement was identified in the City's TIF program as required in order to achieve acceptable operation, but is not feasible due to right-of-way constraints on northbound El Camino Real and eastbound Menlo Avenue. All other improvements listed above are consistent with the mitigation measure noted in the Specific Plan EIR and specified in the City's TIF program. The applicant is required to pay fees per the current TIF schedule. These measures would have potentially significant secondary effects on bicyclists because they would be required to cross additional lanes of traffic to make a left turn or proceed through the intersection and also preclude a future bicycle lane on El Camino Real. This improvement conflicts with the Specific Plan goals to provide enhanced crossings and sidewalks along El Camino Real by increasing the crossing distance, exacerbating the multiple-threat scenario	

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		(where vehicles block sight lines between drivers in adjacent lanes and crossing pedestrians), increasing their exposure time to vehicles, and placing pedestrians closer to moving vehicle traffic. In addition, significantly widening the northbound El Camino Real approach would likely require removal of the trees located at the southeast corner of the intersection and affect access to the 1000 El Camino Real property. Because the intersection is controlled by Caltrans, this measure would require coordination with and approval by Caltrans, which cannot be guaranteed. Furthermore, because of the mitigation measures' secondary impacts and right-of-way acquisition needs, it is considered infeasible. There are no other feasible mitigation measures that would fully mitigate the impact on the intersection of El Camino Real/Ravenswood Avenue-Menlo Avenue, and this impact remains significant and unavoidable. ***C-TRA-4.3: Implement Transportation Demand Management Program to Partially Reduce Cumulative 2040 plus Project Effects.*** A partial mitigation measure, to reduce the impacts of the Project at several intersections under the Cumulative 2040 plus-Project conditions, would be to implement a TDM program, as required by the Specific Plan. The proposed TDM program could reduce peak-hour and daily trip generation. However, although the TDM program could reduce the number of vehicular trips by 2 to 30 percent and reduce the intersection impacts, the effectiveness of the TDM program cannot be reliably predicted. Furthermore, the maximum 30 percent would not be enough to reduce impacts to a less-than-significant level. Therefore, the impacts would remain significant and unavoidable.	
Impact C-TRA-5: Impacts on Roadway Segments under Cumulative 2040 plus-Project Conditions. Increases in traffic associated with the Project under the cumulative 2040 plus-Project conditions would result in increased daily traffic volumes on area roadway segments.	S	***C-TRA-5.1: Implement Roadway Segment Improvements to Address Cumulative 2040 plus-Project Effects.*** The mitigation measures below are recommended to reduce potentially significant impacts on study area roadway segments. a. Oak Grove Avenue between El Camino Real and Laurel Street (#10) (See TRA-2.1.a, which is paraphrased below for reference). A partial mitigation measure to reduce the impact on this roadway	SU

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		segment would be to construct Class II bicycle lanes on Oak Grove Avenue between El Camino Real and Laurel Street. This improvement was identified in the City's Specific Plan. However, it could require on-street parking spaces to be removed along Oak Grove Avenue b. Oak Grove Avenue between Laurel Street and Middlefield Road (#11) (See TRA-2.1.b, which is paraphrased below for reference) A partial mitigation measure to reduce the impact on this roadway segment would be to construct Class II bicycle lanes on Oak Grove Avenue between Laurel Street and the east city limits. This improvement was identified in the City's Specific Plan. However, it could require on-street parking spaces to be removed along Oak Grove Avenue. c. Garwood Way between Glenwood Avenue and Oak Grove Avenue (#13) (See TRA-2.1.c, which is paraphrased below for reference). A partial mitigation measure to reduce the impact on this roadway segment would be to sign a Class III bicycle route on Garwood Way between Glenwood Avenue and Oak Grove Avenue. This improvement was identified in the City's Specific Plan d. Transportation Demand Management Implementation of the trip reduction measures proposed in the Project's TDM program would partially reduce impacts on the roadway segments. The TDM program could reduce the number of vehicular trips by 2 to 30 percent. At the maximum of 30 percent, the impacts on the four local roadway segments, although reduced, would still remain significant.	
Impact C-TRA-6: Impacts on Routes of Regional Significance under Cumulative 2040 plus-Project Conditions. Increases in traffic associated with the Project under cumulative 2040 plus-Project conditions would result in significant impacts on several Routes of Regional Significance.	S	***C-TRA-6.1: Implement Routes of Regional Significance Improvements to Address Cumulative 2040 plus-Project Effects.*** The mitigation measures below were considered to reduce potentially significant impacts on Regional Routes of Significance. Routes of Regional Significance could be widened to add travel lanes; however, the routes are under the jurisdiction of Caltrans. Adding a	SU

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		travel lane would increase capacity, but such projects are considered infeasible due to right-of-way constraints. Therefore, the impacts on the following Routes of Regional Significance would remain significant and unavoidable: • Willow Road – US 101 to Bayfront Expressway (northbound) • Willow Road – Bayfront Expressway to US 101 (southbound) • Bayfront Expressway – University Avenue to Willow Road (westbound) • Bayfront Expressway – Willow Road to University Avenue (eastbound) Partial mitigation measures have been identified to reduce the impacts of the Project on Routes of Regional Significance under cumulative 2040 plus-Project conditions. The Project includes a TDM program that could reduce the number of trips generated during the peak periods and on a daily basis. To partially reduce impacts on Routes of Regional Significance, implementation of the trip reduction measures proposed in the Project's TDM program is recommended. The TDM program could reduce the number of vehicular trips by 2 to 30 percent. At the maximum of 30 percent, impacts on three of the four segments would be reduced but still significant. The TDM program at the maximum range of effectiveness could reduce the impact on northbound Willow Road from US 101 to Bayfront Expressway to a less-than-significant level However, because the reduction cannot be quantified, and it is not anticipated that this would fully mitigate impacts on these segments, the impacts are considered significant and unavoidable.	
Impact TRA-7: Impacts on Bicycle and Pedestrian Facilities. Increased bicycle and pedestrian traffic in the vicinity of the Project would result in added demand for additional bicycle and pedestrian facilities.	S	***TRA-7.1: Implement Improvements to Address Impacts on Bicycle Facilities.*** Gaps in bicycle infrastructure should be closed on Oak Grove Avenue and Garwood Way by constructing bike lanes along Oak Grove Avenue between University Drive and the east city limits as well as a bicycle route along Garwood Way between Glenwood Avenue and Oak Grove Avenue. This mitigation measure is consistent with Mitigation Measures TRA-2.1.a, TRA-2.1.b, and TRA-2.1.c.	LTS

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
Impact TRA-8: Consistency with Existing Bicycle and Pedestrian Policies. The Project would be consistent with established policies pertaining to bicycle and pedestrian facilities.	LTS	None Required.	N/A
Impact TRA-9: Impacts on Transit Facilities. The Project would result in added demand to transit facilities; however, it is expected that existing transit services would adequately serve the Project's demand.	LTS	None Required.	N/A
Impact TRA-10: Impacts on Railroad Crossings. The Project would add traffic to a railroad crossing which would result conflicts and safety concerns.	S	TRA-10.1: *Implement railroad crossing improvements to address Near-Term 2020 plus-Project and Cumulative 2040 plus-Project Effects*. The mitigation measures below are recommended to reduce potential significant impacts on the railroad crossings. a. Ravenswood Avenue railroad crossing Partial mitigations to reduce the impact at the Ravenswood Avenue crossing include: • Extension of time-of-day turn restrictions on the northbound and southbound Alma Street approaches to Ravenswood Avenue. • Roadway improvements to improve the visibility of "keep clear" zones when approaching the railroad tracks. The Project shall maintain the "keep clear" visibility zone. It is worth noting that a median along Ravenswood Avenue, which restricts left turns on the northbound and southbound Alma Street approaches to Ravenswood Avenue, is currently installed as a trial project. Upon analysis of the effects of the median, the City shall determine whether the median along Ravenswood Avenue should remain. b. Oak Grove Avenue and Glenwood Avenue railroad crossings. Partial mitigations to reduce the impact at the Oak Grove Avenue and Glenwood Avenue railroad crossings, include maintaining the visibility of the "keep clear" zones, including roadway striping, lighting, and landscape maintenance. The Project shall maintain the "keep clear" visibility zone.	SU

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
3.2 Air Quality			
Impact AQ-1: Exposure of Sensitive Receptors to Adverse Health Risks in Excess of BAAQMD Thresholds Associated with Localized DPM Concentrations during Construction. The Project would expose sensitive receptors to adverse health risks associated with localized DPM concentrations during construction.	S	***AQ-1.1: Utilize Clean Diesel-Powered Off-Road Equipment during Construction to Control Off-Road Construction-Related PM2.5 and PM10 Emissions.*** The Project Sponsor shall ensure that all off-road diesel-powered equipment used during construction between 2016 and 2018 shall be equipped with EPA Tier 3 or cleaner engines, except for specialized construction equipment for which an EPA Tier 3 engine is not available. This requirement shall ensure construction equipment remains cleaner than the fleet-wide average. The analysis assumes emission reductions compared to a fleet-wide average Tier 2 engine between 2016 and 2018. The Project Sponsor shall also ensure that all off-road, diesel-powered equipment used during construction shall be equipped with a Level 3 Diesel Particulate Filter (DPF). ***AQ-1.2: Use Modern Fleet for On-Road Material Delivery and Haul Trucks during Construction.*** The Project Sponsor shall ensure that all on-road heavy-duty diesel trucks with a gross vehicle weight rating of 19,500 pounds or greater used at the Project site shall comply with EPA 2007 on-road emission standards for PM10 (0.01 grams per brake horsepower-hour). These PM10 standards were phased in through the 2007 and 2010 model years on a percent of sales basis (50 percent of sales in 2007 to 2009 and 100 percent of sales in 2010). This mitigation measure assumes that all on-road heavy-duty diesel trucks shall be model year 2010 and newer, with all trucks compliant with EPA 2007 on-road emission standards. While project impacts are associated with PM2.5 concentrations and the EPA 2007 on-road emission standards address PM10 emission, the newer engine technologies that are required to meet the PM10 emission standards shall also reduce PM2.5 concentrations.	LTS
Impact AQ-2: Exposure of Sensitive Receptors to Localized PM2.5 Concentrations during Construction. The Project would not expose sensitive receptors to localized PM2.5 concentrations in excess of BAAQMD thresholds during construction.	LTS	None Required.	N/A

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
Impact C-AQ-1: Exposure of Sensitive Receptors to Cumulative Health Risks during Construction. Cumulative development in the Project vicinity would not expose sensitive receptors to substantial health risks during construction	S	Mitigation Measures AQ-1.1, AQ-2.1, and AQ-2.2.	LTS
3.3 Noise			
Impact NOI-1: Exposure of Offsite Noise Sensitive Land Uses to Increased Traffic Noise. The Project would not result in a substantial permanent increase in ambient noise levels at existing noise sensitive uses in the project vicinity above levels existing without the project.	LTS	None Required.	N/A
3.4 Hazardous Materials			
Impact HAZ-1: Routine Hazardous Materials Use. The Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	S	***HAZ-1.1: Prepare and Implement a Spill Prevention, Control, and Countermeasure Program for Construction Activities.*** The contractors will develop and implement a Spill Prevention, Control, and Countermeasure Program (SPCCP) to minimize the potential for and effects from spills of hazardous, toxic, or petroleum substances during construction and demolition activities. The SPCCP will be completed before any construction or demolition activities begin. Implementation of this measure will comply with state and federal water quality regulations. The Project Sponsor will review and approve the SPCCP before the onset of construction activities. The Project Sponsor will routinely inspect the construction area to verify that the measures specified in the SPCCP are properly implemented and maintained. The Project Sponsor will notify its contractors immediately if there is a noncompliance issue and will require compliance. The federal reportable spill quantity for petroleum products, as defined in 40 CFR 110, is any oil spill that includes any of the following: • Violates applicable water quality standards, • Causes a film or sheen on or discoloration of the water surface or adjoining shoreline, or	LTS

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		• Causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines. If a spill is reportable, the contractors' superintendents will notify the Project Sponsor, and the Project Sponsor will take action to contact the appropriate safety and cleanup crews and ensure that the SPCCP is followed. A written description of reportable releases must be submitted to the San Francisco Bay Regional Water Quality Control Board. This submittal must contain a description of the spill, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases will be documented on a spill report form. If a reportable spill has occurred and Project activities have adversely affected surface water or groundwater quality, a detailed analysis will be performed by a registered environmental assessor to identify the likely cause of contamination. This analysis will conform to American Society for Testing and Materials (ASTM) standards and will include recommendations for reducing or eliminating the source or mechanisms of contamination. Based on this analysis, the Project Sponsor and its contractors will select and implement measures to control contamination, with a performance standard that groundwater quality must be returned to baseline conditions. These measures will be subject to approval by the Project Sponsor.	
Impact HAZ-2: Accidental Release of Hazardous Materials. The Project could 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.	S	***HAZ-2.1: Hazardous Materials Characterization at 1258 and 1300 El Camino Real and Derry Lane.*** Prior to construction, the following characterization activities shall be conducted by a qualified environmental consultant in areas of the Project site where the likelihood of contaminated media exists. If contaminants are discovered, the consultant shall provide recommendations for the proper treatment and/or removal and disposal of the contaminated media. The following characterization activities are based on the recommendations included in the Phase I ESAs. • Remaining components of the 21 hydraulic lifts located on the	LTS

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		1300 El Camino Real site shall be removed by a qualified contractor, with soil samples collected at the bottom of each hole for laboratory analyses for total petroleum hydrocarbons as hydraulic oil and PCBs. • Soil samples shall be collected at the 1300 El Camino Real site in locations of former automotive painting and detailing operations, sumps, and trenches for laboratory analyses for total extractable and purgeable petroleum hydrocarbons and volatile organic compounds (VOCs). • Groundwater, soil, and soil vapor sampling for VOCs shall be conducted in the eastern portion of the 1300 El Camino Real site to determine the significance and extent of the on-site impact from the off-site PCE release. • Fill soils on the 1300 El Camino Real site shall be sampled for chemicals of potential concern associated with an unknown source of fill. • Soil at the location of a former transformer on the 1300 El Camino Real site shall be sampled for PCBs. • The cause of the depressed asphalt area on the 1258 El Camino Real shall be investigated and remedied. • Construction materials shall be surveyed for ACMs and lead-based paint by a certified consultant on the 1258 El Camino Real site, 1300 El Camino Real site, and Derry Lane site to comply with applicable BAAQMD and Cal/OSHA regulations. If contaminants are discovered during testing, the Project Sponsor will report the contamination to SMCEHD to determine how the contamination is to be addressed and update the HMBP within 30 days of discovering the contamination to reflect the new understanding of hazardous materials at the Project site. ***HAZ-2.2: Implementation of Remedial Action Recommendations included in the Derry Lane RAW.*** Upon approval by the DTSC and prior to construction; site-specific remedial action recommendations contained in the RAW shall be conducted at the Derry Lane site as	

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		required by the Imminent and Substantial Endangerment Determination and Order and Remedial Action Order issued by the DTSC in May 2011. As detailed in the Environmental Setting, remedial actions proposed in the RAW may include; soil excavation and disposal, ISCO injections, well monitoring and implementation of institutional controls. ***HAZ-2.3: Implement Engineering Controls and Best Management Practices during Construction.*** During construction activities conducted on all sites, the contractor shall employ engineering controls and BMPs to minimize human exposure to potential contaminants and potential negative effects from an accidental release to groundwater and soils. Engineering controls and construction BMPs shall include, but not be limited to, the following: • Contractor employees working on-site shall be certified in OSHA's 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training program. • Contractor shall monitor the area around the construction site for fugitive vapor emissions with appropriate field screening instrumentation. • Contractor shall water/mist soil as it is being excavated and loaded onto trucks. • Contractor shall place any stockpiled soil in areas that are shielded from prevailing winds. • Contractor shall cover the bottom of excavated areas with sheeting when work is not being performed. All materials will be handled consistent with the HMBP developed for the Project. ***HAZ-2.4: Develop Construction Activity Dust Control Plan (DCP) and Asbestos Dust Management Plan (ADMP).*** Prior to commencement of site grading on all sites, the Project Sponsor shall retain a qualified professional to prepare a DCP/ADMP. The DCP shall incorporate the applicable BAAQMD standards pertaining to fugitive dust control. The ADMP will be prepared if ACMs are identified onsite	

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Impact Significance without Mitigation	Mitigation Measures	Impact Significance with Mitigation
		and shall be submitted to and approved by BAAQMD prior to the beginning of construction. The Project Sponsor will ensure implementation of all specified dust control measures throughout construction of the Project. The ADMP shall require compliance with specific control measures to the extent deemed necessary by BAAQMD to meet its standard.	
Impact HAZ-3: Proximity to Sensitive Receptors at Schools. The Project would not emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.	LTS	None Required.	N/A
Impact C-HAZ-1: Cumulative Hazardous Materials Use. The Project, in combination with other foreseeable development in the surrounding area, would not have a significant cumulative impact resulting from hazardous materials usage.	LTS	None Required.	N/A
Impact C-HAZ-2: Cumulative Soil and Groundwater Contamination. Development of the Project site and other foreseeable development could expose people or the environment to residual contaminants in soil and/or groundwater if measures are not implemented to control unintentional or inadvertent releases.	LTS	None Required.	N/A
Impact C-HAZ-3: Cumulative Hazardous Materials in Building Components. Development of the Project and other foreseeable development could expose people to asbestos, lead, PCBs, or other hazardous materials in existing buildings that may be demolished, renovated, or rehabilitated if measures are not implemented to control unintentional or inadvertent releases.	LTS	None Required.	N/A
Impact C-HAZ-4: Cumulative Impairment of Emergency Access or Emergency Plan Impacts. Development of the Project and other foreseeable development would not impair implementation of or interfere with an adopted emergency response or evacuation plan.	LTS	None Required.	N/A

Chapter 1
Introduction

1.1 Purpose of This Environmental Impact Report

This Draft Infill Environmental Impact Report (Draft Infill EIR) for the 1300 El Camino Real Greenheart Project (Project) has been prepared by the Project's lead agency, the City of Menlo Park (City), in conformance with the provisions of the California Environmental Quality Act (CEQA) Guidelines, as amended. The lead agency is the public agency that has the principal responsibility for carrying out or approving a project.

This Draft Infill EIR has been prepared consistent with Section 15183.3 of the CEQA Guidelines, which provides guidance streamlining the environmental review process for eligible infill projects (such as the Project) by limiting the topics subject to review at the project level where the effects of infill development have been addressed in a planning-level decision or by uniformly applicable development policies.

This Draft Infill EIR assesses potentially significant impacts that could result from the Project. As defined in the CEQA Guidelines Section 15382, a "significant effect on the environment" is:

> … a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

As stated in the CEQA Guidelines, an EIR is an "informational document" intended to inform public agency decision-makers and the public of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The purpose of this Draft Infill EIR (as described in more detail below) is to provide the City, responsible and trustee agencies, other public agencies, and the public with detailed information about the environmental effects that could result from implementing the Project, to examine and institute methods of mitigating any adverse environmental impacts should the Project be approved, and to consider feasible alternatives to the Project. The City will use the Infill EIR, along with other information in the public record, to determine whether to approve, modify, or deny the Project, and to specify any applicable environmental conditions or mitigation measures as part of the Project approvals.

1.2 Project Overview

Greenheart Land Company (Project Sponsor) is proposing to redevelop 11 Assessor's parcels of land between El Camino Real and the Caltrain right-of-way into a mixed-use development. The Project site includes the former Derry Lane Site (3.5 acres), the former 1300 El Camino Real Site (3.4 acres), and 1258 El Camino Real (0.3 acres), which add up to approximately 7.2 acres in their current state. These parcels generally consist of vacant, previously developed land in the northern area and commercial buildings along Derry Lane and Oak Grove Avenue in the southern area. The Derry Lane Site and the

1300 El Camino Real Site were subject to previous development proposals that would have included development of residential, office, and community-serving[1] uses at the two project sites. Both of these proposals obtained Environmental Impact Report (EIR) certification, although the Derry Lane Site never received overall project approvals, having been subject to a referendum. The 1300 El Camino Real Site's approvals were valid at the point of the Project Sponsor's submittal of the revised application, thus constituting an extension under the City of Menlo Park's (City's) practice.

The Project would demolish the existing structures in the southern portion of the site and construct approximately 420,000 square feet (sf) of mixed uses at the Project site. In total, the Project would include three mixed-use buildings, a surface parking lot, an underground parking garage, onsite linkages, and landscaping. The uses at the Project site would include a range of approximately 188,900 sf to 199,300 sf of non-medical office space in two buildings; approximately 202,100 sf of residential space (up to 202 housing units) in one building; and up to 29,000 sf of community-serving space throughout the proposed office and residential buildings. The Project would provide approximately 1,000 parking spaces within a parking garage and a surface parking lot. After street abandonment and dedication actions under the Project, the total site area would consist of approximately 6.4 acres.

The entire Project site is in the El Camino Real/Downtown Specific Plan (Specific Plan) area and within the El Camino Real Northeast – Residential (ECR NE-R) District. The Project site is zoned SP-ECR/D. The ECR NE-R District is on the east side of El Camino Real between Oak Grove and Glenwood Avenues and is currently characterized by a mix of retail, personal service, office, and residential uses. The ECR NE-R District is located in the El Camino Real Mixed Use – Residential General Plan land use designation, which supports a variety of retail uses, personal services, business and professional offices, and residential uses. The ECR NE-R District provides for higher intensities with a focus on residential development, given its location near the train station area and downtown. The Specific Plan outlines the maximum amount of building intensity permitted in the ECR NE-R District.

The Project would be consistent with the allowed development in the ECR NE-R District with a Public Benefit Bonus.[2] The permitted floor-area ratio (FAR) is 1.10, but with a Public Benefit Bonus the FAR can increase to 1.50. In either scenario, non-medical office is limited to no more than one-half the maximum FAR. In general, maximum heights are permitted to 38 feet. Although 48 feet is permitted with a Public Benefit Bonus, building facades cannot exceed a height of 38 feet. The Project would be constructed at the maximum FAR and height as permitted with a Public Benefit Bonus. Up to 32 dwelling units per acre are allowed at the Project site and up to 50 units per acre are permitted with a Public Benefit Bonus. Therefore, since the Project would develop at an intensity of approximately 31.6 units per acre, a Public Benefit Bonus would not be required for dwelling unit density. All uses proposed under the Project are permitted in the ECR NE-R District.

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[1] Community-serving uses include the following categories of uses as defined in the Specific Plan and permitted in the ECR NE-R zone: banks/other financial institutions, business services, eating/drinking establishments, office/business/professional (limited to a single real estate office of no more than 2,500 square feet), personal improvement services, and retail sales.

[2] The Specific Plan outlines the maximum amount of building intensity permitted in the ECR NE-R District. However, these maximums may be increased with a Public Benefit Bonus, which allows additional development beyond the base intensity and height in exchange for extra public benefits. The Public Benefit Bonus would be expected to increase profits from development in exchange for providing additional benefits to the public. Public Benefit Bonuses require case-by-case discretionary review, and if the Planning Commission and/or City Council ultimately does not find that the proposed benefits are appropriate, a project can be required to be revised to the Base Level development standards.

1.3 CEQA Process

Infill Environmental Checklist

As discussed above, the Project site is within the Specific Plan area. Since the Project's site plan and development parameters are consistent with the development anticipated by the Specific Plan, the programmatic Specific Plan EIR is applicable to this Project. Therefore, an Infill Environmental Checklist for the Project was prepared by the City, in conformance with Section 15183.3 of the CEQA Guidelines and Section 21094.5 of the Public Resources Code (PRC), adopted per Senate Bill (SB) 226 (Appendix 1-1). SB 226 was developed by the California legislature to eliminate repetitive analysis of effects of a project that were previously analyzed in a programmatic EIR for a planning-level decision or that are substantially mitigated by uniformly applied development policies. The checklist was used to limit the scope of the EIR to the effects determined to be significant, identical to the function of an Initial Study as defined in Section 15063 of the CEQA Guidelines.

The Infill Environmental Checklist determined that the Project would have effects that either have not been analyzed in the prior Specific Plan EIR, or are more significant than described in the prior EIR, and that no uniformly applicable development policies would substantially mitigate such effects. Therefore, since these impacts could be significant, this Infill EIR is required to analyze those effects.

Notice of Preparation

The Infill Environmental Checklist (Appendix 1-1) and Notice of Preparation (NOP) (Appendix 1-2) for the Project were released on July 14, 2014, for a 30-day public review period. A public scoping meeting was held on August 4, 2014, before the Planning Commission. The NOP noted that the Project may have a significant effect on the environment and that an EIR would be prepared for the Project.

The NOP was sent to individuals, local interest groups, adjacent property owners, and responsible and trustee state and local agencies having jurisdiction over or interest in environmental resources and/or conditions in the vicinity of the Project site. The purpose of the NOP was to allow various private and public entities to transmit their concerns and comments on the scope and content of the Draft Infill EIR, focusing on specific information related to each individual's or group's interest or agency's statutory responsibility early in the environmental review process.

In response to the NOP, letters were received from the following agencies.

- California Department of Transportation
- San Francisco Public Utilities Commission

In addition, three letters were received from individuals, and members of the public made oral comments at the Planning Commission hearing. Copies of these NOP comment letters and the comments recorded at the Planning Commission hearing are included in Appendix 1-1 of this Draft Infill EIR.

Based on the Infill Environmental Checklist, the following topics do not require further analysis, as described in Chapter 3: Agricultural/Forestry Resources, Air Quality (operational), Biological Resources, Cultural Resources, Geology and Soils, Greenhouse Gas Emissions, Hydrology/Water Quality, Land Use, Mineral Resources, Noise (all but traffic noise), Population and Housing, Public Services, and Utilities. In addition, as described in more detail in Chapter 3, *Environmental Impact Analysis*, because of the

Project's consistency with SB 743 criteria,[3] aesthetics and parking issues are not considered to be impacts under CEQA. Therefore, this EIR analyzes whether the Project would have significant environmental impacts in the following areas:

- Air Quality (construction)
- Noise (traffic noise)
- Hazards and Hazardous Materials
- Transportation and Traffic

Draft Infill EIR

Impact Analysis

This Draft Infill EIR analyzes significant effects that could result from the Project. As explained in Section 15002(g) of the CEQA Guidelines, a significant effect on the environment is defined as a substantial adverse change in the physical conditions that exist in the area affected by a project. Pre-project environmental conditions (the environmental baseline) are considered in determining impact significance. The impact significance thresholds for each environmental resource areas presented in this Draft Infill EIR are based on the CEQA Guidelines Appendix N, *Infill Environmental Checklist Form*. In addition, this Draft Infill EIR uses City-adopted significance criteria for traffic impacts. Where significant impacts are identified, the Draft Infill EIR recommends feasible mitigation measures to reduce, eliminate, or avoid the significant impacts and identifies which significant impacts are unavoidable. Cumulative impacts—two or more individual effects that, when considered together, compound or increase other related environmental impacts—are discussed for each environmental resource area.

As discussed above, this document is an Infill EIR. Per Section 15183(d)(2)(C) of the CEQA Guidelines; if the infill project would result in new specific effects or more significant effects, and uniformly applicable development policies or standards would not substantially mitigate such effects, those effects are subject to CEQA. With respect to those effects that are subject to CEQA, the lead agency shall prepare an Infill EIR if the written checklist shows that the effects of the infill project would be potentially significant. As concluded in the Infill Environmental Checklist for the Project, the Project would have effects that either have not been analyzed in the prior Specific Plan EIR, or are more significant than described in the prior EIR. Further, no uniformly applicable development policies would substantially mitigate such effects. Therefore, since these impacts could be significant, this Infill EIR is required to analyze the following topics: construction air quality, transportation and traffic, traffic noise, and hazardous materials. Per Section 15183.3(e), the analysis of alternatives in an Infill EIR need not address alternative locations, densities, or building intensities. Regardless, this document also discusses alternatives to the Project in Chapter 5, *Alternatives*. In addition, an infill EIR need not analyze growth-inducing impacts.

Public Review

This Draft Infill EIR is considered a draft under CEQA because it must be reviewed and commented upon by public agencies, organizations, and individuals before being finalized. This document is being distributed for a minimum of a 45-day public review and comment period. Readers are invited to submit

[3] SB 743 provides that "aesthetics and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." The Project meets the criteria of SB 743 by being located in a transit priority area and on an infill site and by proposing mixed-use residential uses.

written comments on the document. Comments are most helpful when they suggest specific alternatives or measures that would better mitigate significant environmental effects. Written comments should be submitted to:

Thomas Rogers, Principal Planner
City of Menlo Park
Community Development Department, Planning Division
701 Laurel Street
Menlo Park, CA 94025
Email: throgers@menlopark.org

A public hearing to take oral comments on the Draft Infill EIR will be held before the Planning Commission on March 21, 2016. Hearing notices will be mailed to responsible agencies and interested individuals.

Final EIR and Project Approval

Following the close of the public review period, the City will prepare responses to comments. The Draft Infill EIR, along with the responses to the comments received during the review period, will comprise the Final Infill EIR and will be considered by the City Council in making the decision to certify the Final EIR and to approve or deny the Project.

Certification of the Final Infill EIR by the City Council as complete and adequate in conformance with CEQA does not grant any land use approvals or entitlements for the Project. The merits of the Project will be considered by the City Council in tandem with review of the Final EIR. The CEQA Guidelines require that, for one or more significant and unavoidable impacts that cannot be substantially mitigated, the lead agency must adopt a Statement of Overriding Considerations (SOC) that balances the social, economic, technological, and legal benefits of approving a project against the significant and unavoidable environmental impacts that would result from project implementation. Any SOC will be limited to those effects analyzed in the Draft Infill EIR. Where uniformly applicable development policies or standards would mitigate the significant impacts of the Project, the lead agency will also make a written finding, supported with substantial evidence, that provides a brief explanation for the rationale for the finding; if the Project results in significant unavoidable impacts, the City Council must approve the SOC in order for the Project to be approved.

1.4 Report Organization

This Draft Infill EIR is organized into the following sections.

- *Executive Summary*: Provides a summary of the Project and the impacts that would result from its implementation and describes mitigation measures recommended to reduce, eliminate, or avoid significant impacts. The Executive Summary also discusses alternatives to the Project.
- *Chapter 1—Introduction*: Discusses the overall Draft Infill EIR purpose, provides a summary of the Project and the CEQA process, and summarizes the organization of the Draft Infill EIR.
- *Chapter 2—Project Description*: Provides a description of the Project site, site development, Project objectives, required approvals process, and Project characteristics.

- *Chapter 3—Environmental Impact Analysis*: Describes the existing conditions/setting, analyzes the environmental impacts, and provides mitigation measures (if applicable) for each environmental resource area.
- *Chapter 4—Other CEQA Considerations*: Provides additional, specifically required analyses of the Project's effects, significant irreversible changes, cumulative impacts, and effects not found to be significant.
- *Chapter 5—Alternatives*: Evaluates two alternatives to the Project in addition to the No Project Alternative.

Chapter 2
Project Description

Greenheart Land Company (Project Sponsor) is proposing to redevelop 11 assessor's parcels of land between El Camino Real and the Caltrain right-of-way into a mixed-use development. The Project site includes the former Derry Lane Site (3.5 acres), the former 1300 El Camino Real Site (3.4 acres), and 1258 El Camino Real (0.3 acre), which add up to approximately 7.2 acres in their current state. These parcels generally consist of vacant, previously developed land in the northern area and commercial buildings along Derry Lane and Oak Grove Avenue in the southern area. The Derry Lane Site and the 1300 El Camino Real Site were subject to previous development proposals that would have included development of residential, office, and community-serving uses at the two project sites. Both of these proposals obtained Environmental Impact Report (EIR) certification, although the Derry Lane Site never received overall project approvals, having been subject to a referendum. The 1300 El Camino Real Site's approvals were valid at the point of the Project Sponsor's submittal of the revised application, thus constituting an extension under the City of Menlo Park's (City's) practice.

The 1300 El Camino Real Greenheart Project (Project) would demolish the existing structures in the southern portion of the site and construct approximately 420,000 square feet (sf) of mixed uses at the Project site. In total, the Project would include three mixed-use buildings, a surface parking lot, an underground parking garage, onsite linkages, and landscaping. The uses at the Project site would include a range of approximately 188,900 sf to 199,300 sf of non-medical office space in two buildings; approximately 202,100 sf of residential space (up to 202 housing units) in one building; and up to 29,000 sf of community-serving space throughout the proposed office and residential buildings. The Project would provide approximately 1,000 parking spaces within the parking garage and a surface parking lot. After street abandonment and dedication actions under the Project, the total site area would consist of approximately 6.4 acres.

2.1 Project Location, Setting, and Background

Project Site Setting

The Project site is in the City of Menlo Park and is generally bound by residential and commercial development along Glenwood Avenue to the north, the Caltrain and Garwood Way right-of-ways to the east, Oak Grove Avenue to the south and El Camino Real to the west.[1] Regional access includes US 101, approximately 1.6 miles to the east, and State Route (SR) 82 (El Camino Real), which is adjacent to the Project site to the west. In addition, the Menlo Park Caltrain Station is less than 300 feet south of the Project site, between Alma Street and El Camino Real, providing daily service between San Francisco and Gilroy. Garwood Way connects to Glenwood Avenue and terminates along the eastern edge of the Project site. A 36-inch San Francisco Public Utilities Commission (SFPUC) water main is located under the Garwood Way easement.

[1] For descriptive purposes, true northwest is Project north with El Camino Real running in a north-south direction and Oak Grove Avenue running in an east-west direction.

Neighboring land uses include a hotel to the north, single- and multi-family residential units east of the Caltrain right-of-way, the Menlo Park Caltrain station and mixed-use development (including residential units) south of Oak Grove Avenue, and the El Camino Real commercial corridor to the west. The northeast corner of El Camino Real/Oak Grove Avenue, immediately adjacent to the Project site, includes a Chevron gas station and a restaurant/café. Downtown Menlo Park is approximately 0.1 mile southwest of the Project site. Figure 2-1 depicts the Project site location and its adjacent uses. In total, the Project site contains seven existing buildings, totaling approximately 25,800 sf. In addition, the Project site currently includes parking, pavement, and limited vegetation.

For discussions about the existing setting, the Project site is divided into the following areas: the Derry Lane Site, the 1300 El Camino Real Site, and the 1258 El Camino Real Site. Although these areas are currently on separate parcels, the entire Project site is owned by the Project Sponsor. Therefore, when discussing existing conditions, the three sites are referred to separately, where necessary. However, when analyzing the Project, the discussion refers to the Project site as a whole. The Project site is differentiated this way in the setting discussion because both the Derry Lane Site and the 1300 El Camino Real site have undergone previous environmental review. For reasons discussed below, the Project analysis does not rely on the past project-level California Environmental Quality Act (CEQA) analyses but does rely upon available technical documentation for these sites and, as such, the discussion is organized accordingly.

Derry Lane Site. The 3.5-acre Derry Lane Site is located in the southern portion of the Project site. This area includes eight individual parcels, one public street (Derry Lane), a utility right-of-way, six buildings, and associated parking areas. The six buildings total approximately 22,300 sf and three buildings are currently unoccupied. The buildings located along Oak Grove Avenue are the most prominent uses on the site, because they are immediately adjacent to the street, are visible from commercial areas to the south, and are in the vicinity of the Caltrain station. All buildings are 1–1.5 stories in height. A former surface parking lot for a car dealership occupied the northeastern portion of the Derry Lane Site; however, this area is now vacant and consists of pervious gravel surfaces and ruderal vegetation. Table 2-1 summarizes the existing uses at the Derry Lane Site. A mixed-use project was previously proposed on the Derry Lane Site and underwent environmental review but the project was not entitled.

1300 El Camino Real Site. The 3.4-acre 1300 El Camino Real Site is in the northern portion of the Project site. This area includes two assessor parcel numbers (APNs 061-430-450 and 061-430-420) that formerly featured five buildings constructed in 1967 and associated parking areas used for a Cadillac dealership. These buildings were demolished in April 2010 in anticipation of the mixed-use 1300 El Camino Real Project. However, the building foundations, paved surfaces, and subsurface utilities were not demolished or removed. As such, the existing site is vacant of buildings and consists of impervious surfaces and ruderal vegetation. This previous project, which included office and retail uses, completed the environmental review process and the approvals were valid upon submittal of the Project Sponsor's revised application.

1258 El Camino Real Site. The 0.3-acre 1258 El Camino Real Site is located toward the center of the Project site, north of the Derry Lane Site and south of the 1300 El Camino Real Site. The 1258 El Camino Real Site is comprised of one parcel (APN 061-430-080). This site includes a 3,500-sf building set back from El Camino Real by a paved driveway and surface parking lot. The one-story building, which was constructed in 1958, was occupied by a veterinary hospital from 1958 to 1991, followed by a chiropractic office until 2002, and a hair salon from 2005 to 2010. The building is surrounded by asphalt-paved parking and yard areas. This site has not been included in a previous development project proposal and has never undergone environmental review.

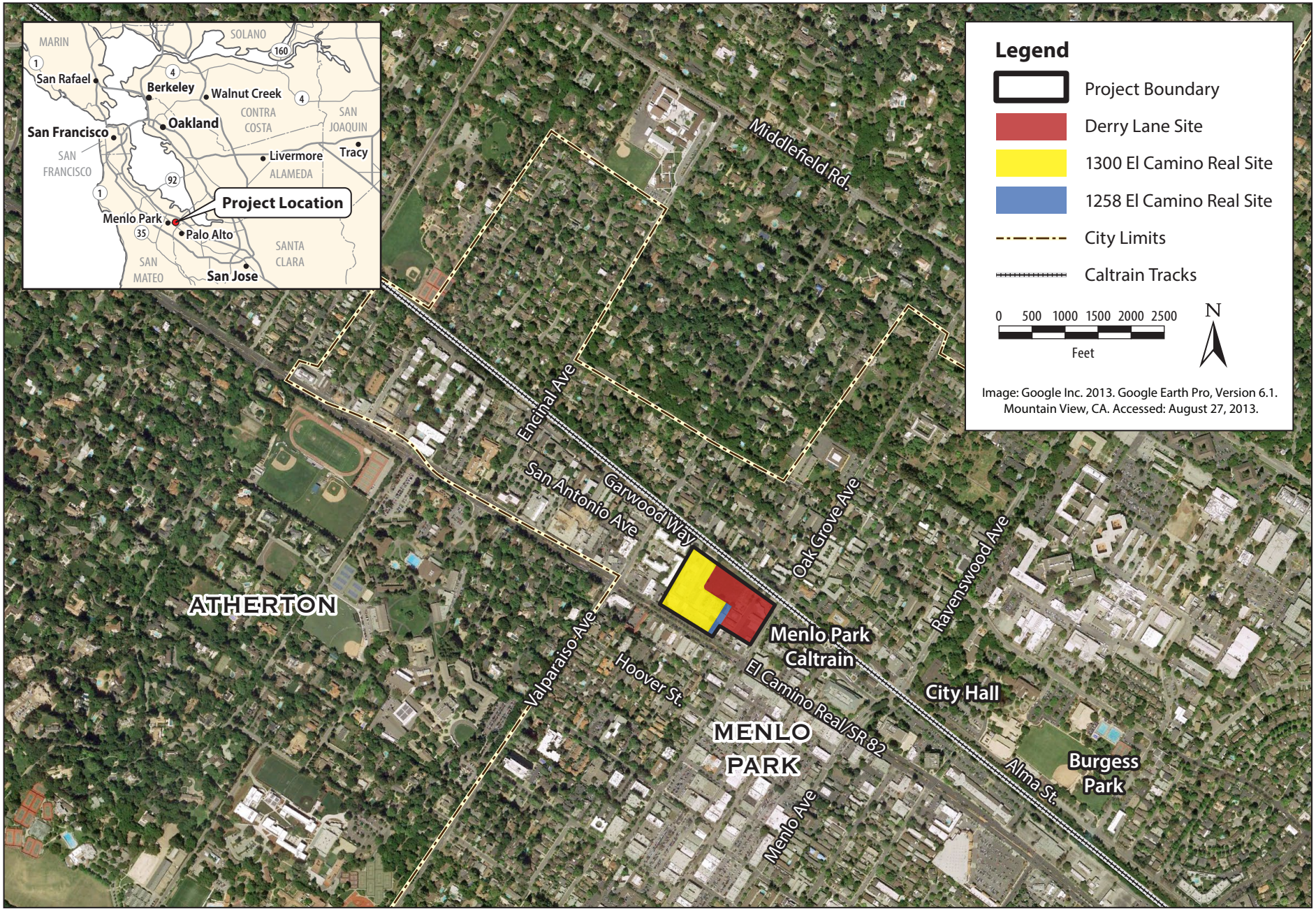

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Figure 2-1
Project Location
1300 El Camino Real Greenheart Project

Table 2-1. Existing Uses at the Derry Lane Site

Parcel Numbers	Address	Current Land Use	Building Size (sf)	Construction Date
061-430-380	550 Oak Grove Avenue	Car Wash	4,000	1967
061-430-310	558/560 Oak Grove Avenue	Vacant	5,000	1948
061-430-320	562/564 Oak Grove Avenue	Dance Studio	3,800	1950
061-430-460	580 Oak Grove Avenue	Foster's Freeze	1,200	1949
061-430-200	540/560 Derry Lane	Hardware Storage	5,000	1949
061-430-210	550 Derry Lane	Vacant	0	--
061-430-220	570 Derry Lane	Vacant	3,300	1948
061-430-230	none	Private parking lot	--	--
Total Building Square Feet			*22,300*	
1821 O.R. 246	Derry Lane right-of-way	Public street and utility access	--	

Source: City of Menlo Park. 2006. *Derry Lane Mixed-Use Development EIR*. Table III-1; Greenheart Land Company 2013.

Project Site Land Use and Zoning

The entire Project site is in the El Camino Real/Downtown Specific Plan (Specific Plan) area and within the El Camino Real Northeast – Residential (ECR NE-R) District. The Project site is zoned SP-ECR/D (El Camino Real/Downtown Specific Plan). The ECR NE-R District is on the east side of El Camino Real between Oak Grove and Glenwood Avenues and is currently characterized by a mix of retail, personal service, office, and residential uses. The area is bordered by the railroad tracks to the east and medium-density residential uses beyond the railroad tracks.

The ECR NE-R District is located in the El Camino Real Mixed Use – Residential General Plan land use designation, which supports a variety of retail uses, personal services, business and professional offices, and residential uses. The ECR NE-R District provides for higher intensities with a focus on residential development, given its location near the train station area and downtown. The Specific Plan outlines the maximum amount of building intensity permitted in the ECR NE-R District. However, these maximums may be increased with a Public Benefit Bonus, which allows additional development beyond the base intensity and height in exchange for extra public benefits. The Public Benefit Bonus would allow additional development in exchange for providing additional benefits to the public. Examples of public benefits include publicly accessible open space, senior housing, affordable residential units, hotel facilities, preservation/reuse of historic resources, public parks/plazas, shuttle services, and a public amenity fund. Public Benefit Bonuses require case-by-case discretionary review, and if the Planning Commission and City Council ultimately do not find that the proposed benefits are appropriate, a project can be required to be revised to the base-level development standards.

2.2 Project Objectives

This Initial Study addresses the physical impacts of the Project as required by the CEQA. The Project Sponsor has identified the following project objectives:

- Develop a mixed-use, infill project on El Camino Real that is consistent with the goals and vision of the Specific Plan, which seeks to improve underutilized and vacant lots, focus high-density development in proximity to the train station, and enrich El Camino Real as a vibrant pedestrian- and transit-oriented corridor.
- Redevelop underutilized parcels with an economically viable mixed-use project that includes multi-family residential, office, and community-serving uses.
- Provide a mix of uses that is close to transit and services, including transportation demand management amenities that reduce vehicle trips and promote walking, biking, carpooling, and transit use.
- Use green design practices and methods that promote energy efficiency and resource conservation.
- Create a mixed-use project that conforms to the design principles set forth in the Specific Plan and that respects the surrounding neighborhood through appropriate building height, siting, and massing.
- Provide new and diverse employment opportunities for City residents.
- Generate revenue for the City and other public entities.

2.3 Project Characteristics

The Project would demolish the existing buildings and paved features and construct proposed new structures. The existing parcels would be re-subdivided to create four APNs: office buildings (one APN each), residential building (one APN), and common areas, including parking (one APN). Up to 420,000 sf of mixed-use development would be constructed at the 6.4-acre Project site. As described above, the Project site is located in the Specific Plan area and within the ECR NE-R District. The Project would be consistent with all guidelines and standards outlined in the Specific Plan, as discussed in this document. The Project has not yet been the subject of detailed City review, and elements may change as the project review process moves forward.

Land Use Consistency and Public Benefits

As shown in Table 2-2, the Project would be consistent with the allowed development in the ECR NE-R District with a Public Benefit Bonus. The permitted floor-area ratio (FAR) is 1.10, but with a Public Benefit Bonus the FAR can increase to 1.50. In either scenario, non-medical office is limited to no more than one-half the maximum FAR. In general, maximum heights are permitted to 38 feet. Although 48 feet is permitted with a Public Benefit Bonus, building facades cannot exceed a height of 38 feet. The Project would be constructed at the maximum FAR and height as permitted with a Public Benefit Bonus. Up to 32 dwelling units per acre are allowed at the Project site and up to 50 units per acre are permitted with a Public Benefit Bonus. Therefore, since the Project would develop at an intensity of approximately 31.6 units per acre, a Public Benefit Bonus would not be required for dwelling unit density. All uses proposed under the Project are permitted in the ECR NE-R District.

Table 2-2. Allowed and Proposed Development at the Project Site

	Allowed Development (ECR NE-R)	Proposed Development
Floor Area Ratio (FAR)	1.10 [1.50][a]	1.50
Dwelling Units/Acre	32 [50][a]	31.6
Max. Building Heights[b]	38 feet [48 feet][c]	48 feet

Sources: City of Menlo Park 2013; Greenheart Land Company 2015.

Notes:

a. [ ] denotes the maximum allowable with a Public Benefit Bonus.

b. According to Section E.3.2.01 of the Specific Plan, roof-mounted mechanical equipment, solar panels, and similar equipment may exceed the maximum building height, but shall be screened from view from publicly-accessible spaces.

c. Even with the Public Benefit Bonus, building façade heights cannot exceed 38 feet.

Proposed Site Plan

The Project would require the demolition of the existing buildings at the Project site and would entail the construction of three mixed-use buildings, a surface parking lot, an underground parking garage, onsite linkages, and landscaping.[2] The Project Sponsor's conceptual site plan is shown in Figure 2-2. Table 2-3 summarizes the three proposed mixed-use buildings.

Table 2-3. Proposed Building Development at the Project Site

Building	Building Use	Floor Area (sf)	Number of Floors
Office North	Non-medical Office/Community-serving	105,000	3
Office South	Non-medical Office/Community-serving	105,000	3
Residential	Residential/Community-serving	210,000	4
Total	--	*420,000*	--

Source: Greenheart Land Company 2015.

In total, the three buildings would cover approximately 45 percent of the Project site and be constructed at 1.5 FAR. A public park, Garwood Park, would be located in the northeast corner of the Project site adjacent to Garwood Way and the Caltrain right-of-way. The approximately 10,000-sf park would be located off of Garwood Way to allow access for City residents. In accordance with the Specific Plan, the park is proposed to include a structural element that would create a defined building edge as seen while walking, biking, and driving along Garwood Way. The park would promote active park use by residents, as well as the possibility of use for organized league play. The park would also contain seating and table areas for casual picnicking, resting, table game play (chess and checkers), and a gathering place. Some of the park area may be used as bioswales for the San Mateo County National Pollutant Discharge Elimination System (NPDES) C.3 storm water requirements and would utilize native grasses in these areas.

[2] Unless otherwise stated, all information from this section is from The Greenheart Land Company and BAR Architecture 2015.

The Office North and Office South buildings would be oriented in an east-west direction and would front onto El Camino Real. Both buildings would be three stories and would not exceed 48 feet in height. Each building would include approximately 105,000 sf of building area with lobbies, office spaces, and community-serving space in the western frontages of the building along El Camino Real. A plaza would be situated between the two buildings with landscaping, a sheltered courtyard, sitting areas, decorative paving, water features, and outdoor "rooms." The private plaza would be designed for outdoor restaurant dining and informal gatherings. Each building would have a footprint of approximately 37,000 sf and each floor plate would range in size from 30,000 sf to 37,000 sf. Together, the two office/community-serving buildings would have a total floor area of 210,000 sf.

The residential building would front Oak Grove Avenue and Garwood Way and consist of approximately 210,000 sf. A landscaped area would be located between this building and the Office South building to the north and west, providing a visual buffer and an amenity for the proposed tenants. In addition, the Garwood/Oak Grove Plaza would be located at the corner of Oak Grove Avenue and Garwood Way. This plaza would face the Caltrain station, providing a high-activity area with access to outdoor restaurant dining, the main residential lobby, underground community-serving parking, and the leasing office. The building would also wrap around a center courtyard area with a pool. Community-serving space would be located along the Oak Grove Avenue street frontage. The residential building would consist of four stories and would not exceed 48 feet in height. Each floor would include approximately 50,000 to 55,000 sf of space.

Table 2-4 outlines the potential floor area by use and the total number of residential units. As shown, the Project would not exceed 420,000 sf of combined office, community-serving, and residential uses.

Table 2-4. Project Development by Use

Use	Floor Area Ranges (sf)	Residential Units
Non-medical Office	188,900–199,300	--
Community-serving	18,600–29,000	--
Residential	202,100	202
Total	*420,000*[a]	*202*

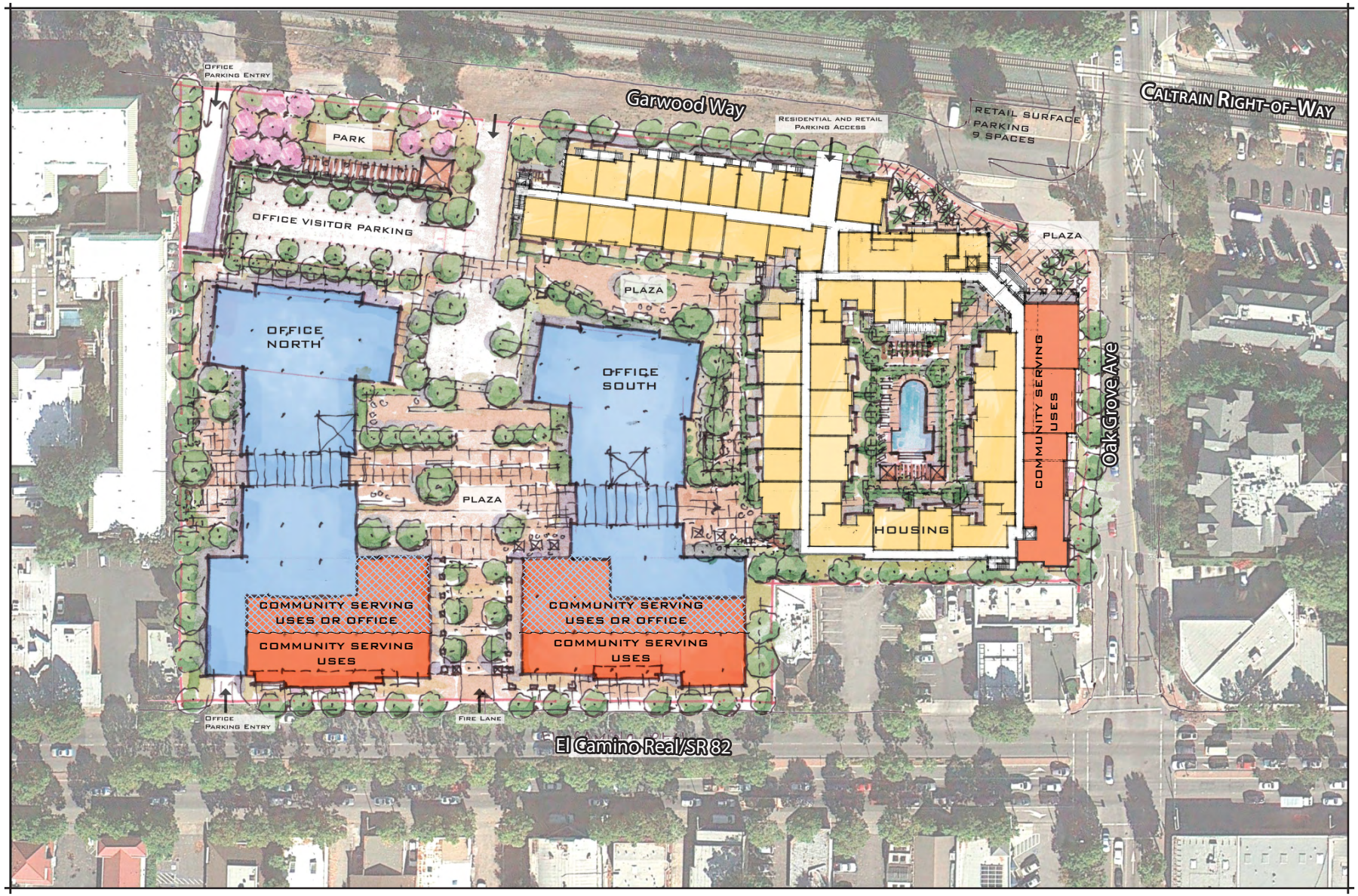
Source: Greenheart Land Company 2015.

[a.] This table shows the ranges of potential uses. Regardless of the land use mix, the Project would not exceed a total of 420,000 sf.

Office Use. Non-medical office uses would be located within the Office North and Office South buildings. As discussed above, community-serving space could be included along the El Camino Real frontages of these buildings. Assuming that community-serving uses would be included, the Project would develop between approximately 188,900 and 199,300 sf of office space. It is anticipated that between one and 20 separate tenants could occupy this space.

Residential Use. The proposed residential building would consist of up to 210,000 sf; however, community-serving use would be located along the Oak Grove Avenue frontage. Assuming construction of these uses (approximately 7,900 sf), the building would include approximately 202,100 sf for up to 202 units. In general, the following unit mix and sizes are anticipated.

- Studios/junior one bedroom (530 sf) = 11.5 percent of units
- One bedroom (710 sf) = 40.2 percent of units



Note: Community Serving Uses include Restaurants, Retail, and Personal/Business Services.

Source: Bar Architects, 2015.

Project North

N

0 40 80 160
Feet

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Figure 2-2
Conceptual Site Plan
1300 El Camino Real Greenheart Project

- Two bedrooms (1,100 sf) = 44.5 percent of units
- Three bedrooms (1,550 sf) = 3.8 percent of units

Community-Serving Use. Community-serving uses include the following categories of uses as defined in the Specific Plan and permitted in the ECR NE-R zone: banks/other financial institutions, business services, eating/drinking establishments, office/business/professional (limited to a single real estate office of no more than 2,500 sf), personal improvement services, and retail sales. The Project could include a maximum of 29,000 sf of ground-floor community-serving space. Up to 21,100 sf would be included in the Office North and Office South buildings along the El Camino Real frontage and approximately 7,900 sf would be included in the residential building along the Oak Grove Way frontage. These community-serving uses would be open to the public and not restricted to onsite users.

Site Access, Circulation, and Parking

Vehicular Access and Circulation. As shown in Figure 2-2, the Project site would be accessible from up to five driveways: two driveways from El Camino Real to serve office and community-serving development and three driveways from Garwood Way to serve office, community-serving, and residential uses. From El Camino Real, one driveway would provide emergency vehicle access only; the other driveway, at the northwest corner of the Project site, would lead to underground parking. One driveway off of Garwood Way would provide access to the underground parking garage for residential and community-serving uses. The driveway at the northeast corner of the Project site would lead to the underground parking for office and community-serving uses. A third driveway off of Garwood Way would allow egress/ingress to a surface parking lot for visitors to the office and plaza. Additionally, at the southern end of the site, on the east side of Garwood Way, there would be a small surface parking lot for community-serving uses, subject to City approval.

The Project would include the completion of Garwood Way from the northeast edge of the Project site to Oak Grove Avenue. This would connect Glenwood Avenue to the north with Oak Grove Avenue to the south and would allow additional access to the Project site. The Garwood Way extension would be constructed concurrently with the construction of the Project. The SFPUC water main under Garwood Way and its 40-foot easement would not be impacted by the Project; no structures would be located within this easement.

The Project Sponsor would provide for Transportation Demand Management (TDM) measures to reduce single-occupancy vehicle trips, air quality impacts, and greenhouse gas emissions. The TDM measures would include, but not be limited to, the following.

- Bicycle storage spaces for both residential and office uses, including guest bicycle spaces
- Bicycle-sharing program
- Showers/changing rooms
- Subsidized transit tickets (Caltrain Go Passes) for both residential and office uses
- Employee and resident transit commute survey
- Join Alliance's guaranteed ride home program
- Install and maintain alternative transportation kiosks
- Car-sharing vehicle spaces
- Web portal for carpooling
- Preferential carpool and vanpool parking

Bicycle and Pedestrian Circulation. Pedestrian walkways would be included between the office plaza, residential plaza, and the proposed buildings. Bicycle lockers would be provided within the underground parking garage. In addition, bicycle racks would be positioned near the main entries of each building.

Emergency Access. Emergency vehicle access would be permitted from El Camino Real and Garwood Way through the middle of the Project site between the two proposed office buildings. Hydrants and other fire connections would be available as per Menlo Park Fire Protection District requirements.

Parking. Parking would be provided in a small surface parking lot for visitors in the northeast corner of the Project site and within an underground parking garage. The surface parking lot would be accessible via Garwood Way and would serve visitors to the proposed office buildings. The portion of the parking garage to be shared by office employees, visitors of the community-serving spaces, and onsite residents would consist of two levels and would be located under the office buildings. Office uses would be allocated 3.8 parking stalls per 1,000 sf and community-serving uses would be allocated 4.0 spaces per 1,000 sf of building space. The portion of the parking garage for exclusive use by onsite residents would be located under the residential buildings and would consist of one level of parking. This parking garage would have 1.25 spaces per unit. Combined, the Project site would include approximately 1,000 parking spaces.

Additionally, at the southern end of the site, on the east side of Garwood Way, there would be a small surface parking lot for community-serving uses, subject to City approval.

Landscaping

As shown in Figure 2-2, landscaping would be provided throughout the Project site. There are currently 37 Heritage Trees (per Section 13.24 of the City's Municipal Code)[3] at the Project site. Over 40 percent of the Heritage Trees are multi-stemmed Chinese Trees of Heaven that spread from root sprouts creating a tree that meets the Heritage Tree definition, but in general has limited landscape value. Other tree species at the Project site include blackwood acacia, African fern pine, Italian cypress, jacaranda, Canary Island date palm, coast live oaks, valley oaks, black locust, and coast redwoods. The Project would remove all of these trees, including the root stems. However, the conceptual landscape plan shows a minimum replacement of a two-to-one ratio for the 37 Heritage Trees that would be removed from the site. There are currently 19 City trees along the El Camino Real and Oak Grove Avenue frontages that are projected to remain with implementation of the Project.[4]

The existing Project site is composed of approximately 214,400 sf of impervious surfaces (76.4 percent). Implementation of the Project would increase impervious surfaces to 233,800 sf (approximately 83.3 percent). Approximately 46,800 sf of pervious landscaped areas would be provided throughout the site.[5] Up to 10 stormwater treatment areas with a total of about 11,500 sf would be located throughout the Project site to limit stormwater runoff. These biotreatment areas would be open, level, vegetated areas that would allow runoff to be distributed evenly across the area and would comply with the San Mateo County NPDES C.3 requirements for bioswales stormwater infiltration/treatment.

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[3] Chapter 13.24 defines Heritage Trees as a tree or group of trees of historical significance, special character, or community benefit; all oak trees native to California (Quercus) that have trunks of 31.4 inches or greater circumference; and all other trees that have a trunk with a circumference of 47.1 inches or more, measured 54 inches above natural grade.

[4] SBCA Tree Consulting. 2013. "Tree Survey: 1300 El Camino Real & Derry, Menlo Park." November 7, 2013.

[5] BKF Engineers. 2013. 1300 El Camino Real Existing and Proposed Impervious Surfaces.

a. Project Facing Northeast on El Camino Real

b. Project Facing Northwest on Oak Grove Avenue

Source: Bar Architects, 2013.

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Figure 2-3
Proposed Building Design
1300 El Camino Real Greenheart Project

The irrigation system would be designed by a certified Irrigation Designer for high efficiency and would comply with the City's Water Efficient Landscape Ordinance. Hydro zones would be established and a water budget would be calculated based on proposed plantings establishing both the maximum applied water allowance (MAWA) and the estimated total water use (ETWU). Landscape would utilize native plants with low water to minimal irrigation requirements. The use of turf would be minimized. All planting areas would receive 2 to 3 inches of mulch to facilitate water conservation. A dedicated landscape irrigation meter would be installed and control of the system would be via a 'Smart' controller, capable of daily schedule adjustment based on real-time weather data gathered from onsite sensors. Shrub and groundcover plantings would be irrigated with low volume drip or subsurface systems, allowing for highest possible efficiency. Equipment would be selected with a goal of minimizing system complexity and maintenance cost. After installation, a landscape and irrigation audit would be completed to confirm that the landscaping and irrigation system were installed as designed.

Building Features and Lighting

The final design of the Project, including lighting, would be determined as part of the City's Architectural Control Review process, which would include input from the public. The performance standards set by Leadership in Energy and Environmental Design (LEED)[6] Silver would be followed, and light pollution from the buildings would be considered and minimized. The Project would be designed to meet CalGREEN, Title 24, and any amendments required by the City. The buildings would be generally consistent with Spanish Eclectic-style architecture and the detailed design would be required to meet the design guidelines of the Specific Plan. Figure 2-3 depicts the conceptual building design.

Activity/Employment

The Project could include a mix of non-medical office, community-serving, and residential uses. Depending on the scenario, the Project could include a higher amount of office uses, or include a higher amount of community-serving uses within the office and residential buildings. If the Project would include the maximum amount of office and the minimum amount of community-serving uses,[7] then it is estimated that approximately 702 employees would be generated.[8] In general, office uses generate the need for more employees than community-serving uses; if all potential community-serving uses would be constructed, then approximately 688 employees would be generated.[9] As such, when analyzing population-driven impacts, this document assumes and analyzes the most conservative scenario of approximately 702 employees at the Project site.

Note that different CEQA topics could be affected differently depending on the land use mix. For example, community-serving uses generally generate more traffic than office and residential uses; therefore, that use would be analyzed in order to be most conservative. Although the Project could include a range of uses, the CEQA analysis presented in this document always considers the worst-case scenario.

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[6] LEED is a green building certification program created and administered by the U.S. Green Building Council that recognizes best-in-class building strategies and practices.

[7] Residential uses would require minimal employees and, therefore, are not included in the calculations. However, under both scenarios, the same amount of residential uses would be provided (202,100 sf).

[8] This estimate assumes 300 sf per office employee and 500 sf per retail employee. With full office buildout, approximately 199,300 sf of office and 18,600 sf of retail uses would be constructed. (199,300 sf of office/300 sf) + (18,600 sf of retail/500 sf) = ~702 employees.

[9] This estimate assumes 300 sf per office employee and 500 sf per retail employee. With full retail buildout, approximately 188,900 sf of office and 29,000 sf of retail uses would be constructed. (188,900 sf of office/300 sf) + (29,000 sf of retail/500 sf) = ~688 employees.

The Project would also include the construction of approximately 202 new housing units at the Project site. The units are expected to be utilized by singles and couples rather than large families. As such, the average household size would be more similar to that used in the Specific Plan rather than the current City average. Based on an average household size of 2.38 persons per household (per the Specific Plan), implementation of the Project would add approximately 481 people to the City's population. As noted in the Specific Plan EIR, this average household size is derived from all of Menlo Park, including single-family residential neighborhoods, and as such represents a relatively conservative projection for multi-family housing.

Utilities

Onsite utility usage would include energy, domestic water, wastewater, and storm drainage. All onsite utilities would be designed in accordance with applicable codes and current engineering practices.

Energy. Pacific Gas and Electric Company (PG&E) would provide gas and electrical power for the proposed facilities. Existing electricity and gas lines in the vicinity of the Project site would continue to serve the Project. It is anticipated that no emergency generators would be installed at the Project site. However, if a back-up generator is required by a future office tenant, the applicant would apply for a permit to install the appropriate-sized generator at that time.

Solar. The Project would include the installation of an estimated 110-kilowatt (kW) photovoltaic system. The system components would include 370, 305-watt polycrystalline modules, one 100-kW inverter, and a web-based solar monitoring system. The photovoltaic system would be designed to meet standard code requirements.[10]

Domestic Water. A 36-inch water main is currently located within a 40-foot-wide SFPUC water line easement north of the Project site (under Garwood Way). This water main and easement would remain as part of the Project. The Project would be served by a new 8-inch water supply line (potentially up-sized to 10 or 12 inches) along Garwood Way. The 8-inch line along Garwood Way would connect to an 8-inch line along Glenwood Avenue and an 8-inch line along Oak Grove Avenue, both of which could be upgraded based on a water demand analysis by the California Water Service Company, Bear Gulch District, which provides water to the Project site.

Wastewater. The sanitary sewer system in this area of the City is owned and operated by the West Bay Sanitary District (WBSD). Existing sanitary sewer service for the Project site is provided via a 6-inch sewer main that runs under the Project site. The system connects to the 15-inch sewer main on the private property that runs parallel to Glenwood Avenue, northeast of the Project site. The Project Sponsor would be required to upsize the existing sanitary sewer main to 8 inches as part of the Project.

Storm Drainage. A 12-inch stormwater main is located under Garwood Way, which leads north into the stormwater system under Glenwood Avenue and, from there, to the receiving waters of the Atherton Channel. A stormwater main is also located under El Camino Real, which fronts the Project site. This main is approximately 30 inches in diameter west of the Project site, increasing in stages to 42 inches in diameter northwest of the Project site, prior to the main's confluence with Atherton Creek. El Camino Real and its associated drainage conveyances are under the jurisdiction of the California Department of Transportation (Caltrans), while the Garwood Way/Glenwood Avenue system is maintained by the City.

[10] Sun, Light, & Power. 2013. "Estimated Scope of work: Photovoltaic System for El Camino Real, 1300, Menlo Park, located in Menlo Park, CA 94025." November 18, 2013.

Hazardous Substances. Phase I Environmental Site Assessments (ESAs) were prepared for the 1300 El Camino Real Site and the 1258 El Camino Real Site. These reports also contain a summary of existing conditions at the Derry Lane Site. Potential hazardous substances at the Project site are described below.

Derry Lane Site. In May 2011, the California Department of Toxic Substances Control (DTSC) issued an Imminent and Substantial Endangerment Determination and Order and Remedial Action Order to the Derry Family Partnership, LP and several individuals in response to the discovery of perchloroethylene (PCE) and the PCE-degradation products trichloroethene (TCE), dichloroethene (DCE), and vinyl chloride in site soil, soil vapor, and groundwater at concentrations posing a risk to human health and the environment. The presence of these contaminants was due to a release of PCE from a former dry cleaning business (Wo Sing Cleaners) that operated at 570 Derry Lane from 1981 to 2011.

The Derry Lane Site underwent activities to identify contaminants and extent of contaminants. Contamination exists in the form of PCE, TCE, DCE, and vinyl chloride impacted soil, soil vapor, and groundwater. Green Environmental, Inc. conducted Feasibility Study and Human Health Risk Assessment and proposed remedies for site cleanup in the Removal Action Workplan. The document is currently under review by DTSC.

The proposed cleanup activities include:

- Excavation of approximately 7,500 cubic yards (cy) of contaminated soil in areas that coincide with the underground parking garage (to at least 22 feet deep in the impacted areas).
- Excavation of approximately 1,230 cy of contaminated soil in area outside of garage footprint.
- Excavation of approximately 1,550 cy of contaminated soil in two identified hot spots of elevated PCE-affected soil below the garage to at least the depth of first encountered groundwater or 40 feet.
- In-situ treatment of contaminated groundwater.
- Install groundwater monitoring wells and periodically sampling the contaminants.
- Install vapor venting features below the garage concrete floor of the residential building coinciding with the location of the PCE groundwater plume to enhance the vapor intrusion protection.
- Establish groundwater and vapor monitoring program.

Confirmation samplings will be collected and analyzed by a state-certified laboratory to confirm the cleanup goals. Approximately 860 truckloads of contaminated soil will be off-hauled to the approved permitted landfill. The Removal Action Work Plan details vapor and dust mitigation, which will be performed under Best Management Practices. The route for transporting contaminated soil will also be considered to avoid traveling through a sensitive area.

1300 El Camino Real. This site includes 21 hydraulic lifts with potential residual hydraulic oil in the lifts and hydraulic oil impacts on the soil at the locations of the lifts. Groundwater, saturated soil, and soil vapor are likely affected by the release of PCE at the site of the former Wo Sing Cleaners, which is part of the Derry Lane Site described above. Soil at the locations of former auto painting and detailing operations, sumps, and trenches have not been adequately sampled to confirm hazardous substances associated with the former car dealership. Other potential concerns with the 1300 El Camino Real Site include the presence of fill material from an unidentified source; un-surfaced soil at the location of a former transformer that may have contained polychlorinated biphenyls (PCBs); presence of discarded fluorescent light bulbs; potential ACMs consisting of concrete, paint, brick, brick mortar, ceramic and

vinyl floor tile, and grout; a sink hole approximately 1 foot deep; and groundwater, saturated soil, and soil vapor that may be affected by a hazardous substance release from one or more former occupancies on upgradient properties.

Soil vapor and groundwater sampling completed on the eastern portion of the 1300 El Camino Real Site indicates that the PCE release at the Derry Lane Site has not significantly affected the 1300 El Camino Real Site. Because the redevelopment plan calls for at least one level of underground parking across the entire site, the hydraulic lifts and sink hole would be removed along with soil of potential concern; the soil would be properly characterized prior to removal. The existing remnants of building floors and foundations would be properly sampled for asbestos prior to demolition and offsite recycling or disposal, as required by the California Division of Occupational Safety and Health (known as Cal-OSHA) and Bay Area Air Quality Management District (BAAQMD) regulations. Prior to construction, additional grab groundwater samples would be collected across the site to determine if potential offsite upgradient chemical releases have affected groundwater beneath the site.[11]

1258 El Camino Real. This site is identified by DTSC as the Tarr Property (former owner), which was a residential property until redevelopment in 1958 with the commercial building currently present on the property. In October 2010, a subsurface investigation was conducted to evaluate whether the property was affected by chlorinated volatile organic compounds. PCE was detected in the soil vapor and groundwater samples collected at the site, which is assumed to have sourced from the adjacent Wo Sing Dry Cleaners.[12]

The Phase I ESA for the 1258 El Camino Real Site determined that groundwater, saturated soils, soil vapor, and indoor air are affected by a past release of dry cleaning solvent to the subsurface at the adjoining property to the east (570 Derry Lane), posing a potential human health risk to the occupants of the site. Other potential concerns at the site include: groundwater, saturated soil, and soil vapor on the site could be affected from the release of petroleum hydrocarbons from a former gasoline station on the adjoining property to the east (1246 El Camino Real); potential asbestos-containing materials consisting of concrete, stucco, paint, sheetrock wall systems, cinder block mortar, carpet mastic, window putty, and roofing materials; potential lead-based paint on cinder block walls, stucco, sheetrock, concrete flooring, and wood ceilings; and an approximate 25 sf depressed area in an asphalt-paved area at the rear of the site.[13]

The 1258 El Camino Real Site is included in the Derry Lane Site boundaries subject to the 2011 DTSC Order, and thus the identified subsurface impacts would be addressed in the selected cleanup remedy for the Derry Lane Site. Soil vapor and groundwater sampling completed on the 1258 El Camino Real Site in the due diligence period for the change in ownership of the Derry Lane Site, indicates that the former gasoline station on the adjoining property to the east has not significantly affected the 1258 El Camino Real Site. The building materials would be properly sampled for asbestos prior to demolition per BAAQMD regulations.

[11] Green Environment, Inc. 2012. Phase I Environmental Site Assessment, 1300 El Camino Real, Menlo Park, California. March 20, 2013.

[12] AEI Consultants. 2010. Comfort Letter Investigation Report, 1258 El Camino Real, Menlo Park, California. November 8, 2010.

[13] Green Environment, Inc. 2012. Phase I Environmental Site Assessment, 1258 El Camino Real, Menlo Park, California. April 9, 2012.

2.4 Comparison to the Specific Plan

The Project site includes areas that were previously evaluated in the Derry Mixed-Use Development Project EIR (certified in 2006) and the 1300 El Camino Real Sand Hill Project EIR (certified in 2009).[14] However, the CEQA approvals for these previously proposed projects are no longer valid and, therefore, are not considered in the analysis. Since certification of these EIRs, the Project site has been included in the Specific Plan EIR (certified in 2012). The previously proposed projects were analyzed as cumulative projects in the EIR, rather than opportunity sites. The analysis in the Specific Plan EIR considered the net new development of up to 680 housing units and approximately 474,000 sf of commercial uses within the Specific Plan area, which includes the El Camino Real corridor, the Caltrain Station area, and the City's downtown core.

As mentioned above, the 1300 El Camino Real Sand Hill Project EIR completed the environmental review process and had valid approvals at the time when the City received the current application. Because the proposed Project is substantially different from the Sand Hill proposal, this CEQA document considers the whole of the current Project and does not rely on previous approvals for the purposes of the analysis. This analysis does not net out the square footages of the previous projects.

However, as the Project relates to the planned development potential in the Specific Plan area, the Sand Hill Project is relevant. Specifically, the development potential associated with the Sand Hill Project was accounted for in the Specific Plan EIR, but not as part of the planned growth of 474,000 sf of non-residential uses. Because a portion of the development potential at the Project site was considered in the background of growth in the Specific Plan area, for planning purposes, the entire 217,900 sf of non-residential uses does not count against the planned development in the Specific Plan area. For informational purposes only, Table 2-5 illustrates the percentage of Specific Plan development potential accounted for by the Project once the Sand Hill Project is netted out.

Table 2-5. Comparison between the El Camino Real Specific Plan and the Net Project

	Non-Residential (sf)	Residential (units)	Height Max (feet)
Proposed Project	217,900[a]	202	48[b]
1300 El Camino Real Sand Hill Project	110,065	--	40
Active Project Site Uses	10,000	--	--
Net Project Development	*97,835*	*202*	--
Specific Plan Development	474,000	680	48[b]
Net Project Development as Percent of Specific Plan	*20.6%*	*32.4%*	--

Source: City of Menlo Park 2013; Greenheart Land Company 2015.

a. The Project would include commercial uses, including a minimum of 188,900 sf of office plus up to 29,000 sf of community-serving (between the two office and one residential buildings) OR up to 199,300 sf of office plus a minimum of 18,600 sf of community-serving retail. Under both scenarios, the total commercial uses would be up to 217,900 sf.

b. The ECR NE-R District allows a height maximum of 38 feet. However, as discussed above, the Project would provide public benefits, which allow a height maximum of 48 feet.

[14] The 1258 El Camino Real Site has not been included in previous development proposals.

2.5 Project Construction

Schedule

Construction of the Project would include demolition of the existing features at the Project site and construction of the proposed components. It is anticipated that construction would start in mid-2016 with the demolition of the existing buildings and construction of the underground parking areas and would continue over approximately 27 months, with full buildout by late 2018. It is conservatively assumed that maximum occupancy would be reached within 2 to 3 years thereafter. The Project site would be constructed in the following phases.

- Demolition of existing buildings and construction of underground parking and Garwood Way extension: mid-2016 to late 2016 (3 months)
- Podium Build-Out: early 2017 to mid-2017 (7 months)
- Offsite Infrastructure: late 2016 to early 2017 and mid-2018 (7 months)
- Onsite Infrastructure and Landscaping: mid-2018 to late 2018 (8 months)
- Apartment Vertical Construction: mid-2017 to late 2018 (18 months)

Depending on the construction phase, the number of onsite construction workers could range from approximately 10 to 70 workers per day. The maximum number of workers (70 workers per day) would occur during construction of the residential building and the minimum number of workers (10 workers per day) would occur during the infrastructure installation phase.

Equipment and Staging

Typical equipment that would be used during construction would include excavators, cat dozers, water trucks for dust control, street sweepers, dump trucks, backhoes, skidsteers, forklifts, cranes, and other surfacing and grading equipment. Pile driving may be required. All construction equipment, employee vehicles, and import material would be staged onsite or nearby.

Spoils, Debris, and Materials

Demolition. Construction would require demolition and removal of the existing buildings, paved areas, other impervious surfaces, and vegetation at the Project site. Approximately 75 percent of all debris would be recycled. Concrete debris could be shredded onsite prior to offhaul. Any portion of material that could not be crushed onsite would be hauled to a local recycling site, likely the facility at the Port of Redwood City.

Grading/Excavation. Approximately 60,000 cubic yards (cy) would be excavated for one level of underground parking (approximately 10 feet deep) for the residential uses, and approximately 63,000 cy would be excavated for two levels for underground parking (approximately 20 feet deep) for shared-use parking. In total, the underground parking would require the excavation of about 123,000 cy to export.

2.6 Project Approvals

City Approvals

The following discretionary approvals by the City would be required prior to development at the Project site.

- **Environmental Review.** This process includes certification of the environmental review and approval of the mitigation measures presented in this document.
- **Approval of Public Benefit Bonus.** The Planning Commission and City Council, concurrent with overall Project review, will review the proposed public benefits. If the decision-making body determines the public benefits are not sufficient, the Project would be required to be revised to the Base level standards.
- **Architectural Control Review.** Design review for compliance with Specific Plan standards and guidelines.
- **Lot Line Adjustment/Lot Merger.** A lot line adjustment or lot merger would be required.
- **Heritage Tree Removal Permits.** A tree removal permit would be required for each Heritage Tree proposed for removal per Municipal Code Section 13.24.040.
- **Below Market Rate Housing Agreement.** A Below Market Rate Housing Agreement would be required for the Project's compliance with the City's Below Market Rate Housing Program, as outlined in Chapter 16.96 of the Municipal Code.
- **Right-of-Way Actions.** City Council approval of the abandonment of Derry Lane; a portion of the Garwood Way plan line would be required concurrent with the other project actions.

Approvals by Responsible Agencies

Approvals by other agencies that may be needed for the Project are identified below. These agencies are expected to review this environmental review in evaluating the Project.

- BAAQMD—permitting of asbestos abatement activities, if any.
- Caltrans—review of traffic circulation effects and consultation on potential traffic improvements affecting state highway facilities, ramps, and intersections.
- California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB)/San Mateo Countywide Water Pollution Prevention Program—approval of NPDES permit for stormwater discharge.
- DTSC—review of remediation action plans.
- City/County Association of Governments (C/CAG)—review of potential effects on Routes of Regional Significance and the proposed TDM program.
- Menlo Park Fire Protection District—approval of proposed fire prevention systems and emergency vehicle access.
- San Mateo County Environmental Health Division—review of food service functions.
- WBSD—approval of wastewater hookups.

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Chapter 3
Environmental Impact Analysis

Chapter 3 of this Draft Infill Environmental Impact Report (Infill EIR) presents an analysis of the potential impacts that the 1300 El Camino Real Greenheart Project (Project) could have on existing environmental conditions. The environmental analysis has been prepared in accordance with the California Environmental Quality Act (CEQA), as amended (Public Resources Code Section 21000, *et seq.*), and the CEQA Guidelines.

Organization of This Chapter

Each CEQA topic or environmental issue in Chapter 3 is given its own section, each containing the following subsections.

- **Regulatory Setting**—describes the federal, state, and local regulations regarding the impact topic that would be applicable to the construction and operation of the Project.
- **Environmental Setting**—describes existing baseline conditions, including the environmental context and background. The environmental baseline for purposes of the analysis is discussed in detail in this chapter under *Environmental Baseline*. As discussed in Chapter 2, *Project Description*, the existing Project site includes the former Derry Lane Site (3.5 acres), the former 1300 El Camino Real Site (3.4 acres), and 1258 El Camino Real Site (0.3 acre), which together total approximately 7.2 acres. These parcels generally consist of vacant, previously developed land in the northern portion of the site and commercial buildings along Derry Lane and Oak Grove Avenue in the southern portion.
- **Environmental Impacts**—identifies standards of significance and evaluates how the Project would affect the baseline conditions. If the change to the baseline conditions would exceed the significance thresholds, this would constitute a significant impact, and mitigation measures to reduce, eliminate, or avoid the significant impacts are suggested. This section also analyzes cumulative impacts, as described in this section under *Approach to Cumulative Impacts*.

CEQA Methodology

CEQA Guidelines Section 15151 provides guidance for the preparation of an adequate EIR.

- An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information that enables them to make a decision that intelligently takes account of environmental consequences.
- An evaluation of the environmental impacts of a project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible.
- Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts.

In practice, this guidance suggests that EIR preparers adopt a reasonable methodology to estimate impacts and make reasonable assumptions using the best information reasonably available.

It has been determined that (1) the Project would have effects that either were not analyzed in the prior El Camino Real/Downtown Specific Plan (Specific Plan) EIR (certified June 2012) or would be more significant than described in the prior EIR, and (2) that no uniformly applicable development policies would substantially mitigate such effects. Therefore, since these impacts could be significant, this Infill EIR is required to analyze those effects.

The Project site is within the Specific Plan area. Since the Project's site plan and development parameters are consistent with the Specific Plan, the programmatic Specific Plan EIR is applicable to this Project. Therefore, an Infill Environmental Checklist for the Project has been prepared by the City of Menlo Park (City), in conformance with Section 15183.3 of the CEQA Guidelines and Section 21094.5 of the Public Resources Code (PRC), and is included as Appendix 1-1. These guidelines were developed to eliminate repetitive analysis of the effects of a project that were previously analyzed in a programmatic EIR for a planning-level decision or are substantially mitigated by uniformly applied development policies. The Infill Environmental Checklist (Appendix 1-1) was used to limit the scope of the Infill EIR to the effects determined to be significant, identical to the function of an initial study as defined in Section 15063 of the CEQA Guidelines.

Section 15183.3 of the CEQA Guidelines and Section 21094.5 of the PRC, adopted per Senate Bill (SB) 226, outline the steps to streamline the CEQA process for projects that qualify as infill development. In order to qualify, a project site must be in an urban area that has been previously developed or that has urban uses on 75 percent of the site perimeter and must meet the following specified performance thresholds.

1. Inclusion of onsite renewable generation for the non-residential portion of the project.
2. Documentation of prior or planned remediation if the site has contamination issues.
3. Address local air quality issues if located near a high-volume roadway or other significant air pollution source.
4. If residential, must have one of the following: lower vehicle miles traveled (VMT) than regional average; be within 0.5 mile of a major transit stop or high-quality transit corridor; or include 300 or fewer units with 100 percent affordable or lower income housing.
5. If commercial, must have one of the following: lower VMT than regional average; or be within 0.5 mile of 1,800 dwelling units.
6. If office, must have one of the following: lower VMT than regional average; within 0.5 mile of a major transit stop or within 0.25 mile of a high-quality transit corridor.

The Office of Planning and Research's (OPR's) Appendix N, *Infill Environmental Checklist*, was used to evaluate the Project and document the Project's eligibility through the completion of the environmental checklist. The Project satisfied the Appendix N performance standards, listed below.

1. The Project would include the installation of an estimated 110-kilowatt (kW) photovoltaic system, which satisfies the inclusion of onsite renewable generation for the non-residential portion of the Project. Therefore, the renewable generation requirement is satisfied.
2. A discussion of the presence of hazardous substances at the Project site is described in detail in Chapter 2, *Project Description*. As described therein, where necessary, remediation is underway. Therefore, the documentation of prior or planned remediation is satisfied.

3. The Project would place residential uses within 500 feet of the Caltrain right-of-way and El Camino Real. The Project would install Minimum Efficiency Reporting Value (MERV) ventilation systems for residential uses to reduce the interior health risks to less than 10 in one million. This requirement was established by the health risk assessment prepared for the Specific Plan EIR.
4. The Project site is located in a low vehicle travel area, as defined in Appendix M.[1] The 2010 regional average VMT is 15.1 per capita, and the Project site is in a traffic analysis zone (TAZ) with approximately 14.9 VMT per capita.
5. The Project is within 0.5 mile of 1,800 dwelling units. With regard to office building projects, the Project is located within a low vehicle travel area, as defined in Appendix M.
6. The Project is located within 0.5 mile of an existing major transit stop (the Menlo Park Caltrain station).

In addition to meeting the above requirements, the Project site is within the Priority Development Area (PDA) in the adopted Plan Bay Area, which is the Sustainable Communities Strategy (SCS) for the Bay Area as required by SB 375. PDAs are areas where new development will support the needs of residents and workers in a pedestrian-friendly environment served by transit. Local jurisdictions, including Menlo Park, defined the character of their PDAs according to existing conditions and future expectations as regional centers, city centers, suburban centers, and/or transit town centers. Therefore, the Specific Plan serves as the PDA that includes the Project site. Since the Project is consistent with the Specific Plan (as discussed throughout this document), it is also consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in the SCS.

SB 743 provides some streamlining options, similar to those presented in SB 226, as described above. The SB 743 streamlining options were not employed in the Infill Environmental Checklist, but other provisions of SB 743 were deemed to be applicable. Specifically, SB 743 provides that "aesthetics and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." Aesthetics and parking will no longer be considered in determining if a project has the potential to result in significant environmental effects provided, a project meets all of the following three criteria:

1. The project is in a transit priority area,[2]
2. The project is on an infill site,[3] and
3. The project is residential, mixed-use residential, or an employment center.[4]

The Project meets these criteria. Criterion 1 is met because of the Project's location. As discussed in Chapter 2, *Project Description*, the Menlo Park Caltrain station is less than 300 feet south of the Project

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[1] Appendix M of the State CEQA Guidelines: Performance Standards for Infill Projects Eligible for Streamlined Review.

[2] *Transit priority area* is defined as an area that is within 0.5 mile of a major transit stop that is existing or planned, if the project is scheduled to be completed within the planning horizon included in an adopted federal Transportation Improvement Program (PRC Section 21099 (a)(7)).

[3] *Infill site* is defined as a lot located within an urban area that has been previously developed or on a vacant site where at least 75 percent of the perimeter of the site adjoins or is separated only by an improved public right-of-way from parcels that are developed with qualified urban uses (PRC Section 21099 (a)(4)).

[4] *Employment center* is defined as a project located on property zoned for commercial use with a floor-area ratio of no less than 0.75 within a transit priority area (PRC Section 21099 (a)(1)).

site, between Alma Street and El Camino Real, providing daily service between San Francisco and Gilroy. Criterion 2 is met because of the adjacent land uses, as discussed in Chapter 2, *Project Description,* and illustrated in Figure 2-1. As discussed therein, neighboring land uses include a hotel to the north, single- and multi-family residential units east of the Caltrain right-of-way, the Menlo Park Caltrain station and mixed-use development (including residential units) south of Oak Grove Avenue, and the El Camino Real commercial corridor to the west. The northeast corner of El Camino Real/Oak Grove Avenue, immediately adjacent to the Project site, includes a Chevron gas station and a restaurant/café. Downtown Menlo Park is approximately 0.1 mile southwest of the Project site, separated from the site by El Camino Real. Finally, Criterion 3 is met because of the proposed land uses at the Project site, which consist of mixed-use residential, as well as the proposed FAR of 1.5, which is greater than the 0.75 required by SB 743.

California Building Industry Association vs. Bay Area Air Quality Management District

The California Supreme Court concluded in the *California Building Industry Association vs. Bay Area Air Quality Management District* (CBIA vs. BAAQMD) case that "CEQA generally does not require an analysis of how existing environmental conditions will impact a project's future users or residents." The CBIA vs. BAAQMD 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 per 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 projects due to proximity to an airport (per PRC 21096); and 4) school projects require specific assessment of certain environmental hazards (per PRC 21151.8).

Classification of Impacts

In accordance with Section 15022(a) of the CEQA Guidelines, the City used the impact significance criteria designated by CEQA and CEQA Guidelines Appendix N, *Infill Environmental Checklist,* for this Infill EIR. These criteria, as well as City-adopted significance criteria for traffic impacts, are used to evaluate project impacts throughout this document. These criteria are listed at the beginning of the subsection *Environmental Impacts* under *Thresholds of Significance* throughout the resource sections in Chapter 3.

For each impact identified, a level of significance is determined using the following classifications.

- ***Significant (S)*** denotes effects that may have a significant impact. The analysis in these instances conservatively assesses the credible worst-case conditions, but the discussion acknowledges that there is some uncertainty regarding the credible extent of the impact.
- ***Less-than-significant (LTS)*** denotes effects that have a noticeable impact, but do not exceed established or defined thresholds or are mitigated below such thresholds.
- ***No impact (NI)*** denotes situations in which there is no adverse effect on the environment.

For each impact identified as being ***significant***, this Infill EIR provides mitigation measures to reduce, eliminate, or avoid the adverse effect. If the mitigation measures would successfully reduce the impact to a ***less-than-significant*** level, this is stated in this Infill EIR. However, if the mitigation measures

would not diminish these effects to ***less-than-significant*** levels, then this Infill EIR classifies the impacts as ***significant and unavoidable (SU)***.

In Chapter 3, impacts are defined using an alphanumeric system that identifies the environmental topic of the impact. For example, NOI-1 denotes the presentation of the first impact in the Noise section. The abbreviated codes used to identify the environmental issues discussed in Chapter 3 are listed below.

- AQ—Air Quality (construction)
- TRA—Transportation and Traffic
- NOI—Noise
- HAZ—Hazards and Hazardous Materials

Mitigation Measures

Mitigation measures identified in this Infill EIR were developed during the analysis and are designed to reduce, minimize, or avoid potential environmental impacts associated with the Project. According to CEQA Guidelines Section 15126.4:

> The discussion of mitigation measures shall distinguish between measures that are proposed by the project proponents to be included in the project and other measures proposed by the lead, responsible, or trustee agency or other persons that are not included, but the agency determines could reasonably be expected to reduce adverse impacts if required as conditions of approving the project. This discussion shall identify mitigation measures for each significant environmental effect identified in the EIR.

In this Infill EIR, mitigation measures are provided immediately following each significant impact. The mitigation measures are numbered to correspond to the impacts they address. For example, Mitigation Measure HAZ-2.1 refers to the first mitigation measure for Impact HAZ-2 in the *Hazards and Hazardous Materials* section.

If the Project is approved by City Council, then a Mitigation Monitoring and Reporting Program (MMRP) must be adopted. Pursuant to CEQA Guidelines Section 15097, an MMRP is a mechanism used for the monitoring and reporting of revisions to the Project or conditions of approval that the public agency has required as mitigation measures to lessen or avoid a significant environmental effect. The City can conduct the reporting or monitoring, or it can delegate the responsibilities to another public agency or private entity that accepts the delegation. The MMRP for the Project will identify (1) the specific monitoring actions that shall be done, (2) the various City departments or other entities that shall oversee the completion of the mitigation, and (3) a timeline for implementation of the measures. The responsible departments will ensure that due diligence is carried out during implementation of the measures. Execution of the MMRP would reduce the severity or eliminate the significant impacts identified in this EIR.

Environmental Baseline

In determining whether impacts are significant, an EIR ordinarily compares the potential impacts of the project with pre-project environmental conditions. Sections 15125(a) and 15126.2(a) of the CEQA Guidelines specify that the baseline normally consists of the physical conditions that exist at the time the notice of preparation (NOP) is published or the time the environmental analysis begins.

The approach to the analysis of the Project is consistent with the CEQA Guidelines. At the time the NOP was released (July 14, 2014), the Project site generally consisted of vacant, previously developed land in the northern portion and commercial buildings along Derry Lane and Oak Grove Avenue in the southern portion. Greenheart Land Company (Project Sponsor) proposes to demolish the existing structures in the southern portion of the site and construct approximately 420,000 square feet (sf) of mixed uses at the Project site. In total, the Project would include three mixed-use buildings, a surface parking lot, an underground parking garage, onsite linkages, and landscaping. Therefore, the baseline, and the point from which all impacts are measured for the Project site, is as a partially unoccupied site with vacant buildings and partially occupied site with commercial buildings.

Approach to Cumulative Impacts

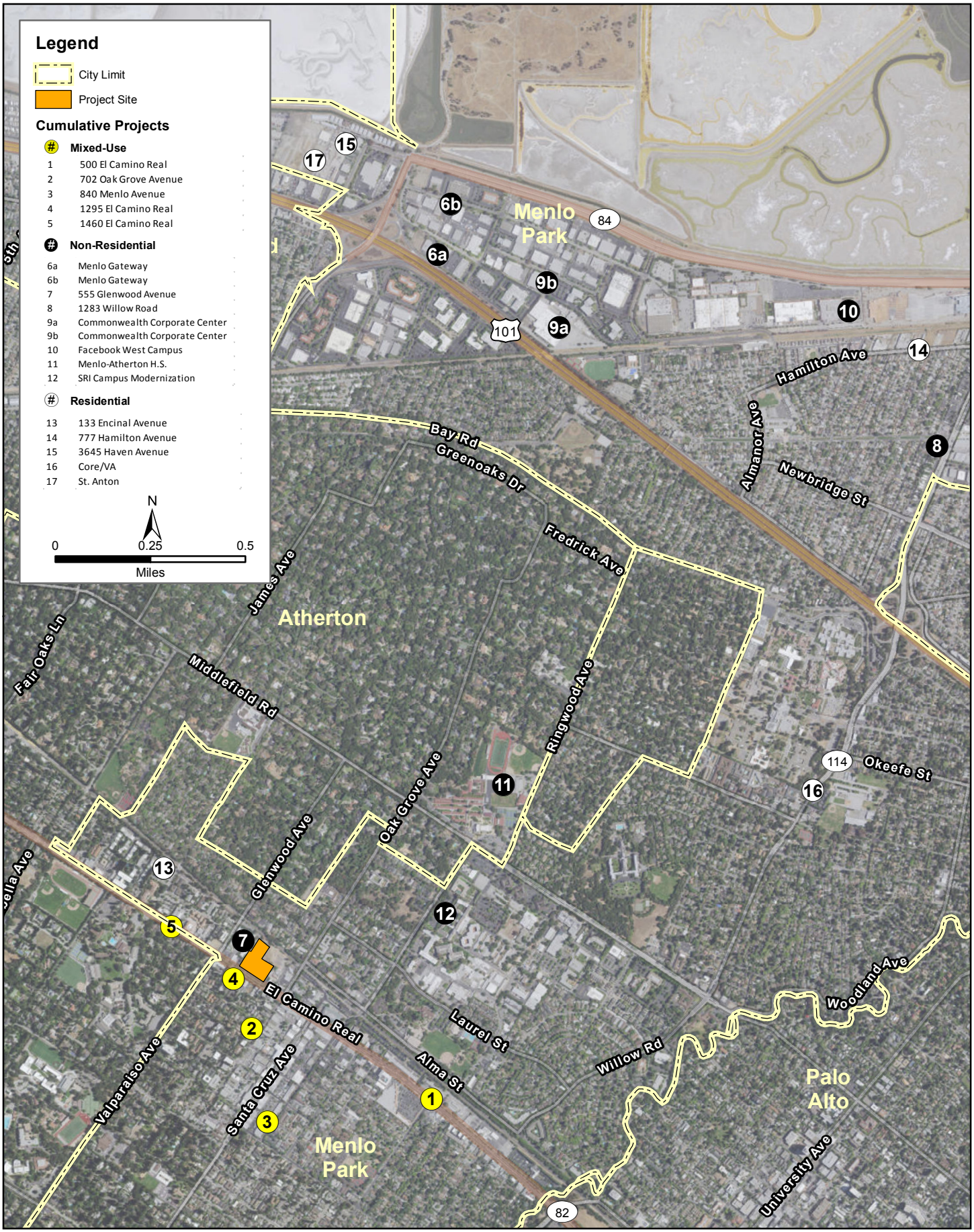
In addition to the evaluation of project-specific impacts, CEQA also requires an evaluation of cumulative impacts. In accordance with CEQA, the discussion of cumulative impacts must reflect the severity of the impacts and the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. According to Section 15355 of the CEQA Guidelines:

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

Throughout this Infill EIR, cumulative impacts are denoted by a "C" (i.e., Impact C-NOI-1). An analysis of cumulative impacts follows the Project-specific impact evaluation and recommendation of mitigation measures in each section. An introductory statement defining the cumulative context that is being analyzed for respective sections (e.g., the City, the San Francisco Bay Area Air Basin) is included at the beginning of each cumulative impacts section. In some instances, a Project-related impact may be considered ***less than significant*** but would be considered ***significant*** in combination with development of the surrounding area. Similarly, a Project-specific significant impact may not result in a cumulatively considerable impact. Cumulative projects are summarized in Table 3.0-1 (presented at the end of this section) and shown in Figure 3.0-1.

Impacts Requiring No Further Analysis

Section 15128 of the CEQA Guidelines states, "An EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR." As described in Chapter 1, *Introduction*, the *Infill Environmental Checklist* (Appendix 1-1) determined that no further analysis was required for the following impacts: Agricultural and Forestry Resources, Air Quality (operational), Biological Resources, Cultural Resources, Geology and Soils, Greenhouse Gas Emissions, Hydrology/Water Quality, Land Use and Planning, Mineral Resources, Noise (all but traffic noise), Population and Housing, Public Services, and Utilities and Service Systems. Therefore, these issues are not discussed further in Chapter 3 of this Draft



Source: City of Menlo Park, ICF 2015

Figure 3.0-1
Cumulative Projects

Infill EIR but are briefly summarized below. In addition, because of the Project's consistency with SB 743 criteria, as discussed above, aesthetics and parking issues are not considered to be impacts under CEQA.

For the impact topics discussed below, the Project would incorporate all applicable mitigation measures from the Specific Plan EIR. The physical conditions, as they relate to these topics, have not changed substantially in the Specific Plan area since the preparation of the Specific Plan EIR. No substantial new information has since been presented that shows more significant effects than those originally analyzed in the Specific Plan EIR and, therefore, there would be no new specific effects as a result of the Project related to these topics. No additional mitigation measures beyond those in the Specific Plan EIR are required.

Agricultural and Forestry Resources

The Project site is zoned SP-ECR/D and within the El Camino Real Mixed Use-Residential General Plan land use designation, which permits a variety of retail uses, personal services, business and professional offices, and residential uses. These land uses would continue with the implementation of the Project. No agricultural or forestry resources exist at the Project site. Thus, the Project would have no impact on farmlands, agricultural resources, the loss of forest land, or the conversion of forest land to nonforest land. Agricultural and forestry resources were analyzed in the Specific Plan EIR (page 6-4) and were determined to result in no impact. Thus, no mitigation measures are required.

Air Quality (Operational)

The Project was analyzed as part of the Specific Plan EIR under the Bay Area Air Quality Management District (BAAQMD) 2010 Clean Air Plan. The Specific Plan EIR found that VMT would increase at a greater rate than population; therefore, the Specific Plan would be inconsistent with the BAAQMD 2010 Clean Air Plan, resulting in significant and unavoidable impacts. As described in the Specific Plan EIR, implementation of Mitigation Measure TR-2 would require Transportation Demand Management (TDM) strategies be implemented to help reduce VMT impacts, but impacts would not be reduced to a less-than-significant level. TDM measures proposed as part of the Project (see Chapter 2, *Project Description*) would ensure that Project operations would not result in a cumulatively considerable net increase of any criteria pollutants. Therefore, the Project would not result in any additional operations-related impacts beyond those originally analyzed in the Specific Plan EIR.

While roadway volumes would increase along El Camino Real with implementation of the Project, this increase would be below the BAAQMD significance criterion for cancer, non-cancer, and health risks related to particulate matter with a diameter of 2.5 micrometers or less (PM2.5). However, implementation of the Project would locate new residences along El Camino Real and the Caltrain right-of-way, which have elevated concentrations of toxic air contaminants (TACs) and PM2.5. Mitigation Measures AIR-5 and AIR-7 in the Specific Plan EIR (page 4.2-21 and pages 4.2-23 to 4.2-25, respectively) would reduce cancer risk to a less-than-significant level. The Project would not include any typical odors of concern and, therefore, would have no impact.

Construction of the proposed land uses could overlap, resulting in substantial pollutant emissions that would contribute to an air quality violation and exceed the BAAQMD's applicable significance threshold. Because of the potential overlap, construction emissions associated with the Project would cause a significant and unavoidable impact. Mitigation Measures AIR-1a and AIR-1b (pages 4.2-15 to 4.2-16) would reduce the amount of criteria pollutant emissions associated with construction of the Project but not to a less-than-significant level. However, because the proposed land uses were included in the

Specific Plan development scenario, the Project would not result in any additional construction-related impacts beyond those disclosed in the Specific Plan EIR. Construction of the Project could also expose sensitive receptors to increased TACs. The Specific Plan EIR did not conduct an analysis related to TAC exposure during construction; therefore, health risks to nearby receptors from exposure to construction-related diesel particular matter and PM2.5 exhaust emissions are analyzed in Section 3.2, *Air Quality*.

Biological Resources

The pallid bat *(Antrozous pallidus)* is the only special-status bat species that has the potential to roost in the Project site, particularly in the 37 heritage trees to be removed and the seven structures to be demolished during Project construction. These direct disturbances, along with indirect disturbances including noise or increased human activity in the area, would have a significant impact on the pallid bat. Mitigation Measures BIO-5a, BIO-5b, and BIO-5c, as described in the Specific Plan EIR (pages 4.3-29 to 4.3-31), would reduce this impact to a less-than-significant level. In addition, Cooper's hawk *(Accipiter cooperii)* may be present at the Project site. Implementation of Mitigation Measures BIO-1a and BIO-1b, as presented in the Specific Plan EIR (pages 4.3-24 to 4.3-27), would reduce potential impacts on Cooper's hawk to a less-than-significant level. The Project would include the removal of 37 heritage trees, but the City code requires a removal permit and replacement at a 1:1 ratio for residential projects and a 2:1 ratio for commercial projects. As such, the City's procedures and the Specific Plan guidelines would mitigate the loss of heritage trees. There would be a less-than-significant impact. No additional mitigation would be required.

The Project site boundaries do not include riparian habitat or natural plant communities, and no wetlands or other waters of the United States are present or adjacent to the Project site. Therefore, there would be a less-than-significant impact on riparian habitats or other sensitive natural communities. The Project site does not include federally protected wetlands and is not part of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation. Therefore, the Project would result in no impact, and no mitigation would be required. Impacts on the riparian habitat, etc., were reviewed in the Specific Plan EIR.

Cultural Resources

A site-specific evaluation was conducted in January 2014, which concluded that none of the seven existing buildings at the Project site are listed on, or appear to be eligible for listing on, the California Register of Historic Places or local registers. Additionally, none of the buildings meet the definition of historical resources pursuant to CEQA Guidelines Section 15064.5. However, the Project site is highly sensitive for paleontological and archaeological deposits, which may meet the definition of historical resources under CEQA. Subsurface Project construction could result in damage to such deposits and, therefore, Mitigation Measures CUL-2 and CUL-3, as presented in the Specific Plan EIR (page 4.4-18 to 4.4-19), would reduce these impacts to a less-than-significant level. Additionally, Project construction would include soil excavation and grading, which may disturb potential human remains near the Project site. Disturbance of human remains would result in a significant impact, and Mitigation Measure CUL-4, as described in the Specific Plan EIR (pages 4.4-19 to 4.4-20), would reduce this impact to a less-than-significant level.

Geology and Soils

As stated above, the CBIA vs. BAAQMD case does not require analysis of how existing environmental conditions will impact a project's future users or residents. The following text is summarized from the Infill Environmental Checklist, which was prepared prior to the CBIA vs. BAAQMD ruling. The following discussion is provided here for informational purposes only. The Project site is not within an Alquist-Priolo Fault Rupture Hazard Zone and no mapped active faults are known to pass through the immediate Project region. Alluvial deposits present at the Project site could expose Project occupants to substantial ground shaking. Construction of the Project would remove the existing groundcover and expose the underlying soils to wind and water, potentially contributing to erosion. However, the Project site consists of relatively flat topography, and there is little potential for erosion. The preliminary geotechnical investigation indicated that the soils at the Project site have low expansion potential. Nonetheless, prior to construction, uniformly applicable policies would require the Project site to be evaluated for the potential for landslides, lateral spreading, subsidence, and collapse using geotechnical practices; no additional mitigation is required. The Project would not require septic tanks or leach systems and wastewater would be disposed through the existing sanitary sewer system. The Project would not exacerbate any existing geologic hazards.

Greenhouse Gas Emissions

The Specific Plan EIR concluded that vehicle trips, natural gas and electricity consumption, solid waste generation, water and wastewater conveyance and treatments, and landscape maintenance would exceed the applicable BAAQMD per capita threshold and would result in a significant and unavoidable impact on the environment. The Project would implement Mitigation Measures GHG-1, GHG-2a, and GHG-2b, as discussed in the Specific Plan EIR (pages 4.6-19 to 4.6-25). In addition, the Project Sponsor would comply with the guidelines and standards in the Specific Plan aimed at reducing GHG emissions, obtain and install electric vehicle/plug-in vehicle recharging stations, and participate in a recycling program as required by the City. Although impacts would be significant and unavoidable, even with the implementation of mitigation measures, the Project would not result in new specific effects or more significant effects than those evaluated in the Specific Plan EIR.

Hazards and Hazardous Materials

The Project site is not located within an airport land use plan area or within the vicinity of a public or private use airport, resulting in no impacts involving airport hazards to people residing or working at the Project site. In addition, the Project would not physically impair or interfere with emergency response or evacuation in the Project vicinity. Adherence to the Local Hazard Mitigation Plan, the City's Emergency Operation Plan (EOP), and the requirements of the Menlo Park Fire Protection District (MPFPD) would reduce the potential for interfering with emergency plans. Therefore, the Project would result in a less-than-significant impact. Since the Project site is not located within a *very high* fire risk area or near wildlands, the Project would have no impact on people or structures involving wildland fires.

Contamination exists at the Project site in the form of perchloroethylene (PCE), trichloroethylene (TCE), dichloroethane (DCE), and vinyl chloride, which have affected soil and groundwater, from historical activities conducted by Wo Sing Laundry and Dry Cleaners. In addition, as detailed in the Phase I ESA for

the 1300 El Camino Real site,[5] historic automotive detailing and painting operations, a former pad-mounted transformer, and undocumented fill may have affected soil within the site. Portions of 21 hydraulic lifts remain on the property. Therefore, residual hydraulic oil may exist within these components, and affected soil may exist in the soil below the lifts and their surroundings. The pad-mounted transformer was located in the western portion of the property and may have contained dielectric oil (with polychlorinated biphenyls [PCBs]). Additionally, historical information suggests that building materials from 1300 El Camino Real, 1258 El Camino Real, and Derry Lane could contain unknown quantities of asbestos-containing materials (ACMs) and lead-based paint. Potential ACMs in the area would consist of concrete, stucco, paint, sheetrock, mortar, mastic, window putty, and roofing materials. Potential lead-based paint might be found in cinder block walls, stucco, sheetrock, concrete flooring, and wood ceilings.

The physical conditions, as they relate to the transport and use of hazardous materials and the accidental release of hazardous materials, have not changed in the Specific Plan area since the preparation of the Specific Plan EIR. However, due to the extent of the identified hazardous materials at the Project site and the possibility that the project may exacerbate these existing hazards, it has been determined that these topics require further discussion. These topics are analyzed in further detail in Section 3.4, *Hazards and Hazardous Materials*.

Hydrology/Water Quality

Excavation activities during Project construction would result in short-term disturbance and exposure of surface soils, which could cause erosion and increase sediment and pollutant loading in stormwater runoff. Therefore, the Project Sponsor would be required to implement a stormwater pollution prevention plan (SWPPP), including the implementation of stormwater quality best management practices (BMPs) during Project construction. In addition, the Project Sponsor would have to apply for an individual waste discharge requirement (WDR)/National Pollutant Discharge Elimination System (NPDES) permit if substantial dewatering is required, as well as a grading and drainage (G&D) permit to show that sediment-laden water would not leave the site..

Compliance with these requirements, as set forth by the City, San Mateo County, the Regional Water Quality Control Board, and Specific Plan guidelines, would ensure that the Project would have a less-than-significant impact on erosion and runoff of soils, siltation, water quality standards, and groundwater supplies during construction and operation. The Project would be served by the City's stormwater drainage, which has adequate capacity, and, consequently, would have a less-than-significant impact on existing stormwater drainage systems. The Project site is not within a Federal Emergency Management Agency (FEMA)-designated flood zone, within a potential dam inundation area, or an area susceptible to tsunamis and, consequently, would not exacerbate any hazards related to these conditions. Therefore, there would be no impact related to levee or dam flooding and seiche, tsunami, or mudflow.

Land Use and Planning

The Project would not include changes to the Caltrain corridor and El Camino Real barriers that currently limit east–west connectivity. Rather, implementation of the Project would include the extension of Garwood Way through the Project site, thereby promoting additional connectivity in the

[5] Green Environment, Inc. 2012. *Phase I Environmental Site Assessment, 1300 El Camino Real, Menlo Park, California.* (GEI Project: A12777.) March 20. Prepared for Bayfront Investments, LLC.

area. The Project would not exacerbate existing barriers or create new ones. The Project site is not part of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation. Therefore, the Project would have no impact on these plans.

Since the Project site is within the Specific Plan Area, the Project is required to abide by the Specific Plan land use designations, goals, and policies. The Project would meet the guiding principles of the Specific Plan by, providing public plazas, developing vacant and underutilized space, increasing retail sales, promoting east–west and north–south connectivity, and encouraging access to public transit. The Project is eligible for a Public Benefit Bonus and would be consistent with the floor area ratio (FAR), height, and densities permitted in the Specific Plan EIR. Although the Project would include taller buildings than the buildings that currently exist, the Project would comply with the building height and massing controls set forth in the Specific Plan. In addition, although the Project would introduce more residential uses to the immediate area than already exist, the residential uses would complement existing retail, restaurant, cinema, and service uses. Overall, the proposed land uses at the Project site would be consistent with the existing land uses and the Specific Plan area standards and guidelines, resulting in less-than-significant impacts.

Mineral Resources

There are no known mineral resources at the Project site, and it is not delineated as a locally important mineral resource by the California Geological Survey (CGS) or on any county or city land use plan. Thus, there would be no impact on known mineral resources. This topic was analyzed in the Specific Plan EIR and also determined to result in no impact.

Noise (Construction)

Project construction would result in noise-related impacts from the operation of heavy-duty construction equipment and on-road vehicles, including construction worker commute vehicles, delivery trucks, and haul trucks. Construction noise as a result of the Project would be exempt during weekday hours but otherwise limited by the City's Noise Ordinance. Implementation of Mitigation Measures NOI-1a, NOI-1b, and NOI-1c, as described in the Specific Plan EIR (pages 4.10-11 to 4.10-12), would further reduce construction noise impacts applicable to daytime thresholds to a less-than-significant level.

Noise from roadway traffic, Caltrain, and Union Pacific Railroad operations could result in impacts on residential uses at the Project site. Train noise could be significant, as residences would be located near the train tracks. Although the effect of existing noise and vibration on the Project is no longer considered a CEQA impact, the residential units would be subject to analyses by acoustical engineers to document the necessary design features to meet interior noise criteria, per Mitigation Measure NOI-3 (pages 4.10-15 to 4.10-16 of the Specific Plan EIR). A vibration study, as required as Mitigation Measure NOI-4 (pages 4.10-16 to 4.10-17 of the Specific Plan EIR), would account for the impacts of groundborne vibrations from Caltrain operations and reduce impacts to an acceptable level. No additional mitigation measures are required. The Project site is not located within proximity of an airport or private airstrip, resulting in no associated noise impacts.

With regard to traffic, operational noise could result in a permanent increase in ambient noise levels from the Project that was not considered in the Specific Plan EIR. Furthermore, this increase would expose nearby residences to increased noise levels. As such, this topic requires further environmental review in this Infill EIR. Noise impacts as a result of roadway traffic during Project operations are discussed in Section 3.3, *Noise*.

Population and Housing

The Project could include a mix of non-medical office, community-serving, and residential uses. Depending on the scenario, the Project could include a higher amount of office uses, or include a higher amount of community-serving uses within the office and residential buildings. In general, office uses generate the need for more employees than community-serving uses. If the Project would include the maximum amount of office and the minimum amount of community-serving uses,[6] then it is estimated that approximately 702 employees would be generated.[7] This is the conservative scenario and, therefore, is analyzed here. The Specific Plan would develop retail and commercial uses by 2030 that would employ up to 1,357 people. Therefore, the Project would represent approximately 52 percent of the anticipated job growth in the Specific Plan area.

The Project would also include the construction of up to 202 new housing units at the Project site. The units are generally expected to be utilized by singles and couples rather than large families. As such, the average household size would be more similar to that used in the Specific Plan rather than the current City average. Based on an average household size of 2.38 persons per household (per the Specific Plan), implementation of the Project would add approximately 481 people to the City's population. The Specific Plan would develop 680 housing units by 2030 that would house approximately 1,537 residents. Therefore, the Project would represent approximately 30 percent of the anticipated housing unit growth in the Specific Plan area.

The anticipated population growth from the proposed housing units and the employment growth as proposed under the Project would represent less than 1 percent of the City's current population and would result in approximately one-third of the City projected population growth through 2020. Therefore, the Project would not directly result in substantial population growth. The demand for additional housing as a result of the Project would be less than significant.

The Association of Bay Area Governments' (ABAG's) *Projections 2013* includes buildout of the Specific Plan, which encompasses development of the Project. Table 3.0-2 illustrates job and housing projections for the city through 2030, which are based on ABAG projections. These projections would not be affected by development of the Project because it is already accounted for in the projections.

Table 3.0-2. Jobs and Housing in the City

	2010	2015	2020	2030
Jobs/Housing without Project				
Jobs	29,830	31,920	34,130	34,760
Housing	14,128	14,490	14,870	15,610
Jobs/Housing Ratio	2.11	2.20	2.30	2.23

Source: Association of Bay Area Governments (ABAG). 2013. Projections 2013. December.

[6] Residential uses would require minimal employees and, therefore, are not included in the calculations. However, under both scenarios, the same amount of residential uses would be provided (202,100 sf).

[7] This estimate assumes 300 sf per office employee and 500 sf per retail employee. With full office buildout, approximately 199,300 sf of office and 18,600 sf of retail uses would be constructed (199,300 sf of office/300 sf) + (18,600 sf of retail/500 sf) = ~702 employees.

Public Services

The Project would increase the City's daytime population by approximately 702 people due to the increase in onsite employment. Additionally, the Project is anticipated to generate approximately 481 onsite residents. This would add to the service population of the MPFPD and the Menlo Park Police Department (MPPD). With an increase in the service population, approximately one additional staff member from each service would need to be hired to maintain the City's service ratios. Since the Project is within the proposed growth of the Specific Plan, and no new facilities would need to be constructed, the Project would have a less-than-significant impact on the MPFPD and the MPPD.

Due to the increase in onsite residents and Project employees potentially living in the City, new students would be added to the Menlo Park City School District and the Sequoia Union High School District. Therefore, the Project could trigger the need for new or expanded high school facilities. However, the Project is subject to SB 50, School Impact Fees, in which the payment of school fees is deemed as full and complete mitigation, resulting in less-than-significant impacts on schools. In addition, the population growth generated by the Project would increase the demand for park, recreation, and library services, but to a less-than-significant level.

Transportation/Traffic

As described above, the Project site is not located within an airport land use plan area and is not within 2 miles of a public airport or public use airport. Additionally, the maximum building height at the Project site would be approximately 48 feet. Therefore, the Project would have no impact on air traffic patterns. No mitigation would be required. Emergency access to the Project site would likely improve over existing conditions due to the new driveway at Garwood Way and, therefore, would have a less-than-significant impact on emergency access.

Conflicts with applicable transportation plans, ordinances, or policies, were analyzed in the Specific Plan EIR. The development under the Specific Plan was determined to result in significant and unavoidable impacts to area intersections and local roadway segments, even with implementation of Mitigation Measures TR-1a, TR-1b, TR-1c, and TR-1d and Mitigation Measure TR-2 (pages 4.13-40 to 4.13-53). The Project would likely affect intersections that were not previously evaluated under the Specific Plan EIR and could potentially impact pedestrian and bicycle facilities and transit load factors. Because the Project would potentially affect intersections not evaluated in the Specific Plan EIR, these topics require further environmental review in the Infill EIR. Therefore, these topics are further discussed in Section 3.1, *Transportation and Traffic*.

Utilities and Service Systems

The Project would continue to drain to the existing underground storm drains and would incorporate Low Impact Development (LID) treatment measures for stormwater management. Additionally, the Project would comply with applicable Specific Plan guidelines and implement a landscaping plan designed to provide stormwater treatment areas. As such, the Project would not require the construction of new stormwater drainage facilities or the expansion of existing facilities, resulting in a less-than-significant impact. The Project would be served by Ox Mountain Sanitary Landfill and would comply with federal, state, and local statutes and regulations. As such, there would be a less-than-significant impact on solid waste generation. The Project would also increase the demand for gas and electric service. However, existing electricity and gas lines in the vicinity of the Project site, provided by

Pacific Gas and Electric Company (PG&E), would continue to serve the site. Therefore, the Project would have a less-than-significant impact on wastewater treatment requirements, water demand, water supplies, water treatment facilities, and electric and gas utilities.

Table 3.0-1. Cumulative Projects (Near-Term Planned Developments in Project Vicinity)

Map ID	Project	Address	Land Use	Size (sf)	Approval Status
Mixed-Use Projects					
1	500 El Camino Real	500 El Camino Real	Residential Office Retail	170 du 199,500 sf 10,000 sf	Pending
2	702 Oak Grove Avenue	702 Oak Grove Avenue	Residential Office	4 du 3,469 sf	
3	840 Menlo Avenue	840 Menlo Avenue	Residential Office	3 du 6,300 sf	Pending
4	1295 El Camino Real	1295 El Camino Real	Residential Commercial	15 du 1,906 sf	Pending
5	1460 El Camino Real	1460 El Camino Real	Residential Office	16 du 26,800 sf	Approved
Non-Residential Projects					
6	Menlo Gateway	100-190 Independence Drive and 101-155 Constitution Drive	Office Health Club Restaurant Hotel	694,669 sf 68,964 sf 4,285 sf 230 rooms	Approved
7	555 Glenwood Avenue	555 Glenwood Avenue	Hotel	138 rooms	Approved
8	1283 Willow Road	1283 Willow Road	Office Retail	3,800 sf 5,096 sf	Approved
9	Commonwealth Corporate Center	151 Commonwealth Drive and 164 Jefferson Drive	Office	259,920 sf	Approved
10	Facebook West Campus	1 Facebook Way (formerly 312 and 313 Constitution Drive)	Office	433,656 sf	Approved
11	Menlo-Atherton H.S.	555 Middlefield Road	School	460 students	Pending
12	SRI Campus Modernization	333 Ravenswood Avenue	R&D Campus	3,000 employees	Pending
Residential Projects					
13	133 Encinal Avenue	133 Encinal Avenue	Residential	26 du	Pending
14	777 Hamilton Avenue	777 Hamilton Avenue	Residential	196 du	Approved
15	3645 Haven Avenue	3645 Haven Avenue	Residential	146 du	Approved
16	Core/VA	605 Willow Road	Residential	60 du	Approved
17	St. Anton	3639 Haven Avenue (formerly 3605-3639 Haven Avenue)	Residential	396 du	Approved

Notes: sf = square feet, du = dwelling unit

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3.1 Transportation/Traffic

This study provides an evaluation of traffic and transportation issues associated with implementation of the proposed 1300 El Camino Real Greenheart Project (Project). The transportation analysis for the Project was prepared according to the methodology detailed in the Menlo Park Transportation Impact Analysis Guidelines to meet the criteria established in the San Mateo County Congestion Management Program (CMP). Potential impacts on intersections, local roadway segments, highways, transit, bicycle transit, and pedestrian facilities were evaluated following these standards, methodologies, and significance criteria. Particular attention was given to vehicular impacts on transportation facilities located within the city of Menlo Park and the surrounding jurisdictions.

In response to the NOP, several comment letters were received. These included requests for analysis of certain transportation issues such as the inclusion of intersections and roadway segments into the study area, consideration of Transportation Demand Management programs, and other transportation issues. These issues have been incorporated into the analysis in this report to the extent that is consistent with the City's Traffic Impact Analysis Guidelines.

The following conditions were evaluated as part of this study:

a) Existing Conditions

b) Near-Term 2020 Conditions (existing [a] + approved projects + background growth)

c) Near-Term 2020 [b] plus-Project Conditions

d) Cumulative 2040 Conditions (existing [a] + approved and pending projects + background growth)

e) Cumulative 2040 [d] plus-Project Conditions

Study Intersections and Roadway Segments

City of Menlo Park (City) staff members selected the 40 intersections and 26 roadway segments to be analyzed; these are the facilities that are most likely to be affected by the Project. The study area is shown in Figure 3.1-1, and the study intersection geometries are shown in Figure 3.1-2. The analysis of these intersections was conducted for the AM and PM Peak-Hour commute times on a typical weekday.

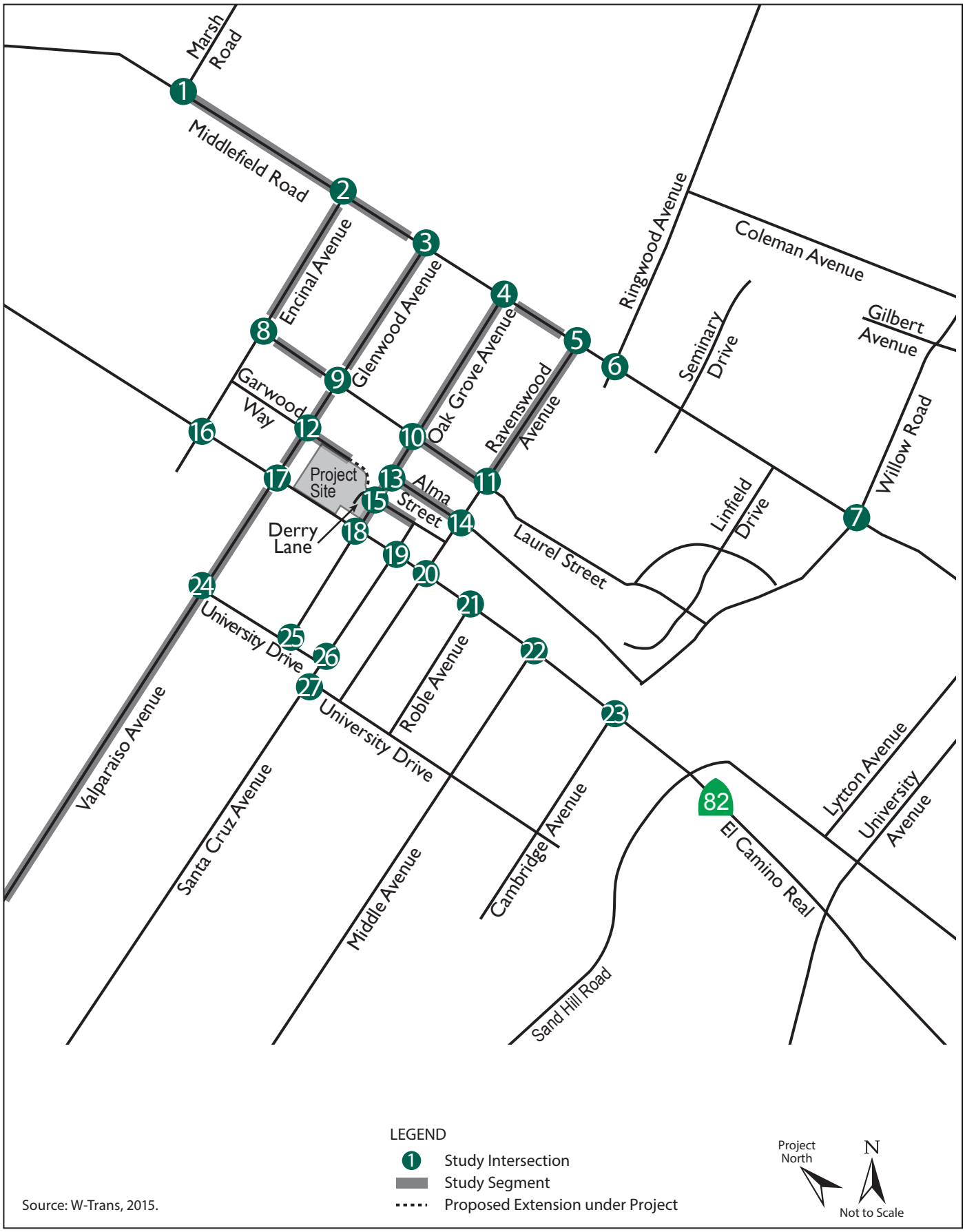
The following are the study intersections, with the controlling agency shown in parenthesis:

1. Middlefield Road and Marsh Road (Atherton)
2. Middlefield Road and Encinal Avenue (Atherton)
3. Middlefield Road and Glenwood Avenue (Atherton)
4. Middlefield Road and Oak Grove Avenue (Atherton)
5. Middlefield Road and Ravenswood Avenue (Menlo Park)
6. Middlefield Road and Ringwood Avenue (Menlo Park)
7. Middlefield Road and Willow Road (Menlo Park)
8. Laurel Street and Encinal Avenue (Menlo Park)
9. Laurel Street and Glenwood Avenue (Menlo Park)

10. Laurel Street and Oak Grove Avenue (Menlo Park)
11. Laurel Street and Ravenswood Avenue (Menlo Park)
12. Garwood Way and Glenwood Avenue (Menlo Park)
13. Alma Street and Oak Grove Avenue (Menlo Park)
14. Alma Street and Ravenswood Avenue (Menlo Park)
15. Derry Lane (Garwood Way)/Merrill Street and Oak Grove Avenue (Menlo Park)
16. El Camino Real and Encinal Avenue (California Department of Transportation [Caltrans])
17. El Camino Real and Valparaiso Avenue/Glenwood Avenue (Caltrans)
18. El Camino Real and Oak Grove Avenue (Caltrans)
19. El Camino Real and Santa Cruz Avenue (Caltrans)
20. El Camino Real and Ravenswood Avenue/Menlo Avenue (Caltrans)
21. El Camino Real and Roble Avenue (Caltrans)
22. El Camino Real and Middle Avenue (Caltrans)
23. El Camino Real and Cambridge Avenue (Caltrans)
24. University Drive and Valparaiso Avenue (Menlo Park)
25. University Drive and Oak Grove Avenue (Menlo Park)
26. Santa Cruz Avenue and University Drive (North) (Menlo Park)
27. Santa Cruz Avenue and University Drive (South) (Menlo Park)

The following roadway segments, all controlled by the City of Menlo Park unless otherwise noted, were also evaluated:

1. Middlefield Road between Marsh Road and Glenwood Avenue (Atherton)
2. Middlefield Road between Oak Grove Avenue and Ravenswood Avenue (Atherton)
3. Laurel Street between Encinal Avenue and Glenwood Avenue
4. Laurel Street between Oak Grove Avenue and Ravenswood Avenue
5. Ravenswood Avenue between Laurel Street and Middlefield Road
6. Encinal Avenue between Laurel Street and Middlefield Road (partially in Atherton)
7. Valparaiso Avenue between University Drive and El Camino Real
8. Glenwood Avenue between El Camino Real and Laurel Street
9. Glenwood Avenue between Laurel Street and Middlefield Road (Atherton)
10. Oak Grove Avenue between El Camino Real and Laurel Street
11. Oak Grove Avenue between Laurel Street and Middlefield Road (partially in Atherton)
12. Alma Street between Oak Grove Avenue and Ravenswood Avenue



Source: W-Trans, 2015.

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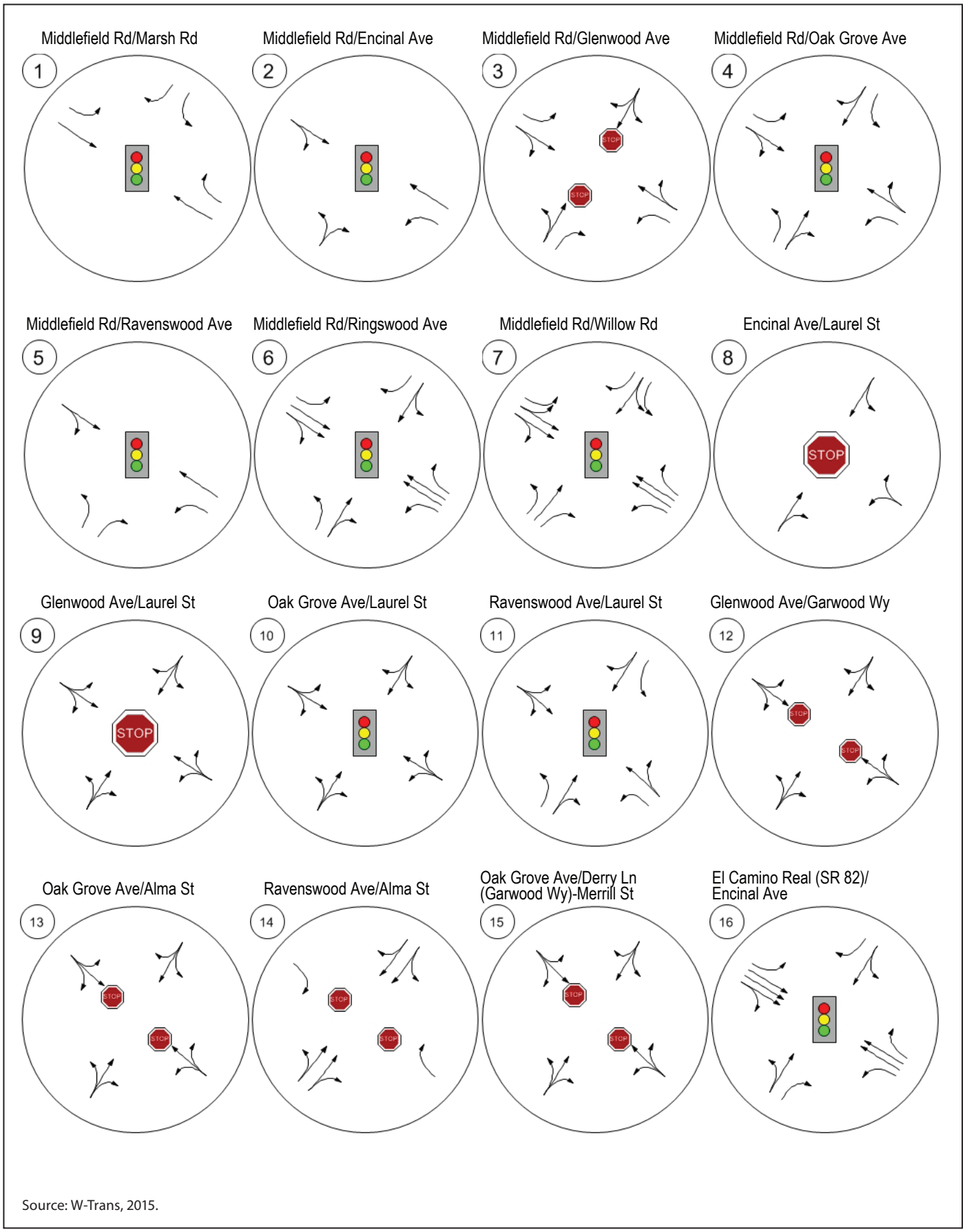
Figure 3.1-1
Study Network
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

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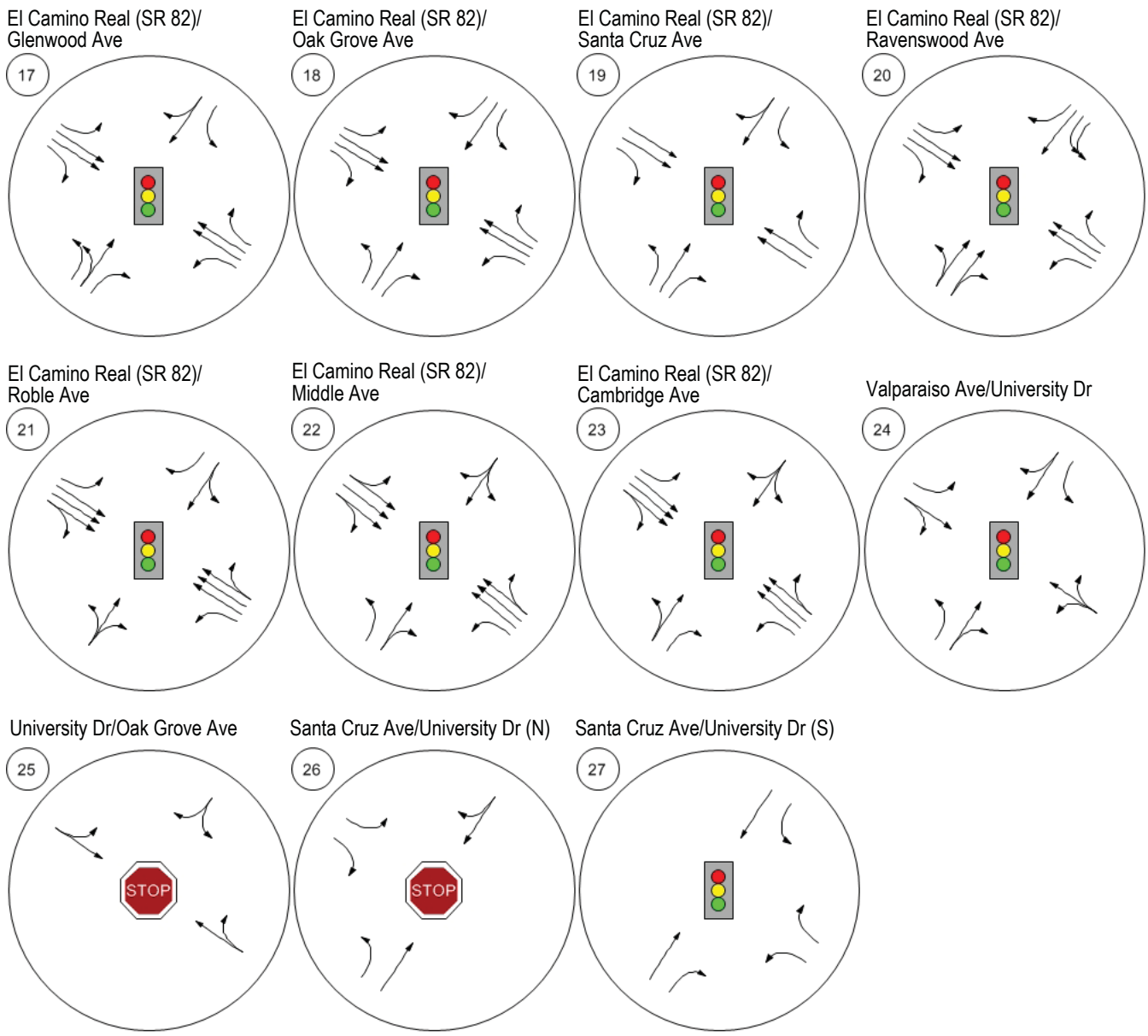
Figure 3.1-2A
Existing Lane Configurations
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

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Figure 3.1-2B
Existing Lane Configurations
1300 El Camino Real Greenheart Project

13. Garwood Way between Glenwood Avenue and Oak Grove Avenue
14. Merrill Street between Oak Grove Avenue and Ravenswood Avenue

Roadway Network

The existing roadway network in the vicinity of the Project site is illustrated in Figure 3.1-1. It is acknowledged that streets in Menlo Park generally do not follow a true north-south or east-west alignment. For the purpose of this analysis, both US 101 and El Camino Real are considered roadways with a north-south alignment. The alignment designation of all other streets was based on the street's relative position to US 101 and/or El Camino Real.

The following are descriptions of regional routes in the vicinity of the Project site as well as routes that provide a direct connection between the Project site and regional routes.

US 101 – US 101 is a north-south highway that extends from Los Angeles, California, to Olympia, Washington. US 101 is a major corridor in San Mateo County. In Menlo Park, US 101 is owned and operated by Caltrans. The segment of US 101 in Menlo Park is an eight-lane, grade-separated freeway. The Project site is located approximately 3 miles west of US 101 via Willow Road and approximately 2.5 miles west of US 101 via Marsh Road. US 101 has high-occupancy vehicle (HOV) lanes in both directions in Menlo Park. There is an auxiliary lane, or a fifth lane, which provides additional room for merging into and out of freeway traffic, in both directions between the Marsh Road intersection and the University Avenue interchange. The posted speed limit on US 101 near the Project site is 65 miles per hour (mph).

Bayfront Expressway (SR 84) – Bayfront Expressway, also designated as State Route (SR) 84, is a six-lane highway that connects Marsh Road with the Dumbarton Bridge and, ultimately, Alameda County to the east. As a State Route, Bayfront Expressway is owned and operated by Caltrans. On-street parking is prohibited on Bayfront Expressway, and the posted speed limit is 50 mph.

El Camino Real – El Camino Real, also designated as SR 82, is a primary arterial roadway and commercial corridor on the San Francisco Peninsula. El Camino Real is one of the routes included in the San Mateo County Smart Corridor Project, an Intelligent Transportation System (ITS) program that has been designed to improve mobility along the US 101 corridor (including parallel routes) in San Mateo County. The Project site is located on El Camino Real. Within Menlo Park, El Camino Real has two lanes in each direction north of Ravenswood Avenue/Menlo Avenue; to the south, three lanes are provided in each direction. The route has a posted speed limit of 35 mph. As a regional route, El Camino Real extends from Santa Clara County, to the south, and continues through Daly City, to the north, where it continues as Mission Street.

Middlefield Road – Middlefield Road is a north-south street with a posted speed limit of 30 mph. It is classified as a Minor Arterial. Middlefield Road has one through lane in each direction north of Ringwood Avenue; two lanes are provided in each direction south of Ringwood Avenue. On-street parking is not permitted. Middlefield Road provides access to mainly residential, office, and school sites.

Ravenswood Avenue – Ravenswood Avenue is an east-west street. It is classified as a Minor Arterial between El Camino Real and Middlefield Road. Ravenswood Avenue has a posted speed limit of 30 mph and has one lane in each direction east of Noel Drive and two lanes in each direction between El Camino Real and Noel Drive. It provides access to both commercial and residential uses.

Laurel Street – Laurel Street is a north-south street with one lane in each direction and a 25 mph posted speed limit. It is classified as a Collector between Willow Road and Glenwood Avenue. The Project site lies west of Laurel Street.

Bicycle and Pedestrian Facilities

The *Highway Design Manual* (Caltrans 2012) classifies bikeways according to four categories:

- Class I Multi-Use Path: A completely separated right-of-way for the exclusive use of bicycles and pedestrians, with cross flows of motorized traffic minimized.
- Class II Bike Lane: A striped and signed lane for one-way bike travel on a street or highway.
- Class III Bike Route: Signed only for shared use with motor vehicles within the same travel lane on a street or highway.
- Class IV Bikeways: A separated bikeway for the exclusive use of bicycles and includes a separation between the bikeway and the through vehicular traffic.

The Project site is bounded by continuous Class II bike lanes on Laurel Street, Willow Road, Middlefield Road, and Ravenswood Avenue. There are also Class II facilities on the surrounding streets (i.e., Valparaiso Avenue, Santa Cruz Avenue, Encinal Avenue, Willow Avenue, Alma Street, Middlefield Road).

The El Camino Real Corridor Study, which is currently being conducted, includes alternatives that would provide bicycle lanes on El Camino Real within the city limits. In addition, recommendations from the El Camino Real/Downtown Specific Plan (Specific Plan) include Class II bike lanes on Oak Grove Avenue between University Drive and Laurel Street and a Class III Bike Route on Garwood Way between Encinal Avenue and Oak Grove Avenue.

Pedestrian facilities include sidewalks, crosswalks, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. Adjacent to the Project site, there is an enhanced lighted crosswalk on the west leg of Oak Grove Avenue/Merrill Street that would provide pedestrian access to the nearby Caltrain station. In general, the network of sidewalks, crosswalks, pedestrian signals, and curb ramps accommodates pedestrians in the vicinity of the Project site.

There are continuous sidewalks along El Camino Real, Glenwood Avenue, and Oak Grove Avenue adjacent to the Project site. In the vicinity of the Project site, the sidewalks are in generally good condition, although narrow in width. Marked crosswalks with pedestrian signal phasing are provided at all signalized study intersections.

Transit Facilities

Local transit services in the vicinity of the Project site are provided by the San Mateo County Transit District (SamTrans). Additional regional services are provided by Caltrain, the Santa Clara Valley Transportation Authority (VTA), and Bay Area Rapid Transit (BART).

SamTrans

SamTrans, a fixed-route bus transit service, serves primarily as a local transit provider within San Mateo County but also provides connecting regional services to neighboring Santa Clara and San Francisco Counties. All SamTrans buses are equipped with bike racks. Two additional bikes are allowed inside the bus, depending on passenger loads.

The following SamTrans routes serve the Project site:

- Route 286 serves the West Menlo Park and Sharon Heights neighborhoods, along with the Downtown Menlo Park and the Menlo Park Caltrain station. The bus runs four times daily in each direction, twice in the morning and twice in the evening.
- Route 296 serves Redwood City, Atherton, Menlo Park, and East Palo Alto. Within the vicinity of the Project site, Route 296 stops at Santa Cruz Avenue/Merrill Street. The route serves the Redwood City Transit Center from approximately 5:15 a.m. to 11:00 p.m., with headways of 15 minutes on weekdays. On weekends, Route 296 runs from approximately 8:45 a.m. to 8:00 p.m. with half-hour headways. Route 296 serves both the Redwood City and Menlo Park Caltrain stations, where riders can transfer to Caltrain service or other SamTrans routes.
- Route ECR serves El Camino Real between Palo Alto and the Daly City BART station. The bus runs Monday through Friday from approximately 4:00 a.m. to 2:30 a.m., on Saturdays from 4:45 a.m. to 2:30 a.m., and on Sundays from 5:00 a.m. to 2:30 a.m., with headways of approximately 15 to 20 minutes.
- Route 397 serves San Francisco, South San Francisco, San Francisco International Airport, Burlingame, San Mateo, Belmont, San Carlos, Redwood City, and Palo Alto. The bus stops at Middlefield Avenue/Oak Grove Avenue, 0.75 mile from the Project site. This route provides only late-night service, operating with 1-hour headways from approximately 12:45 a.m. to 6:30 a.m.
- Routes 80, 82, 83, 84, 85, 86, 87, 88, and 89 provide school-oriented services. These routes operate only on school days and are timed to coincide with school arrival and dismissal times.

SamTrans provides paratransit services through the affiliated Redi-Wheels and RediCoast providers. Paratransit, also known as dial-a-ride or door-to-door service, is available for those who are unable to use the transit system independently because of a disability.

Stanford Marguerite Shuttle

Stanford University operates the Marguerite Shuttle, which provides free public service within the main campus as well as destinations near campus. The Marguerite BOH line also provides service between the main campus and Stanford Children's Hospital, near the US 101 interchange at Marsh Road, via El Camino Real, Ravenswood Avenue, and Ringwood Avenue. In the vicinity of the Project site, the nearest shuttle stop for the BOH line is the Menlo Park Caltrain station. The shuttle operates on weekdays from 7:00 a.m. to 7:20 p.m., with headways of approximately 20 to 30 minutes.

Regional Transit Services

In addition to the local service provided by SamTrans, the regional transit services discussed below are also available in the vicinity of the Project site and along San Francisco Peninsula. These services are not intended for riders who travel only within Menlo Park; instead, they provide connections between Menlo Park and neighboring cities and counties.

Caltrain

Caltrain is a commuter rail line that serves the San Francisco Peninsula. It connects Menlo Park with San Francisco to the north and San José and Gilroy to the south. On weekdays, approximately 32 trains service the Menlo Park station from each direction (i.e., northbound and southbound). There are four to six northbound trains during the AM and the PM Peak Periods (i.e., 7:00–9:00 a.m. and 4:00–6:00 p.m.)

and four or five southbound trains during the AM and the PM Peak Periods. On weekends, 14 to 16 trains stop at the station (both Saturday and Sunday). The Menlo Park Caltrain station is on the south side of Oak Grove Avenue, across the street from the Project site.

Santa Clara VTA

Santa Clara VTA operates Dumbarton Express routes DB/DB1/DB3, which serve Palo Alto, East Palo Alto, Menlo Park, and Union City. Route DB runs along University Avenue, US 101, Willow Road, and Bayfront Expressway. There are no Dumbarton Express stops near the Project site; however, the SamTrans ECR route provides connecting service to the Dumbarton Express. The Dumbarton Express operates only on weekdays from 5:30 a.m. to 9:00 p.m., with headways of approximately 30 minutes.

VTA also provides light-rail services within Mountain View, Santa Clara, Sunnyvale, Milpitas, San José, and Campbell. The nearest VTA light-rail station is the Downtown Mountain View station, with Caltrain providing a connection between Menlo Park and the light-rail service.

BART

BART provides heavy-rail rapid transit service within Alameda, Contra Costa, San Francisco, and northern San Mateo Counties. Although BART does not provide service within the city of Menlo Park, both Caltrain and SamTrans provide connections between BART and the Project site.

Regulatory Setting

City of Menlo Park

Menlo Park General Plan

The Menlo Park General Plan (General Plan), adopted in 1994, provides the framework for transportation planning within the city. The General Plan established goals relative to the safe and efficient movement of people and goods in and around the city while promoting alternative modes of transportation. In addition, an update to the General Plan, called ConnectMenlo, is currently in development.

Transportation-related goals and policies included in the Circulation and Transportation Element of the General Plan that are relevant to this Project include the following:

> **Goal II-A:** To maintain a circulation system using the Roadway Classification System that will provide for the safe and efficient movement of people and goods throughout Menlo Park for residential and commercial purposes.
>
> *Policy II-A-1:* Level of Service D (40 seconds average stopped delay per vehicle) or better shall be maintained at all City-controlled signalized intersections during peak hours, except at the intersection of Ravenswood Avenue and Middlefield Road and at intersections along Willow Road from Middlefield Road to US 101.
>
> *Policy II-A-3:* The City shall work with Caltrans to ensure that average stopped delay on local approaches to state-controlled signalized intersections does not exceed Level of Service E (60 seconds per vehicle).
>
> *Policy II-A-4:* New development shall be restricted or required to implement mitigation measures to maintain the levels of service and travel speeds specified in Policies II-A-1 through II-A-3.

Policy II-A-8: New development shall be reviewed for its potential to generate significant traffic volumes on local streets in residential areas and shall be required to mitigate potential significant traffic problem.

Goal II-B: To promote the use of public transit.

Policy II-B-1: The City shall consider transit modes in the design of transportation improvements and the review and approval of development projects.

Policy II-B-2: As many activities as possible should be located within easy walking distance of transit stops, and transit stops should be convenient and close to as many activities as possible.

Policy II-B-3: The City shall promote improved public transit service and increased transit ridership, especially to office and industrial areas and schools.

Goal II-C: To promote the use of alternatives to the single-occupant automobile.

Policy II-C-1: The City shall work with all Menlo Park employers to encourage the use of alternatives to the single-occupant automobile in their commute to work.

Policy II-C-2: The City shall provide information to existing and new Menlo Park employers to assist their employees in identifying potential carpools, transit alternatives, and other commute alternatives.

Policy II-C-6: The City shall, to the degree feasible, assist Menlo Park employers in meeting the Average Vehicle Ridership (AVR) targets established by the Bay Area Air Quality Management District.

Policy II-C-7: Commuter shuttle service between the industrial work centers and the Downtown Transportation Center should be maintained and improved, within fiscal constraints. The City shall encourage SamTrans and other agencies to provide funding to support shuttle services.

Goal II-D: To promote the safe use of bicycles as a commute alternative and for recreation.

Policy II-D-2: The City shall, within available funding, work to complete a system of bikeways within Menlo Park.

Policy II-D-4: The City shall require new commercial and industrial development to provide secure bicycle storage facilities on-site.

Goal II-E: To promote walking as a commute alternative and for short trips.

Policy II-E-1: The City shall require all new development to incorporate safe and attractive pedestrian facilities on-site.

Policy II-E-2: The City shall endeavor to maintain safe sidewalks and walkways where existing within the public right of way.

Policy II-E-3: Appropriate traffic control shall be provided for pedestrians at intersections.

Policy II-E-4: The City shall incorporate appropriate pedestrian facilities, traffic control, and street lighting within street improvement projects to maintain or improve pedestrian safety.

Policy II-E-5: The City shall support full pedestrian access across all legs of an intersection at all signalized intersections that are City controlled and at the signalized intersections along El Camino Real.

Goal II-F: To provide adequate parking in the downtown area, especially for retail customers and Caltrain patrons.

Policy II-F-1: Adequate off-street parking should be required for all new development in the downtown area.

Policy II-F-2: Short-term retail customer parking shall be first priority for the allocation of parking spaces in downtown parking plazas. Long-term employee parking shall be located in such a manner that it does not create a shortage of customer parking adjacent to retail shops.

El Camino Real/Downtown Specific Plan

The Specific Plan, adopted in 2012, establishes a framework for private and public improvements on El Camino Real, in the Caltrain station area, and in downtown Menlo Park. The standards and guidelines of this plan are applicable to private and public improvements in the area. Transportation-related standards and guidelines included in the Specific Plan that are relevant to this Project include the following:

F.5 Bicycle Storage Standards and Guidelines

Standard F.5.01: Outside downtown, new commercial and residential development shall provide secure bicycle storage facilities for long-term occupants (e.g., employees and residents) on-site.

Standard F.5.02: Outside downtown, new commercial and residential development shall provide bicycle parking spaces for long-term occupants and short-term visitors (e.g., employees and guests, respectively), per the requirements in Table F1.

Guideline F.5.04: Visitor and customer bicycle racks should be positioned in areas with active visual surveillance and night lighting, and protected from damage from nearby vehicles.

Guideline F.5.05: Outside downtown, bicycle racks should be located within 50 feet of each building's main entries. For retail buildings or other buildings with multiple main entries, bicycle racks should be proportionally distributed within 50 feet of business or other main entries.

City of Menlo Park Comprehensive Bicycle Development Plan

The 2005 Comprehensive Bicycle Development Plan (CBDP) provides a blueprint with strategies and actions related to bike usage, both for commuting and for recreation. The goals of this plan provide the framework for specific policies and actions with a long-range vision, while the policies provide specific actions for implementing the plan.

The following are the relevant bicycle-related goals and policies:

Goal 1: Expand and Enhance Menlo Park's Bikeway Network

Policy 1.1: Complete a network of bike lanes, bike routes, and shared-use paths that serve all bicycle user groups, including commuting, recreation, and utilitarian trips.

Goal 2: Plan for the Needs of Bicyclists

Policy 2.1: Accommodate bicyclists and other non-motorized users when planning, designing, and developing transportation improvements.

Policy 2.2: Review capital improvement projects to ensure that needs of bicyclists and other non-motorized users are considered in programming, planning, maintenance, construction, operations, and project development activities.

Policy 2.3: Encourage traffic calming, intersection improvements or other similar actions that improve safety for bicyclists and other non-motorized users.

Policy 2.4: Require developers to adhere to the design standards identified in this Comprehensive Bicycle Development Plan.

Goal 3: Provide for Regular Maintenance of the Bikeway Network

Policy 3.3: Develop a program to ensure that bicycle loop detectors are installed at all signalized intersections on the bike network and tested regularly to ensure they remain functional.

Policy 3.4: Require that construction or repair activities, both on street and at adjacent buildings, minimize disruptions to bicycle facilities, ensure bicyclist safety at all times, and provide alternate routes if necessary.

Goal 4: Encourage and Educate Residents, Businesses, and Employers in Menlo Park on Bicycling

Policy 4.6: Encourage major Menlo Park employers and retailers to provide incentives and support facilities for existing and potential employees and customers who commute by bicycle.

Policy 4.9: Promote bicycling as a healthy transportation alternative.

El Camino Real Corridor Study

A study of the El Camino Real corridor is currently underway. The study will review potential transportation and safety improvements for El Camino Real within the city limits. The improvements to El Camino Real that are being considered include capacity improvements, transportation safety improvements, and bicycle and pedestrian infrastructure enhancements.

City of Menlo Park Transportation Impact Fee Study

The City of Menlo Park Transportation Impact Fee, adopted in 2009, established the nexus between anticipated future development in the city of Menlo Park and the need for certain improvements to local transportation facilities. This nexus serves as the basis for requiring transportation impact fees from new developments. The projects that will be needed to support expected traffic growth were also identified.

Proportionate Cost-Sharing Program Study

The Proportionate Cost-Sharing Program Study was prepared in 2014 to determine a proportional cost per trip for mitigating environmental impacts associated with the Specific Plan in addition to those added by the 2009 TIF. Various transportation improvements will supplement the projects included in the 2009 Transportation Impact Fee Study. This fee is also referred to as the Supplemental Transportation Impact Fee.

Regional Regulatory Setting

City/County Association of Governments of San Mateo County Congestion Management Program

The City/County Association of Governments (C/CAG), as the Congestion Management Agency for San Mateo County, is required to prepare and adopt a CMP on a biennial basis. The purpose of the CMP is

to identify strategies that respond to future transportation needs, develop procedures for alleviating and controlling congestion, and promote countywide solutions.

The CMP is required to be consistent with the Metropolitan Transportation Commission (MTC) planning process, which includes regional goals, policies, and projects for the Regional Transportation Improvement Program (RTIP). The 2013 CMP, which is consistent with MTC's Transportation 2040 Plan, provides updated program information and performance monitoring results for the CMP roadway system.

Metropolitan Transportation Commission

The MTC was created by the California Legislature in 1970 as the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area. The MTC functions as the Metropolitan Planning Organization for state and federal purposes as well as the regional transportation planning agency at the state level. It is responsible for prioritizing regional transportation projects and attaining federal and state funding through the Regional Transportation Program (RTP), which provides a comprehensive blueprint for the development of mass transit, highway, rail, and bicycle and pedestrian facilities. Prioritization is accomplished through coordination among local agencies and congestion management plans that demonstrate need, feasibility, and conformance with federal and local transportation policies.

San Mateo County Comprehensive Bicycle and Pedestrian Plan

The C/CAG, with support from the San Mateo County Transportation Authority (SMCTA), developed the 2011 San Mateo County Comprehensive Bicycle and Pedestrian Plan (CBPP) to address issues related to the planning, design, funding, and implementation of bicycle and pedestrian projects of countywide significance.

The relevant goals and policies are as follows:

> **Goal 2:** More People Riding and Walking for Transportation and Recreation
>
> *Policy 2.6:* Serve as a resource to county employers on promotional information and resources related to bicycling and walking.
>
> **Goal 4:** Complete Streets and Routine Accommodation of Bicyclists and Pedestrians
>
> *Policy 4.1:* Comply with the complete streets policy requirements of Caltrans and the Metropolitan Transportation Commission concerning safe and convenient access for bicyclists and pedestrians, and assist local implementing agencies in meeting their responsibilities under the policy.
>
> *Policy 4.5:* Encourage local agencies to adopt policies, guidelines, standards and regulations that result in truly bicycle-friendly and pedestrian-friendly land use developments, and provide them technical assistance and support in this area.
>
> *Policy 4.6:* Discourage local agencies from removing, degrading or blocking access to bicycle and pedestrian facilities without providing a safe and convenient alternative.

State of California Complete Streets Act

On September 30, 2008, Governor Schwarzenegger signed Assembly Bill (AB) 1358, the California Complete Streets Act of 2008, into law. AB 1358 requires any substantive revision of the Circulation Element of a city or county's general plan to identify how it will safely accommodate the circulation of all users of the roadway, including pedestrians, bicyclists, children, seniors, individuals with disabilities, transit riders, and motorists.

Caltrans Deputy Directive 64-R1: Complete Streets – Integrating the Transportation System

In 2001, Caltrans adopted Deputy Directive (DD) 64, a policy directive related to non-motorized travel throughout the state. In October 2008, DD 64 was strengthened to reflect changing priorities and challenges.

DD 64-R1 states:

> The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system.
>
> The Department develops integrated multimodal projects in balance with community goals, plans, and values. Addressing the safety and mobility needs of bicyclists, pedestrians, and transit users in all projects, regardless of funding, is implicit in these objectives. Bicycle, pedestrian, and transit travel is facilitated by creating "complete streets," beginning early in system planning and continuing through project delivery and maintenance and operations. Developing a network of "complete streets" requires collaboration among all Department functional units and stakeholders to establish effective partnerships.
>
> Providing safe mobility for all users, including motorists, bicyclists, pedestrians, and transit, contributes to the Department's vision: "Improving Mobility across California."

Successful long-term implementation of this policy will result in more options for people when going from one place to another, less traffic congestion, fewer greenhouse gas (GHG) emissions, more walkable communities (with healthier, more active people), and fewer barriers for older adults, children, and people with disabilities.

Caltrans Director's Policy 22, Director's Policy on Context-Sensitive Solutions

Director's Policy 22, regarding the use of "Context-Sensitive Solutions" on all state highways, was adopted by Caltrans in November 2001.

The policy reads:

> The Department uses "Context-Sensitive Solutions" as an approach to plan, design, construct, maintain, and operate its transportation system. These solutions use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Context-sensitive solutions are reached through a collaborative, interdisciplinary approach involving all stakeholders.
>
> The context of all projects and activities is a key factor in reaching decisions. It is considered for all state transportation and support facilities when defining, developing, and evaluating options. When considering the context, issues such as funding feasibility, maintenance feasibility, traffic demand, impact on alternate routes, impact on safety, and relevant laws, rules, and regulations must be addressed.

The policy recognizes that, in towns and cities across California, a state highway may be the only through street. Alternatively, it may function as a local street. Communities want their main street be an economic, social, and cultural asset and facilitate the safe and efficient movement of people and goods. Furthermore, communities want transportation projects to provide opportunities for enhanced non-motorized travel and visual quality. By recognizing these criteria, the policy ensures that transportation solutions will meet more than just traffic and operational objectives.

Plan Bay Area

The current RTP produced by MTC, Plan Bay Area, was adopted in 2013. Plan Bay Area sets forth a regional transportation policy and provides capital program planning for all regional, state, and federally funded projects. In addition, Plan Bay Area provides strategic investment recommendations to improve the performance of the regional transportation system over the next 25 years. Information regarding investments in regional highway, transit, local roadway, bicycle, and pedestrian projects is set forth.

Plan Bay Area includes the following transportation-related projects within or immediately adjacent to the city of Menlo Park:

- Implement an incentive program to support transit-oriented development.
- Implement bicycle/pedestrian enhancements in San Mateo County.
- Implement local circulation improvements and traffic management programs countywide.
- Implement San Mateo County's Safe Routes to School program.
- Implement San Mateo County's Transportation for Livable Communities Program.
- Implement traffic signal interconnect between signals on Willow Road from Middlefield Avenue to Bay Road.
- Implement transportation environmental enhancements countywide.
- Electrify Caltrain from San Jose Tamien to San Francisco, which includes the segment in Menlo Park

Analysis Methodology

Study intersections were analyzed utilizing methodologies published in the *Highway Capacity Manual* (2000). Details regarding these methodologies, and the associated level-of-service (LOS) criteria, are provided in Appendix 3.1-A. An analysis of Menlo Park roadway segments is based on the criteria established in the City of Menlo Park Circulation System Assessment document.

Standards of Significance

The City of Menlo Park's traffic impact analysis guidelines are contained in the 2004 Circulation System Assessment document. Within the Circulation System Assessment, the City has established detailed standards of significance, which are to be used when analyzing a project's impact on the City's circulation network. For reference, the Circulation System Assessment is provided in Appendix 3.1-B.

Intersections

A Project is considered to have a potentially significant traffic impact if the addition of project traffic causes an intersection on a collector street operating at LOS A through C to operate at an unacceptable level (LOS D, E, or F) or have an increase of 23 seconds or greater in average vehicle delay, whichever comes first. A potential significant traffic impact shall also include a project that causes an intersection on arterial streets or local approaches to state-controlled signalized intersections operating at LOS A through D to operate at an unacceptable level (LOS E or F) or have an increase of 23 seconds or greater in average vehicle delay, whichever comes first.

A project is also considered to have a potentially significant traffic impact if the addition of project traffic causes an increase of more than 0.8 second of average delay to vehicles on all critical movements for intersections operating at a near term LOS D through F for collector streets and at a near term LOS E or F for arterial streets. For local approaches to state-controlled signalized intersections, a project is considered to have a potentially significant impact if the addition of project traffic causes an increase of more than 0.8 second of delay to vehicles on the most critical movements for intersections operating at a near term LOS E or F.

Roadway Segments

On Minor Arterial Streets, a traffic impact may be considered potentially significant if the existing average daily traffic (ADT) volume is (1) greater than 18,000 (90 percent of capacity), and there is a net increase (i.e., 100 trips or more) in ADT due to Project-related traffic; (2) the ADT is greater than 10,000 (50 percent of capacity) but less than 18,000, and the Project-related traffic increases the ADT by 12.5 percent or the ADT becomes 18,000 or more; or (3) the ADT is less than 10,000, and the Project-related traffic increases the ADT by 25 percent.

On Collector Streets, a traffic impact may be considered potentially significant if the existing ADT volume is (1) greater than 9,000 (90 percent of capacity), and there is a net increase (i.e., 50 trips or more) in ADT due to Project-related traffic; (2) the ADT is greater than 5,000 (50 percent of capacity) but less than 9,000, and the Project-related traffic increases the ADT by 12.5 percent or the ADT becomes 9,000 or more; or (3) the ADT is less than 5,000, and the Project-related traffic increases the ADT by 25 percent.

On Local Streets, a traffic impact may be considered potentially significant if the existing ADT volume is (1) greater than 1,350 (90 percent of capacity), and there is a net increase (i.e., 25 trips or more) in ADT due to Project-related traffic, (2) the ADT is greater than 750 (50 percent of capacity) but less than 1,350, and the Project-related traffic increases ADT by 12.5 percent or the ADT becomes 1,350; or (3) the ADT is less than 750, and the Project-related traffic increases the ADT by 25 percent.

For study facilities that are not under the control of the City of Menlo Park, the following standards of significance were applied. These thresholds are consistent with the standards of significance that were applied to other impact analyses that were recently completed for the City of Menlo Park.

Atherton Roadway Segments. At Town of Atherton–controlled roadway segments, the capacity of each roadway segment is defined in the Town of Atherton General Plan. The capacity is based on the road type and ADT. The capacity of Minor Arterial, Collector, and Local Streets is defined as 25,000 ADT, 12,000 ADT, and 1,000 ADT respectively. The Project would have an impact if Project traffic were to result in ADT volumes that are higher than the stated traffic capacity thresholds for the roadway segment.

Atherton Intersections. At Town of Atherton–controlled intersections that currently operate at LOS D or better, the Project would have an impact if Project traffic were to result in an intersection LOS of E or F or increase the critical worst-approach delay by 4.0 seconds or more if the LOS is E or F without Project traffic.

The LOS thresholds that were applied to the study intersections are summarized in Table 3.1-1.

Table 3.1-1. LOS Significance

Study Intersection	Jurisdiction	LOS Significance Threshold	Significance Threshold for Unacceptable LOS
Middlefield Rd/Marsh Rd	Town of Atherton	D	LOS becomes E or F or 4.0-second increase occurs at critical worst approach if LOS is currently E or F
Middlefield Rd/Encinal Ave	Town of Atherton	D	LOS becomes E or F or 4.0-second increase occurs at critical worst approach if LOS is currently E or F
Middlefield Rd/Glenwood Ave	Town of Atherton	D	LOS becomes E or F or 4.0-second increase occurs at critical worst approach if LOS is currently E or F
Middlefield Rd/ Oak Grove Ave	Town of Atherton	D	LOS becomes E or F or 4.0-second increase occurs at critical worst approach if LOS is currently E or F
Middlefield Rd/Ravenswood Ave	City of Menlo Park	D	LOS becomes E or worse or delay increases by 23 seconds or more or, if LOS is currently E or F, all critical movement delay increases by 0.8 second
Middlefield Rd/Ringwood Ave	City of Menlo Park	D	LOS becomes E or worse or delay increases by 23 seconds or more or, if LOS is currently E or F, all critical movement delay increases by 0.8 second
Middlefield Rd/Willow Rd	City of Menlo Park	D	LOS becomes E or worse or delay increases by 23 seconds or more or, if LOS is currently E or F, all critical movement delay increases by 0.8 second
Encinal Ave/Laurel St	City of Menlo Park	C	LOS becomes D or worse or delay increases by 23 seconds or more or, if LOS is currently D, E or F, all critical movement delay increases by 0.8 second
Glenwood Ave/Laurel St	City of Menlo Park	C	LOS becomes D or worse or delay increases by 23 seconds or more or, if LOS is currently D, E or F, all critical movement delay increases by 0.8 second
Oak Grove Ave/Laurel St	City of Menlo Park	C	LOS becomes D or worse or delay increases by 23 seconds or more or, if LOS is currently D, E or F, all critical movement delay increases by 0.8 second
Ravenswood Ave/ Laurel St	City of Menlo Park	D	LOS becomes E or worse or delay increases by 23 seconds or more or, if LOS is currently E or F, all critical movement delay increases by 0.8 second

Study Intersection	Jurisdiction	LOS Significance Threshold	Significance Threshold for Unacceptable LOS
Glenwood Ave/Garwood Way	City of Menlo Park	C	LOS becomes D or worse or delay increases by 23 seconds or more or, if LOS is currently D, E or F, all critical movement delay increases by 0.8 second
Oak Grove Ave/Alma St	City of Menlo Park	C	LOS becomes D or worse or delay increases by 23 seconds or more or, if LOS is currently D, E or F, all critical movement delay increases by 0.8 second
Ravenswood Ave/ Alma St	City of Menlo Park	D	LOS becomes E or worse or delay increases by 23 seconds or more or, if LOS is currently E or F, all critical movement delay increases by 0.8 second
Oak Grove Ave/Derry Ln (Garwood Way)-Merrill St	City of Menlo Park	C	LOS becomes D or worse or delay increases by 23 seconds or more or, if LOS is currently D, E or F, all critical movement delay increases by 0.8 second
El Camino Real/ Encinal Ave	State with Local Approach	D	LOS of local approaches becomes E or F; if LOS is currently E or F, all critical approach delay increases by 0.8 second or more
El Camino Real/ Valparaiso Ave-Glenwood Ave	State with Local Approach	D	LOS of local approaches becomes E or F; if LOS is currently E or F, all critical approach delay increases by 0.8 second or more
El Camino Real/ Oak Grove Ave	State with Local Approach	D	LOS of local approaches becomes E or F; if LOS is currently E or F, all critical approach delay increases by 0.8 second or more
El Camino Real/ Santa Cruz Ave	State with Local Approach	D	LOS of local approaches becomes E or F; if LOS is currently E or F, all critical approach delay increases by 0.8 second or more
El Camino Real/ Ravenswood Ave	State with Local Approach	D	LOS of local approaches becomes E or F; if LOS is currently E or F, all critical approach delay increases by 0.8 second or more
El Camino Real/ Roble Ave	State with Local Approach	D	LOS of local approaches becomes E or F; if LOS is currently E or F, all critical approach delay increases by 0.8 second or more
El Camino Real/ Middle Ave	State with Local Approach	D	LOS of local approaches becomes E or F; if LOS is currently E or F, all critical approach delay increases by 0.8 second or more

Study Intersection	Jurisdiction	LOS Significance Threshold	Significance Threshold for Unacceptable LOS
El Camino Real/ Cambridge Ave	State with Local Approach	D	LOS of local approaches becomes E or F; if LOS is currently E or F, all critical approach delay increases by 0.8 second or more
University Dr/Valparaiso Ave	City of Menlo Park	D	LOS becomes E or worse or delay increases by 23 seconds or more or, if LOS is currently E or F, all critical movement delay increases by 0.8 second
Oak Grove Ave/University Dr	City of Menlo Park	C	LOS becomes D or worse or delay increases by 23 seconds or more or, if LOS is currently D, E or F, all critical movement delay increases by 0.8 second
Santa Cruz Ave/ University Dr (North)	City of Menlo Park	D	LOS becomes E or worse or delay increases by 23 seconds or more or, if LOS is currently E or F, all critical movement delay increases by 0.8 second
Santa Cruz/ University Dr (South)	City of Menlo Park	D	LOS becomes E or worse or delay increases by 23 seconds or more or, if LOS is currently E or F, all critical movement delay increases by 0.8 second

Routes of Regional Significance

LOS standards for Routes of Regional Significance were established by C/CAG and published in the 2013 CMP Monitoring Report.

The following are the LOS standards for roadway segments in San Mateo County:

- If the existing (1990/1991) LOS was F, then the standard was set to be LOS F.
- If the existing or future LOS was or will be E, then the standard was set to be LOS E.
- On SR 82 (El Camino Real), the standard was set to be LOS E.
- For the remaining roadway segments, the standard was set to be one letter designation worse than the LOS projected for 2000.

Table 3.1-2 provides a summary of the standards of significance for the study area segments. If a Route of Regional Significance operates unacceptably without the addition of Project-generated traffic, the Project's impact would be considered significant if the volume-to-capacity (v/c) ratio increases by 0.01 or more. This approach is consistent with the standards of significance that were applied to other impact analyses that were recently completed for projects in the city of Menlo Park.

Table 3.1-2. C/CAG Routes of Regional Significance

Route	Segment	Roadway Type[a]	Estimated Capacity (vph)[a,b,c]	LOS Standard[a]
El Camino Real (SR 82)	North of Ravenswood Ave	Arterial	2,200	E
	South of Ravenswood Ave	Arterial	3,300	E
Bayfront Expressway (SR 84)	Willow Road to University Ave	Arterial	3,300	E
	University Ave to County Line	Freeway	6,900	F
Willow Road (SR 114)	US 101 to Bayfront Expressway	Arterial	2,200	E
US 101	North of Marsh Rd	Freeway	9,200	F
	Marsh Rd to Willow Rd	Freeway	9,200	F
	Willow Rd to University Ave	Freeway	9,200	F
	South of University Ave	Freeway	9,200	F

Notes:

a. Source: San Mateo County. 2013. *Congestion Management Program Monitoring Report*.

b. Freeway capacity is 2,300 vehicles per hour per lane (vphpl) for six-lane segments and 2,200 vphpl for four-lane segments. Arterial capacity is based on a 60 percent green time saturation flow rate of 1,900 vphpl (1,140 vphpl is rounded to 1,100 vphpl).

c. Capacity is per direction of travel.

Existing Conditions

Existing Traffic Demand and Levels of Service

The existing conditions scenario, which evaluates current operations, considers existing traffic volumes during the weekday AM and PM Peak Periods. This does not include Project-generated traffic volumes.

Existing conditions at the study intersections were evaluated during typical weekday AM and PM Peak Periods, which are defined as the hours with the highest traffic volumes (i.e., 7:00–9:00 a.m. and 4:00–6:00 p.m., respectively). Traffic counts for all intersections and roadway segments were collected between September and December 2014 and provided by the City of Menlo Park. Existing intersection lane geometrics are provided in Figure 3.1-2, and the existing intersection traffic volumes are shown in Figures 3.1-3 and 3.1-4 for the AM and PM Peak Hours, respectively. ADT volumes for the existing study segments are provided in Figure 3.1-5.

Intersection LOS

The existing intersection levels of service are summarized in Table 3.1-3. Detailed results are provided in Appendix 3.1-C, and calculations are provided in Appendix 3.1-D. Currently, all study intersections are operating acceptably, with the exception of Middlefield Road/Glenwood Avenue-Linden Avenue.

Table 3.1-3. Existing Intersection LOS

Study Intersection	AM Peak Hour Delay	AM Peak Hour LOS	PM Peak Hour Delay	PM Peak Hour LOS
1. Middlefield Rd/Marsh Rd	21.7	C	28.5	C
2. Middlefield Rd/Encinal Ave	29.0	C	15.0	B
3. Middlefield Rd/Glenwood Ave-Linden Ave*	92.4	F	124.1**	F
4. Middlefield Rd/Oak Grove Ave	17.4	B	15.7	B
5. Middlefield Rd/Ravenswood Ave	22.2	C	25.1	C
6. Middlefield Rd/Ringwood Ave	30.7	C	33.9	C
7. Middlefield Rd/Willow Rd	48.3	D	47.1	D
8. Laurel St/Encinal Ave	17.7	C	10.4	B
9. Laurel St/Glenwood Ave	16.3	C	11.4	B
10. Laurel St/Oak Grove Ave	14.7	B	15.0	B
11. Ravenswood Ave/Laurel St	18.5	B	23.5	C
12. Glenwood Ave/Garwood Way*	14.1	B	13.3	B
13. Oak Grove Ave/Alma St*	20.5	C	19.0	C
14. Ravenswood Ave/Alma St*	12.2	B	16.8	C
15. Oak Grove Ave/Derry Ln (Garwood Way)-Merrill St*	20.2	C	17.1	C
16. El Camino Real/Encinal Ave	26.9	C	26.2	C
17. El Camino Real/Valparaiso Ave-Glenwood Ave	35.5	D	39.1	D
18. El Camino Real/Oak Grove Ave	18.1	B	16.6	B
19. El Camino Real/Santa Cruz Ave	11.3	B	13.7	B
20. El Camino Real/Ravenswood Ave	37.6	D	46.3	D
21. El Camino Real/Roble Ave	8.7	A	10.7	B
22. El Camino Real/Middle Ave	15.7	B	19.4	B
23. El Camino Real/Cambridge Ave	4.6	A	10.4	B
24. Valparaiso Ave/University Dr	21.3	C	23.2	C
25. Oak Grove Ave/University Dr	13.6	B	13.4	B
26. Santa Cruz Ave/University Dr (North)	13.3	B	16.1	C
27. Santa Cruz Ave/University Dr (South)	16.9	B	18.4	B

Source: W-Trans 2015.

Notes:

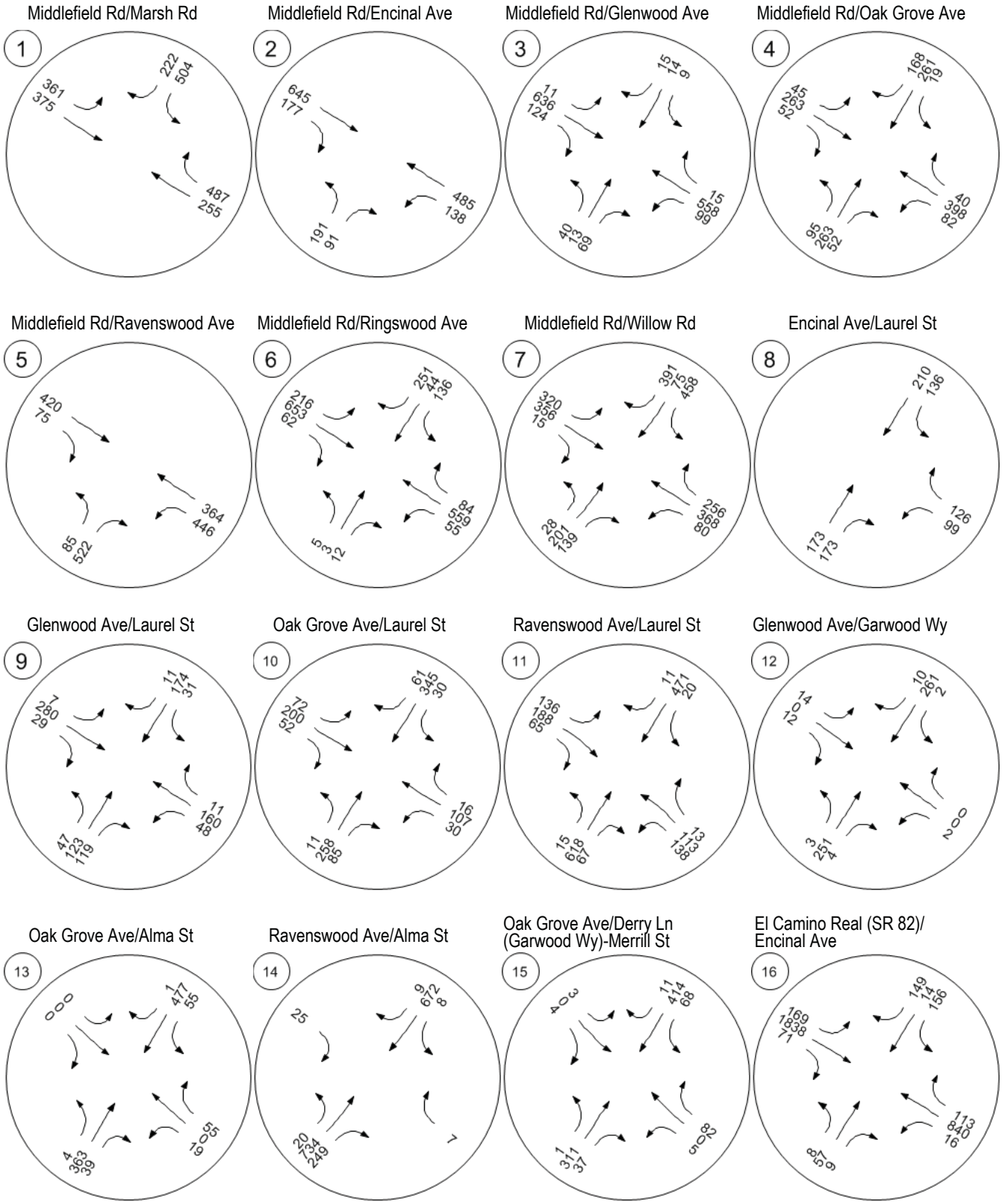
Delay = average number of seconds per vehicle.

LOS = level of service.

* For two-way, stop-controlled intersections, results are reported for the approach with the highest delay.

** For calculated delays greater than 120 seconds, *Highway Capacity Manual* methodology does not provide an accurate representation of actual conditions. However, calculated delays greater than 120 seconds are reported for comparative purposes and used to determine the significance of an impact.

See Appendix 3.1-A for definitions of LOS for signalized and unsignalized intersections.



Source: W-Trans, 2015.

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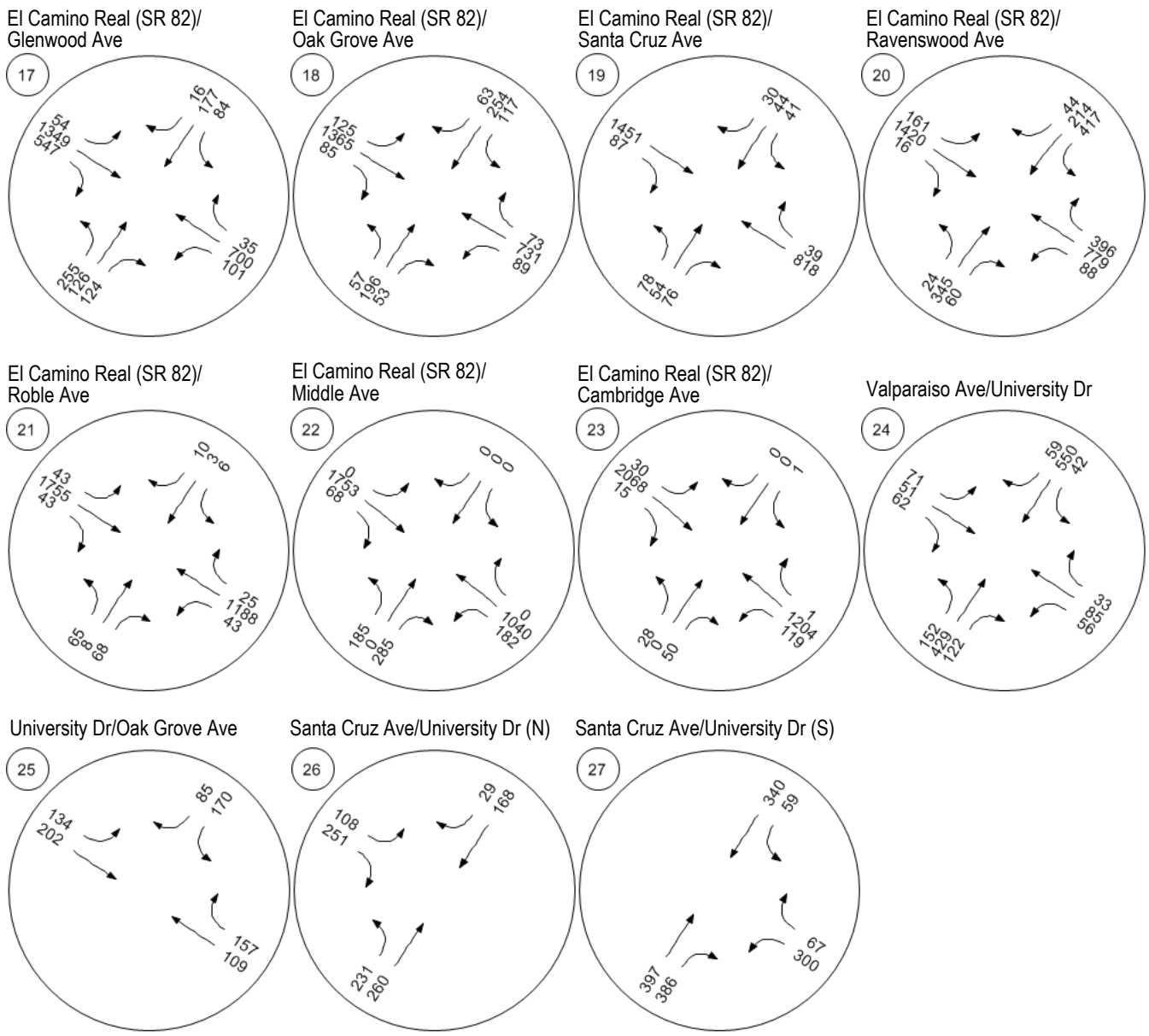
Figure 3.1-3A
Existing AM Peak Volumes
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

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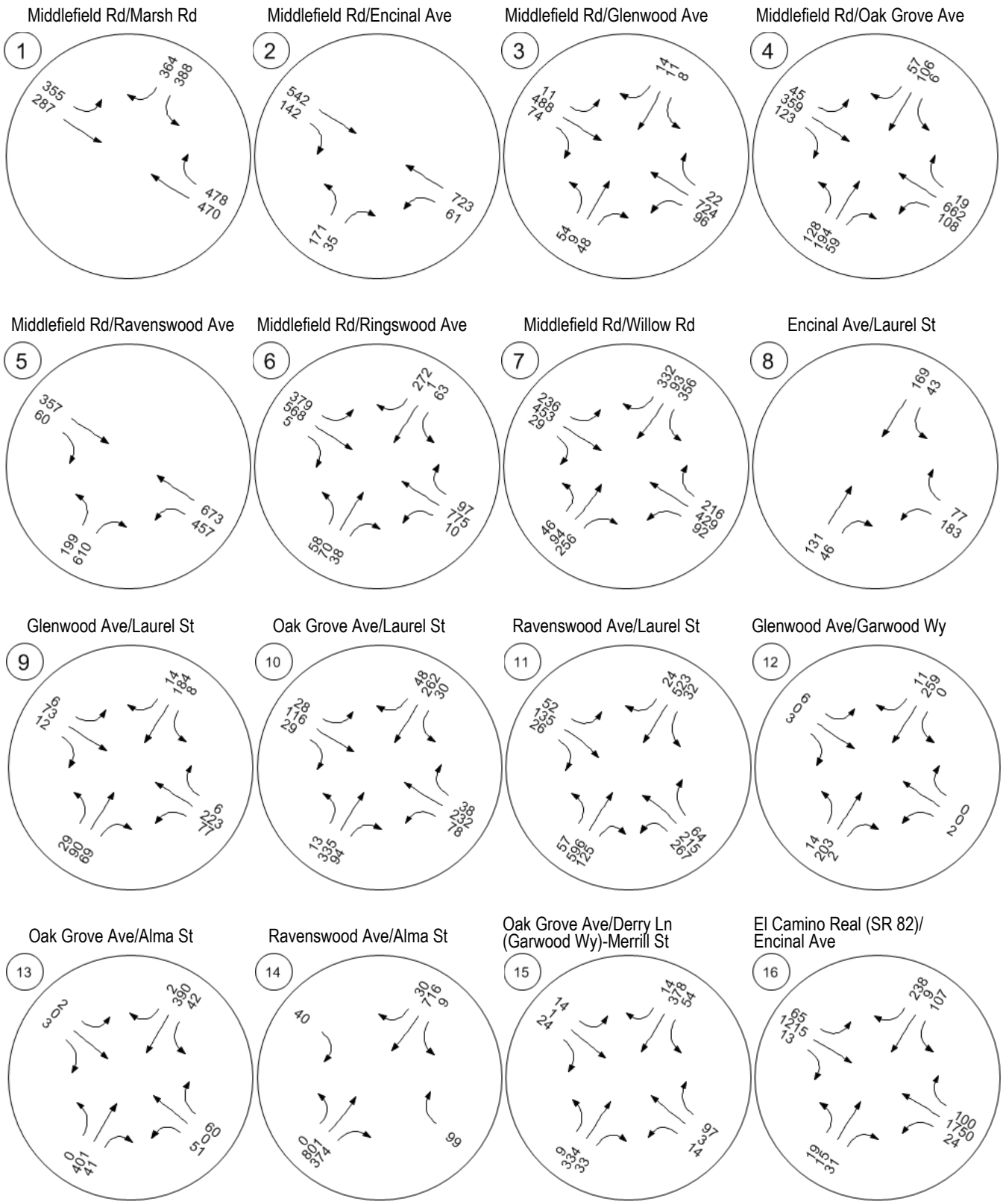
Figure 3.1-3B
Existing AM Peak Volumes
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

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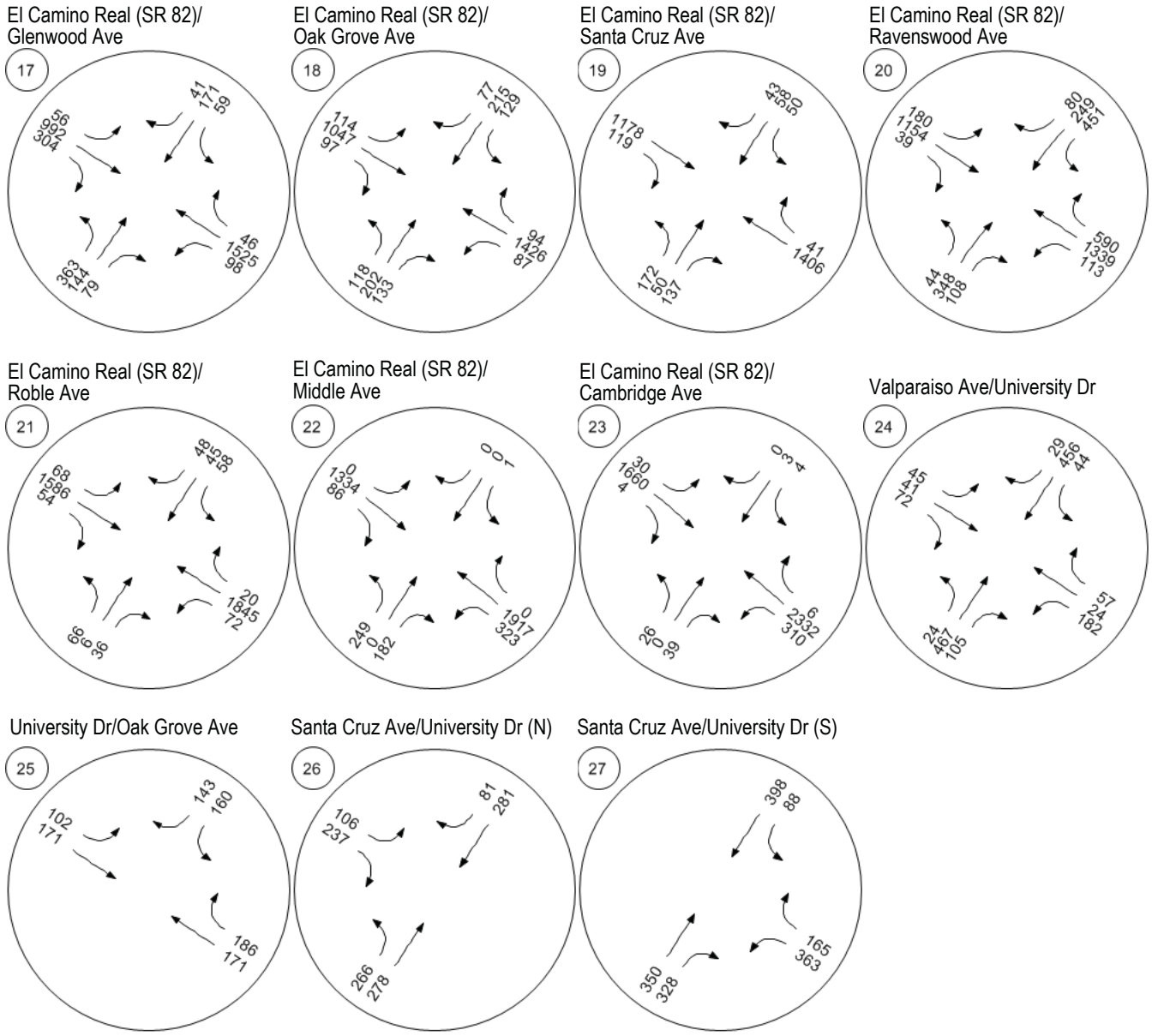
Figure 3.1-4A
Existing PM Peak Volumes
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

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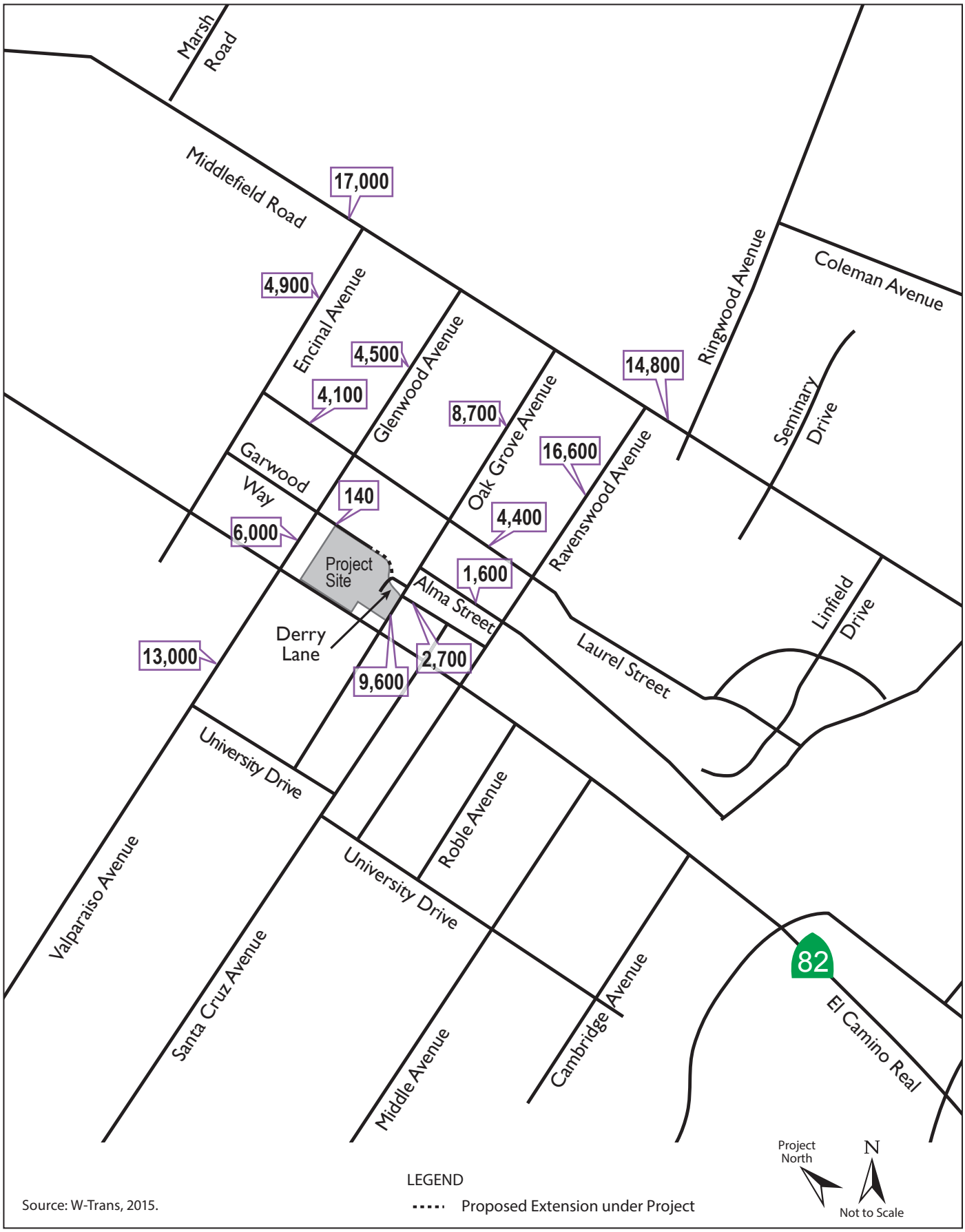
Figure 3.1-4B
Existing PM Peak Volumes
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

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Figure 3.1-5
Existing Roadway ADT
1300 El Camino Real Greenheart Project

Roadway Segment Analysis

Existing ADT volumes for study area roadway segments are shown in Table 3.1-4. It is noted that, according to the Circulation System Assessment document, the City of Menlo Park does not designate a roadway as operating acceptably or unacceptably. Instead, the City considers only a proposed project's contribution to an acceptable or unacceptable level of growth on a roadway. Therefore, existing traffic volumes for the roadway segments are provided for reference purposes and used as a basis for determining Project-related impacts.

Table 3.1-4. Existing ADT Summary

Roadway Segment	Classification	Capacity	ADT
1. Middlefield Rd (Marsh Rd to Glenwood Ave)*	Minor Arterial	25,000	17,000
2. Middlefield Rd (Oak Grove Ave to Ravenswood Ave)*	Minor Arterial	25,000	14,800
3. Laurel St (Encinal Ave to Glenwood Ave)	Collector	10,000	4,100
4. Laurel St (Oak Grove Ave to Ravenswood Ave)	Collector	10,000	4,400
5. Ravenswood Ave (Laurel St to Middlefield Rd)	Minor Arterial	20,000	16,600
6. Encinal Ave (Laurel St to Middlefield Ave)*	Collector	10,000	4,900
7. Valparaiso Ave (University Dr to El Camino Real)	Minor Arterial	20,000	13,000
8. Glenwood Ave (El Camino Real to Laurel St)	Collector	10,000	6,000
9. Glenwood Ave (Laurel St to Middlefield Rd)*	Collector	12,000	4,500
10. Oak Grove Ave (El Camino Real to Laurel St)	Collector	10,000	9,600
11. Oak Grove Ave (Laurel St to Middlefield Rd)*	Collector	10,000	8,700
12. Alma St (Oak Grove Ave to Ravenswood Ave)	Collector	10,000	1,600
13. Garwood Way (Glenwood Ave to Oak Grove Ave)	Local	1,500	140
14. Merrill St (Oak Grove Ave to Ravenswood Ave)	Local	1,500	2,700

Source: W-Trans, 2015.

Notes:

* Part or all of the roadway segment is located in the Town of Atherton.

Roadway capacities for each roadway classification are detailed in the City of Menlo Park Circulation System Assessment and the Town of Atherton General Plan (2002).

Data regarding existing volumes collected by the City of Menlo Park in 2014.

Routes of Regional Significance

Existing operations along the Routes of Regional Significance are summarized in Table 3.1-5. Currently, the segment of Bayfront Expressway between University Avenue and Willow Road operates unacceptably at LOS F in the eastbound direction during the PM Peak Hour; all other Routes of Regional Significance operate acceptably.

Table 3.1-5. Routes of Regional Significance – Existing Conditions

		AM Peak Hour		PM Peak Hour	
Route	Segment	v/c	LOS	v/c	LOS
El Camino Real (SR 82)	Ravenswood Ave to Encinal Ave (NB)	0.35	A	0.66	B
	City limits to Ravenswood Ave (NB)	0.28	A	0.47	A
	Encinal Ave to Ravenswood Ave (SB)	0.65	B	0.51	A
	Ravenswood Ave to City limits (SB)	0.41	A	0.36	A
Bayfront Expressway (SR 84)	University Ave to Willow Road (WB)	0.94	E	0.42	A
	County Line to University Ave (WB)	0.51	C	0.23	A
	Willow Road to University Ave (EB)	0.38	A	0.98	E
	University Ave to County Line (EB)	0.20	A	0.53	C
Willow Road (SR 114)	US 101 to Bayfront Expy (NB)	0.50	A	1.14	F
	Bayfront Expy to US 101 (SB)	0.95	E	0.68	B
US 101	North of Marsh Rd (NB)	0.74	D	0.85	D
	Willow Rd to Marsh Rd (NB)	0.68	C	0.78	D
	University Ave to Willow Rd (NB)	0.73	D	0.83	D
	South of University Ave (NB)	0.75	D	0.85	D
	North of Marsh Rd (SB)	0.89	E	0.71	D
	Marsh Rd to Willow Rd (SB)	0.82	D	0.65	C
	Willow Rd to University Ave (SB)	0.87	D	0.69	C
	South of University Ave (SB)	0.90	E	0.71	D

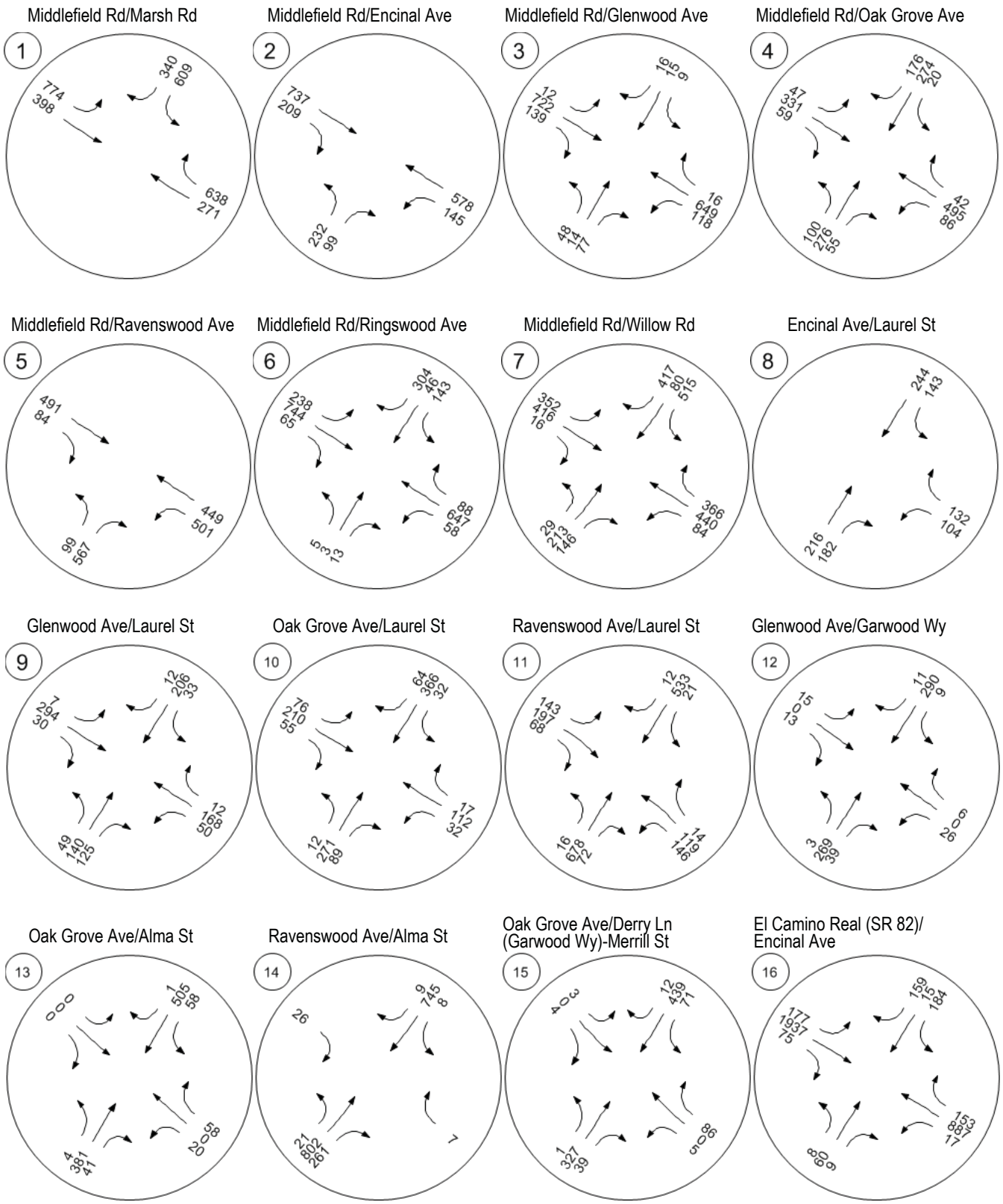
Source: W-Trans, 2015.

Notes:

NB = northbound; SB = southbound; EB = eastbound; WB = westbound; v/c = volume-to-capacity ratio; LOS = level of service.

Near-Term 2020 Conditions

The Near-Term scenario represents a short-term horizon year of 2020, the earliest the Project could be built and fully occupied. The Near-Term scenario includes traffic that would be generated by approved projects within the City of Menlo Park. A list of these projects was provided by the City of Menlo Park (Table 3.1-6). Detailed information, including information regarding the land uses that are being replaced, is provided in Appendix 3.1-E. The traffic volumes that would be generated by these approved projects was obtained from the City's Traffix analysis network, where available, or developed from data published by the Institute of Transportation Engineers (ITE) in the Trip Generation Manual. Additionally, a growth rate of 1 percent per year was applied to account for growth in regional traffic until the horizon year of 2020. Near-term traffic volumes are shown in Figure 3.1-6 for the AM Peak Hour and Figure 3.1-7 for the PM Peak Hour. Near-term daily traffic volumes on roadway segments are shown in Figure 3.1-8.



Source: W-Trans, 2015.

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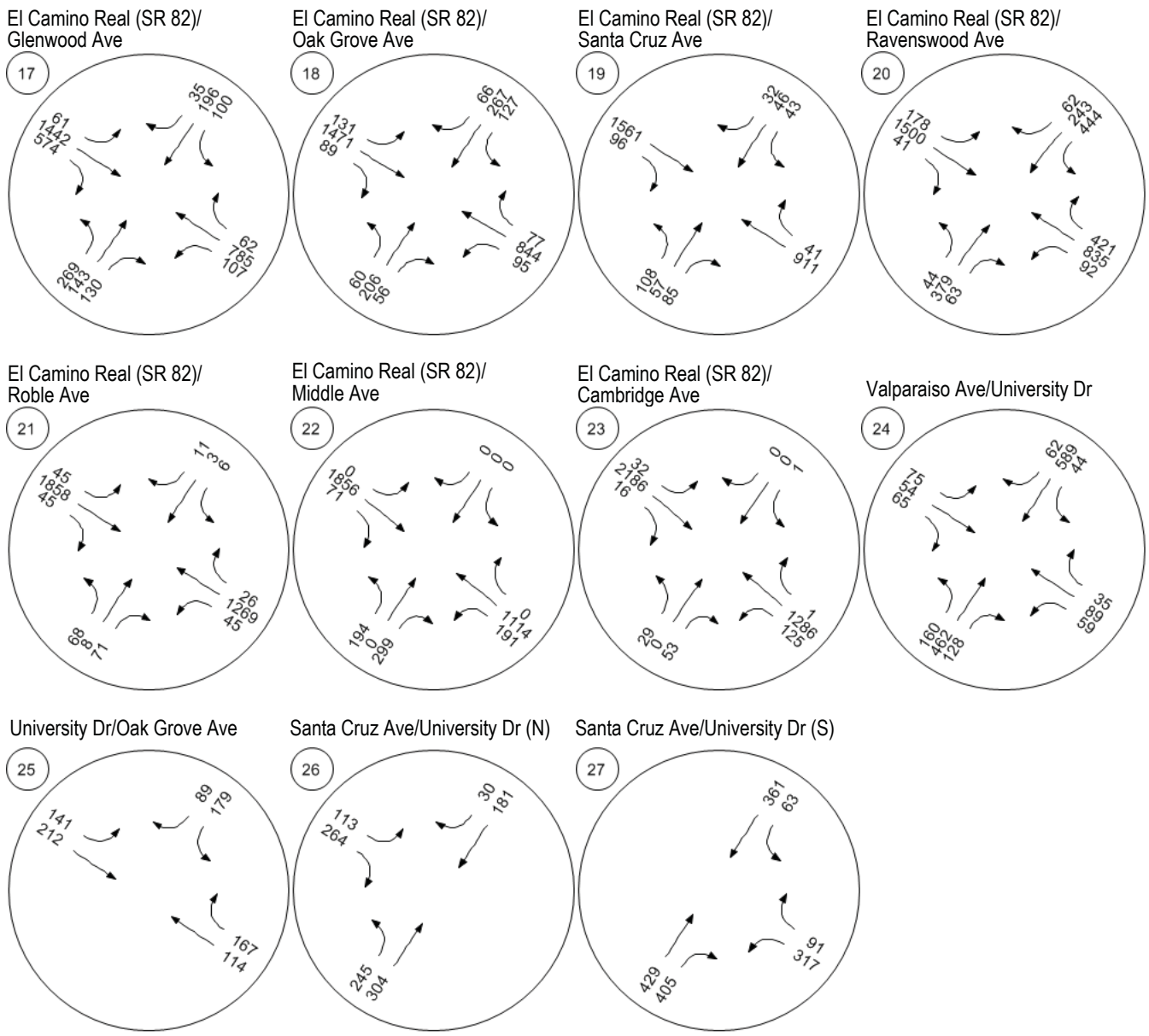
Figure 3.1-6A
Near Term AM Peak Volumes
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

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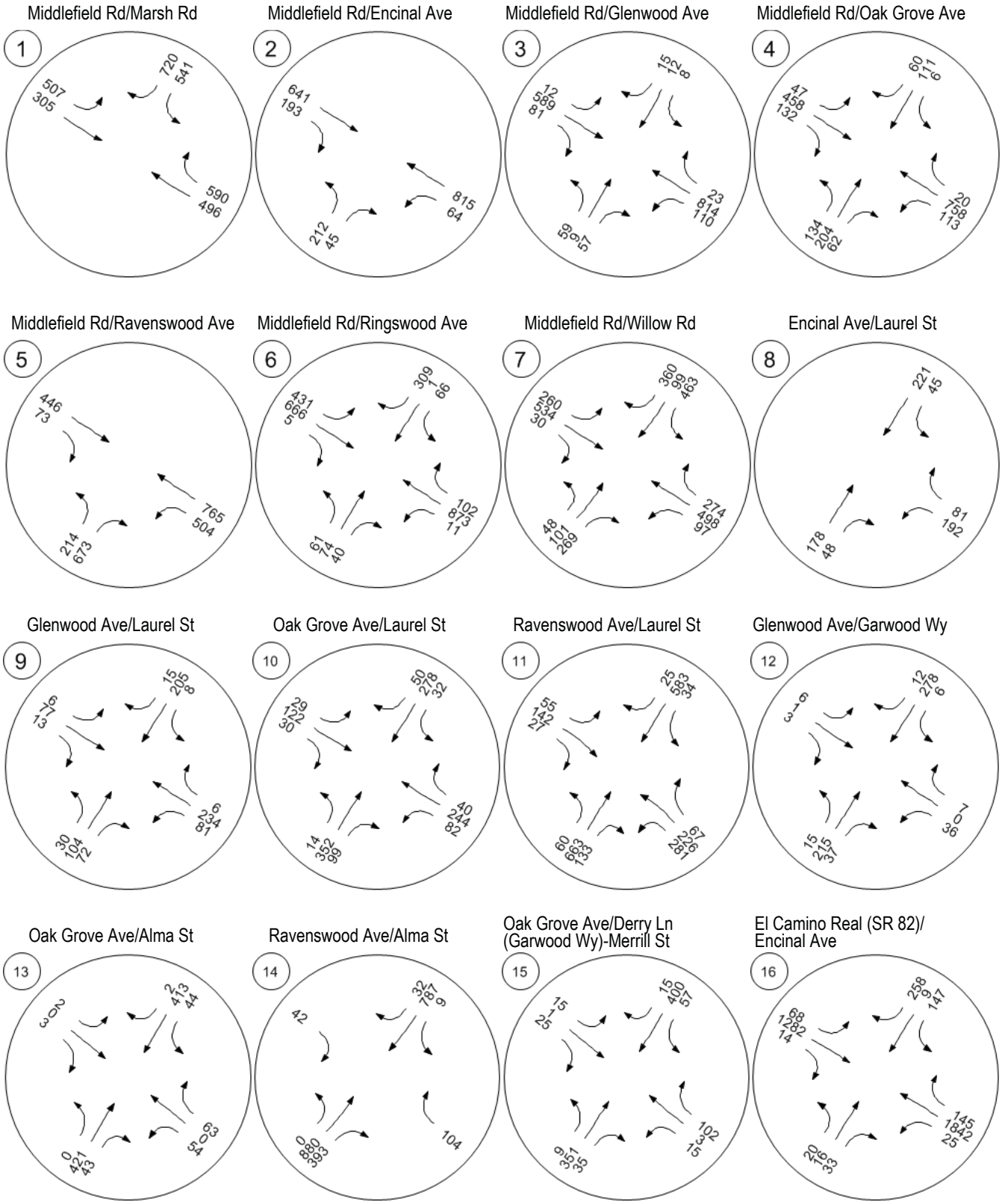
Figure 3.1-6B
Near Term AM Peak Volumes
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

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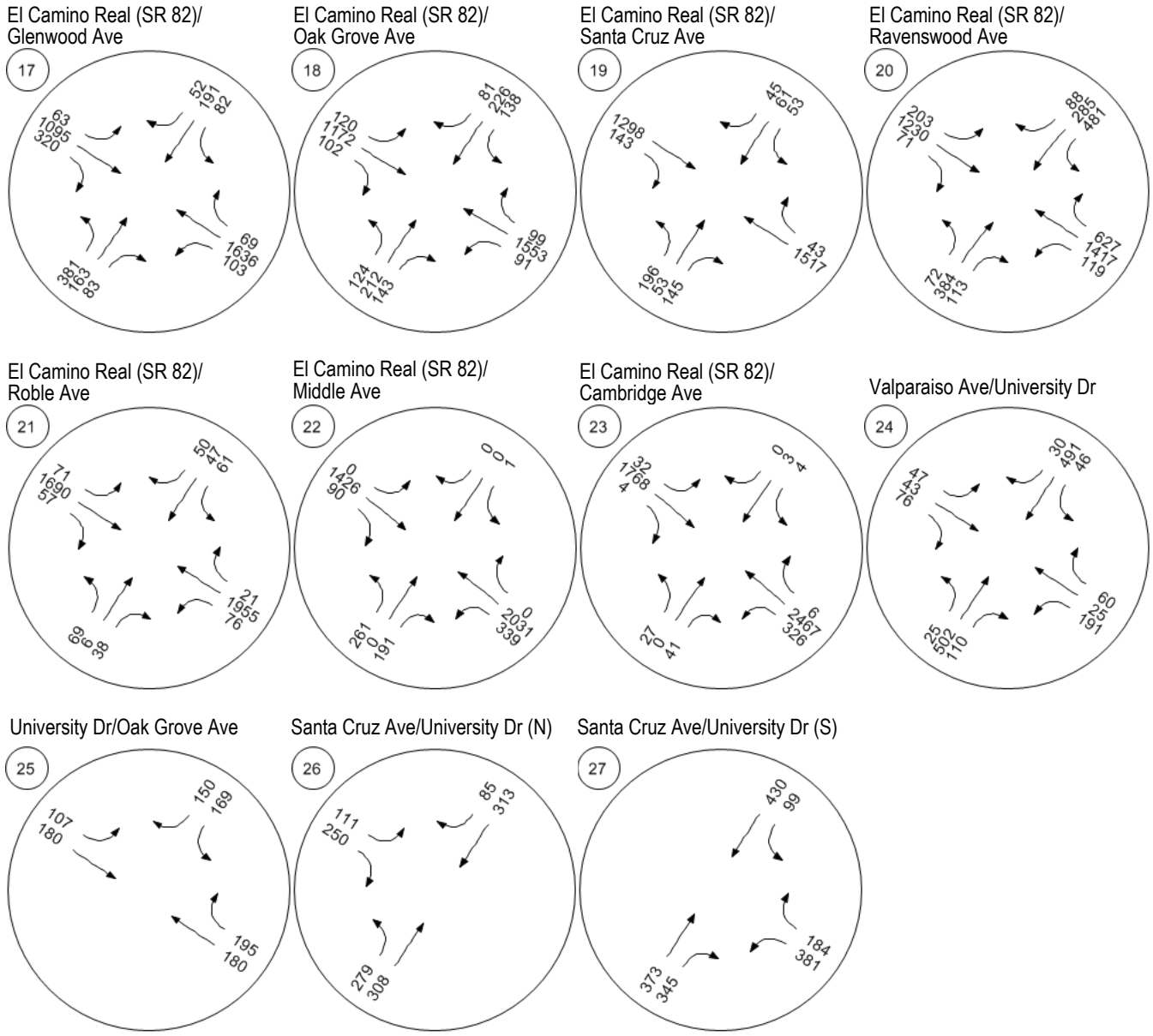
Figure 3.1-7A
Near Term PM Peak Volumes
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

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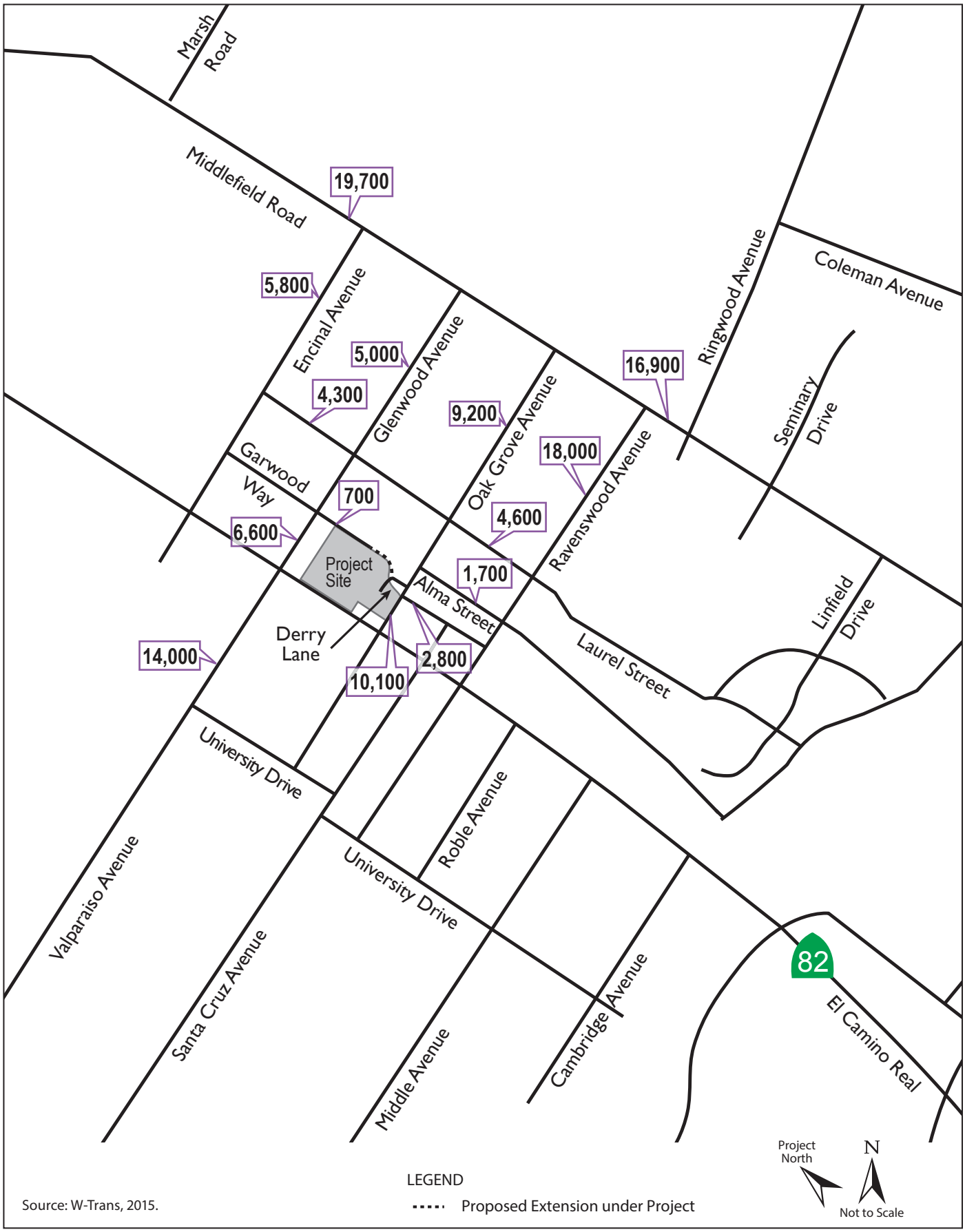
Figure 3.1-7B
Near Term PM Peak Volumes
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

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Figure 3.1-8
Near Term Daily Volumes
1300 El Camino Real Greenheart Project

Table 3.1-6. Near-Term Approved Developments in Project Vicinity

Project	Land Use	Size
1460 El Camino Real	Residential/Office	16 du/26,800 sf
702 Oak Grove Ave	Residential/Office	4 du/3,469 sf
555 Glenwood Ave	Hotel	138 rooms
1283 Willow Road	Office/Retail	3,800 sf/5,096 sf
Menlo Gateway	Office/Health Club/ Restaurant/Hotel	694,669 sf/68,964 sf/ 4,285 sf/230 rooms
Facebook West	Office	433,656 sf
Commonwealth Corporate Center	Office	259,920 sf
VA/Core	Residential	60 du
Anton Menlo	Residential	396 du
777 Hamilton	Residential	196 du
3645 Haven Ave	Residential	146 du

Note: sf = square feet; du = dwelling unit.

Programmed/Planned Transportation Facility Improvements

At the direction of the City of Menlo Park, the following programmed and planned improvements to study facilities were included in the Near-Term analysis:

- Signal phasing changes at Ravenswood Avenue/Laurel Street to incorporate split phasing on the Laurel Street approaches.
- Traffic signal timing improvements along Middlefield Road to coordinate traffic signals.
- At Willow Road/Middlefield Road, modifications to the northbound Middlefield Road approach to provide a left-turn lane and a through lane, shared through and right-turn lane, and right-turn lane. The existing channelizing right-turn island would be removed.

Transportation improvements along El Camino Real are currently being considered as part of the ongoing El Camino Real Corridor Study. The City Council has recently provided direction to pursue implementing a future bicycle lane alternative. The specifics of the bicycle lane design are expected at a future date. Approval and construction of the Project would not preclude development of the transportation improvement alternatives that are currently being considered.

Near-Term 2020 Conditions

Intersection operations under Near-Term conditions, without the addition of Project-generated traffic, are summarized in Table 3.1-7. Detailed results are provided in Appendix 3.1-C; calculations are provided in Appendix 3.1-D.

The following intersections are expected to operate at unacceptable levels of service:

1. Middlefield Road/Marsh Road
3. Middlefield Road/Glenwood Avenue-Linden Avenue
20. El Camino Real/Ravenswood Ave

Table 3.1-7. Near-Term Intersection LOS

Study Intersection	AM Peak Hour Delay	AM Peak Hour LOS	PM Peak Hour Delay	PM Peak Hour LOS
1. Middlefield Rd/Marsh Rd	70.0	E	64.9	E
2. Middlefield Rd/Encinal Ave	47.1	D	20.2	C
3. Middlefield Rd/Glenwood Ave-Linden Ave*	>180**	F	>180**	F
4. Middlefield Rd/Oak Grove Ave	18.7	B	17.0	B
5. Middlefield Rd/Ravenswood Ave	26.1	C	32.7	C
6. Middlefield Rd/Ringwood Ave	32.4	C	36.9	D
7. Middlefield Rd/Willow Rd	50.5	D	49.3	D
8. Laurel St/Encinal Ave	24.6	C	11.6	B
9. Laurel St/Glenwood Ave	20.1	C	12.2	B
10. Laurel St/Oak Grove Ave	15.3	B	15.6	B
11. Ravenswood Ave/Laurel St	39.1	D	50.5	D
12. Glenwood Ave/Garwood Way*	15.5	C	14.6	B
13. Oak Grove Ave/Alma St*	20.8	C	22.7	C
14. Ravenswood Ave/Alma St*	12.7	B	18.4	C
15. Oak Grove Ave/Derry Ln (Garwood Way)-Merrill St*	21.9	C	18.4	C
16. El Camino Real/Encinal Ave	20.2	C	18.5	B
17. El Camino Real/Valparaiso Ave-Glenwood Ave	40.1	D	45.5	D
18. El Camino Real/Oak Grove Ave	31.4	C	30.0	C
19. El Camino Real/Santa Cruz Ave	12.3	B	14.3	B
20. El Camino Real/Ravenswood Ave	42.1	D	56.5	E
21. El Camino Real/Roble Ave	8.9	A	11.0	B
22. El Camino Real/Middle Ave	16.3	B	20.1	C
23. El Camino Real/Cambridge Ave	4.8	A	10.6	B
24. Valparaiso Ave/University Dr	23.4	C	23.8	C
25. Oak Grove Ave/University Dr	14.7	B	14.4	B
26. Santa Cruz Ave/University Dr (North)	14.6	B	18.5	C
27. Santa Cruz Ave/University Dr (South)	17.6	B	19.2	B

Source: W-Trans, 2015.

Notes:

Delay = average number of seconds per vehicle.

LOS = level of service.

* For two-way, stop-controlled intersections, results are reported for the approach with the highest delay.

** For calculated delays greater than 120 seconds, *Highway Capacity Manual* methodology does not provide an accurate representation of actual conditions. However, calculated delays greater between 120-180 seconds are reported for comparative purposes and used to determine the significance of an impact. Calculated delays greater than 180 seconds are shown as >180.

See Appendix 3.1-A for definitions of LOS for signalized and unsignalized intersections.

Roadway Segments

Projected roadway segment traffic volumes under Near-Term conditions, without the addition of Project-generated traffic, are summarized in Table 3.1-8. This information is provided for reference purposes, with the projected Near-Term ADT volumes used as the basis for determining if Project-generated traffic would constitute a significant impact.

Table 3.1-8. Near-Term ADT Summary

Roadway Segment	Classification	Capacity	ADT
1. Middlefield Rd (Marsh Rd to Glenwood Ave)*	Minor Arterial	25,000	19,700
2. Middlefield Rd (Oak Grove Ave to Ravenswood Ave)*	Minor Arterial	25,000	16,900
3. Laurel St (Encinal Ave to Glenwood Ave)	Collector	10,000	4,300
4. Laurel St (Oak Grove Ave to Ravenswood Ave)	Collector	10,000	4,600
5. Ravenswood Ave(Laurel St to Middlefield Rd)	Minor Arterial	20,000	18,000
6. Encinal Ave (Laurel St to Middlefield Ave)*	Collector	10,000	5,800
7. Valparaiso Ave (University Dr to El Camino Real)	Minor Arterial	20,000	14,000
8. Glenwood Ave (El Camino Real to Laurel St)	Collector	10,000	6,600
9. Glenwood Ave (Laurel St to Middlefield Rd)*	Collector	12,000	5,000
10. Oak Grove Ave (El Camino Real to Laurel St)	Collector	10,000	10,100
11. Oak Grove Ave (Laurel St to Middlefield Rd)*	Collector	10,000	9,200
12. Alma St (Oak Grove Ave to Ravenswood Ave)	Collector	10,000	1,700
13. Garwood Way (Glenwood Ave to Oak Grove Ave)	Local	1,500	700
14. Merrill St (Oak Grove Ave to Ravenswood Ave)	Local	1,500	2,800

Source: W-Trans, 2015.
Notes:
* Part or all of the roadway segment located in the Town of Atherton.
Roadway capacities for each roadway classification are detailed in the City of Menlo Park Circulation System Assessment and the Town of Atherton General Plan (2002).
Data regarding existing volumes collected by the City of Menlo Park in 2014.

Routes of Regional Significance

Operations on Routes of Regional Significance under projected Near-Term conditions are summarized in Table 3.1-9. The following four Routes of Regional Significance are expected to operate at unacceptable levels of service under projected Near-Term conditions:

- Bayfront Expressway from University Avenue to Willow Road (westbound – AM Peak Hour)
- Bayfront Expressway from Willow Road to University Avenue (eastbound – PM Peak Hour)
- Willow Road between Bayfront Expressway to US 101 (southbound – AM Peak Hour)
- Willow Road between US 101 to Bayfront Expressway (northbound – PM Peak Hour)

Table 3.1-9. Routes of Regional Significance – Near-Term Conditions

		AM Peak Hour		PM Peak Hour	
Route	Segment	v/c	LOS	v/c	LOS
El Camino Real (SR 82)	North of Ravenswood Ave (NB)	0.40	A	0.72	C
	South of Ravenswood Ave (NB)	0.31	A	0.50	A
	North of Ravenswood Ave (SB)	0.70	B	0.58	A
	South of Ravenswood Ave (SB)	0.44	A	0.38	A
Bayfront Expressway (SR 84)	University Ave to Willow Rd (WB)	1.15	F	0.47	A
	County Line to University Ave (WB)	0.61	C	0.25	A
	Willow Rd to University Ave (EB)	0.42	A	1.16	F
	University Ave to County Line (EB)	0.20	A	0.61	C
Willow Rd (SR 114)	US 101 to Bayfront Expressway (NB)	0.75	C	1.25	F
	Bayfront Expressway to US 101 (SB)	1.04	F	0.91	E
US 101	North of Marsh Rd (NB)	0.79	D	0.93	E
	Willow Rd to Marsh Rd (NB)	0.78	D	0.85	D
	University Ave to Willow Rd (NB)	0.86	D	0.91	E
	South of University Ave (NB)	0.89	E	0.93	E
	North of Marsh Rd (SB)	0.98	E	0.76	D
	Marsh Rd to Willow Rd (SB)	0.88	D	0.74	D
	Willow Rd to University Ave (SB)	0.94	E	0.82	D
	South of University Ave (SB)	0.97	E	0.84	D

Source: W-Trans, 2015.

Notes: v/c = volume-to-capacity ratio; LOS = level of service; NB = northbound; SB = southbound; EB = eastbound; WB = westbound.

Project Conditions

Project Description

The Project would result in the removal of existing buildings on the site and construction of three mixed-use buildings on top of shared underground parking. The development would add up to 188,900 square feet (sf) of non-medical office space in two buildings, up to 202 apartment units, and up to 29,000 sf of community-serving retail/restaurant space located throughout the proposed office and residential buildings. The Project site plan is shown in Figure 3.1-12.

The City, as the lead agency for this California Environmental Quality Act (CEQA) document, is required to provide a reasonable worst-case scenario for the analysis of environmental impacts resulting from the Project.

The following sections describe the methodology used for the transportation analysis and rely on conservative assumptions regarding vehicle trip rates, alternative modes, and Transportation Demand Management (TDM) reductions to provide a reasonable worst-case scenario. However, in some cases, the Project, once built and occupied, may generate fewer vehicle trips than the number estimated in this analysis as a result of increased walking, biking, and transit use. If fewer vehicle trips are generated, then it is possible that some of the impacts described in this document may be reduced or eliminated. A more

detailed description of potential impact reductions is provided in the Impacts and Mitigation Measures section below.

Trip Generation

Anticipated trip generation was estimated by using the standard rates published by ITE in its *Trip Generation Manual*, ninth edition (2012), followed by trip reduction estimates, as noted below. The land use categories for Apartment (LU #220), General Office Building (LU #710), and Shopping Center (LU #820) were applied to this analysis. The land use category Specialty Retail Center (LU #826) was considered for the community serving retail portion of the Project. However, because the trip generation rates for Specialty Retail Center are lower than those for Shopping Center, the trip generation rates for Shopping Center were used to provide a conservative estimate of Project trip generation.

Trip Reductions

The data that have historically been used to develop the rates contained in ITE's *Trip Generation Manual* have typically been collected at isolated sites in suburban environments. Because of this, the trip generation rates do not account for significant use of alternative means of transportation. Therefore, the availability of transit services near the site as well as the mix of uses within the site were considered in determining whether a trip generation deduction was appropriate.

Transit

The farthest building on the 1300 El Camino Real site is located less than 0.25 mile (walking distance) of the Menlo Park Caltrain station, and the apartments' main entry is located less than 0.1 mile away from the Caltrain station. Also, SamTrans provides local and regional connecting bus service in the area. Given the proximity to both regional and local transit services, it is reasonable to expect that some Project site residents, employees, or visitors may use transit to complete their trips. The 1300 El Camino Real site is located within the El Camino Real North Area, which was analyzed as part of the *El Camino Real/Downtown Specific Plan: Transportation Impact Analysis* (Fehr & Peers 2010); however, the site itself was not identified as an opportunity site in the analysis. In the analysis, transit reduction rates for the Station Area were applied to sites adjacent to the Station Area, which includes the 1300 El Camino Real site. In the previous analysis, a transit reduction of 10 percent was applied to residential uses, 5 percent was applied to office uses, and 3 percent reduction was applied to retail uses. It is worth noting that the Project could result in higher transit usage compared with the level that was assumed under the previous analysis because of the site's proximity to the nearby Caltrain station. However, to be consistent with prior City of Menlo Park studies, the conservative transit reduction rates used in the previous analysis were applied to this analysis.

Mixed Use

Because there would be a mix of uses on the site, the potential exists for some trips to be internal trips within the development (e.g., residents patronizing adjacent retail and restaurant uses as well as office employees patronizing retail or restaurant uses). The majority of these trips would be walking trips. The few that would be made by automobile would be on-site and therefore would not affect the adjacent street network. ITE recently published a revised methodology in its *Trip Generation Handbook*, third edition (2014), which is based on research presented in National Cooperative Highway Research Program Report 684: Enhancing Internal Capture Estimation for Mixed-Use Developments (Transportation Research Board 2011). That methodology was applied to this analysis.

Pass-by Trip Reduction

Some portion of traffic associated with retail and restaurant uses is drawn from existing traffic on nearby streets. These vehicle trips are not considered "new" but instead are trips made by drivers who are already driving on the adjacent street system and choose to make an interim stop. These are referred to as "pass-by" trips. Per direction from the City, a 25 percent pass-by reduction (based on data published in the ITE *Trip Generation Handbook*) was applied to proposed retail uses on the site. The rates were deducted from the overall number of trips generated by the Project, after deducting internally captured trips. At the Project site, pass-by trips would, in essence, be captured from traffic on El Camino Real.

Overall Trip Generation Reductions

Previously, reductions for transit and mixed-use developments were calculated independently. However, by applying the recently published ITE methodology, reductions for transit and mixed-use developments can be calculated together. Trip generation is calculated on the basis of person-trips, which are broken down by mode (personal vehicle), alternative mode (transit, bicycle, walking), and internal capture. To calculate the number of vehicle trips, the number of person-trips completed by a personal vehicle is divided by vehicle occupancy. Average vehicle occupancy was estimated using data published by ITE for the various types of uses. This results in an effective transit and mixed-use development reduction of 18 percent during the AM Peak Hour and 26 percent during the PM Peak Hour. An average transit and mixed-use development reduction of 22 percent was applied to the daily trip generation projections. The results are summarized in the Trip Generation Summary section below. Copies of the trip reduction calculations are included in Appendix 3.1-F.

Existing Land Use

Currently, some portions of the site are occupied and generate traffic. To determine the net number of new trips that would be generated by the Project, the number of existing trips was subtracted from the number for estimated Project trip generation.

The following assumptions were applied to the various uses on the site to determine trip generation:

- **Car Wash, 550 Oak Grove Road** – ITE provides little data for self-service car washes, such as the one on the site. Therefore, to account for the use, observations were made on October 14, 2014, to capture actual peak-hour trip generation. During that time, the site generated five trips during the AM Peak Hour and 12 trips during the PM Peak Hour. For the sake of daily trip generation analysis, it was assumed that the highest peak hour represents 10 percent of daily trip generation.
- **Dance Studio, 562/564 Oak Grove Road** – The ITE land use category for Specialty Retail (#826) lists "dance studios" as one of the possible uses. It is noted that ITE has not published AM Peak-Hour trip generation data for Specialty Retail uses. However, a review of the dance studio's web site (http://www.mpaod.com/) on October 14, 2014, indicates that no classes are scheduled during the weekday AM Peak Hour. Therefore, the site would generate a negligible amount of traffic, if any, during that period. Published data for Specialty Retail, including zero AM Peak-Hour trip generation, were applied to this site.

- **Foster's Freeze Fast-Food Restaurant, 580 Oak Grove Road** – Data published by ITE for the Fast-Food Restaurant without Drive-Through Window land use (#933) were applied to this use. It is noted that this land use does not include data for daily trip generation. Therefore, the daily trip generation rate was calculated by using Fast-Food Restaurant with Drive-Through Window as a base, then adjusting according to the ratio of the PM Peak-Hour trip generation rates for the categories (i.e., with or without drive-through windows). Before the business' closure in late 2015, the restaurant opened at 10:00 a.m. on weekdays, which is outside of the AM Peak Hour. Because of this, there would be few, if any, trips generated during the AM Peak Hour. Therefore, to provide a conservative analysis, it was assumed that no trips are currently generated during the AM Peak Hour.
- **Hardware Storage, 540/560 Derry Lane** – ITE does not provide data for storage areas, such as the one on the site. Therefore, to account for the use, observations were made on October 14, 2014, to capture actual peak-hour trip generation rates. During that time, it was found that the site generated one trip during the AM Peak Hour and no trips during the PM Peak Hour. For the purpose of daily trip generation analysis, it was assumed that the highest peak hour represents 10 percent of daily trip generation.

Trip Generation Summary

Application of the trip generation rates, assumptions, and deductions would result in a net Project-generated increase in the number of daily vehicle trips (an increase of approximately 3,740, of which 384 would occur during the AM Peak Hour and 401 during the PM Peak Hour) (Table 3.1-10). Full detailed calculations are provided in Appendix 3.1-F.

Table 3.1-10. Project Trip Generation

Description	Daily	AM Total	AM In	AM Out	PM Total	PM In	PM Out
Project							
Apartment	1,348	103	21	82	129	84	45
General Office Building	2,129	318	280	38	290	49	241
Shopping Center	3,037	73	45	28	261	125	136
Project Trips Sub-Total	6,514	494	346	148	680	258	422
Trip Reductions							
Internal Capture + Transit Reduction	-1,457	-91	-52	-39	-179	-80	-99
Retail Pass-By	-542	-13	-8	-5	-47	-24	-23
Trip Reduction Sub-Total	-1,999	-104	-60	-44	-226	-104	-122
Existing Uses							
Car Wash	-120	-5	-2	-3	-12	-7	-5
Dance Studio	-168	0	0	0	-10	-5	-5
Fast-Food Restaurant	-477	0	0	0	-31	-16	-15
Hardware/Storage Area	-10	-1	-1	-0	0	0	0
Existing Use Sub-Total	-775	-6	-3	-3	-53	-28	-25
Net New Trips	3,740	384	283	101	401	126	275

Source: W-Trans, 2015.

Trip Distribution

In the city of Menlo Park, trip distribution profiles are usually based on data presented in the City's Circulation System Assessment document. The Circulation System Assessment uses three distribution profiles, depending on the type of land use: residential, employment, or commercial. The City is divided into four areas, with the Project site located within the West Menlo/Downtown/El Camino Real area. The distribution profiles were developed by the City and based on travel surveys conducted for each of the three land use types as well as the locations of homes, businesses, and other origins and destinations.

The Circulation System Assessment distribution profiles for trips within the West Menlo/ Downtown/El Camino Real area are shown in Table 3.1-11 as well as Figures 3.1-9, 3.1-10, and 3.1-11. Project trips for the residential, office, and retail uses were based on the distribution profiles for residential, employment, and commercial uses, respectively. Project-added traffic volumes at the study intersections are shown in Figures 3.1-13 and 3.1-14 for the AM and PM Peak Hours, respectively, and daily project-added traffic volumes at the study roadways are shown in Figure 3.1-15.

Table 3.1-11. Trip Distribution

Destination	Residential	Employment	Commercial
I-280 North	5%	12%	7%
I-280 South	9%	16%	3%
Sand Hill West	1%	1%	1%
SR 84 East	2%	20%	1%
US 101 South	9%	17%	3%
US 101 North	2%	4%	2%
Alameda North	6%	4%	4%
El Camino Real North	10%	7%	6%
Alpine South	0%	0%	0%
Junipero South	5%	3%	4%
Sand Hill East	3%	1%	3%
Middlefield South	0%	0%	0%
El Camino Real South	14%	7%	15%
Middlefield North	0%	0%	0%
Local Sharon Heights	5%	1%	8%
Local Downtown	26%	6%	38%
Local Willows	3%	1%	5%
Local Belle Haven	0%	0%	0%
Total Distribution	100%	100%	100%

Source: City of Menlo Park. 2004. *Circulation System Assessment*.

Source: W-Trans, 2015.

Graphics ... 0052914 (2-10-2016) tm

Figure 3.1-9
Project Trip Distribution (Residential Portion)
1300 El Camino Real Greenheart Project

Source: W-Trans, 2015.

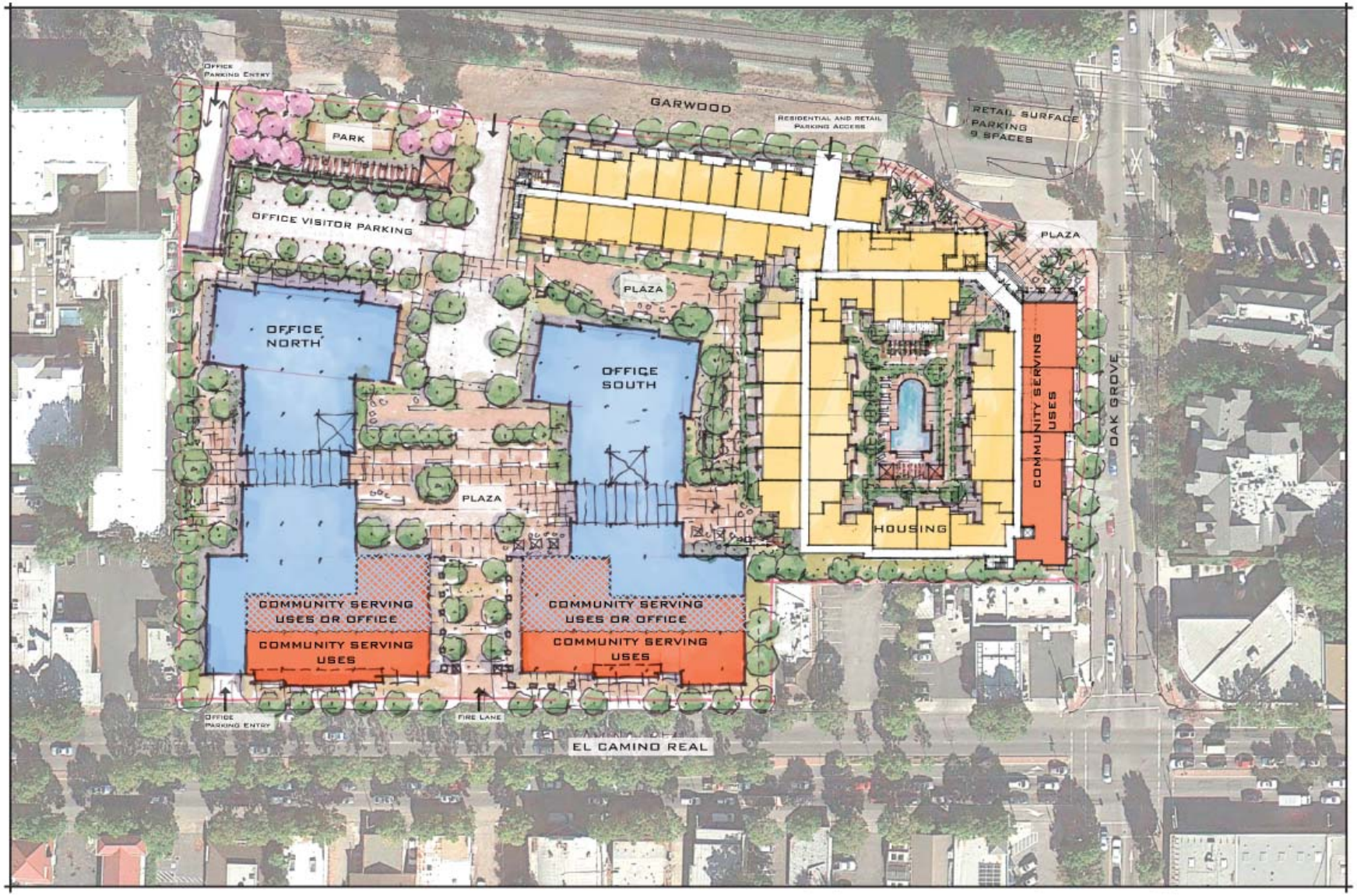
Graphics ... 0052914 (2-10-2016) tm

Figure 3.1-10
Project Trip Distribution (Commercial Portion)
1300 El Camino Real Greenheart Project

Source: W-Trans, 2015.

Graphics ... 0052914 (2-10-2016) tm

Figure 3.1-11
Project Trip Distribution (Retail Portion)
1300 El Camino Real Greenheart Project



Note: Community Serving Uses include Restaurants, Retail, and Personal/Business Services.

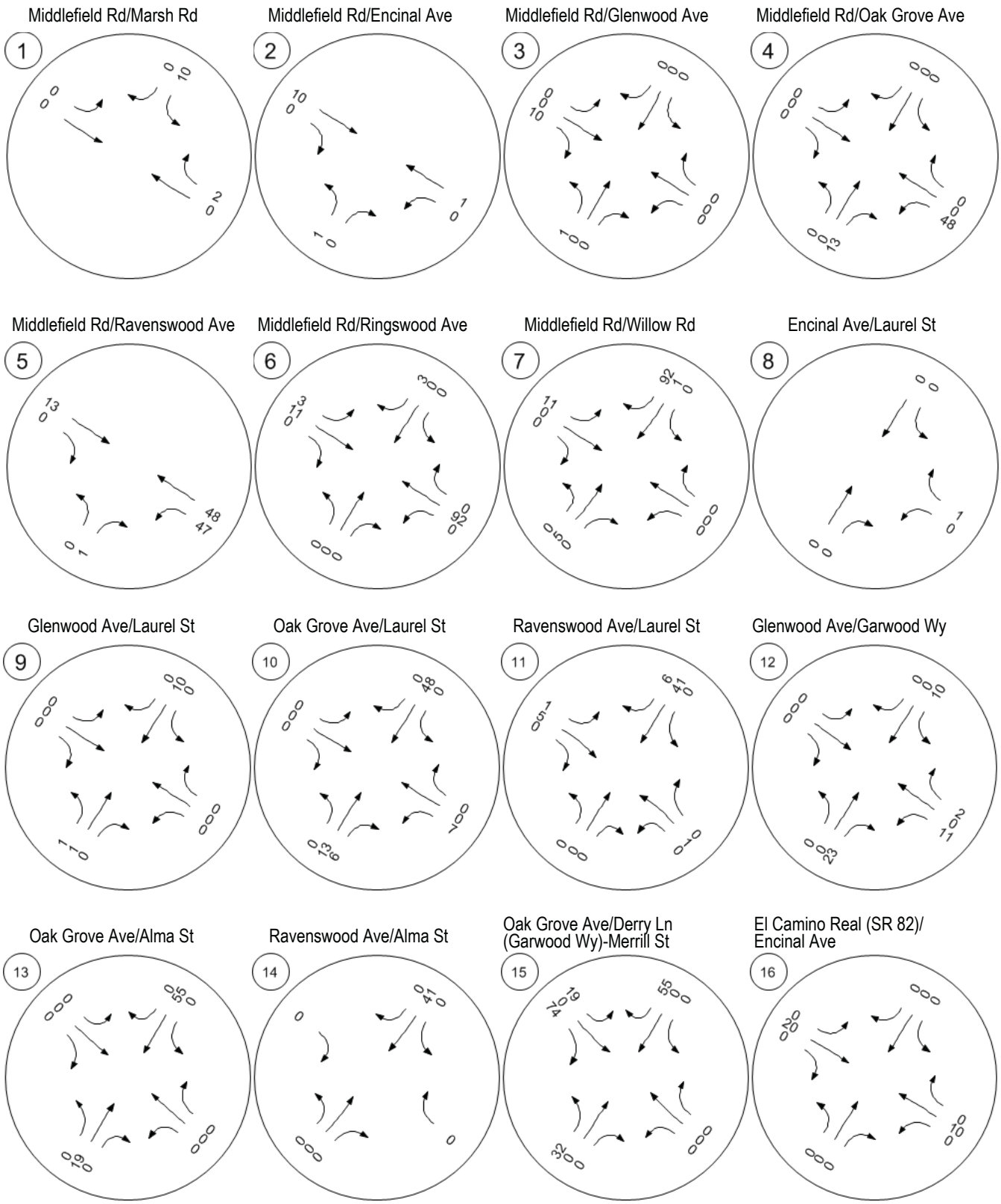
Project North N

0 40 80 160 Feet

Source: Bar Architects, 2013; W-Trans, 2015.

Graphics ... 00529.14 (10-19-2015) tm

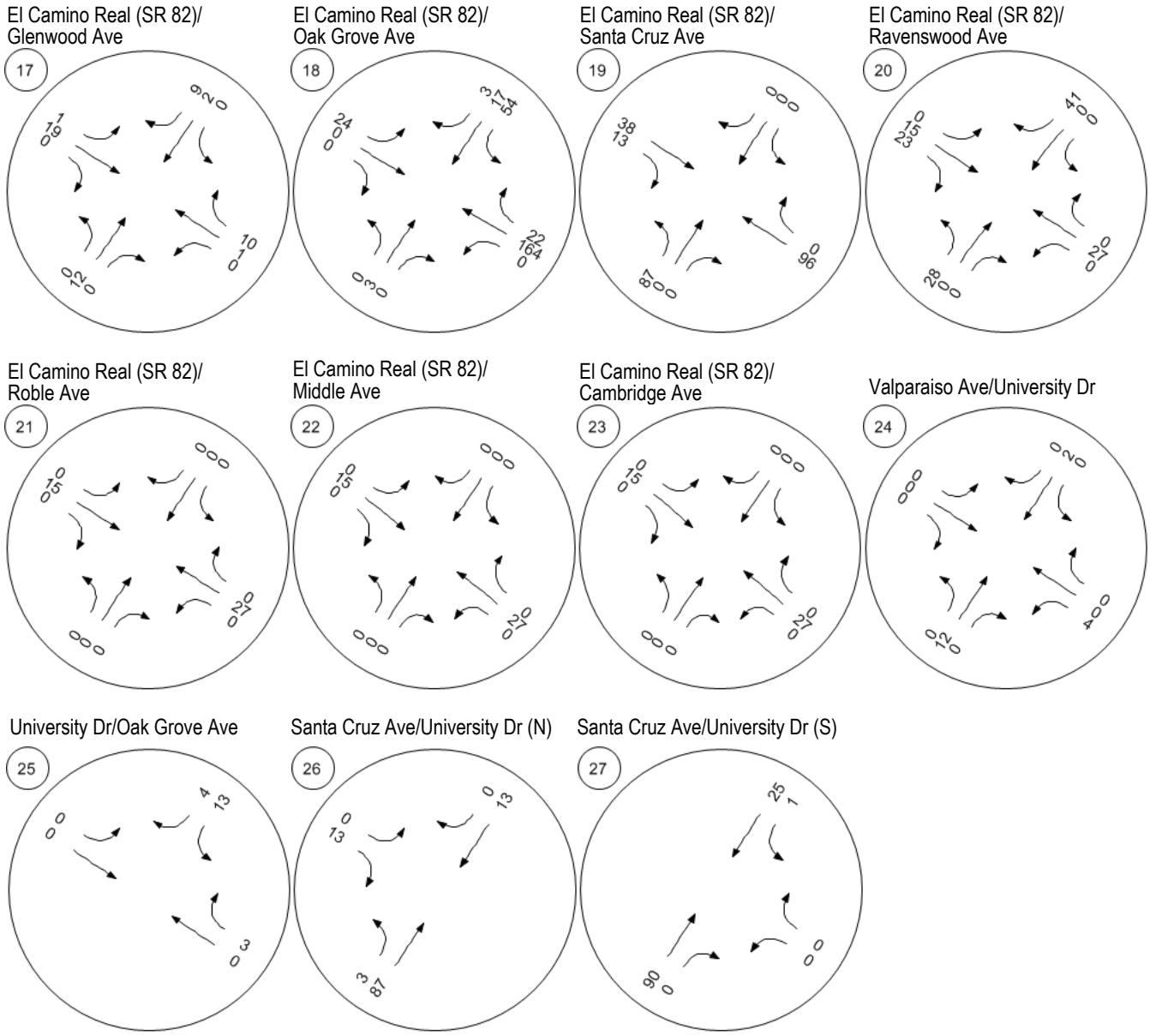
Figure 3.1-12
Site Plan
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

Graphics ... 0052914 (10-19-2015) tm

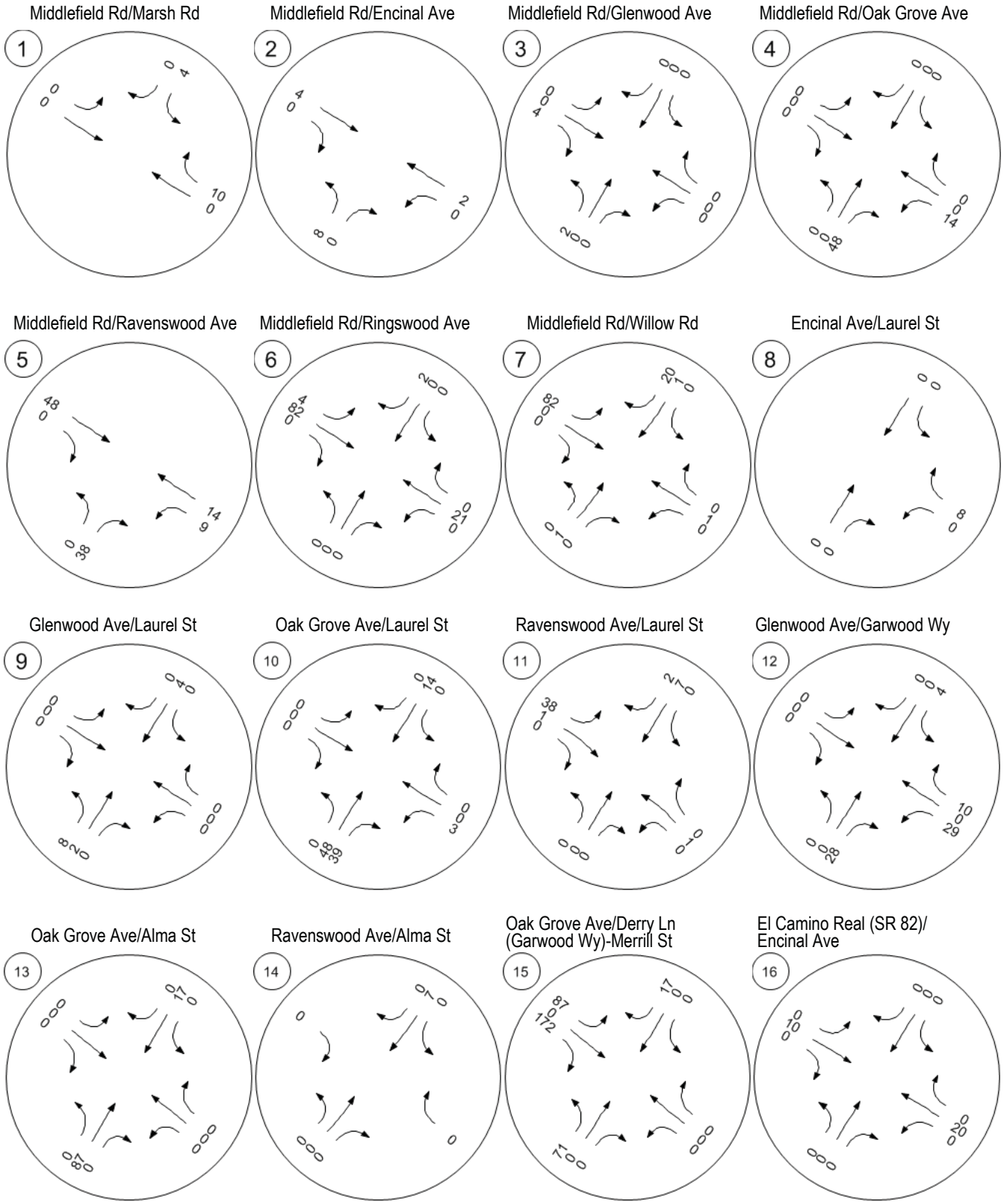
Figure 3.1-13A
Added AM Peak Project Volumes
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

Graphics ... 0052914 (10-19-2015) tm

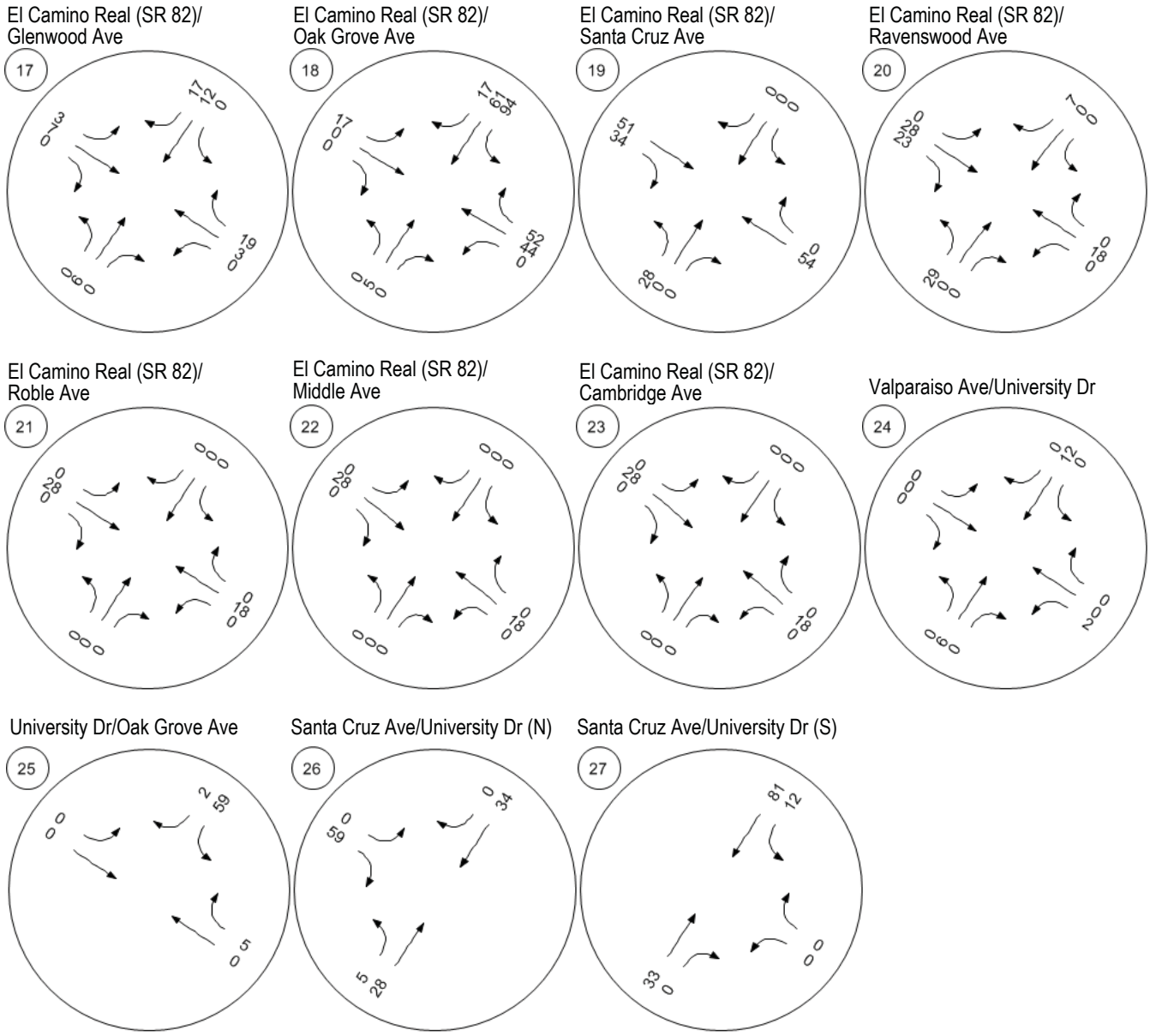
Figure 3.1-13B
Added AM Peak Project Volumes
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

Graphics ... 0052914 (10-19-2015) tm

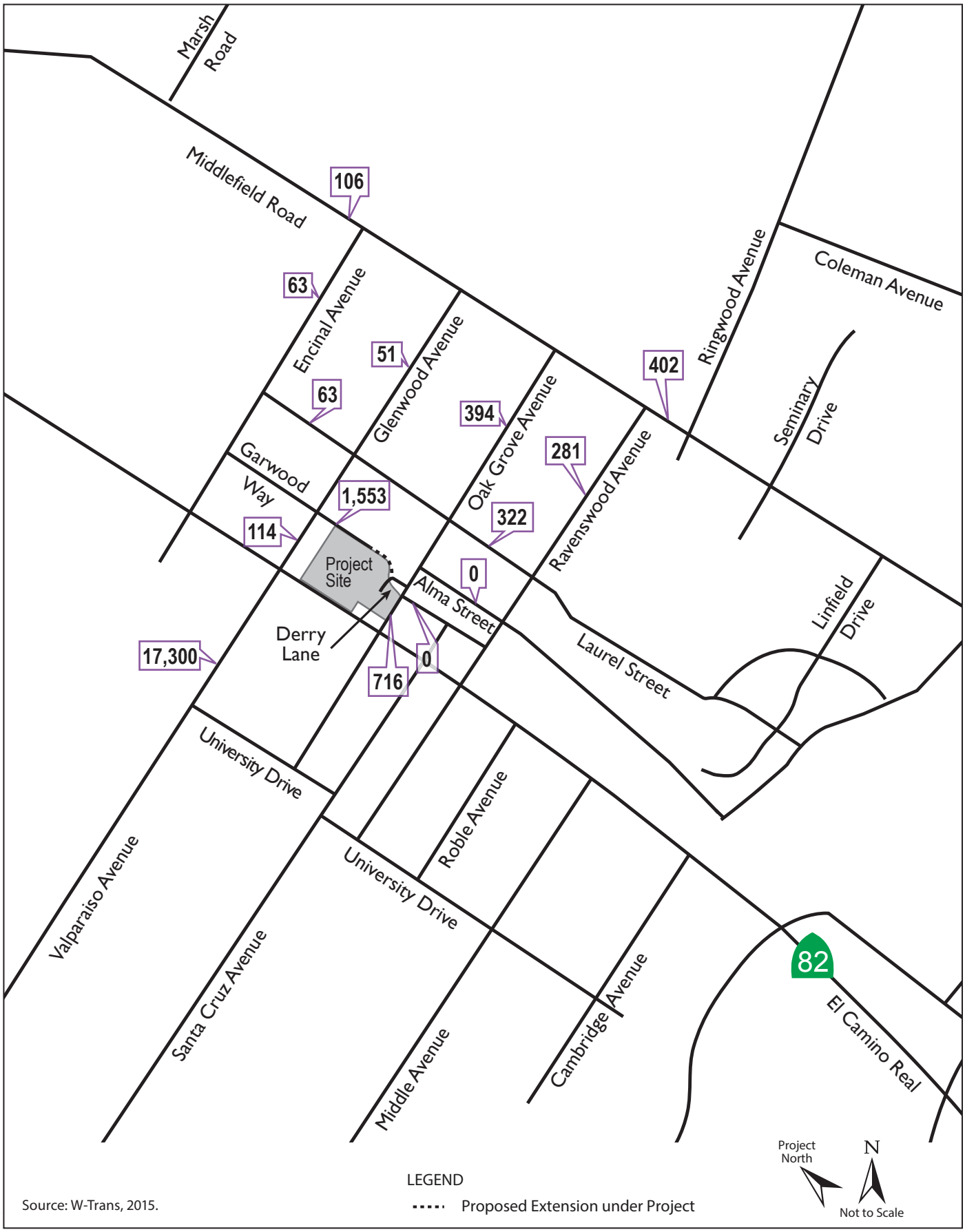
Figure 3.1-14A
Added PM Peak Project Volumes
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

Graphics ... 0052914 (10-19-2015) tm

Figure 3.1-14B
Added PM Peak Project Volumes
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

Graphics ... 0052914 (2-10-2016) tm

Figure 3.1-15
Project Added Daily Volumes
1300 El Camino Real Greenheart Project

Transportation Demand Management Program

The purpose of a TDM program is to reduce the number of vehicle trips and lessen impacts on roadway segments and intersections. It is also used to reduce associated parking demand by encouraging the use of modes other than single-occupant vehicles for travel. New developments that generate more than 100 peak-hour trips, such as the Project, are required by C/CAG and the Specific Plan to either pay an impact fee or develop a TDM program.

As currently proposed, the Project would include a TDM program with the following components:

- Free transit tickets (residential and office)
- Preferential parking for carpoolers
- Bicycle storage facilities (residential and office)
- Showers and changing rooms
- Car-share programs
- Bike-share programs

The range of effectiveness for each component of the proposed TDM program and its ability to reduce the number of Project-related vehicular trips was based on research conducted by the California Air Pollution Control Officers Association (CAPCOA) in *Quantifying Greenhouse Gas Mitigation Measures* (2010). Additional research found in the *TDM Encyclopedia*, published by the Victoria Transport Policy Institute, was also reviewed.

Free transit tickets would incentivize residents and workers who commute to the Project site to utilize transit as an alternative to traveling by automobile. The expected effectiveness of free transit tickets with respect to reducing the number of Project-related vehicular trips is between 0.3 and 20 percent of peak-hour office and residential trips.

Preferential parking for carpoolers would incentivize workers to commute to the Project site by carpool as an alternative to traveling in separate vehicles. The expected effectiveness of preferential parking for carpoolers is between 1 and 15 percent of peak-hour office trips.

Bicycle storage facilities, as well as showers and changing rooms, would be expected to reduce the number of vehicular Project-related trips by encouraging bicycling and providing amenities that would allow more office workers to travel by bicycle. The expected effectiveness of bicycle storage facilities with respect to reducing the number of Project-related vehicular trips is 0.625 percent of daily office trips, and the expected effectiveness for showers and changing rooms is 2 to 5 percent of commute office trips.

Car-sharing and bike-sharing programs would provide residents with options with respect to car ownership. In addition, these programs would provide additional flexibility by allowing office workers who commute by transit to use other means of transportation for short trips from the office during the business day. These trips would have otherwise required workers to commute by private automobile for the purpose of a short trip from the office. The expected effectiveness of a car-sharing program is between 0.4 and 0.7 percent of peak-hour office and residential trips. Although bike-sharing programs would be expected to reduce the number of vehicular trips at the Project site, its effectiveness is not yet known.

The combination of these trip reduction strategies would be expected to reduce the number of Project-related trips by 43 to 665 per day, including seven to 96 trips during the AM Peak Hour and four to 73 trips during the PM Peak Hour. This would result in a range of effectiveness of 2 to 30 percent with respect to reducing the number of peak-hour trips. It should be noted that under the C/CAG guidelines, this Project

would be expected to receive up to 426 daily trip credits for the TDM program. However, because the efficacy of the TDM program cannot be predicted reliably, to provide a conservative analysis, and to be consistent with other Menlo Park traffic studies for similar projects, no further trip reductions were applied to the analysis in relation to the proposed TDM program.

Site Access

Site Access and Circulation

Access to the site would be provided by driveways on Garwood Way and El Camino Real. As part of the Project, Garwood Way would be extended south, connecting Glenwood Avenue to Oak Grove Avenue. The intersection of Oak Grove Avenue and the newly extended Garwood Way would be at Merrill Street, approximately 30 feet west of the existing Derry Lane alignment.

El Camino Real

Two driveways would be provided on El Camino Real. The northern driveway would provide one-way inbound-only access to the shared underground parking area, while the southern driveway would be limited to emergency vehicle access only.

Garwood Way

Three driveways would be constructed on Garwood Way. The northern driveway would provide access to the shared underground parking area, the southern driveway would connect to the residential and retail areas, and the mid-frontage driveway would provide access to the plaza area and surface parking only. All three driveways would have full access, with all turning movements allowed at each location. Additionally, at the southern end of the site, on the east side of Garwood Way, there would be a small surface parking lot for retail uses, subject to City approval. Patrons of the retail uses who drive to the site could park in the small surface parking lot and walk along Oak Grove Avenue and El Camino Real to reach the retail destination. However, there are no marked facilities on the latest site plan for pedestrians who wish to cross Garwood Way at the north leg of the future Oak Grove Avenue/Garwood Way intersection.

Bicycle and Pedestrian Access

Bicycle and pedestrian access to the Project site would be provided at the mid-frontage driveway on Garwood Way, the southern access on El Camino Real, and the plaza at the northwest corner of the Oak Grove Avenue/Derry Lane intersection.

The access point at the future Oak Grove Avenue/Garwood Way intersection would provide employees, residents, and patrons with the shortest possible route between the Project site and the Menlo Park Caltrain station. The additional access points would provide connectivity to adjacent land uses along the perimeter of the Project site.

Continuous sidewalks would remain along the perimeter of the Project site; implementation of the Project would not modify existing bicycle or pedestrian facilities along the perimeter.

Upon more detailed development of the site plan, the Project should include connections for bicyclists and pedestrians to accommodate travel within the site between the parking garages, surface parking lots, and other on-site destinations.

Garwood Way Extension

Currently, Garwood Way terminates along the Project site's frontage. The Project would extend Garwood Way to the south, connecting to Oak Grove Avenue across from Merrill Street. However, to extend Garwood Way, Derry Lane would need to be removed so that Garwood Way could align with Merrill Street. Both Garwood Way and Merrill Street would continue to be stop controlled on their approaches to Oak Grove Avenue.

Impacts and Mitigation Measures

Near-Term 2020 plus-Project Conditions

The Near-Term plus-Project scenario considers traffic that would be generated by implementation of the Project in addition to Near-Term traffic volumes. A summary of the intersection analysis is provided in Table 3.1-12. Detailed results are provided in Appendix 3.1-C, and calculations are provided in Appendix 3.1-D.

Impact TRA-1: Impacts on Intersections under Near-Term 2020 plus-Project Conditions. Increases in traffic associated with the Project under Near-Term 2020 plus-Project conditions would result in increased peak-hour delays at five intersections. Intersection impacts at the four of the five intersections would remain significant and unavoidable because improvements would require obtaining additional rights-of-way, would violate existing City/town policies, or would be outside the City's jurisdiction. (SU)

The following study intersections would experience a potentially significant increase in delay as a result of the Project, resulting in a ***potentially significant*** impact:

3. Middlefield Road/Glenwood Avenue-Linden Avenue
11. Ravenswood Avenue/Laurel Street
13. Oak Grove Avenue/Alma Street
15. Oak Grove Avenue/Derry Lane (Garwood Way)-Merrill Street
20. El Camino Real/Ravenswood Avenue-Menlo Avenue

MITIGATION MEASURES. Intersection improvements at Ravenswood Avenue/Laurel Street are needed to mitigate the impact of Near-Term 2020 plus-Project conditions to a ***less-than-significant*** level.

TRA-1.1: Implement Intersection Improvements to Address Near-Term 2020 plus-Project Effects. Operations at Ravenswood Avenue/Laurel Street (#11) could be improved by modifying the intersection geometry to provide additional capacity. Impacts on this intersection were noted in the Specific Plan's Environmental Impact Report (EIR). Acceptable operations could be achieved at the intersection of Ravenswood Avenue/Laurel Street by reconfiguring the southbound Laurel Street approach to have a left-turn lane and a shared through/right-turn lane. This mitigation measure was not specified in the Specific Plan EIR. Conceptual schematics of the recommended feasible mitigation measures are provided in Appendix 3.1-G. A summary of the intersection analysis with mitigation measures is provided in Table 3.1-13. It may be possible to implement this mitigation measure within the existing right-of-way while maintaining the bicycle lanes, but it would require removal of on-street parking and 10-foot-wide travel lanes. With this mitigation measure, the impact would be reduced to a less-than-significant level.

Table 3.1-12. Near-Term and Near-Term plus-Project Intersection LOS

	Near-Term Conditions				Near-Term plus-Project Conditions					
	AM Peak Hour		PM Peak Hour		AM Peak Hour			PM Peak Hour		
Study Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Potentially Significant Impact	Delay	LOS	Potentially Significant Impact
1. Middlefield Rd/Marsh Rd	70.0	E	64.9	E	71.5	E	No[a]	65.6	E	No[a]
2. Middlefield Rd/Encinal Ave	47.1	D	20.2	C	48.8	D	No	21.0	C	No
3. Middlefield Rd/Glenwood Ave-Linden Ave*	>180**	F	>180**	F	>180**	F	Y	>180**	F	Yes
4. Middlefield Rd/Oak Grove Ave	18.7	B	17.0	B	18.8	B	No	18.1	B	No
5. Middlefield Rd/Ravenswood Ave	26.1	C	32.7	C	28.1	C	No	37.3	D	No
6. Middlefield Rd/Ringwood Ave	32.4	C	36.9	D	32.4	C	No	36.8	D	No
7. Middlefield Rd/Willow Rd	50.5	D	49.3	D	50.6	D	No	49.2	D	No
8. Laurel St/Encinal Ave	24.6	C	11.6	B	24.7	C	No	11.7	B	No
9. Laurel St/Glenwood Ave	20.1	C	12.2	B	20.8	C	No	12.4	B	No
10. Laurel St/Oak Grove Ave	15.3	B	15.6	B	15.8	B	No	16.4	B	No
11. Ravenswood Ave/Laurel St	39.1	D	50.5	D	39.7	D	No	56.5	E	Yes
12. Glenwood Ave/Garwood Way*	15.5	C	14.6	B	16.8	C	No	16.0	C	No
13. Oak Grove Ave/Alma St*	20.8	C	22.7	C	23.3	C	No	28.0	D	Yes
14. Ravenswood Ave/Alma St*	12.7	B	18.4	C	12.7	B	No	18.4	C	No
15. Oak Grove Ave/Derry Ln (Garwood Way)-Merrill St*	21.9	C	18.4	C	28.4	D	Yes	138.7**	F	Yes
16. El Camino Real/Encinal Ave	20.2	C	18.5	B	20.3	C	No	18.6	B	No
17. El Camino Real/Valparaiso Ave-Glenwood Ave	40.1	D	45.5	D	42.1	D	No	48.8	D	No
18. El Camino Real/Oak Grove Ave	31.4	C	30.0	C	34.5	C	No	37.9	D	No
19. El Camino Real/Santa Cruz Ave	12.3	B	14.3	B	13.6	B	No	14.9	B	No
20. El Camino Real/Ravenswood Ave	42.1	D	56.5	E	43.0	D	No	58.6	E	Yes
21. El Camino Real/Roble Ave	8.9	A	11.0	B	8.8	A	No	10.8	B	No
22. El Camino Real/Middle Ave	16.3	B	20.1	C	16.0	B	No	21.7	C	No
23. El Camino Real/Cambridge Ave	4.8	A	10.6	B	4.8	A	No	10.7	B	No

	Near-Term Conditions				Near-Term plus-Project Conditions					
	AM Peak Hour		PM Peak Hour		AM Peak Hour			PM Peak Hour		
Study Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Potentially Significant Impact	Delay	LOS	Potentially Significant Impact
24. Valparaiso Ave/University Dr	23.4	C	23.8	C	24.1	C	No	24.0	C	No
25. Oak Grove Ave/University Dr	14.7	B	14.4	B	15.3	C	No	16.8	C	No
26. Santa Cruz Ave/University Dr (North)	14.6	B	18.5	C	17.8	C	No	23.3	C	No
27. Santa Cruz Ave/University Dr (South)	17.6	B	19.2	B	18.0	B	No	19.8	B	No

Source: W-Trans, 2015.

Notes:

[a.] Increase in delay on critical movements does not exceed the standards of significance.

Delay = average number of seconds per vehicle; LOS = level of service.

* For two-way, stop-controlled intersections, results are reported for the approach with the highest delay.

** For calculated delays greater than 120 seconds, *Highway Capacity Manual* methodology does not provide an accurate representation of actual conditions. However, calculated delays between 120-180 seconds are reported for comparative purposes and used to determine the significance of an impact. Calculated delays greater than 180 seconds are shown as >180.

See Appendix 3.1-A for definitions of LOS for signalized and unsignalized intersections.

Table 3.1-13. Near-Term plus-Project Intersection LOS with Mitigation Measures

	AM Peak Hour		PM Peak Hour	
Study Intersection	Delay	LOS	Delay	LOS
3. Middlefield Rd/Glenwood Ave-Linden Ave	9.9	A	8.9	A
11. Ravenswood Ave/Laurel St	30.6	C	50.8	D
20. El Camino Real/Ravenswood Ave	42.2	D	49.0	D

Source: W-Trans, 2015.
Notes:
Delay = average number of seconds per vehicle.
LOS = Level of service.
* For two-way, stop-controlled intersections, results are reported for the approach with the highest delay.
See Appendix 3.1-A for definitions of LOS for signalized and unsignalized intersections.

Intersection improvements are needed at the other four intersections to mitigate or reduce the impact of the Near-Term 2020 plus-Project conditions. However, each impact would remain ***significant and unavoidable*** because the intersection is not under the City's jurisdiction, or due to other factors as noted below.

TRA-1.2: Implement Intersection Improvements to Address Near-Term 2020 plus-Project Effects. Operations at four intersections could be improved by modifying intersection geometry to provide additional capacity. Some of these modifications may require additional rights-of-way to add travel lanes. Conceptual schematics of the recommended feasible mitigation measures are provided in Appendix 3.1-G. A summary of the intersection analysis with mitigation measures is provided in Table 3.1-13.

a. Middlefield Road/Glenwood Avenue-Linden Avenue (#3)

Impacts on this intersection were noted in the Specific Plan EIR. Acceptable operations could be achieved at Middlefield Road/Glenwood Avenue-Linden Avenue with signalization of the intersection. This mitigation measure would be consistent with the mitigation measure noted in the Specific Plan -EIR. No additional mitigation measures beyond those identified in the Specific Plan EIR would be required to achieve acceptable operations at this intersection. This mitigation measure is specified in the Supplemental Transportation Impact Fee.

Although traffic volumes at this intersection would not satisfy peak-hour traffic signal warrant criteria, as discussed in the Traffic Signal Warrants section, the impact would be reduced to a less-than-significant level with implementation of this mitigation measure. However, this mitigation measure may require the acquisition of additional rights-of-way to install traffic signal equipment and modify the Glenwood Gate, a physical gate at the east Linden Avenue leg of the intersection that restricts the Linden Avenue approach to a two-way, one-lane road. Additionally, because the measure would require approval from the Town of Atherton, its implementation cannot be guaranteed; therefore, the impact would be significant and unavoidable. The Project is required to contribute a fair share financial contribution toward a traffic signal at this location, based the percentage of project-generated trips compared to the total number of trips passing through the intersection. The funds would be available to the

Town of Atherton for a 5-year period. The Project's fair share contribution would be 3.7 percent of the cost of the improvement, as shown in Appendix 3.1-H.

b. Oak Grove Avenue/Alma Street (#13)

Acceptable operations would be achieved at the intersection of Oak Grove Avenue/Alma Street with implementation of Mitigation Measure TRA-1.2.c at Oak Grove Avenue/Derry Lane (Garwood Way)-Merrill Street. The mitigation measure includes a southbound peak-hour left-turn restriction at Oak Grove Avenue/Derry Lane (Garwood Way)-Merrill Street, which would reduce the amount of traffic entering eastbound Oak Grove Avenue at Alma Street. However, the City's experience has found that turn restrictions are ineffective because turn restrictions are ignored by drivers. Consequently, they would not mitigate the impact. Installation of a traffic signal at this intersection was not considered because traffic volumes at this intersection would not satisfy peak-hour signal warrant criteria, as discussed in the Traffic Signal Warrants section. Additionally, a traffic signal at this intersection is infeasible because of the immediate proximity of the Caltrain railroad tracks to the east and the potential for queuing to extend onto the tracks. Grade separation for the railroad tracks and Oak Grove Avenue would modify the Alma Street intersection and may mitigate this impact. However, grade separation is a large-scale, long-term project. It is not expected that it would be funded by one development. In addition, a design is still to be completed. Therefore, this impact would remain significant and unavoidable.

A partial mitigation measure to reduce the impact on this intersection would be to construct Class II bicycle lanes on Oak Grove Avenue between El Camino Real and the east city limits. This improvement was identified in the City's Specific Plan. It could require parking spaces to be removed along Oak Grove Avenue. The Project is required to implement the Class II bicycle lanes on Oak Grove Avenue as a partial mitigation measure.

c. Oak Grove Avenue/Derry Lane (Garwood Way)-Merrill Street (#15)

Although traffic volumes at this intersection would satisfy peak-hour signal warrant criteria, as discussed in the Traffic Signal Warrants section, a traffic signal is not recommended. It is infeasible because of the immediate proximity of the Caltrain railroad tracks to the east and the potential for queuing to extend onto the tracks. Acceptable operations could be achieved at the intersection of Oak Grove Avenue/Derry Lane (Garwood Way)-Merrill Street with implementation of southbound left-turn restrictions during the morning peak period (7:00–9:00 a.m.) and the afternoon peak period (4:00–6:00 p.m.). The City's experience has found that turn restrictions are ineffective because turn restrictions are ignored by drivers, and they would not mitigate the impact. As part of the Garwood Way extension, the Project would provide a two-lane approach at the Oak Grove Avenue intersection. While this widening would reduce the delay expected at this intersection, the impact would remain significant.

As discussed in TRA-1.2b, although it may mitigate this impact, grade separation is considered a large-scale, long-term project. It is not expected that it would be funded by one development. Therefore, the impact would remain significant and unavoidable.

A partial mitigation measure to reduce the impact on this intersection would be to construct Class II bicycle lanes on Oak Grove Avenue between El Camino Real and the east city limits. This improvement was identified in the City's Specific Plan. It could require parking spaces to be removed along Oak Grove Avenue. As noted in TRA 1.2b, the Project is required to implement the Class II bicycle lanes on Oak Grove Avenue as a partial mitigation measure.

d. El Camino Real/Ravenswood Avenue-Menlo Avenue (#20)

Impacts on this intersection were noted in the Specific Plan EIR. Acceptable operations could be achieved at El Camino Real/Ravenswood Avenue-Menlo Avenue with the addition of a third northbound through travel lane along El Camino Real; this mitigation measure is consistent with the mitigation measure noted in the Specific Plan EIR. This improvement is specified in the City's Transportation Impact Fee (TIF) program. The measure is consistent with one of the alternatives that is currently being considered in the El Camino Real Corridor Study and would not preclude implementation of potential alternatives. However, widening would likely require removal of some of the trees located at the southeast corner and affect access to the 1000 El Camino Real property. The applicant is required to pay traffic impact fees per the current TIF schedule.

This measure would have potentially significant secondary effects on bicyclists because they would be required to cross additional lanes of traffic to make a left turn or proceed through the intersection. This improvement would also affect pedestrians by increasing the crossing distance, exacerbating the multiple-threat scenario (where vehicles block sight lines between drivers in adjacent lanes and crossing pedestrians), and increasing their exposure time to vehicles.

Because the intersection is controlled by Caltrans, this measure would require coordination with and approval by Caltrans, which cannot be guaranteed. Furthermore, because of the mitigation measures' secondary and access impacts, it is considered infeasible. There are no other feasible mitigation measures that would fully mitigate the impact on the intersection of El Camino Real/Ravenswood Avenue-Menlo Avenue.

TRA-1.3: Implement Transportation Demand Management Program to Partially Reduce Near-Term 2020 plus Project Effects. Several intersections would experience a significant and unavoidable impact under Near-Term 2020 plus-Project conditions.

To partially alleviate the effects of the Project, the applicant would be required to implement a TDM program, as required by the Specific Plan. A partial mitigation measure, to reduce the impacts of the Project at several intersections under the Near-Term 2020 plus-Project conditions, would be to implement a TDM program, as required by the Specific Plan. The proposed TDM program could reduce peak-hour and daily trip generation. However, although the TDM program could reduce the number of vehicular trips by 2 to 30 percent and reduce the intersection impacts, the effectiveness of the TDM program cannot be reliably predicted. Furthermore, the maximum 30 percent would not be enough to reduce impacts to a less-than-significant level. Therefore, the impacts would remain significant and unavoidable.

Roadway Segments

Impact TRA-2: Impacts on Roadway Segments under Near-Term 2020 plus-Project Conditions. Increases in traffic associated with the Project under Near-Term 2020 plus-Project conditions would result in increased ADT volumes on area roadway segments. (SU)

Roadway segment operations with the addition of Project-generated traffic are summarized in Table 3.1-14. With the addition of Project-generated traffic, the following roadway segments are expected to experience an unacceptable increase in traffic volumes, resulting in ***potentially significant*** impacts:

5. Ravenswood Avenue between Laurel Street and Middlefield Road
10. Oak Grove Avenue west of Laurel Street
11. Oak Grove Avenue east of Laurel Street
13. Garwood Way south of Glenwood Avenue

MITIGATION MEASURE. Roadway improvements are needed to mitigate impacts of the Project on study roadways under Near-Term 2020 plus-Project conditions. A typical mitigation measure would be to widen the roadway and add travel lanes and capacity to accommodate the increase in the net number of daily trips. However, increasing the capacity of the roadway would require additional rights-of-way, which would affect local property owners. This is considered infeasible. Also, widening can lead to other effects, such as induced travel demand (e.g., more vehicles on the roadway due to increased capacity on a particular route), air quality degradation, increases in noise associated with motor vehicles, and reductions in transit use (less congestion or reduced driving time may make driving more attractive than transit travel). Wider roadways also result in the degradation of bicycle and pedestrian facilities as well as increased intersection crossing times. There is also a quality-of-life aspect to roadway planning because congestion, mobility, air quality, and noise impacts affect the quality of life for local residents, commuters, employees, and businesses in the area. Neighborhoods as well as commercial business centers are affected by roadway projects. Thus, although traffic may increase on certain roadways by varying percentages, the increase should be viewed as more than an LOS or traffic operation issue.

Additional lanes would not mitigate the impacts on the roadway segments because the thresholds are based on baseline and added Project traffic volumes. Therefore, impacts on the following roadway segments would remain ***significant and unavoidable***:

5. Ravenswood Avenue between Laurel Street and Middlefield Road
10. Oak Grove Avenue between El Camino Real and Laurel Street
11. Oak Grove Avenue between Laurel Street and Middlefield Road
13. Garwood Way between Glenwood Avenue and Oak Grove Avenue

Partial mitigation measures are identified to reduce the impacts of the Project on daily roadway segment operations under Near-Term 2020 plus-Project conditions. The Project includes a TDM program that could reduce the number of Project-related peak-hour and daily trips. The identified bicycle lane improvements on Oak Grove Avenue could encourage bicycling and possibly reduce traffic volumes if drivers shift mode from personal vehicles to bicycles with the availability of additional bicycle routes. However, because the reduction cannot be quantified, and it is not anticipated that this would fully mitigate impacts on these segments by reducing trips to the extent that the impact would be less than significant, the impacts are considered ***significant and unavoidable***.

Table 3.1-14. Near-Term and Near-Term plus-Project ADT Summary

Roadway Segment	Classification	Capacity	ADT			Potentially Significant Impact
			Near Term	Added	Near Term plus Project	
Middlefield Rd (Marsh Rd to Glenwood Ave)*	Minor Arterial	25,000	19,700	106	19,806	No
Middlefield Rd (Oak Grove Ave to Ravenswood Ave)*	Minor Arterial	25,000	16,900	402	17,302	No
Laurel St (Encinal Ave to Glenwood Ave)	Collector	10,000	4,300	63	4,363	No
Laurel St (Oak Grove Ave to Ravenswood Ave)	Collector	10,000	4,600	322	4,922	No
Ravenswood Ave (Laurel St to Middlefield Rd)	Minor Arterial	20,000	18,000	281	18,281	Yes
Encinal Ave (Laurel St to Middlefield Ave)*	Collector	10,000	5,800	63	5,863	No
Valparaiso Ave (University Dr to El Camino Real)	Minor Arterial	20,000	14,000	181	14,181	No
Glenwood Ave (El Camino Real to Laurel St)	Collector	10,000	6,600	114	6,714	No
Glenwood Ave (Laurel St to Middlefield Rd)*	Collector	12,000	5,000	51	5,051	No
Oak Grove Ave (El Camino Real to Laurel St)	Collector	10,000	10,100	716	10,816	Yes
Oak Grove Ave (Laurel St to Middlefield Rd)*	Collector	10,000	9,200	394	9,594	Yes
Alma St (Oak Grove Ave to Ravenswood Ave)	Collector	10,000	1,700	0	1,700	No
Garwood Way (Glenwood Ave to Oak Grove Ave)	Local	1,500	700	1,553	2,253	Yes
Merrill St (Oak Grove Ave to Ravenswood Ave)	Local	1,500	2,800	0	2,800	No

Source: W-Trans, 2015.

Notes:

* Part or all of the roadway segment is located in the Town of Atherton.

Roadway capacities for each roadway classification are detailed in the City of Menlo Park Circulation System Assessment and the Town of Atherton General Plan (2002).

Data regarding existing volumes collected by the City of Menlo Park in 2014.

TRA-2.1: Implement Roadway Segment Improvements to Address Near-Term 2020 plus-Project Effects. The mitigation measures below are recommended to reduce potentially significant impacts on study area roadway segments.

a. Oak Grove Avenue between El Camino Real and Laurel Street (#10)

A partial mitigation measure to reduce the impact on this roadway segment would be to construct Class II bicycle lanes on Oak Grove Avenue between El Camino Real and Laurel Street. This improvement was identified in the City's Specific Plan. It could require parking spaces to be removed along Oak Grove Avenue.

b. Oak Grove Avenue between Laurel Street and Middlefield Road (#11)

A partial mitigation measure to reduce the impact on this roadway segment would be to construct Class II bicycle lanes on Oak Grove Avenue between Laurel Street and the east city limits. This improvement was identified in the City's Specific Plan. It could require parking spaces to be removed along Oak Grove Avenue.

c. Garwood Way between Glenwood Avenue and Oak Grove Avenue (#13)

A partial mitigation measure to reduce the impact on this roadway segment would be to sign a Class III bicycle route on Garwood Way between Glenwood Avenue and Oak Grove Avenue. This improvement was identified in the City's Specific Plan.

d. Transportation Demand Management

Impacts on roadway segments would be partially reduced by implementing the trip reduction measures proposed in the Project's TDM program, as required by the Specific Plan. The TDM program could reduce the number of vehicular trips by 2 to 30 percent, but even at the maximum of 30 percent, impacts on the four segments, although reduced, would still remain significant and unavoidable.

Routes of Regional Significance

Impact TRA-3: Impacts on Routes of Regional Significance under Near-Term 2020 plus-Project Conditions. Increases in traffic associated with the Project under Near-Term 2020 plus-Project conditions could result in significant impacts on several Routes of Regional Significance. (SU)

As summarized in Table 3.1-15, with the addition of Project-generated traffic, the following Routes of Regional Significance are expected to experience a ***potentially significant*** impact:

- Willow Road – US 101 to Bayfront Expressway (northbound)
- Willow Road – Bayfront Expressway to US 101 (southbound)
- Bayfront Expressway – University Avenue to Willow Road (westbound)
- Bayfront Expressway – Willow Road to University Avenue (eastbound)

Table 3.1-15. Routes of Regional Significance – Near-Term Conditions and Near-Term plus-Project Conditions

		Near Term				Near Term plus Project					
		AM Peak Hour		PM Peak Hour		AM Peak Hour			PM Peak Hour		
Route	Segment	v/c	LOS	v/c	LOS	v/c	LOS	Potentially Significant Impact?	v/c	LOS	Potentially Significant Impact?
El Camino Real (SR 82)	North of Ravenswood Ave (NB)	0.40	A	0.72	C	0.48	A	No	0.76	C	No
	South of Ravenswood Ave (NB)	0.31	A	0.50	A	0.31	A	No	0.51	A	No
	North of Ravenswood Ave (SB)	0.70	B	0.58	A	0.72	C	No	0.62	B	No
	South of Ravenswood Ave (SB)	0.44	A	0.38	A	0.44	A	No	0.39	A	No
Bayfront Expressway (SR 84)	University Ave to Willow Rd (WB)	1.15	F	0.47	A	1.16	F	Yes	0.48	A	No
	County Line to University Ave (WB)	0.61	C	0.25	A	0.61	C	No	0.25	A	No
	Willow Rd to University Ave (EB)	0.42	A	1.16	F	0.42	A	No	1.17	F	Yes
	University Ave to County Line (EB)	0.20	A	0.61	C	0.22	A	No	0.62	C	No
Willow Rd (SR 114)	US 101 to Bayfront Expressway (NB)	0.75	C	1.25	F	0.75	C	No	1.27	F	Yes
	Bayfront Expressway to US 101 (SB)	1.04	F	0.91	E	1.07	F	Yes	0.92	E	No
US 101	North of Marsh Rd (NB)	0.79	D	0.93	E	0.79	D	No	0.93	E	No
	Willow Rd to Marsh Rd (NB)	0.78	D	0.85	D	0.78	D	No	0.85	D	No
	University Ave to Willow Rd (NB)	0.86	D	0.91	E	0.87	D	No	0.91	E	No
	South of University Ave (NB)	0.89	E	0.93	E	0.90	E	No	0.93	E	No
	North of Marsh Rd (SB)	0.98	E	0.76	D	0.98	E	No	0.76	D	No
	Marsh Rd to Willow Rd (SB)	0.88	D	0.74	D	0.88	D	No	0.74	D	No
	Willow Rd to University Ave (SB)	0.94	E	0.82	D	0.94	E	No	0.82	D	No
	South of University Ave (SB)	0.97	E	0.84	D	0.97	E	No	0.84	D	No

Source: W-Trans, 2015.

Notes: v/c = volume-to-capacity ratio; LOS = level of service; NB = northbound; SB = southbound; EB = eastbound; WB = westbound.

MITIGATION MEASURES. Roadway improvements are needed to mitigate impacts of the Project under Near-Term 2020 plus-Project conditions on Routes of Regional Significance. A typical mitigation measure would be to widen the road to add travel lanes and capacity. However, impacts on Routes of Regional Significance would remain ***significant and unavoidable*** because these roadways are not under the jurisdiction of the City. In addition, freeway improvement projects, which add lanes, are planned and funded on a regional scale, and would be too costly for a single project.

TRA-3.1: Implement Routes of Regional Significance Improvements to Address Near-Term 2020 plus-Project Effects. The mitigation measures below were considered to reduce potentially significant impacts on Regional Routes of Significance.

Routes of Regional Significance could be widened to add travel lanes; however, the routes are under the jurisdiction of Caltrans. Although adding a travel lane would increase capacity, constructing additional lanes is not a feasible mitigation measure because of right-of-way constraints. Therefore, impacts at the following locations would remain significant and unavoidable:

- Willow Road – US 101 to Bayfront Expressway (northbound)
- Willow Road – Bayfront Expressway to US 101 (southbound)
- Bayfront Expressway – University Avenue to Willow Road (westbound)
- Bayfront Expressway – Willow Road to University Avenue (eastbound)

Partial mitigation measures are identified to reduce impacts of the Project on Routes of Regional Significance under Near-Term 2020 plus-Project conditions. The Project includes a TDM program that could reduce its peak-hour and daily trip totals. Impacts on Routes of Regional Significance would be partially reduced by implementing the trip reduction measures proposed in the Project's TDM program, as required by the Specific Plan. The TDM program could reduce the number of vehicular trips by 2 to 30 percent, but even at the maximum of 30 percent, impacts on three of the four segments, although reduced, would still remain significant . With a full 30 percent trip reduction, the TDM program would reduce the impact on northbound Willow Road between US 101 and Bayfront Expressway to a less-than-significant level. However, because the reduction cannot be quantified and the effectiveness of the TDM program is uncertain, impacts to all four of the roadway segments would remain significant and unavoidable, as described below.

Cumulative 2040 Conditions

Cumulative Approved/Planned Development Projects

The cumulative scenario includes an analysis of projected traffic volumes for the horizon year of 2040. This scenario includes traffic that would be generated by approved developments that were identified in the Near-Term scenario, traffic that would be generated by developments that are currently pending approval, as well as a growth rate of 1 percent per year to account for growth in regional traffic. A list of these developments was provided by the City of Menlo Park. Table 3.1-16 provides a summary that shows approved projects that are already identified in the Near-Term scenario as well as pending projects that are not yet approved.

Table 3.1-16. Cumulative Pending and Approved Developments in Project Vicinity

Project	Land Use	Size	Approval Status
1460 El Camino Real	Residential/Office	16 du/26,800 sf	Approved
333 Ravenswood (SRI)	R&D Campus	3,000 Employees	Pending
500 El Camino Real	Residential/Office/Retail	170 du/199,500 sf/10,000 sf	Pending
840 Menlo Ave	Residential/Office	3 du/6,300 sf	Pending
Menlo Atherton HS Facilities Plan Update	High School	460 student increase	Pending
702 Oak Grove Ave	Residential/Office	4 du/3,469 sf	Approved
1295 El Camino Real	Residential/Commercial	15 du/1,906 sf	Pending
133 Encinal Avenue	Residential	26 du	Pending
555 Glenwood Ave	Hotel	138 rooms	Approved
1283 Willow Road	Office/Retail	3,800 sf/5,096 sf	Approved
Menlo Gateway	Office/Health Club/ Restaurant/Hotel	694,669 sf/68,964 sf/ 4,285 sf/230 rooms	Approved
Facebook West	Office	433,656 sf	Approved
Commonwealth Corporate Center	Office	259,920 sf	Approved
VA/Core	Residential	60 du	Approved
Anton Menlo	Residential	396 du	Approved
777 Hamilton	Residential	196 du	Approved
3645 Haven Ave	Residential	146 du	Approved

Note: sf = square feet; du = dwelling unit.

Detailed information, including information on the land uses that are being replaced, is provided in Appendix 3.1-E. The traffic volumes that would be generated by these pending projects were developed from data published by ITE in its Trip Generation Manual. Cumulative traffic volumes are shown in Figures 3.1-16 and 3.1-17 for the AM and PM Peak Hours, respectively. Daily traffic volumes on roadway segments are shown in Figure 3.1-18.

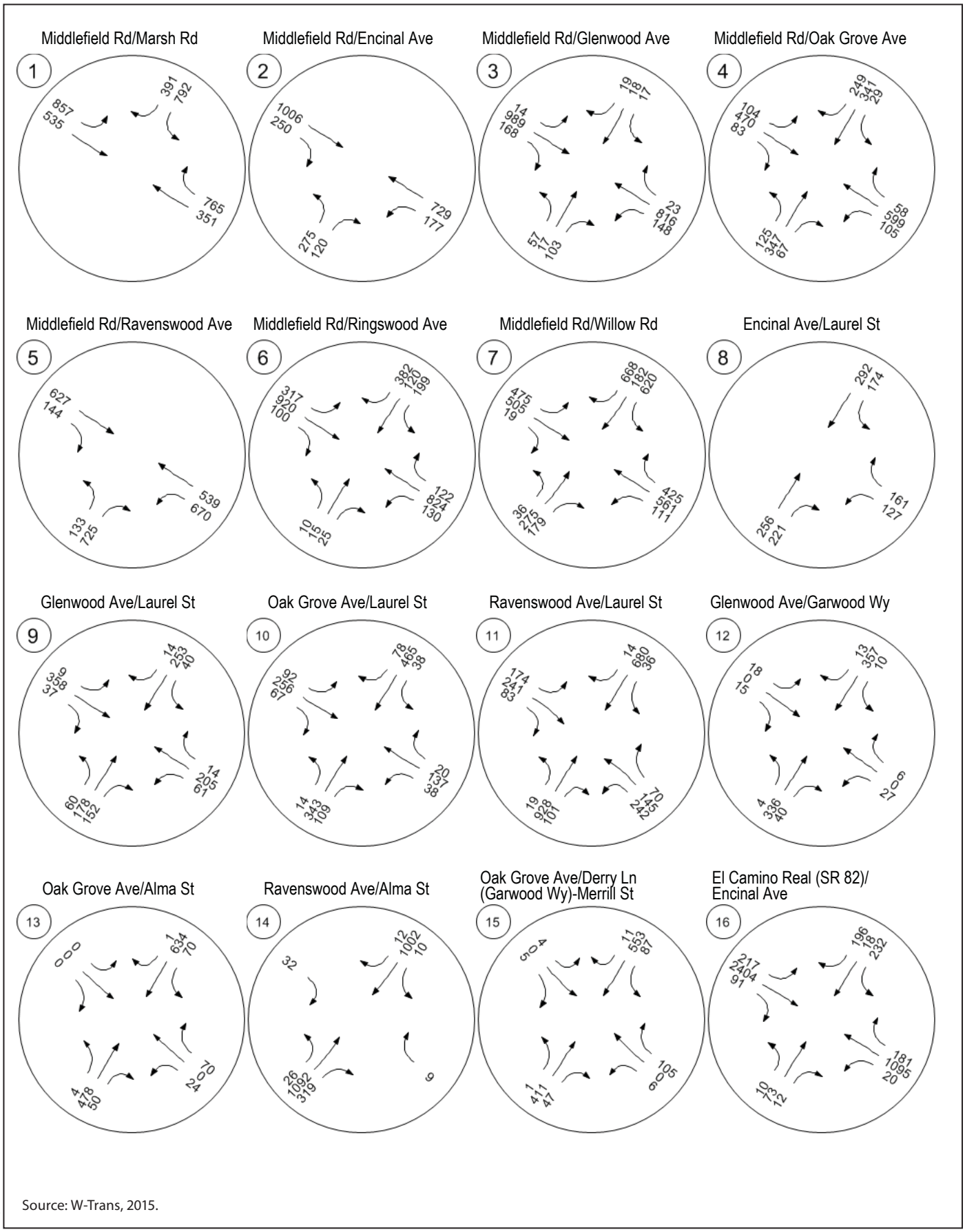
Programmed/Planned Transportation Facility Improvements

The planned improvements included in the Near-Term scenario were also included in the cumulative scenario. For reference, the improvements included in the Near-Term conditions scenario included:

- Traffic signal timing improvements to coordinate traffic signals along Willow Road, Middlefield Road, and Marsh Road.
- Modification of the northbound approach to Willow Road/Middlefield Road to provide a left-turn lane and through, shared through and right-turn, and right-turn lanes. The existing channelizing right-turn island would be removed.

In addition, the following lane configuration was assumed in the cumulative scenario:

- It is assumed that a southbound left-turn lane and new westbound approach from the 500 El Camino Real site will be added at El Camino Real/Middle Avenue as part of pending development on an adjacent property.



Source: W-Trans, 2015.

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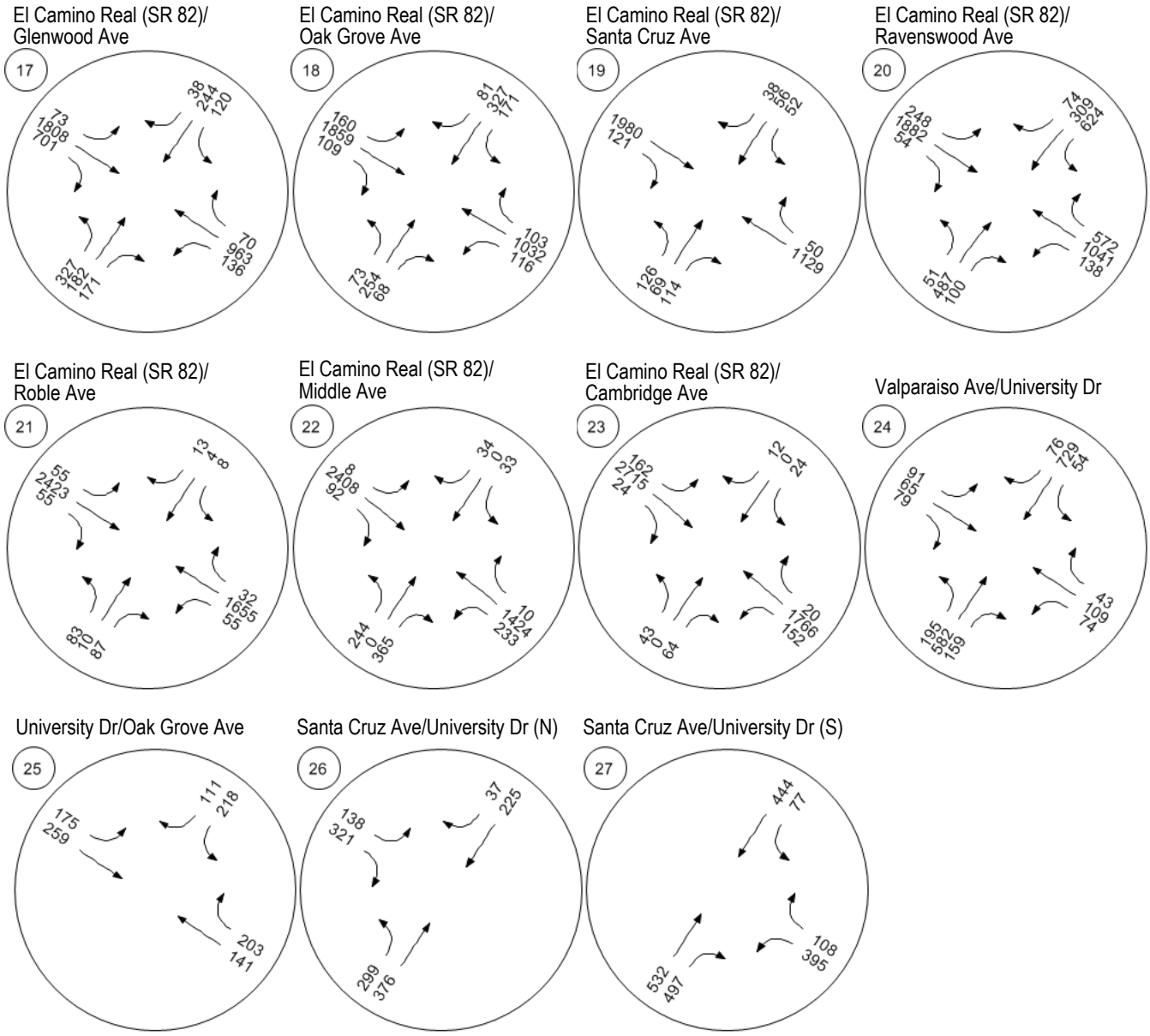
Figure 3.1-16A
Cumulative AM Peak Volumes
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

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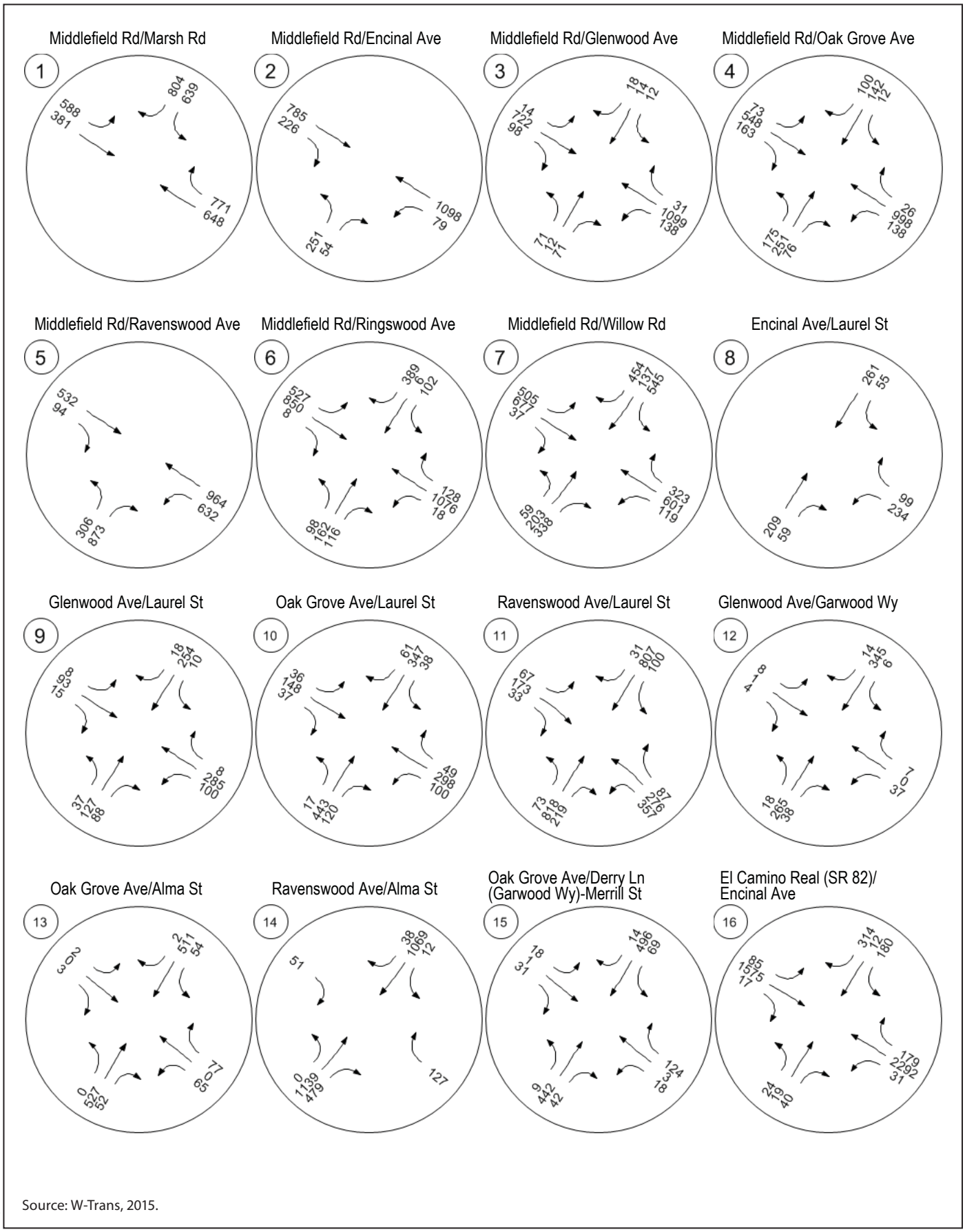
Figure 3.1-16B
Cumulative AM Peak Volumes
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

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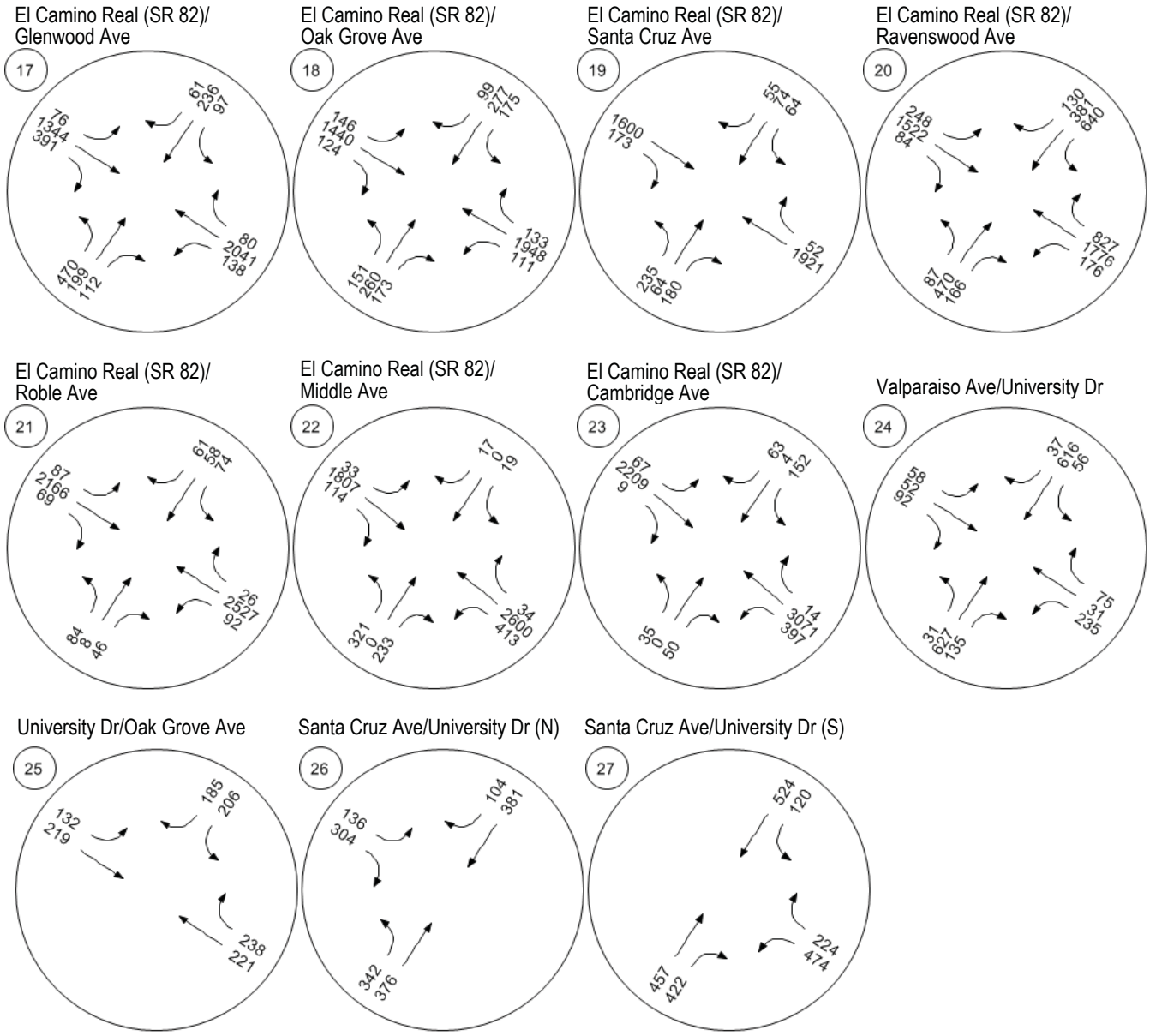
Figure 3.1-17A
Cumulative PM Peak Volumes
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

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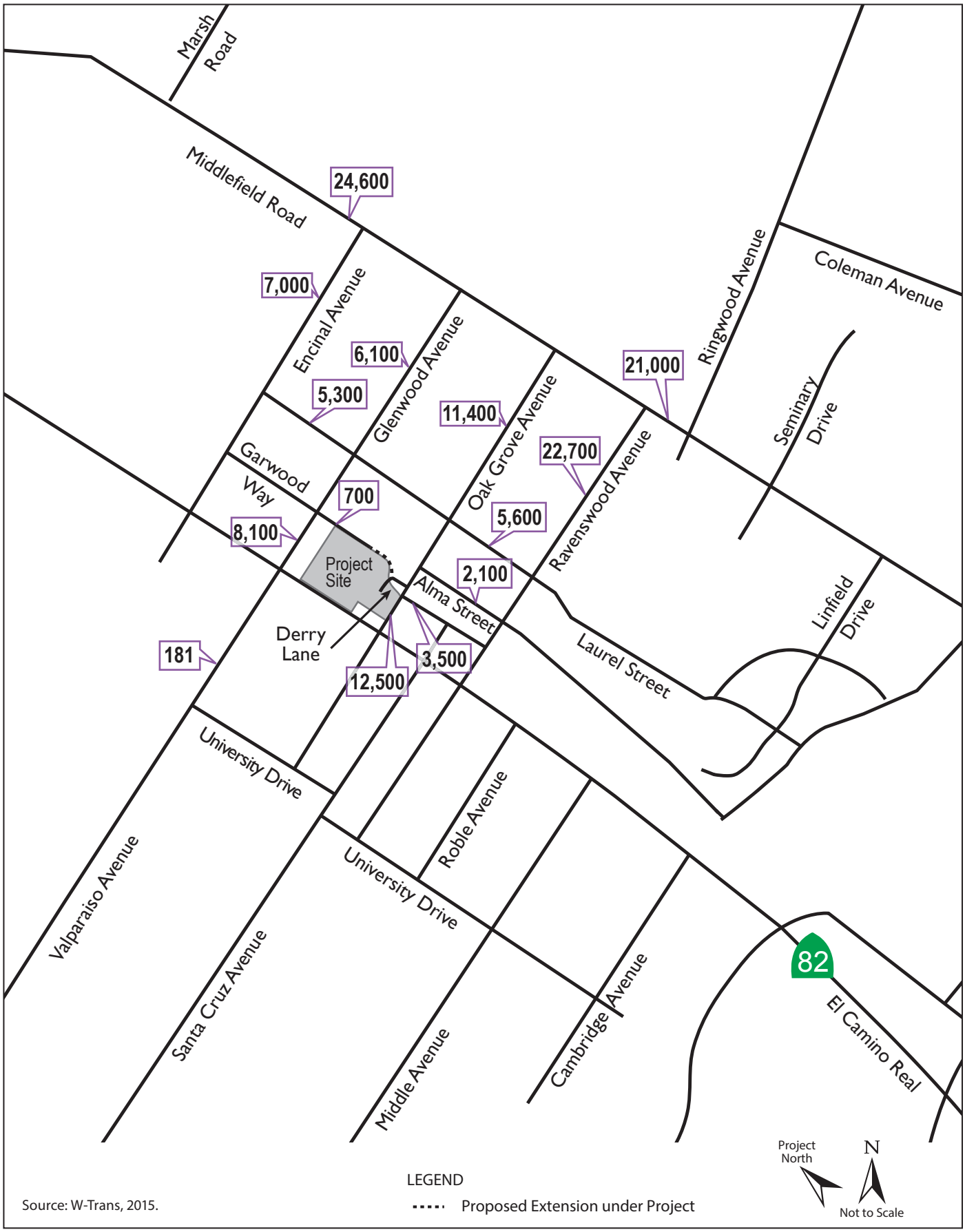
Figure 3.1-17B
Cumulative PM Peak Volumes
1300 El Camino Real Greenheart Project



Source: W-Trans, 2015.

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Figure 3.1-18
Cumulative Daily Volumes
1300 El Camino Real Greenheart Project

Cumulative Traffic Volumes and Levels of Service

Intersection operations under cumulative conditions and without the addition of Project-generated traffic are summarized in Table 3.1-17. Detailed results are provided in Appendix 3.1-C, and calculations are provided in Appendix 3.1-D. The following 13 intersections are expected to operate at unacceptable levels of service:

1. Middlefield Road/Marsh Road
2. Middlefield Road/Encinal Avenue
3. Middlefield Road/Glenwood Avenue-Linden Avenue
5. Middlefield Road/Ravenswood Avenue
7. Middlefield Road/Willow Road
8. Laurel Street/Encinal Avenue
9. Laurel Street/Glenwood Avenue
11. Ravenswood Avenue/Laurel Street
13. Oak Grove Avenue/Alma Street
15. Oak Grove Avenue/Derry Lane (Garwood Way)-Merrill Street
16. El Camino Real/Encinal Avenue
17. El Camino Real/Glenwood Avenue-Valparaiso Avenue
20. El Camino Real/Ravenswood Avenue-Menlo Avenue

Table 3.1-17. Cumulative Intersection LOS

Study Intersection	AM Peak Hour Delay	AM Peak Hour LOS	PM Peak Hour Delay	PM Peak Hour LOS
1. Middlefield Rd/Marsh Rd	127.0**	F	118.9**	F
2. Middlefield Rd/Encinal Ave	127.0**	F	39.2	D
3. Middlefield Rd/Glenwood Ave-Linden Ave*	>180**	F	>180**	F
4. Middlefield Rd/Oak Grove Ave	26.8	C	30.6	C
5. Middlefield Rd/Ravenswood Ave	67.5	E	77.9	E
6. Middlefield Rd/Ringwood Ave	39.3	D	52.5	D
7. Middlefield Rd/Willow Rd	62.7	E	59.5	E
8. Laurel St/Encinal Ave	63.6	F	14.4	B
9. Laurel St/Glenwood Ave	67.0	F	16.8	C
10. Laurel St/Oak Grove Ave	19.3	B	19.6	B
11. Ravenswood Ave/Laurel St	101.0	F	87.3	F
12. Glenwood Ave/Garwood Way*	18.8	C	17.2	C
13. Oak Grove Ave/Alma St*	39.2	E	44.1	E
14. Ravenswood Ave/Alma St*	15.2	C	29.0	D
15. Oak Grove Ave/Derry Ln (Garwood Way)-Merrill St*	35.2	E	26.9	D
16. El Camino Real/Encinal Ave	25.7	C	39.9	D
17. El Camino Real/Valparaiso Ave-Glenwood Ave	75.0	E	90.4	F
18. El Camino Real/Oak Grove Ave	45.9	D	49.0	D
19. El Camino Real/Santa Cruz Ave	16.6	B	21.0	C
20. El Camino Real/Ravenswood Ave	92.3	F	121.4**	F
21. El Camino Real/Roble Ave	9.9	A	13.9	B
22. El Camino Real/Middle Ave	47.7	D	50.4	D
23. El Camino Real/Cambridge Ave	8.6	A	27.6	C
24. Valparaiso Ave/University Dr	51.5	D	34.3	C
25. Oak Grove Ave/University Dr	24.8	C	23.4	C
26. Santa Cruz Ave/University Dr (North)	20.5	C	32.8	D
27. Santa Cruz Ave/University Dr (South)	22.1	C	23.6	C

Source: W-Trans, 2015.

Notes:

Delay = average number of seconds per vehicle.

LOS = level of service.

* For two-way, stop-controlled intersections, results are reported for the approach with the highest delay.

** For calculated delays greater than 120 seconds, *Highway Capacity Manual* methodology does not provide an accurate representation of actual conditions. However, calculated delays between 120-180 seconds are reported for comparative purposes and used to determine the significance of an impact. Calculated delays greater than 180 seconds are shown as >180.

See Appendix 3.1-A for definitions of LOS for signalized and unsignalized intersections.

Roadway Operations

Projected roadway segment ADT volumes under cumulative conditions are summarized in Table 3.1-18. Although there is no service level standard for roadways, these volumes provide the basis for an evaluation of Project impacts in terms of the anticipated increase in traffic.

Table 3.1-18. Cumulative ADT Summary

Roadway Segment	Classification	Capacity	ADT
1. Middlefield Rd (Marsh Rd to Glenwood Ave)*	Minor Arterial	25,000	24,600
2. Middlefield Rd (Oak Grove Ave to Ravenswood Ave)*	Minor Arterial	25,000	21,000
3. Laurel St (Encinal Ave to Glenwood Ave)	Collector	10,000	5,300
4. Laurel St (Oak Grove Ave to Ravenswood Ave)	Collector	10,000	5,600
5. Ravenswood Ave(Laurel St to Middlefield Rd)	Minor Arterial	20,000	22,700
6. Encinal Ave (Laurel St to Middlefield Ave)*	Collector	10,000	7,000
7. Valparaiso Ave (University Dr to El Camino Real)	Minor Arterial	20,000	17,300
8. Glenwood Ave (El Camino Real to Laurel St)	Collector	10,000	8,100
9. Glenwood Ave (Laurel St to Middlefield Rd)*	Collector	12,000	6,100
10. Oak Grove Ave (El Camino Real to Laurel St)	Collector	10,000	12,500
11. Oak Grove Ave (Laurel St to Middlefield Rd)*	Collector	10,000	11,400
12. Alma St (Oak Grove Ave to Ravenswood Ave)	Collector	10,000	2,100
13. Garwood Way (Glenwood Ave to Oak Grove Ave)	Local	1,500	700
14. Merrill St (Oak Grove Ave to Ravenswood Ave)	Local	1,500	3,500

Source: W-Trans, 2015.
Notes:
* Part or all of the roadway segment is located in the Town of Atherton.
Roadway capacities for each roadway classification are detailed in the City of Menlo Park Circulation System Assessment and the Town of Atherton General Plan (2002).
Data regarding existing volumes collected by the City of Menlo Park in 2014.

Routes of Regional Significance

Operation of Routes of Regional Significance under projected cumulative conditions are summarized in Table 3.1-19. The following four Routes of Regional Significance are expected to operate at unacceptable levels of service under projected cumulative 2040 conditions:

- Bayfront Expressway from University Avenue to Willow Road (westbound – AM Peak Hour)
- Bayfront Expressway from Willow Road to University Avenue (eastbound – PM Peak Hour)
- Willow Road between Bayfront Expressway to US 101 (southbound – AM and PM Peak Hour)
- Willow Road between US 101 to Bayfront Expressway (northbound – PM Peak Hour)

Table 3.1-19. Routes of Regional Significance – Cumulative Conditions

		AM Peak Hour		PM Peak Hour	
Route	Segment	v/c	LOS	v/c	LOS
El Camino Real (SR 82)	North of Ravenswood Ave (NB)	0.49	A	0.91	E
	South of Ravenswood Ave (NB)	0.40	A	0.65	B
	North of Ravenswood Ave (SB)	0.89	D	0.71	C
	South of Ravenswood Ave (SB)	0.58	A	0.50	A
Bayfront Expressway (SR 84)	University Ave to Willow Rd (WB)	1.41	F	0.58	A
	County Line to University Ave (WB)	0.74	D	0.31	B
	Willow Rd to University Ave (EB)	0.51	A	1.43	F
	University Ave to County Line (EB)	0.27	A	0.75	D
Willow Rd (SR 114)	US 101 to Bayfront Expressway (NB)	0.87	D	1.59	F
	Bayfront Expressway to US 101 (SB)	1.33	F	1.08	F
US 101	North of Marsh Rd (NB)	0.96	E	1.13	F
	Willow Rd to Marsh Rd (NB)	0.93	E	1.03	F
	University Ave to Willow Rd (NB)	1.05	F	1.10	F
	South of University Ave (NB)	1.08	F	1.13	F
	North of Marsh Rd (SB)	1.19	F	0.92	E
	Marsh Rd to Willow Rd (SB)	1.07	F	0.89	E
	Willow Rd to University Ave (SB)	1.15	F	0.99	E
	South of University Ave (SB)	1.18	F	1.02	F

Source: W-Trans, 2015.

Notes: v/c = volume-to-capacity ratio; LOS = level of service; NB = northbound; SB = southbound; EB = eastbound; WB = westbound.

Cumulative 2040 Plus-Project Traffic Volumes and Levels of Service

Intersection Operations

The cumulative 2040 plus-Project scenario includes traffic that would be generated by implementing the Project in addition to projected cumulative 2040 traffic volumes. A summary of the intersection analysis is provided in Table 3.1-20. Detailed results are provided in Appendix 3.1-C, and calculations are provided in Appendix 3.1-D.

Table 3.1-20. Cumulative and Cumulative plus-Project Intersection LOS

	Cumulative Conditions				Cumulative plus-Project Conditions					
	AM Peak Hour		PM Peak Hour		AM Peak Hour			PM Peak Hour		
Study Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Potentially Significant Impact	Delay	LOS	Potentially Significant Impact
1. Middlefield Rd/Marsh Rd	**127.0****	**F**	**118.9**	**F**	129.0**	F	No[a]	119.7	F	No[a]
2. Middlefield Rd/Encinal Ave	**127.0****	**F**	39.2	D	**129.5****	**F**	**Yes**	40.9	D	No
3. Middlefield Rd/Glenwood Ave-Linden Ave*	**>180****	**F**	**>180****	**F**	**>180****	**F**	**Yes**	**>180****	**F**	**Yes**
4. Middlefield Rd/Oak Grove Ave	26.8	C	30.6	C	27.2	C	No	32.3	C	No
5. Middlefield Rd/Ravenswood Ave	**67.5**	**E**	**77.9**	**E**	78.6	E	No[a]	**93.7**	**F**	**Yes**
6. Middlefield Rd/Ringwood Ave	39.3	D	52.5	D	40.0	D	No	53.7	D	No
7. Middlefield Rd/Willow Rd	**62.7**	**E**	**59.5**	**E**	**63.4**	**E**	**Yes**	**61.1**	**E**	**Yes**
8. Laurel St/Encinal Ave	**63.6**	**F**	14.4	B	64.0	F	No[a]	14.6	B	No
9. Laurel St/Glenwood Ave	**67.0**	**F**	16.8	C	**70.1**	**F**	**Yes**	17.2	C	No
10. Laurel St/Oak Grove Ave	19.3	B	19.6	B	20.5	C	No	22.5	C	No
11. Ravenswood Ave/Laurel St	**101.0**	**F**	**87.3**	**F**	**101.9**	**F**	**Yes**	**98.1**	**F**	**Yes**
12. Glenwood Ave/Garwood Way*	18.8	C	17.2	C	21.0	C	No	19.5	C	No
13. Oak Grove Ave/Alma St*	**39.2**	**E**	**44.1**	**E**	**48.4**	**E**	**Yes**	**63.7**	**F**	**Yes**
14. Ravenswood Ave/Alma St*	15.2	C	29.0	D	15.2	C	No	29.0	D	No
15. Oak Grove Ave/Derry Ln (Garwood Way)-Merrill St*	**35.2**	**E**	26.9	D	**68.1**	**F**	**Yes**	**>180****	**F**	**Yes**
16. El Camino Real/Encinal Ave	25.7	C	39.9	D	25.9	C	No	41.5	D	No
17. El Camino Real/Valparaiso Ave-Glenwood Ave	**75.0**	**E**	**90.4**	**F**	**79.3**	**E**	**Yes**	**99.1**	**F**	**Yes**
18. El Camino Real/Oak Grove Ave	45.9	D	49.0	D	52.9	D	No	**67.7**	**E**	**Yes**
19. El Camino Real/Santa Cruz Ave	16.6	B	21.0	C	19.7	B	No	24.0	C	No
20. El Camino Real/Ravenswood Ave	**92.3**	**F**	**121.4****	**F**	96.5	F	No[a]	**126.4****	**F**	**Yes**
21. El Camino Real/Roble Ave	9.9	A	13.9	B	9.9	A	No	13.5	B	No
22. El Camino Real/Middle Ave	47.7	D	50.4	D	48.8	D	No	52.4	D	No
23. El Camino Real/Cambridge Ave	8.6	A	27.6	C	8.6	A	No	28.2	C	No

	Cumulative Conditions				Cumulative plus-Project Conditions					
	AM Peak Hour		PM Peak Hour		AM Peak Hour			PM Peak Hour		
Study Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Potentially Significant Impact	Delay	LOS	Potentially Significant Impact
24. Valparaiso Ave/University Dr	51.5	D	34.3	C	52.2	D	No	35.0	C	No
25. Oak Grove Ave/University Dr	24.8	C	23.4	C	**26.5**	**D**	**Yes**	**31.0**	**D**	**Yes**
26. Santa Cruz Ave/University Dr (North)	20.5	C	32.8	D	29.2	D	No	**44.1**	**E**	**Yes**
27. Santa Cruz Ave/University Dr (South)	22.1	C	23.6	C	23.2	C	No	24.7	C	No

Source: W-Trans, 2015.

Notes:

a. Increase in delay on critical movements does not exceed the standards of significance.

Delay = average number of seconds per vehicle; LOS = level of service.

Bold indicates intersections with unacceptable LOS

* For two-way, stop-controlled intersections, results are reported for the approach with the highest delay.

** For calculated delays greater than 120 seconds, *Highway Capacity Manual* methodology does not provide an accurate representation of actual conditions. However, calculated delays greater between 120-180 seconds are reported for comparative purposes and used to determine the significance of an impact. Calculated delays greater than 180 seconds are shown as >180.

See Appendix 3.1-A for definitions of LOS for signalized and unsignalized intersections.

Impact C-TRA-4: Impacts on Intersections under Cumulative 2040 plus-Project Conditions. Increases in traffic associated with the Project under cumulative 2040 plus-Project conditions would result in increased peak-hour delays at 13 intersections. Intersection impacts at nine of the intersections would be significant and unavoidable because improvements would require obtaining additional rights-of-way, would violate existing City/town policies, or would be outside the City's jurisdiction. (SU)

The following study intersections would experience a ***potentially significant*** increase in delay as a result of the Project:

2. Middlefield Road/Encinal Avenue
3. Middlefield Road/Glenwood Avenue-Linden Avenue
5. Middlefield Road/Ravenswood Avenue
7. Middlefield Road/Willow Road
9. Laurel Street/Glenwood Avenue
11. Ravenswood Avenue/Laurel Street
13. Oak Grove Avenue/Alma Street
15. Oak Grove Avenue/Derry Lane (Garwood Way)-Merrill Street
17. El Camino Real/Glenwood Avenue-Valparaiso Avenue
18. El Camino Real/Oak Grove Avenue
20. El Camino Real/Ravenswood Avenue-Menlo Avenue
25. Oak Grove Avenue/University Drive
26. Santa Cruz Avenue/University Drive (N)

MITIGATION MEASURES. Intersection improvements are needed to mitigate or reduce impacts under cumulative 2040 plus-Project conditions to a ***less-than-significant*** level.

C-TRA-4.1: Implement Intersection Improvements to Mitigate Cumulative 2040 plus-Project Effects. Operations at several intersections could be improved by modifying intersection geometry to provide additional capacity. Some of these modifications may be made by restriping the existing roadway. Conceptual schematics of the recommended feasible mitigation measures are provided in Appendix 3.1-G. A summary of the intersection analysis with mitigation measures is provided in Table 3.1-21.

Table 3.1-21. Cumulative plus-Project Intersection LOS with Mitigation Measures

Study Intersection	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
2. Middlefield Rd/Encinal Ave	39.2	D	21.2	C
3. Middlefield Rd/Glenwood Ave-Linden Ave	22.8	C	13.0	B
5. Middlefield Rd/Ravenswood Ave	29.7	C	39.6	D
7. Middlefield Rd/Willow Rd	50.5	D	53.0	D
9. Laurel St/Glenwood Ave	17.3	B	15.5	B
11. Ravenswood Ave/Laurel St	69.6	E	73.9	E
17. El Camino Real/Glenwood Ave-Valparaiso Ave	68.8	E	79.5	E
20. El Camino Real/Ravenswood Ave	84.2	E	80.7	F
25. Oak Grove Ave/University Dr	22.8	C	21.6	C
26. Santa Cruz Ave/University Dr (N)	10.3	B	15.5	B

Source: W-Trans, 2015.
Notes:
Delay = average number of seconds per vehicle.
LOS = level of service.
* For two-way, stop-controlled intersections, results are reported for the approach with the highest delay.
See Appendix 3.1-A for definitions of LOS for signalized and unsignalized intersections.

a. Oak Grove Avenue/University Drive (#25)

Acceptable operations could be achieved at the intersection of Oak Grove Avenue/University Drive by reconfiguring the westbound Oak Grove approach to have one exclusive left-turn lane and one exclusive right-turn lane. It may be possible to implement this mitigation measure within the existing right-of-way, but it would require removing on-street parking. This mitigation measure would not affect planned bike lanes along Oak Grove Avenue. However, removal of several parking spaces on the south side of Oak Grove Avenue would be required to incorporate both this mitigation measure and planned bike lanes at the Oak Grove Avenue approach to this intersection. With this mitigation measure, the impact would be reduced to a less-than-significant level. The Project would be required to contribute a fair share toward lane reconfigurations at this location. The Project's fair share would be 16.3 percent of the total cost of improvements, as determined in Appendix 3.1-H.

b. Santa Cruz Avenue/University Drive (North) (#26)

Impacts on this intersection were noted in the Specific Plan EIR. Acceptable operations would be achieved at Santa Cruz Avenue/University Drive (North) with signalization of the intersection. This mitigation measure is consistent with the mitigation measure noted in the Specific Plan EIR. No additional mitigation measures beyond those identified in the Specific Plan EIR would be required to achieve acceptable operations at this intersection. This mitigation measure is also specified in the Supplemental Transportation Impact Fee.

It is noted that traffic volumes at this intersection would satisfy peak-hour traffic signal warrant criteria, as discussed in the Traffic Signal Warrants section. Because of the proximity of the

nearby traffic signal at Santa Cruz Avenue/University Drive (South), the two signals should be interconnected, and coordinated timing should be implemented.

It may be possible to implement this mitigation measure within the existing right-of-way. The design locations for signal equipment, such as poles and controller cabinets, cannot be determined until the intersection has been potholed, which would typically occur during the preliminary engineering phase of the Project. However, the City's recent traffic signal installation and modification projects did not require additional rights-of-way, were built within the public right-of-way, and were not restricted by underground utilities. Therefore, it may reasonably be concluded that the experience would be similar at this location. With this mitigation measure, the impact would be reduced to a less-than-significant level. The Project is required to contribute a fair share toward a traffic signal at this location. The Project's fair share would be 32.6 percent of the total cost of improvements, as determined in Appendix 3.1-H.

Improvements to the following intersection are needed to mitigate or reduce impacts under cumulative 2040 plus-Project conditions. However, impacts to these intersections would remain ***significant and unavoidable*** because the improvements would require obtaining additional rights-of-way, and some intersections are not under the City's jurisdiction.

C-TRA-4.2: Implement Intersection Improvements to Reduce Cumulative 2040 plus-Project Effects. Operations at several intersections could be improved by modifying intersection geometry to provide additional capacity. Some of these modifications may require additional rights-of-way to add travel lanes. However, impacts would remain significant and unavoidable because the improvements would require obtaining additional rights-of-way, and some intersections are not under the City's jurisdiction. Conceptual schematics of the recommended feasible mitigation measures are provided in Appendix 3.1-G. A summary of the intersection analysis with mitigation measures is provided in Table 3.1-21.

a. Middlefield Road/Encinal Avenue (#2)

Impacts on this intersection were noted in the Specific Plan EIR. Acceptable operations could be achieved at the intersection of Middlefield Road/Encinal Avenue with an additional right-turn lane on the southbound Middlefield Road and eastbound Encinal Avenue approaches. The additional right-turn lane on the eastbound Encinal Avenue approach is consistent with the mitigation measure noted in the Specific Plan EIR. However, the additional right-turn lane on southbound Middlefield Road is beyond what was identified in the Specific Plan EIR as necessary to maintain acceptable operations. Although the impact would be reduced to a less-than-significant level with implementation of this intersection improvement, acquisition of additional rights-of-way would be required. Furthermore, because construction of the improvement would require approval from the Town of Atherton, its implementation cannot be guaranteed; therefore, the impact remains significant and unavoidable. The Project is required to pay the Supplemental Transportation Impact Fee and contribute a fair share toward the additional right-turn lanes on the southbound Middlefield Road and approach at this location which was not identified in the Specific Plan EIR mitigation measure.. The funds would be available to the Town of Atherton for a 5-year period. The Project's fair share contribution would be 1.6 percent of the cost of the improvement, as shown in Appendix 3.1-H.

b. Middlefield Road/Glenwood Avenue-Linden Avenue (#3)

It is noted that, for this scenario, traffic volumes at this intersection satisfy peak-hour traffic signal warrant criteria, as discussed in the Traffic Signal Warrants section. The peak-hour warrant would not be satisfied under Near-Term 2020 plus-Project conditions (see TRA-1.1.a, which is paraphrased below for reference).

Impacts on this intersection were noted in the Specific Plan EIR. Acceptable operations could be achieved at the intersection with signalization. This mitigation measure is consistent with the mitigation measure noted in the Specific Plan EIR. No additional mitigation measures beyond those identified in the Specific Plan EIR are required to achieve acceptable operations at this intersection. This mitigation measure is also specified in the Supplemental Transportation Impact Fee.

Although signalization would reduce the impact to a less-than-significant level, this mitigation measure may require the acquisition of additional rights-of-way to install traffic signal equipment and modify the Glenwood Gate. Additionally, because the measure would require approval from the Town of Atherton, its implementation cannot be guaranteed; therefore, the impact would be significant and unavoidable. The Project is required to contribute a fair share toward a traffic signal at this location. The funds would be available to the Town of Atherton for a 5-year period. The Project's fair-share contribution would be 3.7 percent of the cost of the improvement, as noted in TRA-1.2.a and as shown in Appendix 3.1-H.

c. Middlefield Road/Ravenswood Avenue (#5)

Impacts on this intersection were noted in the Specific Plan EIR. Acceptable operations could be achieved at Middlefield Road/Ravenswood Avenue with the addition of a second northbound left-turn lane and a corresponding receiving lane on the west leg. This measure would require coordination with the Town of Atherton. Although this mitigation measure differs from the mitigation measures noted in the Specific Plan EIR, this measure is specified in the City's TIF program. The applicant should pay traffic impact fees per the current TIF schedule.

This measure has potentially significant secondary effects on bicyclists because it would require them to cross additional lanes of traffic to make a left turn or proceed through the intersection. This improvement would also affect pedestrians by increasing the crossing distance, exacerbating the multiple-threat scenario (where vehicles block sight lines between drivers in adjacent lanes and crossing pedestrians), and increasing their exposure time to vehicles. This improvement would therefore be required to include enhancements to bicycle and pedestrian infrastructure. These enhancements would include adding a "jughandle" left turn for bikes on the east side of the intersection, adding a bicycle signal for crossing Middlefield Road, and making modifications to signal timing to provide adequate time for crossings. The modifications would also include warning signs and markings to comply with the CA-MUTCD. The Project is required to contribute a fair share toward enhancements to bicycle and pedestrian infrastructure noted above, which are not included in the City's TIF program. The Project's fair share contribution would be 12 percent of the cost of the improvement, as shown in Appendix 3.1-H.

The impact would be reduced to a less-than-significant level with this measure. However, this measure would require coordination with and approval by the Town of Atherton, which cannot be guaranteed. Therefore, this intersection would experience a significant and unavoidable impact.

d. Middlefield Road/Willow Road (#7)

Impacts on this intersection were noted in the Specific Plan EIR. Acceptable operations could be achieved at Middlefield Road/Willow Road with the following improvements:

- Widening the eastbound Willow Road approach to provide an additional through lane.
- Widening the westbound Willow Road approach to provide an additional left-turn lane and re-striping the existing shared through/left-turn lane to a through-only lane.
- Widening the southbound Middlefield Road approach to include an exclusive through lane and re-striping the existing shared through/left-turn lane to a through-only lane.

This mitigation measure is consistent with the mitigation measure noted in the Specific Plan EIR. Although the improvements to the westbound and eastbound approaches are beyond the scope of the mitigation measures identified in the Specific Plan, these improvements are specified in the City's TIF program. The applicant should pay traffic impact fees per the current TIF schedule.

This measure would have potentially significant secondary effects on bicyclists because it would require them to cross additional lanes of traffic to make a left turn or proceed through the intersection. This improvement would also affect pedestrians by increasing the crossing distance, exacerbating the multiple-threat scenario (where vehicles block sight lines between drivers in adjacent lanes and crossing pedestrians), and increasing their exposure time to vehicles. This improvement would therefore be required to include enhancements to bicycle and pedestrian infrastructure. These enhancements would include modifications to signal timing to provide adequate time for crossings as well as the installation of warning signs and markings to comply with the CA-MUTCD.

e. Laurel Street/Glenwood Avenue (#9)

Acceptable operations would be achieved at Laurel Street/Glenwood Avenue by signalizing the intersection. It is noted that traffic volumes at this intersection would satisfy peak-hour traffic signal warrant criteria, as discussed in the Traffic Signal Warrants section. The Project is required to provide a fair-share contribution toward a traffic signal at this location. The Project's fair share contribution would be 1.4 percent of the cost of the improvement, as shown in Appendix 3.1-H. Because this measure would require coordination with and approval by Town of Atherton, its implementation cannot be guaranteed. No other mitigation measure was identified that would fully mitigate the impact. Therefore, this impact would be significant and unavoidable.

f. Ravenswood Avenue/Laurel Street (#11)

Impacts on this intersection were noted in the Specific Plan EIR. Improvements noted in TRA-1.1, which include reconfiguring the southbound Laurel Street approach to have a left-turn lane and a shared through/right-turn lane, would only partially mitigate the impact at Ravenswood Avenue/Laurel Street. No feasible mitigations would fully mitigate the impact. Therefore, this impact would be significant and unavoidable.

g. Oak Grove Avenue/Alma Street (#13)

(See TRA-1.2.b, which is paraphrased below for reference).

It is noted that, for the cumulative 2040 plus-Project scenario, traffic volumes at this intersection would satisfy peak-hour traffic signal warrant criteria, as discussed in the Traffic Signal Warrants section. However, the peak-hour warrant would not be satisfied at this intersection under Near-Term 2020 plus-Project conditions

Although traffic volumes at this intersection would satisfy peak-hour signal warrant criteria, as discussed in the Traffic Signal Warrants section, a traffic signal is not recommended because it is infeasible given the immediate proximity of the Caltrain railroad tracks to the west and potential for queuing to extend onto the tracks. Acceptable operations could be achieved at the intersection of Oak Grove Avenue/Alma Street with the implementation of peak-hour left-turn restrictions on northbound Alma Street from 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m. (as is currently being done on a trial basis along Ravenswood Avenue with use of a temporary median). However, as noted in TRA-1.2b, the City's experience has found that turn restrictions are ineffective because turn restrictions are ignored by drivers. Consequently, they would not mitigate the impact. Grade separation for the railroad tracks and Oak Grove Avenue would modify the Alma Street intersection and may mitigate this impact. However, grade separation is a large-scale, long-term project. It is not expected to be funded by one development. In addition, a design is still to be completed. No other feasible mitigation measures were identified that would fully mitigate the impact. Therefore, this impact would remain significant and unavoidable.

A partial mitigation measure to reduce the impact on this intersection would be to construct Class II bicycle lanes on Oak Grove Avenue between El Camino Real and the east city limits. This improvement was identified in the City's Specific Plan. It could require parking spaces to be removed along Oak Grove Avenue.

h. Oak Grove Avenue/Garwood Way-Merrill Street (#15)

Although traffic volumes at this intersection would satisfy peak-hour signal warrant criteria, as discussed in the Traffic Signal Warrants section, a traffic signal is not recommended because it is infeasible given the immediate proximity of Caltrain railroad tracks 90 feet to the east and potential for queuing to extend onto the tracks.

Acceptable operations could be achieved at the intersection of Oak Grove Avenue/Garwood Way-Merrill Street with implementation of southbound left-turn restrictions on Garwood Way at Oak Grove Avenue, as noted in Mitigation Measure TRA-1-1.c. However, the City has found turn restrictions to be ineffective because turn restrictions are ignored by drivers. Additionally, the mitigation measure is not recommended under cumulative 2040 conditions because the increase in vehicular traffic that would be turning right at southbound Garwood Way would result in additional traffic at nearby intersections on El Camino Real. These intersections are expected to operate unacceptably under cumulative 2040 plus Project conditions.

As discussed in TRA-1.2c, the Garwood Way extension would have a two-lane approach at the Oak Grove Avenue intersection. While this widening would reduce the delays at this intersection, the impact would not be reduced to less than significant.

As discussed in TRA-1.2c, although it may mitigate this impact, grade separation is a large-scale, long-term project. It is not expected that it would be funded by one development. No other feasible mitigation measures were identified that would fully mitigate the impact. Therefore, this impact would be significant and unavoidable.

A partial mitigation measure to reduce the impact on this intersection would be to construct Class II bicycle lanes on Oak Grove Avenue between El Camino Real and the east city limits. This improvement was identified in the City's Specific Plan. It could require parking spaces to be removed along Oak Grove Avenue.

i. El Camino Real/Glenwood Avenue-Valparaiso Avenue (#17)

Impacts to this intersection were noted in the Specific Plan EIR. Acceptable operations could be achieved at El Camino Real/Glenwood Avenue-Valparaiso Avenue with the following improvements:

- Widening the westbound Glenwood Avenue approach to provide an exclusive right-turn lane,
- Changing the northbound and southbound right-turn lanes to shared through/right-turn lanes, and
- Widening El Camino Real to provide additional receiving lanes in both the northbound and southbound directions.

This improvement would conflict with the Specific Plan goals to provide enhanced pedestrian crossing and sidewalks along El Camino Real by increasing the crossing distance, exacerbating the multiple threat scenario (where vehicles block sight lines between drivers in adjacent lanes and crossing pedestrians), increasing exposure time to vehicle traffic, and placing pedestrians closer to moving vehicle traffic. These improvements would have secondary effects on bicyclists because they would be required to cross additional lanes of traffic to make a left-turn or proceed through the intersection. The improvements would also preclude a future bicycle lane on El Camino Real.

Improvements that would partially mitigate the impact at El Camino Real/Glenwood Avenue-Valparaiso Avenue include widening the westbound Glenwood Avenue approach to provide an exclusive right-turn lane. This improvement is identified in the City's TIF program and payment of the TIF would be used for construction. Because the intersection is controlled by Caltrans, this measure would require coordination with and approval by Caltrans, which cannot be guaranteed. Therefore, this intersection would experience a significant and unavoidable impact.

j. El Camino Real/Oak Grove Avenue (#18)

Acceptable operations could be achieved at the intersection of El Camino Real/Oak Grove Avenue by reconfiguring the northbound right-turn lane into a shared through/right-turn lane and adding a corresponding receiving lane. Although the impact would be reduced to a less than significant level with the implementation of this improvement, this measure would have secondary impacts to bicyclists by increasing the crossing distance and precluding a future bicycle lane on El Camino Real. In addition, this measure would conflict with the Specific Plan goals to provide enhanced pedestrian crossings and sidewalks along El Camino Real. Furthermore, the measure would require coordination with and approval from Caltrans, which

cannot be guaranteed. No other feasible mitigation measures were identified that would fully mitigate the impact. Therefore, the impact would be significant and unavoidable.

k. El Camino Real/Ravenswood Avenue-Menlo Avenue (#17)

Impacts on this intersection were noted in the Specific Plan EIR. Acceptable operations could be achieved at El Camino Real/Ravenswood Avenue-Menlo Avenue with the following improvements:

- Widening the eastbound Menlo Avenue approach to provide an exclusive left-turn lane,
- Widening the northbound El Camino Real approach to provide an additional through lane,
- Widening the northbound El Camino Real approach to provide an additional left-turn lane and widening Menlo Avenue to provide an additional receiving lane,
- Widening the southbound El Camino Real approach to provide an additional left-turn lane, and
- Re-striping the existing southbound El Camino Real right-turn lane to become a through/right-turn lane.

Although the additional northbound left-turn lane and corresponding receiving lane is not identified as part of the mitigation measure noted in the Specific Plan EIR, the improvement was identified in the City's TIF program as required in order to achieve acceptable operation, but is not feasible due to right-of-way constraints on northbound El Camino Real and eastbound Menlo Avenue. All other improvements listed above are consistent with the mitigation measure noted in the Specific Plan EIR and specified in the City's TIF program. The applicant is required to pay fees per the current TIF schedule.

These measures would have potentially significant secondary effects on bicyclists because they would be required to cross additional lanes of traffic to make a left turn or proceed through the intersection and also preclude a future bicycle lane on El Camino Real. This improvement conflicts with the Specific Plan goals to provide enhanced crossings and sidewalks along El Camino Real by increasing the crossing distance, exacerbating the multiple-threat scenario (where vehicles block sight lines between drivers in adjacent lanes and crossing pedestrians), increasing their exposure time to vehicles, and placing pedestrians closer to moving vehicle traffic.

In addition, significantly widening the northbound El Camino Real approach would likely require removal of the trees located at the southeast corner of the intersection and affect access to the 1000 El Camino Real property.

Because the intersection is controlled by Caltrans, this measure would require coordination with and approval by Caltrans, which cannot be guaranteed. Furthermore, because of the mitigation measures' secondary impacts and right-of-way acquisition needs, it is considered infeasible. There are no other feasible mitigation measures that would fully mitigate the impact on the intersection of El Camino Real/Ravenswood Avenue-Menlo Avenue, and this impact remains significant and unavoidable.

Several intersections would experience a ***significant and unavoidable*** impact under Cumulative 2040 plus-Project conditions. To partially alleviate the effects of the Project, the applicant would be required to implement a TDM program, as required by the Specific Plan.

C-TRA-4.3: Implement Transportation Demand Management Program to Partially Reduce Cumulative 2040 plus Project Effects. A partial mitigation measure, to reduce the impacts of the Project at several intersections under the Cumulative 2040 plus-Project conditions, would be to implement a TDM program, as required by the Specific Plan. The proposed TDM program could reduce peak-hour and daily trip generation. However, although the TDM program could reduce the number of vehicular trips by 2 to 30 percent and reduce the intersection impacts, the effectiveness of the TDM program cannot be reliably predicted. Furthermore, the maximum 30 percent would not be enough to reduce impacts to a less-than-significant level. Therefore, the impacts would remain significant and unavoidable.

Roadway Segment Operations

Impact C-TRA-5: Impacts on Roadway Segments under Cumulative 2040 plus-Project Conditions. Increases in traffic associated with the Project under the cumulative 2040 plus-Project conditions would result in increased daily traffic volumes on area roadway segments. (SU)

As summarized in Table 3.1-22, with the addition of Project-generated traffic, the following roadway segments would be expected to experience unacceptable increases in traffic volumes, resulting in a ***potentially significant*** impact:

5. Ravenswood Avenue between Laurel Street and Middlefield Road
10. Oak Grove Avenue between El Camino Real and Laurel Street
11. Oak Grove Avenue between Laurel Street and Middlefield Road
13. Garwood Way between Glenwood Avenue and Oak Grove Avenue

MITIGATION MEASURE. Roadway improvements would be needed to mitigate impacts of the Project on study area roadways under cumulative plus-Project conditions. A typical mitigation measure would be to widen the road and add travel lanes and increase capacity to accommodate new daily trips. However, increasing the capacity of the roadway typically requires additional rights-of-way, which would affect local property owners. This is considered infeasible. Also, widening roadways can lead to induced travel demand (e.g., more vehicles on the roadway because of increased capacity), air quality degradation, increases in noise associated with motor vehicles, and reductions in transit use (less congestion or reduced driving time may make driving more attractive than transit travel). Wider roadways also result in a degradation of bicycle and pedestrian facilities, including increased intersection crossing times. There is also a quality-of-life aspect to roadway planning because congestion, mobility, air quality, and noise impacts affect the quality of life for local residents, commuters, employees, and businesses in the area. Neighborhoods as well as commercial business centers are affected by roadway projects. Thus, although traffic may increase on certain roadways by varying percentages, the increase should be viewed as more than an LOS or traffic operation issue.

An additional lane would not mitigate the impacts on the roadway segments because the roadway segment significance thresholds are based on baseline and added Project traffic volumes. Therefore, impacts on the roadway segments would remain ***significant and unavoidable***.

Table 3.1-22. Cumulative and Cumulative plus-Project ADT Summary

Roadway Segment	Classification	Capacity	ADT Cumulative	ADT Added	ADT Cumulative plus Project	Potentially Significant Impact
1. Middlefield Rd (Marsh Rd to Glenwood Ave)*	Minor Arterial	25,000	24,600	106	24,706	No
2. Middlefield Rd (Oak Grove Ave to Ravenswood Ave)*	Minor Arterial	25,000	21,000	402	21,402	No
3. Laurel St (Encinal Ave to Glenwood Ave)	Collector	10,000	5,300	63	5,363	No
4. Laurel St (Oak Grove Ave to Ravenswood Ave)	Collector	10,000	5,600	322	5,922	No
5. Ravenswood Ave(Laurel St to Middlefield Rd)	Minor Arterial	20,000	22,700	281	22,981	Yes
6. Encinal Ave (Laurel St to Middlefield Ave)*	Collector	10,000	7,000	63	7,063	No
7. Valparaiso Ave (University Dr to El Camino Real)	Minor Arterial	20,000	17,300	181	17,481	No
8. Glenwood Ave (El Camino Real to Laurel St)	Collector	10,000	8,100	114	8,214	No
9. Glenwood Ave (Laurel St to Middlefield Rd)*	Collector	10,000	6,100	51	6,151	No
10. Oak Grove Ave (El Camino Real to Laurel St)	Collector	10,000	12,500	716	13,216	Yes
11. Oak Grove Ave (Laurel St to Middlefield Rd)*	Collector	10,000	11,400	394	11,794	Yes
12. Alma St (Oak Grove Ave to Ravenswood Ave)	Collector	10,000	2,100	0	2,100	No
13. Garwood Way (Glenwood Ave to Oak Grove Ave)	Local	1,500	3,500	0	3,500	No
14. Merrill St (Oak Grove Ave to Ravenswood Ave)	Local	1,500	700	1,553	2,253	Yes

Source: W-Trans, 2015.

Notes:

* Part or all of the roadway segment is located in the Town of Atherton.

Roadway capacities for each roadway classification are detailed in the City of Menlo Park Circulation System Assessment and the Town of Atherton General Plan (2002).

Data regarding existing volumes collected by the City of Menlo Park in 2014.

Partial mitigation measures have been identified to reduce the impact of the Project on roadway segment operations under cumulative 2040 plus-Project conditions. The Project includes a TDM program that could reduce the number of peak-hour and daily Project-related trips. The identified bicycle route improvements on Oak Grove Avenue could encourage bicycling and possibly reduce traffic volumes if drivers shift from personal vehicles to bicycles given the availability of additional bicycle routes. However, because the effectiveness of the TDM program cannot be reliably predicted, and it is not anticipated that this would fully mitigate impacts on these segments, the impacts are considered ***significant and unavoidable***.

C-TRA-5.1: Implement Roadway Segment Improvements to Address Cumulative 2040 plus-Project Effects. The mitigation measures below are recommended to reduce potentially significant impacts on study area roadway segments.

a. Oak Grove Avenue between El Camino Real and Laurel Street (#10)

(See TRA-2.1.a, which is paraphrased below for reference).

A partial mitigation measure to reduce the impact on this roadway segment would be to construct Class II bicycle lanes on Oak Grove Avenue between El Camino Real and Laurel Street. This improvement was identified in the City's Specific Plan. However, it could require on-street parking spaces to be removed along Oak Grove Avenue

b. Oak Grove Avenue between Laurel Street and Middlefield Road (#11)

(See TRA-2.1.b, which is paraphrased below for reference)

A partial mitigation measure to reduce the impact on this roadway segment would be to construct Class II bicycle lanes on Oak Grove Avenue between Laurel Street and the east city limits. This improvement was identified in the City's Specific Plan. However, it could require on-street parking spaces to be removed along Oak Grove Avenue.

c. Garwood Way between Glenwood Avenue and Oak Grove Avenue (#13)

(See TRA-2.1.c, which is paraphrased below for reference).

A partial mitigation measure to reduce the impact on this roadway segment would be to sign a Class III bicycle route on Garwood Way between Glenwood Avenue and Oak Grove Avenue. This improvement was identified in the City's Specific Plan

d. Transportation Demand Management

Implementation of the trip reduction measures proposed in the Project's TDM program would partially reduce impacts on the roadway segments. The TDM program could reduce the number of vehicular trips by 2 to 30 percent. At the maximum of 30 percent, the impacts on the four local roadway segments, although reduced, would still remain significant.

Routes of Regional Significance

Impact C-TRA-6: Impacts on Routes of Regional Significance under Cumulative 2040 plus-Project Conditions. Increases in traffic associated with the Project under cumulative 2040 plus-Project conditions would result in significant impacts on several Routes of Regional Significance. (SU)

As summarized in Table 3.1-23, with the addition of Project-generated traffic, the following Routes of Regional Significance would be expected to experience a ***potentially significant*** impact:

- Willow Road – US 101 to Bayfront Expressway (northbound)
- Willow Road – Bayfront Expressway to US 101 (southbound)
- Bayfront Expressway – University Avenue to Willow Road (westbound)
- Bayfront Expressway – Willow Road to University Avenue (eastbound)

MITIGATION MEASURE. Roadway improvements would be necessary to mitigate impacts of the Project on Routes of Regional Significance under cumulative 2040 plus-Project conditions. A typical mitigation measure would be to widen the road and add travel lanes and increase capacity. However, impacts on Routes of Regional Significance would remain ***significant and unavoidable*** because these roadways are not under the jurisdiction of the City. In addition, freeway improvement projects that add travel lanes are planned and funded on a regional scale and would be too costly for a single project to fund.

C-TRA-6.1: Implement Routes of Regional Significance Improvements to Address Cumulative 2040 plus-Project Effects. The mitigation measures below were considered to reduce potentially significant impacts on Regional Routes of Significance.

Routes of Regional Significance could be widened to add travel lanes; however, the routes are under the jurisdiction of Caltrans. Adding a travel lane would increase capacity, but such projects are considered infeasible due to right-of-way constraints. Therefore, the impacts on the following Routes of Regional Significance would remain significant and unavoidable:

- Willow Road – US 101 to Bayfront Expressway (northbound)
- Willow Road – Bayfront Expressway to US 101 (southbound)
- Bayfront Expressway – University Avenue to Willow Road (westbound)
- Bayfront Expressway – Willow Road to University Avenue (eastbound)

Partial mitigation measures have been identified to reduce the impacts of the Project on Routes of Regional Significance under cumulative 2040 plus-Project conditions. The Project includes a TDM program that could reduce the number of trips generated during the peak periods and on a daily basis. To partially reduce impacts on Routes of Regional Significance, implementation of the trip reduction measures proposed in the Project's TDM program is recommended. The TDM program could reduce the number of vehicular trips by 2 to 30 percent. At the maximum of 30 percent, impacts on three of the four segments would be reduced but still significant. The TDM program at the maximum range of effectiveness could reduce the impact on northbound Willow Road from US 101 to Bayfront Expressway to a less-than-significant level However, because the reduction cannot be quantified, and it is not anticipated that this would fully mitigate impacts on these segments, the impacts are considered significant and unavoidable.

Table 3.1-23. Routes of Regional Significance – Cumulative Conditions and Cumulative plus-Project Conditions

		Cumulative				Cumulative plus Project					
		AM Peak Hour		PM Peak Hour		AM Peak Hour			PM Peak Hour		
Route	Segment	v/c	LOS	v/c	LOS	v/c	LOS	Potentially Significant Impact?	v/c	LOS	Potentially Significant Impact?
El Camino Real (SR 82)	North of Ravenswood Ave (NB)	0.49	A	0.91	E	0.57	A	No	0.95	E	No
	South of Ravenswood Ave (NB)	0.40	A	0.65	B	0.41	A	No	0.66	B	No
	North of Ravenswood Ave (SB)	0.89	D	0.71	C	0.91	E	No	0.75	C	No
	South of Ravenswood Ave (SB)	0.58	A	0.50	A	0.59	A	No	0.51	A	No
Bayfront Expressway (SR 84)	University Ave to Willow Road (WB)	1.41	F	0.58	A	1.42	F	Yes	0.58	A	No
	County Line to University Ave (WB)	0.74	D	0.31	B	0.74	D	No	0.31	B	No
	Willow Road to University Ave (EB)	0.51	A	1.43	F	0.51	A	No	1.44	F	Yes
	University Ave to County Line (EB)	0.27	A	0.75	D	0.27	A	No	0.76	D	No
Willow Rd (SR 114)	US 101 to Bayfront Expressway (NB)	0.87	D	1.59	F	0.88	D	No	1.61	F	Yes
	Bayfront Expressway to US 101 (SB)	1.33	F	1.08	F	1.35	F	Yes	1.08	F	No
US 101	North of Marsh Rd (NB)	0.96	E	1.13	F	0.96	E	No	1.13	F	No
	Willow Rd to Marsh Rd (NB)	0.93	E	1.03	F	0.93	E	No	1.03	F	No
	University Ave to Willow Rd (NB)	1.05	F	1.10	F	1.05	F	No	1.10	F	No
	South of University Ave (NB)	1.08	F	1.13	F	1.08	F	No	1.13	F	No
	North of Marsh Rd (SB)	1.19	F	0.92	E	1.19	F	No	0.92	E	No
	Marsh Rd to Willow Rd (SB)	1.07	F	0.89	E	1.07	F	No	0.89	E	No
	Willow Rd to University Ave (SB)	1.15	F	0.99	E	1.15	F	No	0.99	E	No
	South of University Ave (SB)	1.18	F	1.02	F	1.18	F	No	1.02	F	No

Source: W-Trans, 2015.

Notes: v/c = volume-to-capacity ratio; LOS = level of service; NB = northbound; SB = southbound; EB = eastbound; WB = westbound.

Bicycle and Pedestrian Facilities

Impact TRA-7: Impacts on Bicycle and Pedestrian Facilities. Increased bicycle and pedestrian traffic in the vicinity of the Project would result in added demand for additional bicycle and pedestrian facilities. (LTS/M)

Although pedestrian traffic would increase as a result of the Project, the proposal includes wide sidewalks on El Camino Real (15 feet minimum) and Oak Grove Avenue (12 feet minimum), in compliance with the Specific Plan's design standards. These sidewalks would be significantly wider than the current conditions of approximately four to six feet, and would address the increased demand.

There is an existing gap in bicycle facilities on Oak Grove Avenue and Garwood Way. In the Specific Plan, bicycle lanes are planned on Oak Grove Avenue between University Drive and the east city limits, and a signed bicycle route is planned on Garwood Way between Glenwood Avenue and Oak Grove Avenue.

MITIGATION MEASURE. Improvements that would expand bicycle facilities are needed to mitigate or reduce the impacts on bicycle facilities to a ***less-than-significant*** level.

TRA-7.1: Implement Improvements to Address Impacts on Bicycle Facilities. Gaps in bicycle infrastructure should be closed on Oak Grove Avenue and Garwood Way by constructing bike lanes along Oak Grove Avenue between University Drive and the east city limits as well as a bicycle route along Garwood Way between Glenwood Avenue and Oak Grove Avenue. This mitigation measure is consistent with Mitigation Measures TRA-2.1.a, TRA-2.1.b, and TRA-2.1.c.

Impact TRA-8: Consistency with Existing Bicycle and Pedestrian Policies. The Project would be consistent with established policies pertaining to bicycle and pedestrian facilities. (LTS)

The Project would be subject to the City's established policies pertaining to bicycle and pedestrian facilities. Relevant City policies established in the City's General Plan and Downtown Specific Plan, as well as the Project's consistency with each policy, is shown in Table 3.1-24. Based on a review of the City's policies, specifically the City's General Plan; the Downtown Specific Plan; and Chapter 2, *Project Description*, the Project would be consistent with established policies pertaining to bicycle and pedestrian facilities. In addition, the Project would not preclude the construction of any of the alternatives presented in the El Camino Real Corridor Study. Therfore, the impact would be ***less than significant***.

Table 3.1-24. Consistency with Relevant City Bicycle and Pedestrian Policies

Document	Policy	Project Consistency
General Plan	Policy II-D-4: The City shall require new commercial industrial development to provide secure bicycle storage facilities on-site.	Project would provide underground bicycle storage for employees and visitors.
General Plan	Policy II-E-1: The city shall require all new development to incorporate safe and attractive pedestrian facilities on-site.	Project would widen sidewalks along project frontage. On-site pedestrian paths would be provided to serve on-site pedestrian circulation as shown on the site plan in Figure 3.1-12.
Downtown Specific Plan	Standard F.5.01: Outside downtown, new commercial and residential development shall provide secure bicycle storage facilities for long-term occupants (e.g., employees and residents) on-site.	Project would provide secure bicycle lockers to residents. Project would provide underground bicycle storage for employees.
Downtown Specific Plan	Standard F.5.02: Outside downtown, new commercial and residential development shall provide bicycle parking spaces for long-term occupants and short-term visitors (e.g., employees and guests, respectively), per the requirements in Table F1.	Project would provide underground bicycle storage for employees and visitors.

Transit Facilities

Impact TRA-9: Impacts on Transit Facilities. The Project would result in added demand to transit facilities; however, it is expected that existing transit services would adequately serve the Project's demand. (LTS)

The Project would result in added transit demand. The Project would be expected to generate 29 transit trips in the AM Peak Hour and 31 transit trips in the PM Peak Hour. As discussed under Project Conditions, the Project's transit demand was estimated using rates consistent with prior studies. However, it is possible that the Project would generate more transit riders given the close proximity of the nearby Menlo Park Caltrain station. It is expected that the majority of transit riders would be traveling by Caltrain, with less transit service demand on SamTrans bus lines. In addition, Project-related transit demand would be spread across multiple trains.

Based on Caltrain ridership data published in the February 2014 Caltrain Annual Passenger Counts, current average daily ridership at the Menlo Park Caltrain station is approximately 1,668. The capacity of the trains varies throughout the day based on the size of the trains, and passenger load factors vary throughout the day as well (some trains are more full while others are not as full). Given the number of project-generated passengers, whose transit trips would be spread across multiple trains arriving at and departing the Menlo Park Caltrain station, it is expected that existing transit service would adequately serve the Project's transit service demand and potential additional demand. Also, the Caltrain Modernization Program will electrify the trains and increase train capacity by 2020. Therefore, the impact would be ***less than significant.***

Railroad Crossing

Impact TRA-10: Impacts on Railroad Crossings. The Project would result in added traffic to railroad crossings which would result in conflicts and safety concerns. (SU)

Within the study area, there are existing at-grade railroad crossings on Glenwood Avenue just east of Garwood Way, on Oak Grove Avenue just east of Derry Lane-Merrill Street, and on Ravenswood Avenue just west of Alma Street. Caltrain operates passenger rail service along the railroad, with up to 10 trains per hour crossing these locations during peak commute traffic times. In addition, freight service also operates along the railroad. During the AM and PM Peak Hours, this can result in additional queuing on these three streets.

The effect of railroad gate downtime is that drivers are delayed as they wait to cross the tracks and vehicle queues form on the streets. After the railroad gates are lifted, downstream traffic signals experience a surge in traffic, which may not get served within one or two signal cycles, resulting in queues that could back up toward the railroad tracks. During peak commute times when there are more trains, there is increased potential for conflicts and safety concerns associated with vehicles, bicyclists, and pedestrians, which must stay clear of the tracks. This problem is exacerbated by the existing railroad equipment, which lowers the railroad gates twice per train at each intersection downstream from the station. Gates are lowered when trains arrive at the Menlo Park station and lowered again when trains leave the station. Modernization of the railroad signal and gate systems would result in gates being lowered once per train. Modernization of the railroad signals and gates in Menlo Park is currently being implemented and expected to be complete in 2016.

The numbers of daily Project-generated trips on Glenwood Avenue, Oak Grove Avenue, and Ravenswood Avenue are 114, 716 and 141, respectively. An increase in the number vehicular trips on these roads would result in additional queuing at the railroad gates and surges in traffic at downstream signals. The added traffic would result in increased potential for conflicts and safety concerns as noted above, resulting in a ***potentially significant*** impact.

MITIGATION MEASURE. Grade separation for the railroad tracks and the cross streets of Glenwood Avenue, Oak Grove Avenue, and Ravenswood Avenue, with the crossing at Ravenswood Avenue being the highest priority, would be needed to mitigate the projects' impacts to the railroad crossings. However, as noted in TRA-1.2b, grade separation is a large-scale, long-term project. It is not expected that it would be funded by one development project. In addition, a design is still to be completed. Therefore, this impact would remain ***significant and unavoidable***.

Partial mitigation measures have been identified to reduce the impact of the Project on railroad crossings.

TRA-10.1: Implement railroad crossing improvements to address Near-Term 2020 plus-Project and Cumulative 2040 Plus-Project Effects. The mitigation measures below are recommended to reduce potential significant impacts on the railroad crossings.

a. Ravenswood Avenue railroad crossing

Partial mitigations to reduce the impact at the Ravenswood Avenue crossing include:

- Extension of time-of-day turn restrictions on the northbound and southbound Alma Street approaches to Ravenswood Avenue.
- Roadway improvements to improve the visibility of "keep clear" zones when approaching the railroad tracks. The Project shall maintain the "keep clear" visability zone.

It is worth noting that a median along Ravenswood Avenue, which restricts left turns on the northbound and southbound Alma Street approaches to Ravenswood Avenue, is currently installed as a trial project. Upon analysis of the effects of the median, the City shall determine whether the median along Ravenswood Avenue should remain.

b. Oak Grove Avenue and Glenwood Avenue railroad crossings.

Partial mitigations to reduce the impact at the Oak Grove Avenue and Glenwood Avenue railroad crossings, include maintaining the visibility of the "keep clear" zones, including roadway striping, lighting, and landscape maintenance. The Project shall maintain the "keep clear" visibility zone.

Mitigation Measure Summary

The tables provided below summarize the proposed mitigation measures for the Project. Table 3.1-25 provides a summary of the potential mitigation measures for study intersections, Table 3.1-26 provides a summary of roadway segment mitigation measures, Table 3.1-27 provides a summary of mitigation measures for Routes of Regional Significance, Table 3.1-28 provides a summary of mitigation measures for bicycle facilities, and Table 3.1-29 provides a summary of mitigation measures for railroad crossings.

Table 3.1-25. Summary of Potential Mitigation Measures for Study Intersections

Intersection	Significant Impact? Near Term plus Project	Significant Impact? Cumulative plus Project	Jurisdiction?	Potential Mitigation	Fully Mitigates Impact?	Feasible?	Other Agency Approval/ Coordination Needed?	Remains Significant and Unavoidable Impact?	Developer's Respnsiblity if any
Middlefield Rd/Encinal Ave (#2)		Yes – AM (4.2.a)	Atherton	SB Middlefield Rd: install SB RT lane EB Encinal Ave: install EB RT lane	Yes	No	Yes	Yes	Fair share payment and Supplemental TIF payment
Middlefield Rd/ Glenwood Ave-Linden Ave (#3)	Yes – AM/PM (1.2.a)	Yes – AM/PM (4.2.b)	Atherton	Signalize	Yes	No	Yes	Yes	Fair share payment
Middlefield Rd/ Ravenswood Rd (#5)		Yes – PM (4.2.c)	Menlo Park and Atherton	NB Middlefield Rd: install second LT lane	Yes	Yes	Yes	Yes	TIF payment
Middlefield Rd/ Willow Rd (#7)		Yes – AM/PM (4.2.d)	Menlo Park	SB Middlefield Rd: reconfigure to have two LT lanes, a through lane, and a shared through and RT lane	Yes	Yes	Yes	Yes	TIF payment
Laurel St/ Glenwood Ave (#9)		Yes – AM (4.2.e)	Menlo Park and Atherton	Signalize	Yes	Yes	Yes	Yes	Fair share payment
Ravenswood Ave/ Laurel St (#11)	Yes – PM (1.1)		Menlo Park	SB Laurel St: reconfigure to have a LT lane and a shared through and RT lane	Yes	Yes	No	No	Required to construct
Ravenswood Ave/ Laurel St (#11)		Yes – AM/PM (4.2.f)	Menlo Park	SB Laurel St: reconfigure to have a LT lane and a shared through and RT lane	Yes	No	No	Yes	n/a
Oak Grove Ave/ Alma St (#13)	Yes – PM (1.2.b)	Yes – AM/PM (4.2.g)	Menlo Park	Grade separation of Oak Grove Avenue and railroad tracks	Yes	No	Yes	Yes	Required to construct partial mitigation: bike lanes

Intersection	Significant Impact? Near Term plus Project	Significant Impact? Cumulative plus Project	Jurisdiction?	Potential Mitigation	Fully Mitigates Impact?	Feasible?	Other Agency Approval/ Coordination Needed?	Remains Significant and Unavoidable Impact?	Developer's Respnsiblity if any
Oak Grove Ave/ Garwood Way-Merrill St (#15)	Yes – AM/PM (1.2.c)	Yes – AM/PM (4.2.h)	Menlo Park	Grade separation of Oak Grove Avenue and railroad tracks	Yes	No	Yes	Yes	Required to construct partial mitigation: bike lanes
El Camino Real/ Glenwood Ave-Valparaiso Ave (#17)		Yes – AM/PM (4.2i)	Menlo Park/ Caltrans	WB: add exclusive RT lane	No	Yes	Yes	Yes	TIF payment
El Camino Real/Oak Grove Ave (#18)		Yes – PM (4.2.j)	Menlo Park/ Caltrans	Partial mitigation from TDM program (no full mitigation identified)	No	Yes	No	Yes	n/a
El Camino Real/ Ravenswood Ave-Menlo Ave (#20)	Yes – AM (1.2.d)		Menlo Park/ Caltrans	NB: add a third through lane	Yes	Yes	Yes	Yes	TIF Payment
El Camino Real/ Ravenswood Ave-Menlo Ave (#20)		Yes – AM (4.2.k)	Menlo Park/ Caltrans	NB: add a third through lane WB: add exclusive LT lane and restripe shared LT and through lane to exclusive through lane	No	No	Yes	Yes	TIF Payment
Oak Grove Ave/ University Dr (#25)		Yes – AM/PM (4.1.a)	Menlo Park	WB: add exclusive RT lane	Yes	Yes	No	No	Fair share payment
Santa Cruz Ave/ University Dr (N) (#26)		Yes – PM (4.1.b)	Menlo Park	Signalize and interconnect signal with existing signal at Santa Cruz Ave/ University Dr (S)	Yes	Yes	No	No	Fair share payment

Source: W-Trans, 2015.

Notes: NB = northbound; SB = southbound; EB = eastbound; WB = westbound; LT = left-turn; RT = right-turn.

Table 3.1-26. Summary of Potential Mitigation Measures for Study Roadway Segments

Segment	Significant Impact?		Potential Mitigation	Fully Mitigates Impact?	Feasible?	Remains Significant and Unavoidable Impact?	Developer's Responsibility, if any
	Near Term plus Project	Cumulative plus Project					
Middlefield Rd north of Glenwood Ave (#1)	Yes (2.1)	Yes (5.1)	Add an additional travel lane	No	No	Yes	n/a
Middlefield Rd south of Oak Grove Ave (#2)	No	Yes (5.1)	Add an additional travel lane	No	No	Yes	n/a
Ravenswood Ave east of Laurel St (#5)	Yes (2.1)	Yes (5.1)	Add an additional travel lane	No	No	Yes	n/a
Oak Grove Ave west of Laurel St (#10)	Yes (2.1)	Yes (5.1)	Add an additional travel lane	No	No	Yes	Required to construct partial mitigation: bike lanes
Oak Grove Ave east of Laurel St (#11)	Yes (2.1)	Yes (5.1)	Add an additional travel lane	No	No	Yes	Required to construct partial mitigation: bike lanes
Garwood Way south of Glenwood Ave (#13)	Yes (2.1)	Yes (5.1)	Add an additional travel lane	No	No	Yes	Required to construct partial mitigation: bike route

Source: W-Trans, 2015.

Table 3.1-27. Summary of Potential Mitigation Measures for Study Routes of Regional Significance

Segment	Significant Impact? Near Term plus Project	Significant Impact? Cumulative plus Project	Jurisdiction	Potential Mitigation	Fully Mitigates Impact?	Feasible?	Other Agency Approval/ Coordination Needed?	Remains Significant and Unavoidable Impact?	Developer's Responsiblity, if any
Bayfront Expressway – University Ave to Willow Rd (WB)	Yes	Yes	Caltrans	Add an additional travel lane	Yes	No	Yes	Yes	n/a
Bayfront Expressway – Willow Rd to University Ave (EB)	Yes	Yes	Caltrans	Add an additional travel lane	Yes	No	Yes	Yes	n/a
Willow Rd – Bayfront Expressway to US 101 (SB)	Yes	Yes	Caltrans	Add an additional travel lane	Yes	No	Yes	Yes	n/a
Willow Rd – US 101 to Bayfront Expressway (NB)	Yes	Yes	Caltrans	Add an additional travel lane	Yes	No	Yes	Yes	n/a

Source: W-Trans, 2015.

Notes: NB = northbound; SB = southbound; EB = eastbound; WB = westbound.

Table 3.1-28. Summary of Potential Mitigation Measures for Bicycle Facilities

Facilities	Significant Impact	Potential Mitigation	Fully Mitigates Impact?	Feasible?	Remains Significant and Unavoidable Impact?	Developer's Responsibility, if any
Oak Grove Ave - University Ave to East City Limits	*	Add bicycle lanes	Yes	Yes	No	Required to construct
Garwood Way – Glenwood Ave to Oak Grove Ave	*	Add bicycle route	Yes	Yes	No	Required to construct

Source: W-Trans, 2015.

* There is no significance threshold for bicycle facilities. However, as the Project would add bicyclists and, mitigation measures have been recommended.

Table 3.1-29. Summary of Potential Mitigation Measures for Railroad Crossings

Facilities	Significant Impact	Potential Mitigation	Fully Mitigates Impact?	Feasible?	Remains Significant and Unavoidable Impact?	Developer's Responsibility, if any
Ravenswood Avenue Railroad Crossing	*	Maintain "Keep Clear" markings	No	Yes	Yes	Required to construct
Oak Grove Avenue and Glenwood Avenue Railroad Crossings	*	Maintain "Keep Clear" markings	No	Yes	Yes	Required to construct

Source: W-Trans, 2015.

* There is no significance threshold for railroad crossings. However, as the Project would add vehicular traffic to railroad crossings, , mitigation measures have been recommended.

Other non-CEQA Traffic-Related Issues

Traffic Signal Warrants

The traffic signal warrant criteria presented in the CA-MUTCD were reviewed to determine if it may be beneficial to signalize currently unsignalized Project intersections. For the purposes of this study, Warrant 3, the peak-hour volume warrant, which determines the need for signalization based on the highest volume hour of the day, was used as an initial indication of traffic control needs. The use of this peak-hour signal warrant is common practice for planning studies.

Table 3.1-30 provides a summary of peak-hour traffic signal warrant results. Signal warrant calculations are provided in Appendix 3.1-I.

Table 3.1-30. Peak-Hour Traffic Signal Warrant

Analysis Scenario	Middlefield Ave/ Glenwood Ave-Linden Ave	Laurel St/ Glenwood Ave	Oak Grove Ave/ Alma St	Oak Grove Ave/ Garwood Way-Merrill St	Santa Cruz Ave/University Ave (N)
Existing	No	No	No	No	Yes
Near Term	No	No	No	No	Yes
Near Term plus Project	No	No	No	Yes	Yes
Cumulative	Yes	Yes	No	No	Yes
Cumulative plus Project	Yes	Yes	Yes	Yes	Yes

Source: W-Trans, 2015.

Notes: Peak-hour signal warrant is indicated as met ("Yes") if the warrant threshold is met for either the AM or PM Peak Hour.

Vehicle Miles Traveled Analysis

Introduction and Definition of Vehicle Miles Traveled

In anticipation of the expected implementation of Senate Bill 743, which allows vehicle miles traveled (VMT) analysis as an alternative to LOS, a qualitative analysis of the Project's expected VMT has been completed. VMT is a measure of the number of miles traveled associated with a proposed development or area. VMT per capita is the VMT of the development or the area divided by the population and the number of jobs of the development or area. Furthermore, reducing VMT per capita is a stated target in Plan Bay Area, a policy document adopted by the Association of Bay Area Governments and the MTC in July 2013. VMT is an important metric in the evaluation and management of travel and congestion, both on a regional as well as a local level. For example, VMT influences the analysis of transportation GHG emissions because the level of travel activity is correlated with fuel consumption. Furthermore, to address GHG policy goals, an analysis of VMT associated with development activity may be a more relevant analysis tool than intersection or roadway LOS. The combination of VMT and LOS analysis allows agencies to address issues related to congestion, traffic operations, as well as GHG.

Under Senate Bill 743, automobile LOS would not be a required significance criterion for determining traffic impacts under CEQA but could still be used for planning purposes. Instead, traffic impacts would be based on a comparison of a project's VMT per capita with the VMT per-capita average for the region. Cities may still rely on local impact criteria, in addition to VMT per-capita averages, based on community

goals and local policies. Menlo Park's required criteria are currently being reviewed and evaluated through the City's general plan update process (i.e., ConnectMenlo).

VMT Calculation Methodology

VMT projections are typically estimated with use of a travel forecast model. As part of the ConnecMenlo process, the City is developing a focused travel forecast model that will forecast traffic demand and estimate VMT. This model is currently in the development process and not ready for use in this document. In general, VMT is expected to be reduced when developments place land uses close to areas that are served by transit or employment and retail uses near residential uses, resulting in the average trip lengths being shorter. The Project's land uses would include a mix of retail, office, and residential uses that would be located near the Menlo Park Caltrain station. Given the nature of the Project and its location near transit services, it is likely that the Project's VMT would be similar to lower than the regional average.

Summary

As noted above, the City's General Plan, adopted in 1994, is currently being updated. The 1994 general plan does not include references to VMT as a metric for a proposed development's traffic impact. However, draft circulation policies identified in July 2015 for the updated general plan, ConnectMenlo, include VMT as a measure of a development's impact on the efficiency of the circulation system. These policies, when adopted, would update the general plan to be consistent with Senate Bill 743. As such, VMT information is presented to provide consistency with the ConnectMenlo document.

Parking

City Parking Requirements

The Project is within the boundaries of the Specific Plan's Station Area Sphere of Influence, given its proximity to the Menlo Park Caltrain station. Typically, Menlo Park City Code provides rates, based on land use, for the required number of parking spaces, but such rates are not appropriate for developments that are so close to a major public transit station where people are likely to ride a bicycle, walk, or utilize public transit to access the Project site. Therefore, parking rates from the following sources were analyzed in the Specific Plan to come up with more appropriate rates for developments in the Station Area Sphere of Influence:

- City of Menlo Park Municipal Code, Title 16 Zoning, Chapter 16.72
- City of Menlo Park Parking Reduction Policy
- ITE's *Parking Generation*, third edition (2004)
- Urban Land Institute's (ULI's) *Shared Parking*, second edition (2005)
- MTC's *Reforming Parking Policies to Support Smart Growth* (2007)

The ULI rates were used as the basis for the Specific Plan area rates, except for residential and restaurant uses. Residential developments were set at a minimum rate of one space per unit. The minimum of one space per unit is appropriate for the Project because the residential component would be on the southeast corner of the Project site, across the street from the Menlo Park Caltrain station.

Table 3.1-31 shows the required number of parking spaces, based on the proposed land uses. The Project as planned would provide approximately 1,000 parking spaces.

Table 3.1-31. Project Parking Requirements

Land Use	Size	Specific Plan Rates	Spaces Required
Multi-Family Dwelling	202 units	1 space/unit	202
General Office	188.9 ksf	3.8 spaces/ksf	718
Retail and Personal Service	29 ksf	4 spaces/ksf	116
Total Spaces Required			**1,036**
Proposed Parking Supply			**Approximately 1,000**
Note: ksf = thousand square feet.			

Shared Parking Demand

In addition to a review of the parking requirements set forth in the Specific Plan, a shared-use parking demand analysis was conducted by Fehr and Peers in August 2015. It used the shared parking model developed by ULI and applied parking rates from the Specific Plan. The shared parking model estimates parking activity according to land use by time of day and day of the week and then determines the peak parking demand given the mix of land uses. Per the Specific Plan, a ULI shared parking study may be used to establish the parking requirement for a mixed-use project.

The shared parking analysis in Appendix 3.1-J shows that the Project would have a maximum demand of 1,006 shared parking spaces. The results are summarized in Table 3.1-32. The Project as planned would provide appromimatley 1,000 parking spaces, which would meet the shared parking demand.

Table 3.1-32. Project Shared Parking Demand

Land Use	Size	Spaces Required
Multi-Family Dwelling	202 units	259
General Office	188.9 ksf	647
Retail and Personal Service	29 ksf	100
Shared Parking		**1,006**
Proposed Parking Supply		**Approximately 1,000**
Note: ksf = thousand square feet.		

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3.2 Air Quality

This section describes the regulatory setting and environmental setting for air quality in the City of Menlo Park as it pertains to the Project. The Project site is within the Specific Plan area for the El Camino Real/Downtown Specific Plan (Specific Plan). Since the Project's site plan and development parameters are consistent with the Specific Plan, the programmatic Specific Plan EIR is applicable to this Project. In accordance with Section 15128 and 15183.3(d) of the CEQA Guidelines, this section is limited to those effects that were either not analyzed in the Specific Plan EIR or for which uniformly applicable development policies or standards would not provide substantial mitigation. No comments related to air quality were received in response to the NOP.

Existing Conditions

Regulatory Setting

Air quality within the San Francisco Bay Area Air Basin (SFBAAB) is addressed through the efforts of various federal, state, regional, and local government agencies, including the U.S. Environmental Protection Agency (EPA), California Air Resources Board (ARB), and Bay Area Air Quality Management District (BAAQMD). EPA has established federal air quality standards for which ARB and BAAQMD have primary implementation responsibility. ARB and BAAQMD are also responsible for ensuring that state air quality standards are met.

Federal

Although state and federal standards have been established for criteria pollutants, no ambient standards exist for toxic air contaminant (TAC) or hazardous air pollutants (HAP). The Clean Air Act Amendments of 1990 made controlling air toxic emissions a national priority, by which Congress mandated that the EPA regulate 188 air toxics. In EPA's latest rule, Control of Emissions of Hazardous Air Pollutants from Mobile Sources,[1] it identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS). IRIS is a comprehensive database of specific substances known to cause human health effects.

State

Toxic Air Contaminant Regulation

California TACs are primarily regulated through the Toxic Air Contaminant Identification and Control Act (Tanner Act) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (Hot Spots Act). In the early 1980s, ARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The Tanner Act created California's program to reduce exposure to air toxics. The Hot Spots Act supplements the Tanner Act by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks. ARB has designated nearly 200 compounds as TACs. Additionally, ARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control.

[1] Federal Registry, Vol. 72, No. 37, page 8430, February 2007.

In September 2000, ARB approved a comprehensive Diesel Risk Reduction Plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. The goal of the plan is to reduce diesel particulate matter (DPM) emissions and the associated health risk by 75 percent in 2010 and by 85 percent by 2020. The ARB's Diesel Risk Reduction Plan identifies 14 measures that ARB has been implementing since 2000. Because the ARB measures would be enacted before any phase of construction, the Project would be required to comply with applicable diesel control measures.

California Air Resources Board's Air Quality and Land Use Handbook: A Community Health Perspective

In April 2005, ARB issued a guidance document on air quality and land use, *Air Quality and Land Use Handbook: A Community Health Perspective*, which recommends that sensitive land uses not be located within 500 feet of a freeway or other high-traffic roadway. It also recommends that a site-specific health risk assessment for all sensitive uses within 500 feet of a freeway or other high-traffic roadway be performed as a way to more accurately evaluate the risk.[2]

Traffic-related studies indicate that additional cancer and non-cancer health risks are attributable to roadway proximity; such studies form the basis for ARB's advisory recommendation of the 500-foot buffer.[3] Additional non-cancer health risks occur within 1,000 feet of freeways and high-traffic roadways. The highest concentration of emissions dissipates rapidly within the first 300 feet. According to ARB, California freeway studies also show an approximately 70-percent dropoff in particulate pollution levels at 500 feet, and lifetime cancer risk from exposure to DPM is expected to be lowered proportionately.[4] The guidance manual does not provide a quantitative acceptable threshold of risks from diesel exhaust from freeways in its recommendations of buffer distances between freeways and sensitive land uses. The ARB guidance acknowledges the need to balance this recommendation with other state and local policies addressing housing and transportation needs, the benefits of urban infill, community economic development priorities, and other quality of life issues.

Local

Bay Area Air Quality Management District. BAAQMD has local air quality jurisdiction over projects in San Mateo County. Responsibilities of the air district include overseeing stationary source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality–related sections of environmental documents required by CEQA. BAAQMD is also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws and for ensuring that the appropriate ambient air quality standards are met.

BAAQMD has adopted advisory emission thresholds to assist CEQA lead agencies in determining the level of significance of a project's emissions, which are outlined in its 2011 *California Environmental Quality Act Air Quality Guidelines* (BAAQMD CEQA Guidelines).[5]

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[2] California Air Resources Board. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005. Available: http://www.arb.ca.gov/ch/handbook.pdf. Accessed: October 2013.

[3] California Air Resources Board. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005. Available: http://www.arb.ca.gov/ch/handbook.pdf. Accessed: October 2013.

[4] California Air Resources Board. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005. Available: http://www.arb.ca.gov/ch/handbook.pdf. Accessed: October 2013.

[5] Bay Area Air Quality Management District. 2011. *California Environmental Quality Act Air Quality Guidelines.* May. San Francisco, CA.

The CEQA Guidelines state that, where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the determinations of environmental impact. In 1999 the BAAQMD developed guidelines for determining significance for local projects titled *Bay Area Air Quality Management District California Environmental Quality Act Air Quality Guidelines*.[6]

In June 2010, the BAAQMD revised the Guidelines to include revised thresholds of significance based on substantial evidence to assist in the review of projects under CEQA. These thresholds were overturned by a Superior Court decision issued on March 5, 2012 but upheld in a later Court of Appeal decision. However, due to ongoing legal activity the District's latest CEQA Guidelines, published in May 2012, contain no references to the adopted thresholds of significance.

According to the BAAQMD website, lead agencies may continue to rely on the 1999 thresholds of significance but may also use the BAAQMD's updated CEQA Guidelines for assistance in identifying potential mitigation measures and may also reference the District's CEQA Thresholds Options and Justification Report, which supports the 2010 thresholds and contains substantial evidence supporting those thresholds. The BAAQMD provided a recommendation that lead agencies determine appropriate air quality thresholds of significance based on substantial evidence in the record.

The proposed 2010 thresholds and screening criteria provide a more conservative estimate of potential air quality impacts than the 1999 thresholds and screening criteria. Accordingly, use of the BAAQMD thresholds will not understate the impacts of the project's air quality emissions, and represent the best scientifically based information available. Based on the substantial evidence in the record, the BAAQMD's 2010 thresholds were utilized for the purposes of analyzing potential air quality impacts of the Project.

While the BAAQMD is no longer recommending its significance thresholds for use by local agencies at this time, the BAAQMD thresholds are well grounded on air quality regulations, scientific evidence, and scientific reasoning concerning air quality and GHG emissions. Use of these thresholds is appropriate to determine significance in the environmental review of this Project and allows a rigorous standardized approach for determining whether the Project would cause a significant air quality impact. BAAQMD's Justification Report, found in Appendix D of the BAAQMD's May 2011 CEQA Guidelines, explains the agency's reasoning for adopting the thresholds.[7]

The court case *California Building Industry Assoc. v. Bay Area Air Quality Management District* (Dec. 17, 2015) Cal.4th (BIA vs. BAAQMD) reduced the scope of what is considered to be an environmental impact under CEQA. CBIA challenged the District's adoption of new CEQA guidance, including thresholds for determining whether a project's exposure to existing levels of toxic air contaminants would result in a significant impact. The Court of Appeal upheld the District's thresholds and dismissed the claim that the guidance itself was subject to CEQA. The Supreme Court accepted the case for review, but limited its examination to the question of whether CEQA requires "an analysis of how existing environmental conditions will impact future residents or users (receptors) of a proposed project." After reviewing the CEQA statute and Section 15126.2(a) of the CEQA Guidelines, the Court concluded that "CEQA generally does not require an analysis of how existing environmental conditions will impact a project's future users or residents."

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[6] Bay Area Air Quality Management District. 1999. *BAAQMD CEQA Guidelines: Assessing the Air Quality Impacts of Projects and Plans.* May. San Francisco, CA.

[7] Bay Area Air Quality Management District. 2011. *California Environmental Quality Act Air Quality Guidelines.* May. San Francisco, CA.

The Court however, did not exclude all consideration of existing conditions from CEQA. An agency must "evaluate existing conditions in order to assess whether a project could exacerbate hazards that are already present." In addition, in footnote, the Court explained that CEQA does not prohibit an agency from considering as part of an environmental review how existing conditions might impact a project's future users or residents. However, it stopped short of suggesting that the agency should determine the significance of such impacts and require mitigation.

The Court identified several exceptions to this "general rule" that CEQA does not apply to impacts of the environment on the project. All of them are statutory provisions in CEQA that specifically require consideration of impacts of the environment. They include consideration of projects near airports (Section 21096 – noise and safety hazards), school construction projects (Section 21151.8 - noise, safety, toxic air contaminants), and statutory exemptions for housing projects (Sections 21159.21, 21159.22, 21159.23, and 21159.24) and transit priority projects (Section 21151.1).

City of Menlo Park. Local jurisdictions, such as the City of Menlo Park (City), have the authority to address air pollution issues through their land use decision-making processes. Specifically, the City is responsible for assessing the potential for and mitigating air quality problems that result from its land use decisions. The City is also responsible for the implementation of transportation control measures, as outlined in the Clean Air Plan.

In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces the implementation of such mitigation measures. The City uses the BAAQMD CEQA Guidelines as its guidance document for the environmental review of plans and development proposals within its jurisdiction.

Menlo Park General Plan. The Menlo Park General Plan (General Plan) guides development and use of land within the City. Several goals and policies would be expected to contribute to improving air quality. However, the following goal and policy from the Open Space and Conservation Element is most relevant to the Project.[8]

> **Goal OSC5:** Ensure Healthy Air Quality and Water Quality. Enhance and preserve air quality in accord with State and regional standards, and encourage the coordination of total water quality management including both supply and wastewater treatment.
>
> *Policy OSC5.1*: Air and Water Quality Standards. Continue to apply standards and policies established by the Bay Area Air Quality Management District (BAAQMD), San Mateo Countywide Water Pollution Prevention Program (SMCWPPP), and City of Menlo Park Climate Action Plan through the California Environmental Quality Act (CEQA) process and other means as applicable.

Environmental Setting

Air Quality Background

The City is located within the SFBAAB, an area surrounded by mountains that confine the movement of air and the pollutants it contains. This area includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, the western half of Solano, and the southern half of Sonoma Counties. The regional climate within the SFBAAB is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime on-shore breezes, and moderate

[8] City of Menlo Park. 2013. *Menlo Park General Plan, Open Space/Conservation, Noise and Safety Elements*. Adopted May 21.

humidity. A wide range of meteorology and emissions sources—such as dense population centers, heavy vehicular traffic, and industrial activity—primarily influence the air quality within the SFBAAB.

Air pollutant emissions within the SFBAAB are generated from stationary, area-wide, mobile, and natural sources. Stationary sources can be divided into two major subcategories: point and area sources. *Point sources* occur at an identified location and are usually associated with manufacturing and industry. Examples are boilers and combustion equipment that produce electricity or generate heat. *Area sources* consist of many smaller point sources that are widely distributed. Examples of area sources include residential and commercial water heaters, painting operations, portable generators, lawn mowers, agricultural fields, landfills, and consumer products, such as barbeque lighter fluid and hair spray. Construction activities that create fugitive dust, through activities such as excavation and grading, also contribute to area source emissions. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when fine dust particles are pulled off the ground surface and suspended in the air during high winds.

Toxic Air Contaminants

TAC is a general term for a diverse group of air pollutants that can adversely affect human health, but have not had ambient air quality standards established for them. TACs lack ambient air quality standards for a variety of reasons (e.g., insufficient data on toxicity, association with particular workplace exposures rather than general environmental exposure, etc.). TAC effects tend to be local rather than regional. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

TACs are generated by a number of sources, including: stationary sources, such as dry cleaners, gas stations, auto body shops, and combustion sources; mobile sources, such as diesel trucks, ships, and trains; and area sources, such as farms, landfills, and construction sites. Adverse health effects of TACs can be carcinogenic (cancer-causing), short-term (acute) non-carcinogenic, and long-term (chronic) non-carcinogenic. Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to the brain and nervous system, and respiratory disorders.

Although National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for criteria pollutants, no ambient standards exist for TACs. Many pollutants are identified as TACs because of their potential to increase the risk of developing cancer or because of their acute or chronic health risks. For TACs that are known or suspected carcinogens, ARB has consistently found that there are no levels or thresholds below which exposure is risk-free. Individual TACs vary greatly in the risks they present. At a given level of exposure, one TAC may pose a hazard that is many times greater than another. TACs are identified and their toxicity is studied by the California Office of Environmental Health Hazard Assessment (OEHHA).

Diesel Particulate Matter

The primary TAC of concern associated with the Project is DPM, which is generated primarily by diesel-fueled engines. In August 1998, following a 10-year scientific assessment process, ARB identified DPM from diesel-fueled engines as TACs. Compared to other air toxics ARB has identified, DPM emissions are

estimated to be responsible for about 70 percent of the total ambient air toxics risk.[9] OEHHA guidance indicates that particulate matter of 10 microns in diameter or smaller (PM10) should be used as a surrogate for DPM when evaluating health risks associated with DPM.[10]

Sensitive Receptors

The NAAQS and CAAQS apply at publicly accessible areas, regardless of whether those areas are populated. The BAAQMD generally defines a sensitive receptor as a facility or land use that houses or attracts members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses.[11] Examples of sensitive receptors include residences, hospitals, and schools. BAAQMD has determined that construction activities occurring at distances of greater than 1,000 feet from a sensitive receptor likely do not pose a significant health risk. Sensitive receptors located within 1,500 feet of the Project site are provided in Table 3.2-1. Although BAAQMD has determined that construction activities occurring at distances of greater than 1,000 feet from a sensitive receptor likely do not pose a significant health risk, sensitive receptors at distances as great as 1,500 feet were identified to capture the health risks at the nearest schools, daycares, etc. This approach was adopted to provide a conservative and comprehensive analysis of health risks at all nearby sensitive receptor locations, even those greater than 1,000 feet from the Project site, since a number of schools and daycares are located just outside the 1,000-foot radius.

Table 3.2-1. Sensitive Receptors within 1,500 Feet of the Project Site

Receptor	Distance of Nearest Receptor to Project
Residences	100 feet northeast
Residences	100 feet east
Residences	300 feet southwest
Residences	600 feet northwest
Crane Place-HUD-Seniors	1,200 feet southwest
Nativity Catholic School	800 feet northeast
Trinity School	1,300 feet east
Menlo School	1,400 feet southwest
Menlo Children's Center	1,500 feet east
Source: Google Earth. 2015. Assessment of the project site by ICF International. June.	

[9] California Air Resources Board. 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. Sacramento, CA. Prepared by Stationary Source Division and Mobile Source Control Division.

[10] Office of Environmental Health Hazard Assessment. 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments*. February. Available: <http://oehha.ca.gov/air/hot_spots/hotspots2015.html>. Accessed: June 8, 2015.

[11] Bay Area Air Quality Management District. 2011. *California Environmental Quality Act Air Quality Guidelines.* May. San Francisco, CA.

Environmental Impacts

This section describes the impact analysis relating to air quality for the Project. It describes the methods used to determine the impacts of the Project and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion where necessary.

Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or substantially contribute 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 a nonattainment area for an applicable federal or state ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

CEQA Guidelines further indicate that the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make these significance determinations.

As indicated below, this analysis focuses solely on the evaluation of potential health risks to new and existing adjacent sensitive receptors from exposure to construction-related emissions and does not evaluate the remainder of Project emissions which are adequately addressed in the Specific Plan EIR.

Local Air District Thresholds

The following section summarizes BAAQMD's thresholds and presents substantial evidence regarding the basis upon which they were developed, as well as describes how they are used to determine whether Project construction emissions would cause increased risk to human health.

Health-Based Thresholds for Project-Generated Pollutants of Human Health Concern

All criteria pollutants are associated with some form of health risk (e.g., asthma, asphyxiation). Adverse health effects associated with criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and characteristics of exposed individuals, such as age and gender). Moreover, ozone precursors (reactive organic gases [ROG] and nitrogen oxides [NO_X]) affect air quality on a regional scale. Health effects related to ozone are therefore the product of emissions generated by numerous sources throughout a region. Existing models have limited sensitivity to small changes in criteria pollutant concentrations, and as such, translating Project-generated criteria pollutants to specific health effects would produce meaningless results. In other words, minor increases in regional air pollution from Project -generated ROG and NO_X would have nominal or negligible impacts on human health.[12] As such, an analysis of impacts to human health associated with Project-generated regional

[12] As an example, the BAAQMD's Multi-Pollutant Evaluation Method (MPEM) requires a 3 to 5-percent increase in regional ozone precursors to produce a material change in modeled human health impacts. Based on 2008 ROG and NO_X emissions in the Bay Area, a 3 to 5-percent increase equates to over 20, pounds per day or ROG and NO_X.

emissions is not included in the Project-level analysis. Increased emissions of ozone precursors (ROG and NO_X) generated by the Project could increase photochemical reactions and the formation of tropospheric ozone, which, at certain concentrations, could lead to respiratory symptoms (e.g., coughing), decreased lung function, and inflammation of airways. While these health effects are associated with ozone, the impacts are a result of cumulative and regional ROG and NO_X emissions, and the incremental contribution of the Project to specific health outcomes from criteria pollutant emissions would be limited and cannot be solely traced to the Project.

Localized pollutants generated by a project can directly affect adjacent sensitive receptors; therefore, the analysis of Project-related impacts on human health focuses only on those localized pollutants with the greatest potential to result in a significant, material impact on human health. This approach is consistent with the current state-of-practice and published guidance by BAAQMD,[13] the California Air Pollution Control Officers Association (CAPCOA),[14] OEHHA,[15] and ARB.[16] Accordingly, the analysis of Project-related impacts to human health focuses only on those pollutants with the greatest potential to result in a significant, material impact on human health, which are (1) locally concentrated respirable particulate matter with a diameter of 2.5 microns or less (PM2.5) and (2) DPM.[17] This analysis does not include impacts associated with locally concentrated carbon monoxide (CO) as these impacts were analyzed in the Program EIR and were found to be less than significant. BAAQMD thresholds of significance for each pollutant are identified below and summarized in Table 3.2-2.

Table 3.2-2. BAAQMD Thresholds for PM2.5 Concentration and DPM Health Risks

Analysis	Threshold
Localized PM2.5 Concentrations	Failure to implement emissions control practices PM2.5 increase of greater than 0.3 $\mu g/m^3$ (project) PM2.5 increase of greater than 0.8 $\mu g/m^3$ (cumulative)
Health Risks from Localized DPM Concentrations	Increased cancer risk of 10 in 1 million (project) Increased HI greater than 1.0 (project) Increased cancer risk of 100 in 1 million (cumulative) Increased HI greater than 10.0 (cumulative)
Source: Bay Area Air Quality Management District 2011. *California Environmental Quality Act Air Quality Guidelines.* May. San Francisco, CA.	

Analysis requirements for construction- and operation-related pollutant emissions are contained in the BAAQMD's CEQA Guidelines, which contain thresholds of significance for PM2.5 and TACs (DPM) and

[13] Bay Area Air Quality Management District. 2011. *California Environmental Quality Act Air Quality Guidelines.* May. San Francisco, CA.

[14] California Air Pollution Control Officers Association. 2009. *Health Risk Assessments for Proposed Land Use Projects.* CAPCOA Guidance Document. July. Available: <http://www.capcoa.org/>.

[15] Office of Environmental Health Hazard Assessment. 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments*. February. Available: <http://oehha.ca.gov/air/hot_spots/hotspots2015.html>. Accessed: June 8, 2015.

[16] California Air Resources Board. 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. Sacramento, CA. Prepared by Stationary Source Division and Mobile Source Control Division.

[17] DPM is the primary TAC of concern for mobile sources. Of all controlled TACs, emissions of DPM are estimated to be responsible for about 70 percent of the total ambient TAC risk. Given the risks associated with DPM, tools and factors for evaluating human health impacts from Project-generated DPM have been developed and are readily available. Conversely, tools and techniques for assessing Project-specific health outcomes as a result of exposure to other TAC (e.g., benzene) remain limited. These limitations impede the ability to evaluate and precisely quantify potential public health risks posed by TAC exposure.

are presented in Table 3.2-2. As discussed above, the Supreme Court decided in the BIA vs. BAAQMD court case that CEQA requires analysis of existing environmental hazards when the project exacerbates those existing environmental hazards. Since construction of the Project would exacerbate existing environmental hazards (i.e., PM2.5 concentrations and DPM health risks), the analysis considers the combined effect of Project emissions and adjacent mobile/stationary/rail emissions as a cumulative impact.

Localized PM2.5 Concentrations

BAAQMD adopted an incremental PM2.5 concentration-based significance threshold, where a *substantial* contribution at the project level is defined as total (exhaust and fugitive) PM2.5 concentrations exceeding 0.3 micrograms per cubic meter (μg/m^3). Additionally, BAAQMD considers projects to have a cumulatively considerable PM2.5 impact if concentrations from all local sources, including project-related sources, exceed 0.8 μg/m^3. BAAQMD's PM2.5 thresholds apply to both new receptors and new sources, and are indicated in Table 3.2-2.

Health Risks from Localized Diesel Particulate Matter Concentrations

DPM is a form of localized particulate matter (PM) that is generated by diesel equipment and vehicle exhaust. Consistent with OEHHA guidance, all PM10 exhaust associated with off-road construction equipment was assumed to be DPM.[18] DPM has been identified as TAC and is particularly concerning as long-term exposure can lead to cancer, birth defects, and damage to the brain and nervous system. BAAQMD has adopted incremental cancer and hazard thresholds to evaluate receptor exposure to DPM emissions, as indicated in Table 3.2-2. The *substantial* DPM threshold defined by BAAQMD is an excess cancer risk level of more than 10 in one million, or a non-cancer (i.e., chronic or acute) hazard index greater than 1.0. The air district also considers a project to have a cumulatively considerable DPM impact if it results in excess cancer risk levels of more than 100 in 1 million or hazard index (HI) greater than 10.0. For this analysis, all PM10 exhaust from off-road equipment during construction was assumed to be DPM, consistent with OEHHA guidance.

The health risk impact thresholds are developed based on the cancer and non-cancer risk limits for new and modified sources adopted in the BAAQMD Regulation 2, Rule 5, and the U.S. Environmental Protection Agency (EPA) Significant Impact Level (SIL) for PM2.5 emissions. The EPA SIL is a measure of whether a source may cause or contribute to a violation of NAAQS. Health risks due to toxic emissions from construction, though temporary, can still result in substantial public health impacts due to increases in cancer and non-cancer risks. Applying quantitative thresholds allows a rigorous standardized method of determining when a construction project will cause a significant increase in health risks. The cumulative health risk thresholds are based on EPA guidance for conducting air toxics analyses and making risk management decisions at the facility- and community-scale level and are also consistent with the ambient cancer risk (background cancer risk from all existing sources) in the most pristine portions of the Bay Area based on the BAAQMD's recent regional modeling analysis and the non-cancer Air Toxics Hot Spots (ATHS) mandatory risk reduction levels.

[18] Office of Environmental Health Hazard Assessment. 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments*. February. Available: <http://oehha.ca.gov/air/hot_spots/hotspots2015.html>. Accessed: June 8, 2015.

Methods for Analysis

Impacts related to all thresholds with the exception of exposure of sensitive receptors to substantial pollutant concentrations were adequately evaluated in the Specific Plan EIR. These topics are discussed in the *Infill Environmental Checklist* (Appendix 1-1) and the Specific Plan EIR. Consequently, this analysis focuses on the evaluation of potential health risks to new and existing adjacent sensitive receptors from exposure to construction-related TAC emissions and does not evaluate the remainder of project emissions or impacts. The primary TAC of concern associated with the Project is DPM, which is generated primarily by diesel-fueled engines and is classified as a carcinogen by ARB.

The BAAQMD has developed guidance for estimating risk and hazards impacts entitled *Recommended Methods for Screening and Modeling Local Risks and Hazards* that includes instructions on characterizing hazard and risk and mitigating impacts. BAAQMD recommends characterizing potential health effects associated with exposure to PM2.5 emissions, as well as analyzing local community risk and hazard impacts associated with DPM exposure for both new sources and new receptors.

The project would generate TAC emissions near existing and new receptors. Thus, consistent with BAAQMD requirements, a risk and hazards impact assessment was performed using EPA's most recent dispersion model, AERMOD (version 14134), acute and chronic risk assessment values presented by OEHHA,[19] as well as assumptions for model inputs from BAAQMD's *Recommended Methods for Screening and Modeling Local Risks and* Hazards.[20] The human health risk assessment (HRA) takes into account OEHHA's most recent *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments* guidance and calculation methods, which was adopted by OEHHA in March 2015.[21] The risk and hazard assessment consists of three parts: a DPM and PM2.5 inventory, air dispersion modeling, and risk calculations. A description of each of these parts follows.

DPM and PM2.5 Inventory

DPM and PM2.5 emissions from construction were assessed and quantified using standard and accepted software tools, techniques, and emission factors. This section describes the primary assumptions and key methods used to quantify emissions and estimate potential impacts.

Construction of the project would generate emissions of DPM and PM2.5 that would result in potential long-term health risks in the study area. Emissions would originate from mobile and stationary construction equipment exhaust, fugitive dust from construction equipment activity (PM2.5 only), employee vehicle exhaust and road dust, and heavy-duty diesel truck exhaust and road dust. It is expected that construction would occur between from October 2016 to December 2018, for a total of approximately 27 months.

Construction-related DPM and PM2.5 emissions from heavy-duty equipment and on-road vehicles were estimated using the California Emissions Estimator Model (CalEEMod), version 2013.2.2, using construction activity and scheduling provided by the Project Sponsor. Equipment inventory data, including equipment type, horsepower, and load factors, were provided by the Project Sponsor. The

[19] Office of Environmental Health Hazard Assessment. 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments*. February. Available: <http://oehha.ca.gov/air/hot_spots/hotspots2015.html>. Accessed: June 8, 2015.

[20] Bay Area Air Quality Management District. 2012. *Recommended Methods for Screening and Modeling Local Risks and Hazards.* May. San Francisco, CA.

[21] Ibid.

analysis assumes 8-hour workdays and a 5-day workweek (Monday–Friday) during all construction work. Emissions were estimated for each phase of activity based on activity data (e.g., construction phasing schedule and average equipment hours of operation) provided by the Project Sponsor. Default values from CalEEMod were used for other construction equipment parameters, including engine load factors. Emissions were combined for overlapping construction activities.

As noted above, with respect to construction activities, all PM10 exhaust from off-road equipment during construction was assumed to be DPM, consistent with OEHHA guidance.[22]

Appendix 3.2, *Air Quality Modeling Details,* contains the construction modeling details.

Air Dispersion Modeling

The HRA used EPA's AERMOD model, version 14134, to model annual DPM and PM2.5 concentrations at nearby receptors. The source emission rates (in grams per second) were estimated for off-road construction equipment and on-road haul trucks. Additional modeling inputs, including source characteristics (e.g., release height, initial dispersion) were based on published guidance from OEHHA[23], BAAQMD,[24] and the San Joaquin Air Pollution Control District (SJVAPCD).[25] Where BAAQMD guidance is not available, SJVAPCD guidance is used because detailed HRA/dispersion modeling guidance is provided. Emissions-associated construction activities were treated as individual elevated area sources equal to the area of each phase of construction. Key modeling parameters are presented in Appendix 3.2.

A receptor is defined as a point where a person (resident or worker) may be located for a given period of time. With respect to risk and hazard cancer health effects, all locations where a person could be located for extended periods of time, such as a residence or workplace, need to be identified. Sensitive receptor locations were placed at the locations identified in Table 3.2-1 and in a 20-meter grid out to 1,000 feet surrounding the Project site to identify the highest concentration of DPM and PM2.5. The grid was placed out to 1,000 feet consistent with BAAQMD guidance; BAAQMD has determined that construction activities occurring at distances of greater than 1,000 feet from a sensitive receptor likely do not pose a significant health risk. Additional receptors were placed out to 1,500 feet to capture the nearest schools, daycares, etc. (see Table 3.2-1).

Risk Calculations

OEHHA has established health risk thresholds for both cancer and non-cancer health effects. The BAAQMD recommends a maximum incremental cancer risk significance threshold of 10 in 1 million (1.0×10^{-5}) and recommends that other lead agencies use this significance threshold when approving permits for new or modified stationary sources. A cancer risk significance threshold of 10 in 1 million (1.0×10^{-5}) is also consistent with the threshold established by the State of California as a level posing no significant risk for exposures to carcinogens regulated under the Safe Drinking Water and Toxic Enforcement Act (Proposition 65). Refer to Appendix 3.2 for cancer risk calculation details.

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[22] Office of Environmental Health Hazard Assessment. 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments*. Appendices A-F. Page D-1. February. Available: <http://oehha.ca.gov/air/hot_spots/2015/2015GMAppendicesA_F.pdf>. Accessed: June 8, 2015.

[23] Ibid.

[24] Bay Area Air Quality Management District. 2012. *Recommended Methods for Screening and Modeling Local Risks and Hazards.* May. San Francisco, CA.

[25] San Joaquin Valley Air Pollution Control District. 2015. *Final Staff Report: Update to District's Risk Management Policy to Address OEHHA's Revised Risk Assessment Guidance Document*. May 28. Available: <https://www.valleyair.org/busind/pto/staff-report-5-28-15.pdf>. Accessed: June 24, 2015.

Impacts and Mitigation Measures

Impact AQ-1: Exposure of Sensitive Receptors to Adverse Health Risks in Excess of BAAQMD Thresholds Associated with Localized DPM Concentrations during Construction. The Project would expose sensitive receptors to adverse health risks associated with localized DPM concentrations during construction. (LTS/M)

Project construction would generate DPM emissions, resulting in the exposure of nearby existing sensitive receptors (e.g., residences) to increased DPM concentrations. Cancer health risks associated with exposure to diesel exhaust are typically associated with chronic exposure, in which a 70-year exposure period is assumed. In addition, DPM concentrations, and, thus, cancer health risks, dissipate as a function of distance from the emissions source. BAAQMD has determined that construction activities occurring at distances of greater than 1,000 feet from a sensitive receptor likely do not pose a significant health risk.

As shown in Table 3.2-1, several sensitive receptors are located within 1,500 feet of the Project site. As noted above, although BAAQMD has determined that construction activities occurring at distances of greater than 1,000 feet from a sensitive receptor likely do not pose a significant health risk, health risks at the nearest schools and daycares, which are located outside the 1,000-foot radius but within a 1,500-foot radius, were analyzed to present a conservative estimate of potential risks associated with Project construction activities. Therefore, exposure to construction DPM emissions were assessed by predicting the health risks in terms of excess cancer and non-cancer hazard index (HI). The results of the HRA are summarized in Table 3.2-3 and are compared to BAAQMD's Project-level DPM thresholds. Note that Project construction emissions in Table 3.2-3 do not assume implementation of any onsite mitigation. Exceedances of BAAQMD thresholds are shown in <u>underline.</u> There are no exceedances at receptors located outside the 1,000-foot radius specified by BAAQMD.

Table 3.2-3. Unmitigated Project-Level Cancer and Non-Cancer Chronic (HI) Risks during Construction

Receptor	Non-Cancer HI [a]	Increased Cancer Risk (per million)
Maximum Residential Receptor	0.04	<u>60.8</u>
Maximum School Receptor [b]	<0.01	4.1
Maximum Daycare Receptor [b]	<0.01	3.6
Maximum Worker Receptor	0.04	5.2
BAAQMD Thresholds	1.00	10.0

a. HI = hazard index
b. Receptor located outside BAAQMD's 1,000-foot screening radius.

As shown in Table 3.2-3, construction of the Project would result in cancer risks in excess of BAAQMD's thresholds at the nearest residential receptor. This is a ***significant*** impact.

Non-cancer hazard impacts would be less than the BAAQMD's thresholds and would, therefore, be ***less than significant***.

MITIGATION MEASURES. Because DPM cancer risk from construction equipment, including both off-road vehicles and on-road trucks, would exceed BAAQMD's cancer risk threshold, this impact would be significant and would require implementation of Mitigation Measures AQ-1.1 and AQ-1.2.

AQ-1.1: *Utilize Clean Diesel-Powered Off-Road Equipment during Construction to Control Off-Road Construction-Related PM2.5 and PM10 Emissions*. The Project Sponsor shall ensure that all off-road diesel-powered equipment used during construction between 2016 and 2018 shall be equipped with EPA Tier 3 or cleaner engines, except for specialized construction equipment for which an EPA Tier 3 engine is not available. This requirement shall ensure construction equipment remains cleaner than the fleet-wide average. The analysis assumes emission reductions compared to a fleet-wide average Tier 2 engine between 2016 and 2018. The Project Sponsor shall also ensure that all off-road, diesel-powered equipment used during construction shall be equipped with a Level 3 Diesel Particulate Filter (DPF).

AQ-1.2: *Use Modern Fleet for On-Road Material Delivery and Haul Trucks during Construction*. The Project Sponsor shall ensure that all on-road heavy-duty diesel trucks with a gross vehicle weight rating of 19,500 pounds or greater used at the Project site shall comply with EPA 2007 on-road emission standards for PM10 (0.01 grams per brake horsepower-hour). These PM10 standards were phased in through the 2007 and 2010 model years on a percent of sales basis (50 percent of sales in 2007 to 2009 and 100 percent of sales in 2010). This mitigation measure assumes that all on-road heavy-duty diesel trucks shall be model year 2010 and newer, with all trucks compliant with EPA 2007 on-road emission standards. While project impacts are associated with PM2.5 concentrations and the EPA 2007 on-road emission standards address PM10 emission, the newer engine technologies that are required to meet the PM10 emission standards shall also reduce PM2.5 concentrations.

BAAQMD also requires implementation of recommended best management practices (BMPs) as mitigation measures for all proposed projects (even those with less-than-significant impacts). These BMPs are presented as Mitigation Measure AIR-1a in the Specific Plan EIR. Specific Plan EIR Mitigation Measure AIR-1a also includes BAAQMD's additional construction mitigation measures to reduce construction-related dust and exhaust emissions, which would also be implemented by the Project. Implementation of Mitigation Measure AIR-1a which would further reduce emissions of construction-related PM2.5 associated with the Project.

Mitigation Measures AQ-1.1 and AQ-1.2 and Specific Plan EIR Measure AIR-1a would substantially reduce DPM from off-road equipment exhaust (88–89-percent reduction), and Mitigation Measure AQ-1.2 would substantially reduce DPM from on-road vehicle exhaust (62–63-percent reduction). Project health risks with implementation of applicable mitigation (Mitigation Measures AIR-1a, AQ-1.1, and AQ-1.2) are shown in Table 3.2-4. There are no exceedances at receptors located outside the 1,000-foot radius specified by BAAQMD.

Table 3.2-4. Mitigated Project-Level Cancer and Non-Cancer Chronic (HI) Risks during Construction

Receptor	Non-Cancer HI[a]	Increased Cancer Risk (per million)
Maximum Residential Receptor	<0.01	7.0
Maximum School Receptor[b]	<0.01	0.5
Maximum Daycare Receptor[b]	<0.01	0.4
Maximum Worker Receptor	<0.01	0.6
BAAQMD Thresholds	1.00	10.0

a. HI = hazard index
b. Receptor located outside BAAQMD's 1,000-foot screening radius.

As shown in Table 3.2-4, with implementation of Mitigation Measures AIR-1a, AQ-1.1, and AQ-1.2, cancer risks at the maximum exposed residential receptor locations would be below the BAAQMD's thresholds. Accordingly, implementation of AIR-1a, AQ-1.1, and AQ-1.2 would reduce cancer risk impacts to a ***less-than-significant*** level.

Impact AQ-2: Exposure of Sensitive Receptors to Localized PM2.5 Concentrations during Construction. The Project would not expose sensitive receptors to localized PM2.5 concentrations in excess of BAAQMD thresholds during construction. (LTS)

Project construction would generate PM2.5, resulting in the exposure of nearby existing sensitive receptors (e.g., residences) to increased PM2.5 concentrations. Exposure dissipates as a function of distance from the emissions source; thus, BAAQMD has determined that construction activities occurring at distances of greater than 1,000 feet from a sensitive receptor likely do not pose a significant health risk.

As shown in Table 3.2-1, several sensitive receptors are located within 1,500 feet of the Project site. As noted above, although BAAQMD has determined that construction activities occurring at distances of greater than 1,000 feet from a sensitive receptor likely do not pose a significant health risk, health risks at the nearest schools and daycares, which are located outside the 1,000-foot radius but within a 1,500-foot radius, were analyzed to present a conservative estimate of potential risks associated with Project construction activities. Therefore, exposure to construction PM2.5 emissions was assessed by predicting PM2.5 concentrations at these off-site receptor locations. The results of the PM2.5 analysis are summarized in Table 3.2-5 and are compared to BAAQMD's Project-level PM2.5 thresholds. Note that Project construction emissions in Table 3.2-5 do not assume implementation of any on-site mitigation. There are no exceedances at receptors located outside the 1,000-foot radius specified by BAAQMD.

Table 3.2-5. Unmitigated Project-Level PM2.5 Concentrations during Construction

Receptor	Annual Average PM2.5 Concentration ($\mu g/m^3$)[a]
Maximum Residential Receptor	0.17
Maximum School Receptor[b]	0.02
Maximum Daycare Receptor[b]	0.01
Maximum Worker Receptor	0.21
BAAQMD Threshold	0.30

a. $\mu g/m^3$= micrograms per cubic meter
b. Receptor located outside BAAQMD's 1,000-foot screening radius.

As shown in Table 3.2-5, construction of the Project would not result in PM2.5 concentrations in excess of BAAQMD's threshold for the nearest residential and worker receptors. This is a ***less-than-significant*** impact.

With implementation of Mitigation Measure AQ-1.1, additional reductions of fugitive and equipment PM2.5 exhaust would occur. For example, Tier 3 engines utilized pursuant to Mitigation Measure AQ-1.1 (see Impact AQ-1 above) would substantially reduce PM2.5 exhaust from construction equipment. Mitigation Measure AQ-1.2 (see Impact AQ-1 above) would also substantially reduce PM2.5 exhaust from haul trucks. Similarly, dust controls implemented under Specific Plan EIR Mitigation Measure AIR-1a would reduce fugitive PM2.5 by approximately 55 percent. PM2.5 concentrations with

implementation of applicable mitigation (Mitigation Measures AIR-1a, AQ-1.1, and AQ-1.2). For disclosure purposes, the reductions that would occur with all applicable mitigation measures are shown in Table 3.2-6.

Table 3.2-6. Mitigated Project-Level PM2.5 Exposure during Construction

Receptor	Annual Average PM2.5 Concentration (μg/m^3)[a]
Maximum Residential Receptor	0.03
Maximum School Receptor[b]	<0.01
Maximum Daycare Receptor[b]	<0.01
Maximum Worker Receptor	0.04
BAAQMD Threshold	0.30

a. μg/m^3= micrograms per cubic meter
b. Receptor located outside BAAQMD's 1,000-foot screening radius.

Cumulative Impacts

Impact C-AQ-1: Exposure of Sensitive Receptors to Cumulative Health Risks during Construction. Cumulative development in the Project vicinity would not expose sensitive receptors to substantial health risks during construction (LTS/M)

BAAQMD has determined that construction activities occurring at distances of greater than 1,000 feet from a sensitive receptor likely do not pose a significant health risk. Therefore, while the project-level analysis evaluates sensitive receptors located within 1,500 feet of the project site, the cumulative impact analysis only evaluates existing sources of TACs within 1,000 feet of the project site.

There are rail and roadway sources within 1,000 feet of the Project area that generate DPM and PM2.5. These emissions contribute to elevated background concentrations of DPM and PM2.5, which, when combined with emissions from Project construction, could contribute to a cumulative health risk. Accordingly, consistent with BAAQMD's CEQA Guidelines, cumulative exposure to DPM and PM2.5 was evaluated by adding background health risks to the estimated construction health risks for the Project (see Table 3.2-7).

Background health risks to existing receptors include El Camino Real and Caltrain. Menlo Park El Camino Real/Downtown Specific Plan Draft Environmental Impact Report (Draft EIR), Chapter 4.2, Air Quality, calculated these risks.[26] The Draft EIR states the following for each source and health risk, which is summarized in Table 3.2-7.

- **El Camino Real—DPM**: "*The maximum existing incremental cancer risk from exposure to DPM concentrations along El Camino Real (100 feet from the edge of the roadway) is calculated by BAAQMD to be **20 in one million** and is based on an assumed 2-way daily traffic volume of 49,000 vehicles per day. The risk drops substantially with distance, to 0.69 per million at a distance of 200 feet.*"
- **El Camino Real—HI**: *"The chronic non-cancer hazard index from vehicle traffic on El Camino Real at the maximally exposed receptor is **0.48.**"*

[26] Environmental Science Associates (ESA). 2011. *Menlo Park El Camino Real/Downtown Specific Plan Draft Environmental Impact Report. Chapter 4.2: Air Quality*. Prepared for the City of Menlo Park, California. April. Available: <http://www.menlopark.org/DocumentCenter/View/407>. Accessed: June 24, 2015.

- **El Camino Real—PM2.5**: *"The maximum existing annual average PM2.5 concentration along El Camino Real is calculated by BAAQMD to be **0.48 µg/m³** (micrograms per cubic meter) at a distance of 100 feet from the edge of the roadway."*
- **Caltrain—DPM**: "*Based on modeling results, the highest concentration of DPM would be approximately **0.16 µg/m³** (micrograms per cubic meter) and would occur 50 feet east (downwind) of the track centerline near the Menlo Park Caltrain Station. The maximum incremental cancer risk from exposure to DPM was calculated to be 50.9 in one million, for an outdoor location, while the indoor risk level would be about one-third lower, or about 33.9 in one million."*
- **Caltrain—HI**: *"The cumulative non-cancer hazard index from exposure to diesel particulate matter would be less than **0.034** from rail operations of Caltrain."*
- **Caltrain—PM2.5**: "*It was assumed that all PM2.5 emissions from locomotives would be diesel particulate matter (DPM); therefore, estimated DPM concentrations can be used to represent PM2.5 concentrations as well...annual average DPM concentrations at the maximally exposed individual (MEI) would be approximately **0.16 µg/m³** (micrograms per cubic meter)."*

Table 3.2-7. Background Health Risks from El Camino Real Vehicle Traffic and Caltrain Locomotives

Source	Non-Cancer Hazard Index	Increased Cancer Risk (per million)	Annual Average PM2.5 Concentration (µg/m³)[a]
El Camino Real Vehicle Traffic	0.48	20.0	0.48
Caltrain Locomotives	0.03	50.9	0.16

[a.] µg/m³ = micrograms per cubic meter

Source: Environmental Science Associates (ESA). 2011. *Menlo Park El Camino Real/Downtown Specific Plan Draft Environmental Impact Report. Chapter 4.2: Air Quality*. Prepared for the City of Menlo Park, California. April. Available: <http://www.menlopark.org/DocumentCenter/View/407>. Accessed: June 24, 2015.

Two additional cumulative projects are located within the vicinity of the Project area: 133 Encinal and 1283-1295 El Camino Real. The 133 Encinal project is located more than 1,000 feet from the Project area, so it was not included in the cumulative analysis. The 1283-1295 El Camino Real project is within 1,000 feet of the Project area, but no information is available regarding construction-related impacts. The 1283-1295 El Camino Real project is also a relatively small mixed-use development with a proposed 15 dwelling units and approximately 2,000 square feet of commercial uses, and will therefore likely have minimal construction emissions of DPM and associated health risk. Assuming that the 1283-1295 El Camino Real project would have similar construction activity per-dwelling unit compared to construction activity for the Project, construction of the 1283-1295 El Camino Real project would produce the following unmitigated risks: increased cancer risk of approximately 4.5 per million; hazard index of approximately 0.003; and annual average PM2.5 concentration of approximately 0.016 µg/m³. Even at the unmitigated level, these values would not raise cumulative impacts to above BAAQMD thresholds when added to the mitigated health risks in Table 3.2-9 below (e.g. maximum health risks would be 82.4 for cancer, 0.52 for HI, and 0.69 for PM2.5 concentration).

The results of the cumulative impact assessment are summarized in Table 3.2-8. Health risks are provided for each construction phase based on the combined contribution of sources within 1,000 feet. (As noted above, although BAAQMD has determined that construction activities occurring at distances of greater than 1,000 feet from a sensitive receptor likely do not pose a significant health risk, this document analyzes health risks at the nearest schools and daycares, which are located outside the

1,000-foot radius but within a 1,500-foot radius.) Note that Project construction emissions do not assume implementation of any onsite mitigation. Exceedances of BAAQMD thresholds are shown in underline. There are no exceedances at receptors located outside the 1,000-foot radius specified by BAAQMD.

Table 3.2-8. Unmitigated Cumulative Cancer, Chronic (HI), and PM2.5 Health Risks during Project Construction

Receptor	Non-Cancer Hazard Index	Increased Cancer Risk (per million)	Annual Average PM2.5 Concentration (μg/m^3)[a]
Maximum Residential Receptor	0.55	132	0.81
Maximum School Receptor[b]	0.52	75	0.66
Maximum Daycare Receptor[b]	0.51	75	0.65
Maximum Worker Receptor	0.55	76	0.85
BAAQMD Thresholds	10.00	100	0.80

a. μg/m^3 = micrograms per cubic meter
b. Receptor located outside BAAQMD's 1,000-foot screening radius.

As shown in Table 3.2-8, both offsite and onsite receptors may be exposed to significant cancer risk and PM2.5 concentrations during construction. While background risks exceed BAAQMD's thresholds in some locations, the Project's incremental effect would also be cumulatively considerable without mitigation.

As discussed above, Mitigation Measures AIR-1a, AQ-1.1, and AQ-1.2 would substantially reduce DPM and PM2.5 during construction. Cumulative risks with implementation of applicable onsite mitigation are shown in Table 3.2-9. As shown, no exceedances would occur with implementation of these mitigation measures.

Table 3.2-9. Mitigated Cumulative Cancer, Chronic (HI), and PM2.5 Health Risks during Project Construction

Phase	Non-Cancer Hazard Index	Increased Cancer Risk (per million)	Annual Average PM2.5 Concentration (μg/m^3)[a]
Maximum Residential Receptor	0.52	78	0.67
Maximum School Receptor[b]	0.51	71	0.64
Maximum Daycare Receptor[b]	0.51	71	0.64
Maximum Worker Receptor	0.52	72	0.68
BAAQMD Thresholds	10.00	100	0.80

a. μg/m^3 = micrograms per cubic meter
b. Receptor located outside BAAQMD's 1,000-foot screening radius.

As shown in Table 3.2-9, implementation of Mitigation Measures AQ-1.1, AQ-2.1, and AQ-2.2 would reduce cumulative cancer risks and PM2.5 concentrations to below BAAQMD's cumulative threshold for all receptor locations. Accordingly, potential cumulative health risks would be ***less-than-significant with mitigation***.

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3.3 Noise

This section describes the regulatory setting and environmental setting for noise in the City of Menlo Park as it pertains to the Project. The Project site is within the Specific Plan area. Since the Project's site plan and development parameters are consistent with the Specific Plan, the programmatic Specific Plan EIR is applicable to this Project. In accordance with Sections 15128 and 15183.3(d) of the CEQA Guidelines, this section is limited to those effects that have either not been analyzed in the Specific Plan EIR or that are not substantially mitigated by uniformly applicable development policies or standards.

Issues identified in response to the Notice of Preparation (NOP) (Appendix 1) were considered in preparing this analysis. An NOP comment was submitted regarding the placement of proposed sensitive receptors adjacent to noise associated with rail operations on the Caltrain tracks. This issue is addressed in this section.

Existing Conditions

Regulatory Setting

Federal, state, and local agencies regulate different aspects of environmental noise. Generally, the federal government sets noise standards for transportation-related noise sources closely linked to interstate commerce. These sources include aircraft, locomotives, and trucks. No federal noise standards are directly applicable to the Project. The state government sets noise standards for transportation noise sources such as automobiles, light trucks, and motorcycles. Noise sources associated with industrial, commercial, and construction activities are generally subject to local control through noise ordinances and general plan policies. Local general plans identify general principles intended to guide and influence development plans. State and local noise policies and regulations applicable to the Project are described below.

California Code

Part 2, Title 24 of the California Code of Regulations, "California Noise Insulation Standards," establishes minimum noise insulation standards to protect persons within new hotels, motels, dormitories, long-term care facilities, apartment houses, and dwellings other than single-family residences. Under this regulation, interior noise levels attributable to exterior noise sources cannot exceed 45 average equivalent sound level (L_{DN}) over a 24-hour period in any habitable room. Where such residences are located in an environment in which exterior noise is 60 L_{DN} or greater, an acoustical analysis is required to ensure that interior levels do not exceed the 45 L_{DN} interior standard.

Local

City of Menlo Park General Plan

The California Government Code requires that a noise element be included in the general plan of each county and city in the state. The noise element establishes the local government's goals, objectives, and policies relating to noise control.

According to the City of Menlo Park's General Plan Noise Element, the City "recognizes the issue of noise and has standards to protect the peace, health and safety of residents and the community from unreasonable noise" and "strive(s) to locate uses compatible to the area to minimize escalation of noise from mobile and stationary sources." The Noise Element of the City's General Plan establishes goals and policies to assure that existing and proposed land uses are compatible with their noise environments. To this end, the City has adopted quantitative exterior noise compatibility criteria for various land uses. The purpose of these criteria is to reduce the potential adverse effects of noise on people, including sleep disturbance, interference with speech communication, and the general sense of dissatisfaction that is often associated with high noise exposure. Under the City's Noise Element, noise levels up to 60 A-weighted decibels (dBA) L_{DN} are considered normally acceptable for single-family residential uses, and noise levels up to 65 dBA L_{DN} are normally acceptable for multi-family residential and hotel uses. Noise levels are conditionally acceptable up to 70 dBA L_{DN} for hotel uses and all residential uses, as long as noise reduction features are included in the design to reduce interior noise levels. For playground and neighborhood parks, as well as office uses, schools, and churches, noise levels up to 70 dBA L_{DN} are normally acceptable. For industrial uses, noise levels up to 75 dBA L_{DN} are considered normally acceptable, and 80 dBA L_{DN} are conditionally acceptable.

The following goal and policies from the Noise Element of the City's General Plan pertain to the Project.

> **Goal N1:** Achieve Acceptable Noise Levels.
>
> *Policy N1.1*, *Compliance with Noise Standards*. Consider the compatibility of proposed land uses with the noise environment when preparing or revising community and/or specific plans. Require new projects to comply with the noise standards of local, regional, and building code regulations, including but not limited to the City's Municipal Code, Title 24 of the California Code of Regulations, and subdivision and zoning codes.
>
> *N1.2, Land Use Compatibility Noise Standards*. Protect people in new development from excessive noise by applying the City's Land Use Compatibility Noise Standards for New Development to the siting and required mitigation for new uses in existing noise environments.
>
> *N1.3, Exterior and Interior Noise Standards for Residential Use Areas*. Strive to achieve acceptable interior noise levels and exterior noise levels for backyards and/or common usable outdoor areas in new residential development, and reduce outdoor noise levels in existing residential areas where economically and aesthetically feasible.
>
> *N1.4, Noise Sensitive Uses*. Protect existing residential neighborhoods and noise sensitive uses from unacceptable noise levels and vibration impacts. Noise sensitive uses include, but are not limited to, hospitals, schools, religious facilities, convalescent homes and businesses with highly sensitive equipment. Discourage the siting of noise-sensitive uses in areas in excess of 65 dBA CNEL without appropriate mitigation and locate noise sensitive uses away from noise sources unless mitigation measures are included in development plans.
>
> *N1.5, Planning and Design of New Development to Reduce Noise Impacts*. Design residential developments to minimize the transportation-related noise impacts to adjacent residential areas and encourage new development to be site planned and architecturally designed to minimize noise impacts on noise sensitive spaces. Proper site planning can be effective in reducing noise impacts.
>
> *N1.6, Noise Reduction Measures*. Encourage the use of construction methods, state-of-the-art noise abating materials and technology and creative site design including, but not limited to, open space, earthen berms, parking, accessory buildings, and landscaping to buffer new and existing development from noise and to reduce potential conflicts between ambient noise levels and noise-sensitive land uses. Use sound walls only when other methods are not practical or when recommended by an acoustical expert.

N1.7, Noise and Vibration from New Non-Residential Development. Design non-residential development to minimize noise impacts on nearby uses. Where vibration impacts may occur, reduce impacts on residences and businesses through the use of setbacks and/or structural design features that reduce vibration to levels at or below the guidelines of the Federal Transit Administration near rail lines and industrial uses.

N1.8, Potential Annoying or Harmful Noise. Preclude the generation of annoying or harmful noise on stationary noise sources, such as construction and property maintenance activity and mechanical equipment.

N1.10, Nuisance Noise. Minimize impacts from noise levels that exceed community sound levels through enforcement of the City's Noise Ordinance. Control unnecessary, excessive and annoying noises within the City where not preempted by Federal and State control through implementation and updating of the Noise Ordinance.

City of Menlo Park Municipal Code

In addition to the General Plan, noise regulations are also contained in the City of Menlo Park Municipal Code (Municipal Code). Chapter 8.06 of the Municipal Code contains noise limitations and exclusions for land uses within the City. The Noise Ordinance addresses noise limits that would constitute a noise disturbance, primarily as measured on residential land uses. The following regulations would be applicable to the Project:

8.06.030 Noise Limitations

a. Except as otherwise permitted in this chapter, any source of sound in excess of the sound level limits set forth in Section 8.06.030 shall constitute a noise disturbance. For purposes of determining sound levels from any source of sound, sound level measurements shall be made at a point on the receiving property nearest where the sound source at issue generates the highest sound level.

    1. For all sources of sound measured from any residential property:

        A. "Nighttime" hours—50 dBA (10:00 p.m. to 7:00 a.m.)

        B. "Daytime" hours—60 dBA (7:00 a.m. to 10:00 p.m.)

8.06.040 Exceptions

a. Construction Activities

    1. Construction activities between the hours of 8:00 a.m. and 6:00 p.m. Monday through Friday.

    4. Notwithstanding any other provision set forth above, all powered equipment shall comply with the limits set forth in Section 8.06.040(b).

b. Powered Equipment

    1. Powered equipment used on a temporary, occasional or infrequent basis operated between the hours of 8:00 a.m. and 6:00 p.m. Monday through Friday. No piece of equipment shall generate noise in excess of 85 dBA at 50 feet.

c. Deliveries

    1. Deliveries to food retailers and restaurants.

    2. Deliveries to other commercial and industrial businesses between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday and 9:00 a.m. to 5:00 p.m. Saturdays, Sundays, and holidays.

8.06.050 Exemptions

a. Sound Generated by Motor Vehicles. Sound generated by motor vehicles, trucks, and buses operated on streets and highways, aircraft, trains, and other public transport.

   1. This exemption shall not apply to the operation of any vehicle including any equipment attached to any vehicle (such as attached refrigeration and/or heating units or any attached auxiliary equipment) for a period in excess of ten (10) minutes in any hour while the vehicle is stationary, for reasons other than traffic congestion.

Town of Atherton

For some of the analyzed roadway segments, part or all of the roadway segment is located in the Town of Atherton. The Town of Atherton has its own municipal code (and associated noise ordinance) and general plan (and associated noise element) that involve guidelines and regulations that differ slightly from the regulations for the City of Menlo Park. The Noise Ordinance for the Town of Atherton has comparable noise regulations:

- 7:00 a.m. to 10:00 p.m. — 60 dBA
- 10:00 p.m. to 7:00 a.m. — 50 dBA

The Noise Element Land Use Compatibility standards for the Town of Atherton are slightly more conservative than those of the City of Menlo Park. For Residential land uses, noise levels up to 55 dBA CNEL are considered normally acceptable; noise levels up to 70 dBA CNEL are conditionally acceptable for these uses.

Fundamentals of Environmental Noise and Vibration

Terminology

A brief description of noise and vibration concepts and terminology used in this assessment is provided below.

- **Sound**. A vibratory disturbance transmitted by pressure waves through a medium such as air or water and capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale that indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear. The dBA scale is the most widely used for environmental noise assessments.
- **Maximum Sound Levels (L_{max}).** The maximum sound level measured during the measurement period.
- **Equivalent Sound Level (L_{eq})**. The equivalent steady state sound level that in a stated period of time would contain the same acoustical energy. The 1-hour A-weighted equivalent sound level (L_{eq} 1h) is the energy average of A-weighted sound levels occurring during a 1-hour period.

- **Day-Night Level (L_{DN}).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with a 10-dB penalty added to sound levels between 10:00 p.m. and 7:00 a.m.
- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the sound levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m. L_{DN} and CNEL are typically within 1 dBA of each other and, for all intents and purposes, are interchangeable.
- **Vibration Velocity Level (or Vibration Decibel Level, VdB).** The root mean square velocity amplitude for measured ground motion expressed in dB.
- **Peak Particle Velocity (PPV).** A measurement of ground vibration defined as the maximum speed at which a particle in the ground is moving, expressed in inches per second (in/sec).

Overview of Noise and Sound

Noise is commonly defined as unwanted sound that annoys or disturbs people and potentially causes an adverse psychological or physiological effect on human health. Because noise is an environmental pollutant that can interfere with human activities, evaluation of noise is necessary when considering the environmental impacts of a proposed project.

Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an ambient (existing) sound level. Although the dB scale, a logarithmic scale, is used to quantify sound intensity, it does not accurately describe how sound intensity is perceived by human hearing. The human ear is not equally sensitive to all frequencies in the entire spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process referred to as A-weighted decibels (dBA). Table 3.3-1 summarizes typical A-weighted sound levels for different noise sources.

Human sound perception, in general, is such that a change in sound level of 1 dB cannot typically be perceived by the human ear; a change in sound level of 3 dB is just noticeable; a change of 5 dB is clearly noticeable; and a change of 10 dB is perceived as doubling or halving the sound level. A doubling of actual sound energy is required to result in a 3-dB (i.e., barely noticeable) increase in noise; in practice, for example, this means that the volume of traffic on a roadway would typically need to double to result in a noticeable increase in noise.

The decibel level of a sound decreases (or attenuates) exponentially as the distance from the source of that sound increases. For a point source such as a stationary compressor or construction equipment, sound attenuates at a rate of 6 dB per doubling of distance. For a line source such as free flowing traffic on a freeway, sound attenuates at a rate of 3 dB per doubling of distance.[1] Atmospheric conditions including wind, temperature gradients, and humidity can change how sound propagates over distance and can affect the level of sound received at a given location. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound that travels over an acoustically absorptive surface, such as grass, attenuates at a greater rate than sound that travels over a hard surface such as pavement. The increase in attenuation is typically in the range of 1 to 2 dB per doubling of

[1] California Department of Transportation 2013. *Caltrans Technical Noise Supplement*. September. Available: <http://www.dot.ca.gov/hq/env/noise/>. Accessed: July 13, 2015.

distance. Barriers such as buildings and topography that block the line of sight between a source and receiver also increase the attenuation of sound over distance.

Table 3.3-1. Typical A-Weighted Sound Levels

Common Outdoor Activities	Sound Level (dBA)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet		
	100	
Gas lawnmower at 3 feet		
	90	
Diesel truck at 50 mph at 50 feet		Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower at 100 feet	70	Vacuum cleaner at 3 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60	
		Large business office
Quiet urban area, daytime	50	Dishwasher in next room
Quiet urban area, nighttime	40	Theater, large conference room (background)
Quiet suburban area, nighttime		
	30	Library
Quiet rural area, nighttime		Bedroom at night, concert hall (background)
Rustling of leaves	20	
		Broadcast/recording studio
	10	
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: California Department of Transportation 2009.

Overview of Groundborne Vibration

Groundborne vibration is an oscillatory motion of the soil with respect to the equilibrium position and can be quantified in terms of velocity or acceleration. Groundborne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, as it can cause buildings to shake and generate rumbling sounds. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of groundborne vibration are trains, buses on rough roads, and construction activities such as blasting, pile driving, and operating heavy earthmoving equipment.

Groundborne vibration can be quantified by its peak or root-mean-square (RMS) velocity amplitudes. The RMS amplitude is useful for assessing human annoyance; the RMS amplitude is expressed in terms of the velocity level in decibel units (VdB). The peak amplitude is most often used for assessing the potential for damage to building structures; the peak amplitude is typically assessed in terms of peak particle velocity (PPV), measured in inches/second.

In extreme cases, groundborne vibrations can cause damage to buildings. Building damage is not a factor for normal transportation projects, with the occasional exception of blasting and pile driving during construction. Annoyance from vibration often occurs when the vibration exceeds the threshold of

perception by only a small margin. A vibration level that causes annoyance is well below the damage threshold for normal buildings.

Table 3.3-2 summarizes the typical groundborne vibration velocity levels and average human response to vibration that may be anticipated when a person is at rest in quiet surroundings. If the person is engaged in any type of physical activity, vibration tolerance increases considerably. The duration of the event has an effect on human response, as does its daily frequency of occurrence. Generally, as the duration and frequency of occurrence increase, the potential for adverse human response increases.

Table 3.3-2. Typical Levels of Groundborne Vibration

Human or Structural Response	Vibration Velocity Level (VdB)	Typical Sources (50 Feet from Source)
Threshold for minor cosmetic damage to fragile buildings	100	Blasting from construction project
		Bulldozer or heavy tracked construction equipment
Difficulty in reading computer screen	90	
		Upper range of commuter rail
Threshold for residential annoyance for occasional events (e.g., commuter rail)	80	Upper range of rapid transit
Threshold for residential annoyance for frequent events (e.g., rapid transit)		Typical commuter rail Bus or truck over bump
	70	Typical rapid transit
Approximate threshold for human perception of vibration Limit for vibration sensitive equipment		Typical bus or truck on public road
	60	
		Typical background vibration
	50	

Source: Federal Transit Administration. 2006. *Transit Noise and Vibration Impact Assessment*. FTA-VA-90-1003-06. Office of Planning and Environment.

The background vibration velocity level in residential areas is usually around 50 VdB or lower. The vibration velocity level threshold of perception for humans is approximately 65 VdB. Most perceptible indoor vibration is caused by sources within buildings, such as the operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are heavy construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible.

Groundborne noise is a secondary phenomenon of groundborne vibration. When a building structure vibrates, noise is radiated into the interior of the building. Typically, this is a low frequency sound that would be perceived as a low rumble. The magnitude of the sound depends on the frequency characteristic of the vibration and the manner in which the room surfaces in the building radiate sound. Groundborne noise is quantified by the A-weighted sound level inside the building. The sound level accompanying vibration is generally 25–40 dBA lower than the vibration velocity level in VdB. Groundborne vibration levels of 65 VdB can result in groundborne noise levels up to 40 dBA, which can

disturb sleep. Groundborne vibration levels of 85 VdB can result in groundborne noise levels up to 60 dBA, which can be annoying to daytime noise-sensitive land uses, such as schools.[2]

Environmental Setting

Locations where people reside or where the presence of noise could adversely affect the use of the land are generally considered sensitive land uses. Typical sensitive receptors include residents, school children, hospital patients, and the elderly.

The existing Project site is divided into three areas: the Derry Lane Site, the 1300 El Camino Real Site, and the 1258 El Camino Real Site. The Project site is bound by residential and commercial development to the north along Glenwood Avenue, to the east by the Caltrain tracks and the Garwood Way right-of-way, to the south by Oak Grove Avenue, and to the west by El Camino Real.

Surrounding Land Uses

The land uses surrounding the Project consist of a hotel located immediately adjacent to the north of the Project site; single- and multi-family residential units located approximately 80 feet generally east of the Project site and Caltrain tracks; the Menlo Park Caltrain Station located approximately 320 feet south of the site, and the mixed-use development located adjacent to the Caltrain station, the south of Oak Grove Avenue; and the El Camino Real commercial corridor to the west across El Camino Real. The northeast corner of El Camino Real/Oak Grove Avenue (immediately adjacent to the Project site), includes a Chevron gas station and a restaurant/café.

Existing Noise Levels

Onsite noise sources are primarily associated with rail operations on the Caltrain tracks and traffic surrounding the Project site.

Ambient noise levels in the Project area were measured at several sites for the Specific Plan EIR. As discussed in the *Infill Environmental Checklist* (Appendix 1-1), the noise measurement location closest to the Project site is the Willow Road site (located approximately 50 feet northeast of Alma Street), which has a measured L_{eq} value of 57 6 dBA.[3] Noise at this location, which is approximately 0.75 mile southeast of the Project site, was mostly influenced by the moderate vehicle traffic on Alma Street.

Existing traffic noise levels on roadway segments located in the vicinity of the Project have been characterized with traffic noise modeling using existing traffic volumes presented in Section 3.1, *Transportation*, and the Federal Highway Administration's (FHWA) Traffic Noise Model (TNM)[4] Using these tools, existing traffic noise was modeled along 14 roadway segments in the Project area that were not analyzed in the Specific Plan EIR. Note that a total of 18 roadway segments were previously analyzed in the Specific Plan EIR, and all were determined to have less-than-significant noise impacts related to the Specific Plan; these segments are not further assessed in this Infill EIR. Refer to Table 3.3-3 for the list of 14 segments analyzed in this EIR that were not previously assessed, and for the modeled existing noise levels (based on existing traffic volumes in Section 3.1, *Transportation*) for these roadway segments at a standard distance of 50 feet from the centerline of the roadway segment.

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[2] Federal Transit Administration. 2006. *Transit Noise and Vibration Impact Assessment*. FTA-VA-90-1003-06. Office of Planning and Environment.

[3] City of Menlo Park. 2012. *El Camino Real/Downtown Specific Plan EIR*. June. Table 4.10-1.

[4] Federal Highway Administration. 2004. Traffic Noise Model, Version 2.5

Table 3.3-3. Modeled Existing Traffic Noise Levels at 50 Feet

Roadway	Segment	Existing L_{DN} at 50 Feet
1. Middlefield Road	Marsh Road to Glenwood Avenue[a]	65
2. Middlefield Road	Oak Grove Avenue to Ravenswood Avenue	64.4
3. Laurel Street	Encinal Avenue to Glenwood Avenue	57.5
4. Laurel Street	Oak Grove Avenue to Ravenswood Avenue	57.8
5. Ravenswood Avenue	Laurel Street to Middlefield Road	64.9
6. Encinal Avenue	Laurel Street to Middlefield Avenue[a]	58.3
7. Valparaiso Avenue	University Drive to El Camino Real	65.4
8. Glenwood Avenue	El Camino Real to Laurel Street	62
9. Glenwood Avenue	Laurel Street to Middlefield Road[a]	57.9
10. Oak Grove Avenue	El Camino Real to Laurel Street	61.1
11. Oak Grove Avenue	Laurel Street to Middlefield Road[a]	60.7
12. Alma Street	Oak Grove Avenue to Ravenswood Avenue	53.7
13. Garwood Way	Glenwood Avenue to Oak Grove Avenue	46.1
14. Merrill Street	Oak Grove Avenue to Ravenswood Avenue	55.8

Source: ICF International 2015, W-Trans 2015
[a.] Roadway segments located in the Town of Atherton

Noise levels at 50 feet from the station and mainline tracks were estimated in the Specific Plan EIR using the methodology set forth in the Federal Transit Administration's *Transit Noise and Vibration Impact Assessment*. Information on train trip frequencies was derived from Caltrain's timetables. Noise L_{eq} values from Caltrain operations were analyzed in the Specific Plan EIR at a distance of 50 feet from the Caltrain tracks, and were found to be between 65 and 69 dBA during the daytime and 60 and 64 dBA during the nighttime.[5] Additionally, at a distance of 50 feet from the mainline track, noise levels were approximately 71.3 dBA L_{DN}, including associated horn noise and 68.1 dBA L_{DN} not including horn noise.[6]

Existing Groundborne Vibration Levels

Existing groundborne vibration in the Project area is associated with passenger vehicles and heavy-duty trucks along with existing rail operations. Because the rubber tires and suspension systems of passenger vehicles and heavy-duty vehicles provide vibration isolation, it is unusual for passenger vehicles or heavy-duty trucks to cause groundborne noise or vibration problems. Passenger vehicles and heavy-duty trucks cause effects such as rattling of windows; however, the source is almost always airborne noise and not vibration. Most causes of passenger vehicle and heavy-duty truck-related vibration can be directly related to a pothole, bump, expansion joint, or other discontinuity in the road surface. Smoothing the bump or filling the pothole usually solves the problem. For these reasons, vehicular traffic in the Project vicinity does not contribute substantially to existing groundborne vibration levels. The nearby Caltrain tracks also produce groundborne vibration. According to the Federal Transit Authority's (FTA's) groundborne vibration and noise impact criteria, the existing railroad operation is considered frequent because there are more than 70 train events per day. The groundborne vibration

[6] City of Menlo Park. 2012. El Camino Real/Downtown Specific Plan EIR. June. Table 4.10-1.

standard for commercial uses subject to frequent train events is 75 VdB.[7] For residential uses the vibration standard is 72 VdB.

Environmental Impacts

This section describes the impact analysis relating to noise for the Project. It describes the methods used to determine the impacts of the Project and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, as necessary.

Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies.
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels.
- Result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.
- Result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project.
- Be located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, and expose people residing or working in the Project area to excessive noise levels.
- Be located in the vicinity of a private airstrip and expose people residing or working in the Project area to excessive noise levels.

Methods for Analysis

Traffic noise in the Project vicinity was modeled using segment Average Daily Traffic (ADT) volumes from the Project's transportation analysis (Section 3.1, *Transportation*) and the FHWA TNM.[8] This model consists of a spreadsheet that calculates the traffic noise level at a fixed distance of 50 feet from the centerline of a roadway based on the ADT volume, roadway speed, and vehicle mix that is predicted to occur. Operational traffic noise would be considered a significant impact where with-Project noise levels would exceed local land use noise standards for the affected land use and the Project would increase existing traffic noise levels by 3.0 dBA or more (3 dBA is the threshold level for most people noticing a change in noise).

Impacts related to groundborne vibration, temporary or periodic increases in ambient noise levels, and public airport or private airstrip noise effects were determined to be less than significant with mitigation discussed in the Specific Plan EIR. These noise topics that are discussed in the *Infill Environmental Checklist* (Appendix 1-1 and the Specific Plan EIR and are not discussed further in this Infill EIR.

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[7] Federal Transit Administration. 2006. *Transit Noise and Vibration Impact Assessment*. May.

[8] Federal Highway Administration 2004. Traffic Noise Model, Version 2.5

The following impact areas related to operational traffic noise were determined to require further analysis in the *Infill Environmental Checklist* (Appendix 1-1).

Impacts and Mitigation Measures

Impact NOI-1: Exposure of Offsite Noise-Sensitive Land Uses to Increased Traffic Noise. The Project would not result in a substantial permanent increase in ambient noise levels at existing noise sensitive uses in the project vicinity above levels existing without the project. (LTS)

Operation – Traffic Noise

Operational noise from roadway traffic generated by the Project could increase noise levels along roadway segments in the vicinity of the Project resulting in Project-related traffic noise impacts.

The Specific Plan EIR considered traffic noise on a total of 18 roadway segments. These segments were modeled to determine future noise levels based on buildout assumed in the Specific Plan EIR. The segments modeled in the Specific Plan EIR included segments of Oak Grove Avenue, Santa Cruz Avenue, Menlo Avenue, Ravenswood Avenue, University Avenue, El Camino Real, and Middlefield Road. According to the Specific Plan EIR, traffic noise increases for all of the analyzed segments under buildout conditions were determined to be less than 1 dBA as compared to existing conditions with the exception of one segment (El Camino Real from Menlo College to Valparaiso), where the increase would be 1.1 dBA. As discussed in the *Fundamentals of Noise and Vibration* section, a change in sound level of 1 dB is not perceptible to the human ear, and a change in sound level of 3 dB is just barely noticeable. According to the Specific Plan EIR, as a 3-dB change is barely perceptible to humans, it can be assumed that changes in noise levels of less than 3 dB due to increased roadway traffic would not result in substantial noise level increases that could impact sensitive receptors. Therefore, impacts related to traffic noise were determined to be less than significant for the segments assessed in the Specific Plan EIR.

Section 3.1, *Transportation*, analyzed traffic effects on 14 additional roadway segments not included in the Specific Plan EIR. Analysis of these segments was conducted for the existing, near term 2020, near term 2020 plus Project, cumulative 2040, and cumulative 2040 plus Project conditions. For the purposes of this analysis, impacts associated with increased traffic volumes along these 14 segments generated by the Project were evaluated by determining noise levels under existing conditions as compared to noise levels associated with existing plus Project conditions using the FHWA TNM methodology. This model calculates the traffic noise level at a fixed distance from the centerline of a roadway based on the ADT volume, roadway speed, and vehicle mix that is predicted to occur under each condition. The vehicle mix (i.e., the proportion of automobiles, trucks, buses, and other vehicles) utilized in the analysis was based on information from W-Trans. The percentage of heavy trucks was assumed to be 2 percent for the roadway segments included in the analysis Traffic noise was evaluated in terms of the degree by which Project-related traffic noise increases could combine with existing noise levels and affect existing noise-sensitive land uses along the analyzed segments. Table 3.3-4 summarizes the increase in traffic-related noise at a standard reference distance of 50 feet from the centerline of the roadway segment along identified roadway segments under the existing and existing plus Project condition.

Table 3.3-4. Existing and Existing Plus Project Traffic Noise Levels at 50 Feet

Roadway	Segment	Existing L_{DN} at 50 Feet	Existing plus Project L_{DN} at 50 Feet	Project Contribution to Noise Level at 50 Feet (dB)	Greater than or Equal to 60 L_{DN}?	> 3 dB Change at 50 Feet?	Significant Impact?
1. Middlefield Road	Marsh Road to Glenwood Avenue*	65.0	65.0	0.0	Yes	No	No
2. Middlefield Road	Oak Grove Avenue to Ravenswood Avenue	64.4	64.5	0.1	Yes	No	No
3. Laurel Street	Encinal Avenue to Glenwood Avenue	57.5	57.6	0.1	No	No	No
4. Laurel Street	Oak Grove Avenue to Ravenswood Avenue	57.8	58.1	0.3	No	No	No
5. Ravenswood Avenue	Laurel St to Middlefield Road	64.9	64.9	0.1	Yes	No	No
6. Encinal Avenue	Laurel Street to Middlefield Avenue*	58.3	58.3	0.1	No	No	No
7. Valparaiso Avenue	University Drive to El Camino Real	65.4	65.4	0.1	Yes	No	No
8. Glenwood Avenue	El Camino Real to Laurel Street	62.0	62.1	0.1	Yes	No	No
9. Glenwood Avenue	Laurel Street to Middlefield Road*	57.9	58.0	0.0	No	No	No
10. Oak Grove Avenue	El Camino Real to Laurel Street	61.1	61.4	0.3	Yes	No	No
11. Oak Grove Avenue	Laurel Street to Middlefield Road*	60.7	60.9	0.2	Yes	No	No
12. Alma Street	Oak Grove Avenue to Ravenswood Avenue	53.7	53.7	0.0	No	No	No
13. Garwood Way	Glenwood Avenue to Oak Grove Avenue	46.1	53.9	7.8	No	Yes	No
14. Merrill Street	Oak Grove Avenue to Ravenswood Avenue	55.8	55.8	0.0	No	No	No

Notes:
- Traffic noise was modeled using ADT segment volumes from the transportation impact assessment (W-Trans, Appendix 3.1).
- City regulations limit noise levels to 60 dBA L_{DN} residential uses

*Roadway segments located in the Town of Atherton

Under existing plus Project conditions, traffic noise levels at seven of the analyzed roadway segments could exceed the City's thresholds of 60 dBA L_{DN} for residential land uses. Because Project noise levels would exceed local land use noise standards in some areas, impacts would result if the Project would increase existing traffic noise levels by 3.0 dBA or more. Under existing conditions, Project-generated traffic noise increases were found to add between 0.1 and 0.3 dBA at a standard reference distance of 50 feet from the roadway centerline to the existing L_{DN} for the seven roadway segments where noise levels would exceed thresholds under existing plus Project conditions. Project traffic would only increase noise levels by more than 3 dBA along one analyzed roadway segment, Garwood Way from Glenwood Avenue to Oak Grove Avenue; however, for this roadway segment, the existing plus Project traffic noise level is below 60 L_{DN}, and no significant impact would result. Because there are no roadway

segments where the Project would cause existing plus Project noise levels to exceed 60 L_{DN} and increase noise by 3 dB, noise impacts from Project-generated traffic would be ***less than significant***.

Cumulative Impacts

For cumulative operational noise impacts, specifically from traffic, the overall growth of a city or jurisdiction is considered; future regional growth in the Project vicinity would result in increases in traffic that would cumulatively increase traffic noise.

In general, a project would result in a significant cumulative traffic noise impact if cumulative plus project noise levels at existing sensitive receivers were greater than the applicable thresholds (60 dBA L_{DN} for single-family residential land uses). A project would have a cumulatively considerable contribution to the overall increase in traffic noise levels if it would increase cumulative traffic noise levels by greater than 1 dB under Cumulative with-Project conditions.

The results of the cumulative year 2040 and the cumulative year 2040 with-Project traffic noise modeling, as well as the cumulative impact determination for the analyzed segments, are shown in Table 3.3-5.

Modeling results for cumulative traffic noise levels indicate that traffic noise would be in excess 60 dBA L_{DN} at a distance of 50 feet for seven of the 14 analyzed roadway segments in the vicinity of the Project site; significant cumulative traffic noise impacts are therefore considered to occur along these seven roadway segments. The Project would only increase cumulative noise levels by more than 1 dBA along one analyzed roadway segment, Garwood Way from Glenwood Avenue to Oak Grove Avenue; however, for this roadway segment, noise levels are below 60 L_{DN} for all analyzed conditions, so no cumulative impact would occur. The Project would not have a cumulatively considerable contribution to any cumulative impacts due to the very minor Project-related noise increases shown in Table 3.3-5. Therefore, the Project would have a ***less-than-significant*** contribution to the seven cumulative impacts identified in the vicinity of the Project site.

Table 3.3-5. Cumulative and Cumulative Plus Project Traffic Noise Levels at 50 Feet

Roadway	Segment	Existing L_{DN} at 50 Feet	Cumulative L_{DN} at 50 Feet	Cumulative plus Project L_{DN} at 50 Feet	Significant Cumulative Impact at 50 Feet? (> 60 L_{DN} Cumulative plus Project)	Project Contribution to Noise Level at 50 Feet (dB)	Cumulatively Considerable Contribution at to Cumulative Impact at 50 Feet? (>1 dB change)
1. Middlefield Road	Marsh Road to Glenwood Avenue[a]	65.0	66.6	66.6	Yes	0.0	No
2. Middlefield Road	Oak Grove Avenue to Ravenswood Avenue	64.4	65.9	66.0	Yes	0.1	No
3. Laurel Street	Encinal Avenue to Glenwood Avenue	57.5	58.6	58.7	No	0.0	No
4. Laurel Street	Oak Grove Avenue to Ravenswood Avenue	57.8	58.8	59.1	No	0.2	No
5. Ravenswood Avenue	Laurel Street to Middlefield Road	64.9	66.2	66.3	Yes	0.1	No
6. Encinal Avenue	Laurel Street to Middlefield Avenue[a]	58.3	59.8	59.8	No	0.0	No
7. Valparaiso Avenue	University Drive to El Camino Real	65.4	66.6	66.6	Yes	0.0	No
8. Glenwood Avenue	El Camino Real to Laurel Street	62.0	63.3	63.4	Yes	0.1	No
9. Glenwood Avenue	Laurel Street to Middlefield Road[a]	57.9	59.2	59.2	No	0.0	No
10. Oak Grove Avenue	El Camino Real to Laurel Street	61.1	62.2	62.5	Yes	0.2	No
11. Oak Grove Avenue	Laurel Street to Middlefield Road[a]	60.7	61.9	62.0	Yes	0.1	No
12. Alma Street	Oak Grove Avenue to Ravenswood Avenue	53.7	54.8	54.8	No	0.0	No
13. Garwood Way	Glenwood Avenue to Oak Grove Avenue	46.1	50.6	55.1	No	4.5	No[b]
14. Merrill Street	Oak Grove Avenue to Ravenswood Avenue	55.8	56.9	56.9	No	0.0	No

Notes:
a. Part or all of the roadway segment is located in the Town of Atherton.
b. Although a > 1-dBA increase occurs, noise levels are still below applicable thresholds for this segment; cumulative impacts are less than significant.
- Traffic noise was modeled using ADT segment volumes from the transportation impact assessment (W-Trans, Appendix 3.1).
- Noise levels up to 60 dBA L_{DN} are normally acceptable for single-family residential uses, and noise levels up to 65 dBA L_{DN} are normally acceptable for multi-family residential and hotel uses.

3.4 Hazards and Hazardous Materials

A hazardous material is any substance that, because of its quantity, concentration, or physical or chemical properties, may pose a hazard to human health and the environment. Under California Code of Regulations (CCR) Title 22, the term "hazardous substance" refers to both hazardous materials and hazardous wastes. Both of these are classified according to four properties: (1) toxicity, (2) ignitability, (3) corrosiveness, and (4) reactivity (CCR Title 22, Chapter 11, and Article 3).

A hazardous material is defined in CCR Title 22 as:

> [a] substance or combination of substances that, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed (CCR Title 22 Section 66260.10).

Hazardous materials in various forms can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Hazards to human health and the environment can occur during production, storage, transportation, use, or disposal of hazardous materials.

This section describes the environmental and regulatory setting pertaining to hazards and hazardous materials. It also describes impacts related to hazards and hazardous materials that would result with implementation of the Project as well as mitigation for significant impacts where feasible and appropriate.

The Project site is within the planning area for the El Camino Real/Downtown Specific Plan. Because the Project's site plan and development parameters are consistent with development anticipated by the Specific Plan, the programmatic Specific Plan Environmental Impact Report (EIR) is applicable to this Project. Therefore, in accordance with Sections 15128 and 15183.3(d) of the CEQA Guidelines, this discussion is limited to either effects that have not been analyzed in the Specific Plan EIR or effects that cannot be substantially mitigated by uniformly applicable development policies or standards.

Hazardous materials information in this section is based primarily on the Phase I Environmental Site Assessments (Phase I ESAs) for the 1258 El Camino Real site and the 1300 El Camino Real site prepared by Green Environment in April and March 2012, respectively,[1,2] and the High-Vacuum, Dual-Phase Extraction Pilot Test Work Plan and the Removal Action Work Plan, Derry Lane site, prepared by Green Environment in September 2013[3] and September 2015.[4] ICF also conducted supplemental hazardous materials research on the State Water Resources Control Board's GeoTracker website in May 2015.

No NOP comments were received regarding hazardous materials.

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[1] Green Environment, Inc. 2012. *Phase I Environmental Site Assessment, 1258 El Camino Real, Menlo Park, California.* (GEI Project: A12784.) April 9. San Carlos, CA. Prepared for Bayfront Investments, LLC.

[2] Green Environment, Inc. 2012. *Phase I Environmental Site Assessment, 1300 El Camino Real, Menlo Park, California*. (GEI Project: A12777.) March 20. Prepared for Bayfront Investments, LLC.

[3] Green Environment, Inc. 2013. *High-Vacuum, Dual-Phase Extraction Pilot Test Work Plan, Derry Lane Site.* (Docket No. I&SE 10/11-014.) September 10. Prepared for Bayfront Investments, LLC.

[4] Green Environment, Inc. 2015. *Removal Action Work Plan, Derry Lane Site.* September. Prepared for Bayfront Investment, LLC.

Existing Conditions

Regulatory Setting

Federal and State

Resource Conservation and Recovery Act

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act (RCRA) (42 United States Code [U.S.C.] Section 6901 et seq.). The RCRA was established in 1976 to protect human health and the environment, reduce waste, conserve energy and natural resources, and eliminate the generation of hazardous waste. Under the authority of the RCRA, the regulatory framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat, or dispose of hazardous waste, is found in 40 Code of Federal Regulations (CFR) Sections 260–299. Other applicable federal laws and regulations include the following:

- 49 CFR Sections 172 and 173: These regulations establish standards for the transport of hazardous materials and hazardous wastes. The standards include requirements for labeling, packaging, and shipping hazardous materials and hazardous wastes as well as training requirements for personnel who complete shipping papers and manifests.
- 40 CFR Subchapter I—Solid Wastes: These regulations implement the provisions of the Solid Waste Act and the RCRA. They also establish criteria for the classification of solid waste disposal facilities (landfills), hazardous waste characteristic criteria and regulatory thresholds, and hazardous waste generator requirements as well as requirements for the management of used oil and universal wastes.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as "Superfund," was enacted by Congress on December 11, 1980. This law (42 U.S.C. 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites, provides for liability of persons who were responsible for releases of hazardous waste at these sites, and establishes a trust fund for cleanup when no responsible party can be identified. CERCLA also enabled revision of the National Contingency Plan (NCP). The NCP (Title 40, CFR Part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the National Priorities List (NPL). CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) came into law on October 11, 1976. TSCA authorized the U.S. Environmental Protection Agency (EPA) to secure information regarding all new and existing chemical substances and control any substances that cause unreasonable risks with respect to public health or the environment. The current polychlorinated biphenyl (PCB) regulations (40 CFR 761) were published pursuant to the TCSA and include the following CFR sections, which are applicable to the Project.

- Section 761.60, disposal requirements.
- Section 761.61, PCB remediation, waste cleanup, and disposal options.

- Section 761.77, coordination with the EPA regional administrator.
- Section 761.79, decontamination standards and procedures.
- Section 761.97, export requirements for disposal.
- Section 761.125, requirements for PCB spill cleanup.
- Section 761.130, sampling requirements.
- Section 761.180, records and monitoring.

Department of Transportation Hazardous Materials Regulations (49 CFR 100–185)

U.S. Department of Transportation (DOT) Hazardous Materials Regulations cover all aspects of hazardous materials packaging, handling, and transportation. Parts 107 (Hazard Materials Program), 130 (Oil Spill Prevention and Response), 172 (Emergency Response), and 177 (Highway Transportation) would apply to the Project and/or surrounding uses.

Cortese List

U.S.C. 65962.5 (commonly referred to as the Cortese List) includes Department of Toxic Substances Control– (DTSC-) listed hazardous waste facilities and sites, Department of Health Services lists of contaminated drinking water wells, sites that have been listed by the State Water Resources Control Board as having underground storage tank leaks or discharges of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

California Health and Safety Code

DTSC, a department of the California Environmental Protection Agency (CalEPA), is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in the state. DTSC regulates hazardous waste primarily under the authority of the federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Division 20, Chapter 6.5, of the California Health and Safety Code deals with hazardous waste control through regulations pertaining to transport, treatment, recycling, disposal, enforcement, and permitting. Division 20, Chapter 6.10, contains regulations pertaining to the cleanup of hazardous materials releases. Title 22, Division 4.5, contains environmental health standards for the management of hazardous waste. This includes standards for the identification of hazardous waste (Chapter 11) and standards that are applicable to transporters of hazardous waste (Chapter 13).

Occupational Safety and Health Administration

The Occupational Safety and Health Administration's (OSHA's) mission is to ensure the safety and health of American workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. OSHA establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in 29 CFR 1910.

The California Division of Occupational Safety and Health, known as Cal/OSHA, regulations restrict asbestos emissions from demolition and renovation activities and specify safe work practices to minimize the potential for a release of asbestos fibers. These regulations prohibit emissions of asbestos from asbestos-related manufacturing, demolition, or construction activities; require medical

examinations and monitoring of employees who are engaged in activities that could disturb asbestos; specify precautions and safe work practices that must be followed to minimize the potential for a release of asbestos fibers; and require notices to federal and local government agencies prior to beginning renovation or demolition that could disturb asbestos.

Hazardous Waste Control Act (Section 25100 et seq.)

DTSC is responsible for enforcement of the Hazardous Waste Control Act (California Health and Safety Code Section 25100 et seq.), which creates the framework under which hazardous wastes are managed in California. The law provides for the development of a hazardous waste program that administers and implements the provisions of the federal RCRA cradle-to-grave waste management system in California. It also provides for the designation of California-only hazardous waste and the development of standards that are equal to or, in some cases, more stringent than federal requirements.

California Code of Regulations, Title 8—Industrial Relations

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. Cal/OSHA and OSHA are the agencies that are responsible for ensuring employee safety in the workplace. Cal/OSHA assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices. These standards would be applicable to construction activities related to the Project.

California Labor Code (Division 5, Parts 1, 6, 7, and 7.5)

The California Labor Code is a collection of regulations that include workplace regulations. These include appropriate training regarding the use and handling of hazardous materials as well as the operation of equipment and machines that use, store, transport, or dispose of hazardous materials. Division 5, Part 1, Chapter 2.5, ensures that employees who handle hazardous materials are appropriately trained and informed about the materials. Division 5, Part 6, governs the operation and care of storage tanks and boilers for hazardous materials. Division 5, Part 7, ensures that employees who work with volatile flammable liquids are outfitted with appropriate safety gear and clothing. Division 5, Part 7.5, otherwise referred to as the California Refinery and Chemical Plant Worker Safety Act of 1990, was enacted to prevent or minimize the consequences of catastrophic releases of toxic, flammable, or explosive chemicals. The establishment of process safety management standards is intended to eliminate, to a substantial degree, the risks to which workers are exposed in petroleum refineries, chemical plants, and other related manufacturing facilities.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (California Health and Safety Code, Chapter 6.11, Sections 25404–25404.9)

This program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of environmental and emergency response programs and provides authority to the Certified Unified Program Agency (CUPA). The CUPA is designed to protect public health and the environment from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes. This is accomplished through inspections, emergency response, enforcement, and site mitigation oversight. The CUPA for Menlo Park is the San Mateo County Health Department, Environmental Health Division (SMCEHD).

State Water Resources Control Board Construction General Permit (2009-0009-DWQ)

The general permit requirements apply to construction or demolition activities, including, but not limited to, clearing, grading, grubbing, or excavation or any other activity that results in a land disturbance equal to or greater than 1 acre.

The Construction General Permit requires development and implementation of a site-specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across a project site. The SWPPP must list the best management practices (BMPs) the discharger will use to protect stormwater runoff and describe the placement of those BMPs.[4]

Local

County of San Mateo

Certified Uniform Program Agency Program

As detailed above, many laws and regulations at the federal, state, and local levels regulate the management of hazardous materials. EPA grants enforcement authority over federal hazardous materials regulations to the states. In California, the state agency with responsibility is CalEPA. CalEPA has granted authority to a local agency, SMCEHD, for implementation and enforcement, under the CUPA, of many of the hazardous materials regulations in the county. The CUPA certifies 83 local government agencies to implement the hazardous waste and materials standards set by five state agencies.

Hazardous Material Business Plan

Businesses must complete a Hazardous Material Business Plan (HMBP) within 30 days of handling or storing a hazardous material equal to or greater than the minimum reportable quantities (i.e., 55 gallons for liquids, 500 pounds for solids, 200 cubic feet at standard temperature and pressure for compressed gasses). The purpose of the HMBP is to provide information to firefighters, health officials, planners, public safety officers, health care providers, and others in case of emergency, thereby lessening "damage to the health and safety of people and the environment when a hazardous material is released."

The HMBP must include the following elements.

- Summary of business activities.
- Owner/operator information, including emergency contacts.
- The type and quantity of reportable hazardous materials.
- Site map.
- Emergency response procedures.
- Employee training program.

[4] State Water Resources Control Board. 2015. *State Water Program*. Last revised: April 20, 2015. Available: <http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml>. Accessed: May 27, 2015.

California Accidental Release Prevention Program

The California Accidental Release Prevention Program (CalARP) protects people from releases of regulated substances into the environment. *Regulated substances* are chemicals that pose a major threat to public health and safety or the environment because of their highly toxic, flammable, or explosive nature. Examples of regulated substances are chlorine gas, nitric acid, and propane.

The types and threshold quantities of regulated substances are provided on a federal list and a state list. All businesses that store or handle more than a threshold quantity of a regulated substance must develop a Risk Management Plan (RMP) to respond to an accidental release.

The RMP must include procedures for the following:

- Keeping employees and customers safe.
- Handling regulated substances.
- Training staff.
- Maintaining equipment.
- Checking that substances are stored safely.
- Responding to an accidental release.

Underground Storage Tank Program

To make sure that underground storage tanks remain leak-free and do not contaminate soil and groundwater, tank owners must comply with the following requirements:

- Possess a valid operating permit.
- Conduct routine testing.
- Maintain equipment.
- Prepare an approved leak-response plan.
- Upgrade tank systems, as required.

Aboveground Storage Tank Program

The CUPA has responsibility for implementation, inspection, enforcement, and administration of aboveground storage tank operations. Aboveground storage tanks are defined as those with the capacity to store 55 gallons or more of petroleum and are substantially or totally above the surface of the ground.

Hazardous Waste Generation and Disposal

San Mateo County operates a Hazardous Waste Disposal and Reduction Program with three waste streams: residential, businesses that generate small quantities of hazardous waste (Very Small Quantity Generator Program), and businesses that generate larger quantities.

City of Menlo Park

City of Menlo Park General Plan Hazardous Materials Policies

The following policies within the Safety Element of the general plan are relevant to the Project.[5]

> *Policy S1.16: Hazardous Materials Regulations*. Review and strengthen, if necessary, regulations for the structural design and/or uses involving hazardous materials to minimize risk to local populations. Enforce compliance with current state and local requirements for the manufacturing, use, storage, transportation and disposal of hazardous materials, and the designation of appropriate truck routes in Menlo Park.
>
> *Policy S1.17: Potential Exposure of New Residential Development to Hazardous Materials*. Minimize risk associated with hazardous materials by assessing exposure to hazardous materials of new residential development and sensitive populations near existing industrial and manufacturing areas. Minimize risk associated with hazardous materials.
>
> *Policy S1.18: Potential Hazardous Materials Conditions Investigation*. Continue to require developers to conduct an investigation of soils, groundwater and buildings affected by hazardous-material potentially released from prior land uses in areas historically used for commercial or industrial uses and to identify and implement mitigation measures to avoid adversely affecting the environment or the health and safety of residents or new uses.
>
> *Policy S1.19: Disposal of Existing Hazardous Materials on Sites Planned for Housing*. Continue to require that sites planned for housing be cleared of hazardous materials (paint, solvents, chlorine, etc.) and the hazardous materials disposed in compliance with state and federal laws.

City of Menlo Park Municipal Code, Chapter 16, Zoning Ordinance

Chapter 16, Zoning Ordinance, of the City of Menlo Park Municipal Code requires a conditional use permit for hazardous materials use in M-2, and M-3 zoning districts. Also, fuel used in the operation of emergency generators (associated with office uses) can be reviewed through the conditional use permit process in any zoning district. Use permit applications pertaining to hazardous materials are routed to the Menlo Park Fire Protection District, SMCEHD, West Bay Sanitary District, and City of Menlo Park Building Division for review and approval prior to Planning Commission review and action.

City of Menlo Park Emergency Operations Plan

The City of Menlo Park Emergency Operations Plan (EOP) describes how the City will manage and coordinate resources and personnel when responding to emergency situations. The EOP discusses the City of Menlo Park's planned response to extraordinary emergency situations associated with natural disasters and technological incidents, thus focusing on potential large-scale disasters, which can create unique situations and require expanded emergency responses.

The EOP has as its objectives the following:

- Conform to the National Incident Management System (NIMS) and the Standardized Emergency Management System (SEMS).

[5] City of Menlo Park. 2013. Open Space/Conservation, Noise, and Safety Elements. Available: <http://menlopark.org/DocumentCenter/View/234>. Accessed: May 27, 2015.

- Provide Emergency Operations Center (EOC) responders with procedures, documentation, and user-friendly checklists to manage emergencies effectively.
- Provide detailed information regarding supplemental requirements (e.g., public information, damage assessment, recovery operations).

Environmental Setting

The Project site is bound by commercial development to the north, along Glenwood Avenue; by both the Caltrain and Garwood Way rights-of-way to the east; by Oak Grove Avenue to the south; and El Camino Real to the west. Nearby land uses include a hotel to the north, single- and multi-family residential units east of the Caltrain right-of-way, the Menlo Park Caltrain station and mixed-use development south of Oak Grove Avenue, and the El Camino Real commercial corridor to the west. The northeast corner of El Camino Real/Oak Grove Avenue (immediately adjacent to the Project site) includes a Chevron gas station and a restaurant. The existing Project site is divided into three areas: the 1258 El Camino Real site, the 1300 El Camino Real site, and the Derry Lane site. Although these areas are currently on separate parcels, the entire Project site is owned by the Project Sponsor.

Hazardous Materials

Derry Lane Site. The Derry Lane site occupies approximately 3.5 acres of contiguous parcels. According to the Site Characterization Report prepared by Weber, Hayes & Associates,[6] the site is currently developed with five commercial buildings, a self-service car wash, and vehicle parking and storage lots. The buildings at Derry Lane were constructed during the late 1940s or early 1950s.

The following is a summary of current conditions:

- 560 Derry Lane is currently developed with a commercial one-story building with an adjacent yard and concrete pad, which are occupied by a handyman/contractor.
- 550 Oak Grove Avenue is currently developed with an operating self-service car wash.
- 562/564 Oak Grove Avenue is developed with a commercial one-story building, occupied by a private dance studio.
- 580 Oak Grove Avenue is developed with a commercial one-story building, occupied by a Foster's Freeze fast-food restaurant when the project NOP was released, although it has been vacant since late 2015.
- 570 Derry Lane and 558/560 Oak Grove Avenue are both developed with a one-story commercial building, which is currently vacant.
- A vacant field is located at 550 Derry Lane.

In May 2011, DTSC issued an Imminent and Substantial Endangerment Determination and Order and Remedial Action Order to the Derry Family Partnership and several individuals in response to the discovery of PCE and the PCE-degradation products (i.e., trichloroethene [TCE], dichloroethene [DCE], and vinyl chloride) in site soil, soil vapor, and groundwater at concentrations that pose a risk to human health and the environment. The presence of these contaminants was due to a release of PCE from a former dry cleaning business (Wo Sing Laundry and Dry Cleaners) that operated at 570 Derry Lane from 1981 to 2011.

[6] Weber, Hayes, & Associates. 2013. *Site Characterization Report, Derry Lane Site*. May 21.

Activities conducted at the Derry Lane site were designed to identify contaminants and the extent of contaminants. Contamination exists in the form of PCE, TCE, DCE, and vinyl chloride, which affect soil, soil vapor, and groundwater. In 2015 Green Environmental conducted a feasibility study and human health risk assessment, then proposed remedies for site cleanup in its Removal Action Work Plan (RAW). The document is under review by DTSC. Upon approval of the Project's Final RAW, a detailed Remedial Design and Implementation Plan (RDIP) and Soil Management Plan will be prepared for DTSC approval.

Remedial Action Recommendations proposed in the RAW include:

Soil Excavation and Offsite Disposal

- Excavation of approximately 7,500 cubic yards (cy) of contaminated soil in areas that coincide with the underground parking garage (to at least 22 feet deep in the affected areas).
- Excavation of approximately 1,230 cy of contaminated soil in area outside of garage footprint.
- Excavation of approximately 1,550 cy of contaminated soil at two identified hot spots below the garage with PCE-affected soil (to at least the depth of the first encountered groundwater or 40 feet).

In-Situ Chemical Oxidation (ISCO), Well Monitoring, and Institutional Controls

- In-situ treatment of contaminated groundwater.
- Installation of groundwater monitoring wells and periodic sampling.
- Installation of vapor venting features below the concrete floor of the garage for the residential building, coinciding with the location of the PCE groundwater plume to enhance vapor-intrusion protection.
- Establishment of a groundwater and vapor monitoring program.

Confirmation samplings will be collected and analyzed by a state-certified laboratory to confirm that cleanup goals are being met. The contaminated soil will be hauled to the approved permitted landfill. The Removal Action Work Plan details vapor and dust mitigation, which will be performed under BMPs. The route for transporting contaminated soil will also be considered to avoid traveling through a sensitive area.

1258 El Camino Real Site. This site includes a 3,500-square-foot building. The one-story building was constructed in 1958 and occupied by a veterinary hospital from 1958 to 1991, a chiropractic office until 2002, and a hair salon from 2005 to 2010. The building is currently vacant. The 1258 El Camino Real site is listed as a former state voluntary cleanup program site, with a voluntary cleanup agreement termination date of June 2011, and a past hazardous waste generation site (asbestos waste, PCBs, and other organic solids). This site is identified by DTSC as the Tarr Property (former owner). It was a residential property until redevelopment in 1958 when the commercial building that is currently present on the property was constructed. In October 2010, a subsurface investigation was conducted to determine whether the property was affected by chlorinated volatile organic compounds. Perchloroethylene (PCE) was detected in the soil vapor and groundwater samples collected at the site. It is assumed that the source was the adjacent Wo Sing Laundry and Dry Cleaners.[7]

[7] AEI Consultants. 2010. *Comfort Letter Investigation Report, 1258 El Camino Real, Menlo Park, California.* November 8.

The Phase I ESA for the 1258 El Camino Real site determined that groundwater, saturated soils, soil vapor, and indoor air are affected by a past release of dry cleaning solvent to the subsurface from the adjoining property to the east (570 Derry Lane), thereby posing a potential human health risk for occupants of the site. Other potential concerns at the site include groundwater, saturated soil, and soil vapor, which could be affected by petroleum hydrocarbons from a former gasoline station on the adjoining property to the east (1246 El Camino Real); asbestos-containing materials (ACMs), consisting of concrete, stucco, paint, sheetrock, mortar, mastic, window putty, and roofing materials; lead-based paint on cinder blocks, stucco, sheetrock, concrete floors, and wood ceilings; and a depressed paved area (approximately 25 square feet) at the rear of the site.[8]

The 1258 El Camino Real site is included in the Derry Lane site boundaries and subject to the 2011 DTSC order. Thus, the identified subsurface impacts would be addressed in the selected cleanup remedy for the Derry Lane site. Soil vapor and groundwater sampling completed on the 1258 El Camino Real site during the due diligence period associated with a change in ownership at the Derry Lane site indicates that the former gasoline station on the adjoining property to the east has not significantly affected the 1258 El Camino Real site. Building materials would be properly sampled for asbestos prior to demolition under Bay Area Air Quality Management District (BAAQMD) regulations.

1300 El Camino Real Site. The site includes two parcels that were formerly occupied by five buildings that were constructed in 1967. The buildings were demolished in April 2010 in anticipation of a mixed-use project that was not completed. Building foundations, paved surfaces, and subsurface utilities were not demolished or removed at that time. The existing site, which is vacant with respect to buildings, includes impervious surfaces and ruderal vegetation. In-ground components from 21 hydraulic lifts, remnants from a historic automotive dealership, exist on the subject property. As described in the Phase I ESA for the 1300 El Camino Real site,[9] the potential exists for residual hydraulic oil in the lifts and potentially affected soil at the lift locations. The potential also exists for contaminated soil from a previously installed pad-mounted transformer, which was located in the western portion of the property and may have contained dielectric oil with PCBs.

Soils at the locations of former automotive painting and detailing operations, sumps, and trenches have not been adequately sampled to confirm the presence of hazardous substances. Other potential concerns with the 1300 El Camino Real site include fill material from an unidentified source; soil where a former transformer that may have contained PCBs was located; discarded fluorescent light bulbs; ACMs, consisting of concrete, paint, brick, mortar, ceramic and vinyl flooring tiles, and grout; a sinkhole, approximately 1 foot deep; and groundwater, saturated soil, and soil vapor that may be affected by a hazardous substance release from one or more former occupants of upgradient properties.

Soil vapor and groundwater sampling completed on the eastern portion of the 1300 El Camino Real site indicates that the PCE release at the Derry Lane site has not significantly affected the 1300 El Camino Real site. Because the redevelopment plan calls for at least one level of underground parking across the entire site, the hydraulic lifts and sinkhole would be removed, along with soil of potential concern. The soil would be properly characterized prior to removal. The remnants of building floors and foundations would be properly sampled for asbestos prior to demolition and off-site recycling or disposal, as required by Cal/OSHA and BAAQMD regulations. Prior to construction, additional groundwater samples

[8] Green Environment, Inc. 2012. *Phase I Environmental Site Assessment, 1258 El Camino Real, Menlo Park, California.* April 9.

[9] Green Environment, Inc. 2012. *Phase I Environmental Site Assessment, 1300 El Camino Real, Menlo Park, California.* (GEI Project: A12777.) March 20. Prepared for Bayfront Investments, LLC.

would be collected across the site to determine if potential off-site upgradient chemical releases have affected groundwater beneath the site.[10]

Soils and Hydrogeology

Information obtained from the Phase I ESAs[11,12] indicates that the Project site soils generally consist of fill (mostly sand and clay) at shallow depths (2 to 6 feet below ground surface [bgs]). Beneath the fill, the native soils consist of clay, with varying amounts of sand. Groundwater was encountered at 41 feet bgs at 1258 El Camino Real. A 50-foot soil boring at the 1300 El Camino Real site did not encounter groundwater.

Hazardous Materials Use

The 1300 El Camino Real site is a vacant lot; the 1258 El Camino Real site includes one building, which is currently vacant. The Derry Lane site includes a car wash, dance studio, fast-food restaurant, hardware storage area, and a private parking lot. Hazardous materials usage is expected to be typical of commercial locations (e.g., small quantities of solvents, cleaning agents, paints, pesticides, petroleum fuels, propane, and aerosol cans). Accordingly, significant hazardous materials usage is not expected.

Cortese List Status

The 1258 El Camino Real site was listed as a former state voluntary cleanup program site, with termination granted in June 2011. The 1300 El Camino Real site was included and granted closure in August of 1984 for a leaking underground storage tank violation. The Derry Lane site is currently participating in an Imminent and Substantial Endangerment Determination and Order and Remedial Action Order from DTSC.

Asbestos, Lead-Based Paint, PCBs

Given the construction dates of previously existing buildings on the Project site (1958 for the 1258 El Camino Real site, 1967 for the 1300 El Camino Real site, and late 1940s and early 1950s for the Derry Lane site), it is possible that existing building components on the site contain unknown quantities of ACMs or lead-based paints. Potential ACMs on the Project site consist of concrete, stucco, paint, sheetrock, mortar, mastic, window putty, brick, ceramic floor tile, ceramic floor tile grout, roofing materials, etc. Lead-based paint may be found in cinder block walls, stucco, sheetrock, concrete flooring, and wood ceilings.

Emergency Response

In September 2011, the City adopted the Annex to 2010 Association of Bay Area Governments Local Hazard Mitigation Plan (Hazard Mitigation Plan) and an update to the City's EOP. The Hazard Mitigation Plan assesses a full range of natural disasters and the City's disaster planning. The City developed the

[10] Green Environment, Inc. 2012. *Phase I Environmental Site Assessment, 1300 El Camino Real, Menlo Park, California.* March 20.

[11] Green Environment, Inc. 2012. Phase I Environmental Site Assessment 1258 El Camino Real Menlo Park, California. (GEI Project: A12784.) April 9. San Carlos, CA. Prepared for Bayfront Investments, LLC.

[12] Green Environment, Inc. 2012. Phase I Environmental Site Assessment 1300 El Camino Real Menlo Park, California. (GEI Project: A12777.) March 20. Prepared for Bayfront Investments, LLC.

EOP to prepare for emergency situations that could result from natural disasters and technological incidents.

The Menlo Park Fire Protection District (MPFPD) would respond to incidents at the Project site, primarily from Fire Station 6, located at 700 Oak Grove Avenue.

The Menlo Park Police Department (MPPD) is at 701 Laurel Street.

Schools within 0.25 Mile of the Project Site

The closest school to the Project site is the Language Pacifica School, at 585 Glenwood Avenue, approximately 400 feet to the northwest. Other schools in the vicinity include Menlo School, located southwest of the Project site at 50 Valparaiso Avenue, and Nativity Catholic School, located northeast of the Project site at 1250 Laurel Street. Both schools are approximately 0.3 mile from the Project site.

Airports within 2 Miles of the Project Site

The Project site is not within an airport land use plan area or within 2 miles of a public airport or public use airport. The closest airport to the Project site is Palo Alto Airport of Santa Clara County, located approximately 4 miles to the east. San Carlos Airport is approximately 5.4 miles to the northwest, and the Moffett Federal Airfield is approximately 7.8 miles to the southeast. There are no private airstrips in the vicinity of the Project site.

Environmental Impacts

This section presents the analysis regarding hazards and hazardous materials related to the Project. It describes the methods that were used to determine Project impacts and lists the thresholds that were used to conclude whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany the discussion where applicable. As presented in the Infill Environmental Checklist (Appendix 1-1), the Project must implement Mitigation Measure HAZ-3, which requires the use of construction BMPs to control the handling of hazardous materials during construction. This mitigation measure is included as part of the Project's Mitigation Monitoring and Reporting Program (MMRP).

Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Project would have a significant effect if it would result in any of the conditions listed below.

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (the Cortese List, described above) and, as a result, 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 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.
- Impair or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- 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.

Impacts Not Evaluated In Detail

Public and private airports, interference with emergency response plans, and wildland fires are not discussed below because it was determined in the Infill Environmental Checklist that the Project would have no impact.

Impacts and Mitigation Measures

Impact HAZ-1: Routine Hazardous Materials Use. The Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (LTS/M)

Project Construction

Project construction would involve the routine transport, use, and disposal of hazardous materials such as solvents, paints, oils, grease, and caulking. Such transport, use, and disposal must comply with applicable regulations, such as the RCRA, DOT Hazardous Materials Regulations, local CUPA regulations, and City of Menlo Park General Plan Hazardous Materials Policies and construction BMPs, as implemented through a Project-specific SWPPP (per requirements of the State Water Resources Control Board's Construction General Permit 2009-0009-DWQ). Although small amounts of solvents, paints, oils, grease, and caulking would be routinely transported, used, and disposed of during the construction phase, these materials would not represent the transport, use, and disposal of acutely hazardous materials. Because compliance with existing regulations is mandatory, the Project is not expected to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Information obtained in the Phase I ESAs for the 1300 El Camino Real site and the 1258 El Camino Real site, as well as the current remediation status of the Derry Lane site, indicates that contamination exists within the Project site. Additionally, given the construction dates of on-site structures, it is possible that building components may contain unknown quantities of ACMs or lead-based paints. If encountered during construction activities, contaminated media and building materials would be hauled off-site for disposal. This could have an impact on the public or the surrounding environment during demolition and transport if the materials are handled incorrectly. However, as mentioned above, the transport and disposal of hazardous materials must comply with applicable DOT transportation regulations and City of Menlo Park General Plan Hazardous Materials Policies. Furthermore, in accordance with relevant U.S. EPA regulations, implementation of Mitigation Measure HAZ-1.1 would ensure that any spills would be

contained and controlled. Therefore, the Project would not create a significant hazard for the public or the environment through the routine transport or disposal of hazardous materials. Construction of the Project would result in ***less-than-significant*** impacts related to routine transport, use, or disposal of hazardous materials.

HAZ-1.1: Prepare and Implement a Spill Prevention, Control, and Countermeasure Program for Construction Activities. The contractors will develop and implement a Spill Prevention, Control, and Countermeasure Program (SPCCP) to minimize the potential for and effects from spills of hazardous, toxic, or petroleum substances during construction and demolition activities. The SPCCP will be completed before any construction or demolition activities begin. Implementation of this measure will comply with state and federal water quality regulations.

The Project Sponsor will review and approve the SPCCP before the onset of construction activities. The Project Sponsor will routinely inspect the construction area to verify that the measures specified in the SPCCP are properly implemented and maintained. The Project Sponsor will notify its contractors immediately if there is a noncompliance issue and will require compliance.

The federal reportable spill quantity for petroleum products, as defined in 40 CFR 110, is any oil spill that includes any of the following:

- Violates applicable water quality standards,
- Causes a film or sheen on or discoloration of the water surface or adjoining shoreline, or
- Causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines.

If a spill is reportable, the contractors' superintendents will notify the Project Sponsor, and the Project Sponsor will take action to contact the appropriate safety and cleanup crews and ensure that the SPCCP is followed. A written description of reportable releases must be submitted to the San Francisco Bay Regional Water Quality Control Board. This submittal must contain a description of the spill, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases will be documented on a spill report form.

If a reportable spill has occurred and Project activities have adversely affected surface water or groundwater quality, a detailed analysis will be performed by a registered environmental assessor to identify the likely cause of contamination. This analysis will conform to American Society for Testing and Materials (ASTM) standards and will include recommendations for reducing or eliminating the source or mechanisms of contamination. Based on this analysis, the Project Sponsor and its contractors will select and implement measures to control contamination, with a performance standard that groundwater quality must be returned to baseline conditions. These measures will be subject to approval by the Project Sponsor.

Project Operation

The Project would use hazardous materials that are typical of non-medical office, retail, and residential uses (e.g., solvents, cleaning agents, paints, pesticides, petroleum fuels, propane, aerosol

cans). These hazardous materials are generally used in small, localized amounts, and any spills that may occur would be cleaned up immediately. Although implementation of the Project might account for an increase in the amount of common types of hazardous materials, normal routine use of these products would not result in a significant hazard for residents or workers in the vicinity. In addition, the Project would not involve handling acutely hazardous materials, substances, or waste. Moreover, any applicant who handles quantities of hazardous materials equal to or greater than the minimum reportable quantities (i.e., 55 gallons for liquids, 500 pounds for solids, 200 cubic feet for compressed gases) would be required to submit a HMBP for review and approval by SMCEHD. The City reviews the use of hazardous materials (e.g., diesel fuel for emergency generators) when certain thresholds are exceeded and coordinates with the county and the MPFPD. The purpose of the HMBP is to ensure that employees are adequately trained with respect to handling hazardous materials and providing information to the MPFPD in a timely manner should an emergency response be required. Proper handling and disposal of contaminated materials reduces unforeseen risks to the environment and prevents adverse health, safety, or environmental effects. The Project would have ***less-than-significant*** impacts related to the transport, use, and disposal of hazardous materials.

Impact HAZ-2: Accidental Release of Hazardous Materials. The Project could 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. (LTS/M)

As described under Impact HAZ-1, typical construction-related hazardous materials, including gasoline, diesel, oil, other vehicle-related fluids, paints, solvents, and metals, would be used during construction of the Project. It is possible that these substances could be released during construction activities. However, as described previously, compliance with federal, state, and local regulations, in combination with construction BMPs, as implemented through a Project-specific SWPPP, would ensure that all hazardous materials would be used, stored, and disposed of properly, which would minimize potential impacts related to a hazardous materials release during construction activities.

As described in the Existing Conditions section, contamination exists in the form of PCE, TCE, DCE, and vinyl chloride, which have affected soil and groundwater, from historical activities conducted by Wo Sing Laundry and Dry Cleaners. The dry cleaners operated at 570 Derry Lane from 1981 to 2011. A RAW has been prepared with site-specific remedial action recommendations for the Derry Lane site and is pending approval by the DTSC. Mitigation Measure HAZ-2.2 would ensure the implementation of the aforementioned remedial activities at the Derry Lane site upon DTSC approval and prior to construction of the Project. As detailed in the Phase I ESA for the 1300 El Camino Real site,[13] historic automotive detailing and painting operations, a former pad-mounted transformer, and undocumented fill may have affected soil within the site. Portions of 21 hydraulic lifts remain on the property. Therefore, residual hydraulic oil may exist within these components, and affected soil may exist in the soil below the lifts and their surroundings. The pad-mounted transformer was located in the western portion of the property and may have contained dielectric oil (containing PCBs). As such, construction activities related to the Project may encounter contaminated media during grading, excavation, and the installation of the support structures for new buildings. Any disturbance of soils or groundwater at locations that may have been previously contaminated by prior uses could further extend contamination into the environment and expose construction workers, the public, or the environment to hazardous conditions. Additionally, historical information suggests that building materials from 1300 El Camino Real, 1258 El Camino Real,

[13] Green Environment, Inc. 2012. *Phase I Environmental Site Assessment, 1300 El Camino Real, Menlo Park, California.* (GEI Project: A12777.) March 20. Prepared for Bayfront Investments, LLC.

and Derry Lane could contain unknown quantities of ACMs and lead-based paint. Potential ACMs in the area would consist of concrete, stucco, paint, sheetrock, mortar, mastic, window putty, and roofing materials. Potential lead-based paint might be found in cinder block walls, stucco, sheetrock, concrete flooring, and wood ceilings. Asbestos is regulated both as a hazardous air pollutant and as a potential safety hazard for workers. BAAQMD and Cal/OSHA regulations restrict asbestos emissions from demolition and renovation activities and specify safe work practices to minimize the potential for a release of asbestos fibers. As such, compliance with applicable BAAQMD and Cal/OSHA regulations, as well as RCRA, DOT Hazardous Materials Regulations, local CUPA regulations, and City of Menlo Park General Plan Hazardous Materials Policies, and implementation of Mitigation Measures HAZ-1.1, described above, and HAZ-2.1, HAZ-2.2, HAZ-2.3 and HAZ-2.4, described below, would reduce these potential impacts to a ***less-than-significant*** level.

HAZ-2.1: Hazardous Materials Characterization at 1258 and 1300 El Camino Real and Derry Lane. Prior to construction, the following characterization activities shall be conducted by a qualified environmental consultant in areas of the Project site where the likelihood of contaminated media exists. If contaminants are discovered, the consultant shall provide recommendations for the proper treatment and/or removal and disposal of the contaminated media.

The following characterization activities are based on the recommendations included in the Phase I ESAs.

- Remaining components of the 21 hydraulic lifts located on the 1300 El Camino Real site shall be removed by a qualified contractor, with soil samples collected at the bottom of each hole for laboratory analyses for total petroleum hydrocarbons as hydraulic oil and PCBs.
- Soil samples shall be collected at the 1300 El Camino Real site in locations of former automotive painting and detailing operations, sumps, and trenches for laboratory analyses for total extractable and purgeable petroleum hydrocarbons and volatile organic compounds (VOCs).
- Groundwater, soil, and soil vapor sampling for VOCs shall be conducted in the eastern portion of the 1300 El Camino Real site to determine the significance and extent of the on-site impact from the off-site PCE release.
- Fill soils on the 1300 El Camino Real site shall be sampled for chemicals of potential concern associated with an unknown source of fill.
- Soil at the location of a former transformer on the 1300 El Camino Real site shall be sampled for PCBs.
- The cause of the depressed asphalt area on the 1258 El Camino Real shall be investigated and remedied.
- Construction materials shall be surveyed for ACMs and lead-based paint by a certified consultant on the 1258 El Camino Real site, 1300 El Camino Real site, and Derry Lane site to comply with applicable BAAQMD and Cal/OSHA regulations.

If contaminants are discovered during testing, the Project Sponsor will report the contamination to SMCEHD to determine how the contamination is to be addressed and update the HMBP within 30 days of discovering the contamination to reflect the new understanding of hazardous materials at the Project site.

HAZ-2.2: Implementation of Remedial Action Recommendations included in the Derry Lane RAW. Upon approval by the DTSC and prior to construction; site-specific remedial action recommendations contained in the RAW shall be conducted at the Derry Lane site as required by the Imminent and Substantial Endangerment Determination and Order and Remedial Action Order issued by the DTSC in May 2011. As detailed in the Environmental Setting, remedial actions proposed in the RAW may include; soil excavation and disposal, ISCO injections, well monitoring and implementation of institutional controls.

HAZ-2.3: Implement Engineering Controls and Best Management Practices during Construction. During construction activities conducted on all sites, the contractor shall employ engineering controls and BMPs to minimize human exposure to potential contaminants and potential negative effects from an accidental release to groundwater and soils. Engineering controls and construction BMPs shall include, but not be limited to, the following:

- Contractor employees working on-site shall be certified in OSHA's 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training program.
- Contractor shall monitor the area around the construction site for fugitive vapor emissions with appropriate field screening instrumentation.
- Contractor shall water/mist soil as it is being excavated and loaded onto trucks.
- Contractor shall place any stockpiled soil in areas that are shielded from prevailing winds.
- Contractor shall cover the bottom of excavated areas with sheeting when work is not being performed.

All materials will be handled consistent with the HMBP developed for the Project.

HAZ-2.4: Develop Construction Activity Dust Control Plan (DCP) and Asbestos Dust Management Plan (ADMP). Prior to commencement of site grading on all sites, the Project Sponsor shall retain a qualified professional to prepare a DCP/ADMP. The DCP shall incorporate the applicable BAAQMD standards pertaining to fugitive dust control. The ADMP will be prepared if ACMs are identified onsite and shall be submitted to and approved by BAAQMD prior to the beginning of construction. The Project Sponsor will ensure implementation of all specified dust control measures throughout construction of the Project. The ADMP shall require compliance with specific control measures to the extent deemed necessary by BAAQMD to meet its standard.

Impact HAZ-3: Proximity to Sensitive Receptors at Schools. The Project would not emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. (LTS)

Project Construction

The closest school is the Language Pacifica School, located at 585 Glenwood Avenue, approximately 400 feet northwest of the Project site. All other schools in the vicinity are more than 0.25 mile away. Project construction would involve hazardous materials that are typical of a construction project (as discussed above under Impact HAZ-1). It is expected that construction of the Project would be conducted in compliance with federal, state, and local regulations. Any potential construction-related hazardous materials releases or emissions would be from commonly used materials, such as fossil fuels, solvents,

and paints, and would not include substances that have been listed in 40 CFR 355, Appendix A: Extremely Hazardous Substances and Their Threshold Planning Quantities. Any spills would be localized and immediately contained and cleaned up. Also, construction BMPs implemented through a project-specific SWPPP, per requirements of the Construction General Permit, would further reduce potential impacts to ***less than significant***.

As discussed above, it is possible that contamination may exist at the Project site in the form of PCE releases in soil and groundwater, hydraulic fluid–affected soil, and PCB-affected soil. As such, construction activities related to the Project may encounter contamination during grading, excavation activities, and the installation of support structures for new buildings and could, therefore, result in potential impacts. However, compliance with federal, state, and local regulations, in combination with implementation of Mitigation Measures HAZ 1.1 and HAZ–2.1 through HAZ–2.4 would reduce these impacts to a ***less-than-significant*** level.

Project Operation

The Project would not involve handling acutely hazardous materials, substances, or waste as part of day-to-day operations. It is anticipated that the Project would use hazardous materials that are typical of non-medical office, retail, and residential uses. These hazardous materials would generally be used in small, localized amounts, and any spills that may occur would be cleaned up immediately. Furthermore, any site where hazardous materials would be handled in reportable quantities would be required to submit a HMBP for review and approval by the SMCEHD and would be subject to its oversight. As such, operation of the Project would result in ***less-than-significant*** impacts.

Impact HAZ-4: Hazardous Materials Sites. The Project would not exacerbate existing environmental hazards as a result of being located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

As discussed in Chapter 3.0, *Introduction to the Environmental Analysis*, the CBIA vs. BAAQMD case does not require analysis of how existing environmental conditions will impact a project's future users or residents. Since the Project would not exacerbate an existing hazard, the following discussion is provided here for informational purposes only and no significance conclusion is required. The Project site was found in several environmental databases. The 1258 El Camino Real site was listed as a former state voluntary cleanup program site, with termination granted in June 2011. The 1300 El Camino Real site was granted closure in August of 1984 for a leaking underground storage tank violation. The Derry Lane site is currently participating in an Imminent and Substantial Endangerment Determination and Order and Remedial Action Order from DTSC. Due to the nature of the future land uses at the Project site, the Project would not contribute to or exacerbate the existing hazards. No further discussion is needed.

Cumulative Impacts

Hazardous materials issues are related to specific geologic conditions, prior land uses, and current activities on a site or adjacent sites. Hazardous materials issues are site specific, unless there is a major hazardous site nearby (e.g., a Superfund site) or contamination reaches groundwater.

Cumulative development within the Specific Plan area must adhere to the mitigation measures contained in the Specific Plan EIR. These include Mitigation Measure HAZ-1, which requires Phase I ESAs to identify the potential for hazardous releases and subsequent Phase II ESAs, as necessary, to remediate

identified contamination. Specific Plan Mitigation Measure HAZ-2.3 requires all new development to use construction BMPs to control hazardous waste during construction and minimize risks. Compliance with these measures will help minimize the likelihood of cumulative hazardous materials impacts.

The Project site is in an area of groundwater contamination. Thus, any impacts related to hazardous materials have the potential to be cumulatively considerable and must be closely reviewed.

Impact C-HAZ-1: Cumulative Hazardous Materials Use. The Project, in combination with other foreseeable development in the surrounding area, would not have a significant cumulative impact resulting from hazardous materials usage. (LTS)

Although existing, proposed, and reasonably foreseeable development, as identified in Section 3.0, *Introduction to the Analysis*, could have unique hazardous materials considerations, all existing and potential users would comply with the range of federal, state, and local statutes and regulations regarding the use, transport, and disposal of hazardous materials and be required to comply with existing and future programs of enforcement by the appropriate regulatory agencies, which are described in the Regulatory Setting. Compliance with these federal, state, and local laws and regulations pertaining to hazardous materials management would be adequate for minimizing health and safety risks because the laws and regulations have been designed to protect health and safety and are enforced by state and local agencies. In addition, stringent federal and state regulatory requirements would apply to the common carriers that would deliver and transport hazardous materials to and from locations where hazardous materials are used. Although these regulations would not eliminate the potential for accidents and resulting spills, they would reduce the frequency of possible occurrences and limit the number of people who could be exposed. Therefore, the cumulative impact with regard to the routine use, transport, disposal, and handling of hazardous materials would be ***less than significant***.

Operation of the Project would involve limited hazardous materials usage because of the types of activities that would occur on-site (office, residential, and retail/service uses and related amenities). Moreover, as explained in Impact HAZ-1, the Project would comply with all applicable statutes and regulations and implement Mitigation Measure HAZ-1.1. This would ensure that the Project would not result in significant hazards as a result of hazardous materials use, transport, or disposal.

Development of other projects and the Project would result in an increase in hazardous materials usage and transportation in the area. Such use could also occur within 0.25 mile of a school. This could expose a greater number of people to risk in the event of an inadvertent release or spill. However, hazardous materials incidents are usually site specific, and the likelihood of multiple incidents occurring concurrently and resulting in a cumulative impact is very remote. As a result, associated health and safety risks would generally be limited to those individuals who use the materials or persons in the immediate vicinity of the materials. The impact would be ***less than significant***.

Impact C-HAZ-2: Cumulative Soil and Groundwater Contamination. Development of the Project site and other foreseeable development could expose people or the environment to residual contaminants in soil and/or groundwater if measures are not implemented to control unintentional or inadvertent releases. (LTS)

The projects identified in Section 3.0, *Introduction to the Analysis*, could be listed on the Cortese List, pursuant to Government Code Section 65962.5. For projects in the city that involve development or redevelopment of an existing site where soil or groundwater contamination may have occurred, the potential exists for a release of hazardous materials during construction and/or remediation of those

sites. For individuals who are not involved in construction activities, the greatest potential source of exposure to contaminants is airborne emissions, primarily through construction-generated dust. Other potential pathways, such as direct contact with contaminated soils or groundwater, would not pose as great a risk to the public because such exposure scenarios are typically confined to construction zones.

Assuming that site-specific risk management controls are implemented and compliance with applicable laws and regulations pertaining to site cleanup and hazardous materials management is achieved at all other locations, soil or water contamination in the identified geographic context would not result in significant cumulative impacts. Exposure to soil and groundwater contamination, inadvertent spills, etc., are localized impacts that are not expected to combine with other incidents to create a cumulative impact for the same population or environment. Moreover, an individual who is near the construction zone of one source would most likely not be exposed to maximum off-site levels from another source. Implementation of applicable laws and regulations for the management of hazardous materials adopted at the federal, state, and local levels, which are explained in the Regulatory Setting, would reduce cumulative impacts related to development of known or potentially contaminated sites to ***less than significant***.

Impact C-HAZ-3: Cumulative Hazardous Materials in Building Components. Development of the Project and other foreseeable development could expose people to asbestos, lead, PCBs, or other hazardous materials in existing buildings that may be demolished, renovated, or rehabilitated if measures are not implemented to control unintentional or inadvertent releases. (LTS)

It is reasonable to assume that development of some projects could involve demolition of some structures or renovation and rehabilitation of others. If building demolition occurs where asbestos, lead-based paint, PCBs, or other hazardous materials are present, the projects would be required to comply with applicable federal, state, and local regulations, which are explained in the Regulatory Setting. Prior to issuance of a demolition permit, the City would be responsible for ensuring that the necessary investigations and remediation have been completed.

Hazardous materials incidents associated with demolition activities where asbestos, lead-based paint, PCBs, or other hazardous materials could be released would be site specific. As a result, associated health and safety risks would generally be limited to those individuals who use the materials or persons in the immediate vicinity of the materials. Furthermore, the likelihood of multiple incidents occurring concurrently and resulting in a cumulative impact would be minimal. Therefore, there would be no significant cumulative impact. Development of the Project would comply with all local, state, and federal regulations pertaining to the handling and disposal of hazardous materials that could be contained in buildings that are to be demolished. Implementation of Mitigation Measure HAZ-2.4 would also be required. Compliance with these regulations would reduce any potential Project impact to less than significant. Therefore, the Project's cumulative impact would also be ***less than significant***.

Impact C-HAZ-4: Cumulative Impairment of Emergency Access or Emergency Plan Impacts. Development of the Project and other foreseeable development would not impair implementation of or interfere with an adopted emergency response or evacuation plan. (LTS)

New development would result in increased traffic throughout the city. Response times for emergency providers could be significantly affected because of congestion at intersections. Projects that are located far away from fire and police stations would be particularly affected. However, the Project is fairly close to Fire Station 6, and existing traffic preemption devices would ensure that response times would not be significantly affected.

Because details regarding the site plans of several foreseeable projects are unknown, it is possible that emergency access to these sites could be affected. However, during the design review process for the projects, the City would require appropriate measures to ensure that emergency access is not impeded and that adequate emergency access to the sites is included.

Adequate emergency access to the Project site would be provided. Furthermore, Project features (such as the Garwood Way connection) have the potential to improve emergency response times by providing additional access for emergency responders.

With existing traffic preemption devices located throughout the city and adequate emergency access to the Project site, implementation of the Project would not impede emergency access routes. The existing city grid system would continue to be maintained. The Project would not result in permanent road closures that would physically interfere with the City's EOP. Therefore, the impact would be ***less than significant***.

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Chapter 4
Other CEQA Considerations

4.1 Significant and Unavoidable Environmental Impacts

Section 21100(b)(2)(A) of the California Environmental Quality Act (CEQA) requires that a draft environmental impact report (Draft EIR) identify any significant environmental effects that cannot be avoided if a project is implemented. Most impacts identified for the 1300 El Camino Real Greenheart Project (Project) in this Draft Infill Environmental Impact Report (Infill EIR) would either be less than significant or could be mitigated to a less-than-significant level. However, the Project would result in some significant impacts that cannot be mitigated to less-than-significant levels. These impacts are listed below.

Project-Level Impacts

- **Impact TRA-1: Impacts on Intersections under Near-Term 2020 plus-Project Conditions.** Increases in traffic associated with the Project under near-term 2020 plus-Project conditions would result in increased peak-hour delays at five intersections. Intersection impacts at the four of the five intersections would remain significant and unavoidable because improvements would require obtaining additional rights-of-way, would violate existing City/town policies, or would be outside the City's jurisdiction.
- **Impact TRA-2: Impacts on Roadway Segments under Near-Term 2020 plus-Project Conditions.** Increases in traffic associated with the Project under near-term 2020 plus-Project conditions would result in increased ADT volumes on area roadway segments.
- **Impact TRA-3: Impacts on Routes of Regional Significance under Near-Term 2020 plus-Project Conditions**. Increases in traffic associated with the Project under near-term 2020 plus-Project conditions would result in significant impacts on several Routes of Regional Significance.
- **Impact TRA-10: Impacts on Railroad Crossings.** The Project would result in added traffic to railroad crossings which would result in conflicts and safety concerns. (SU)

Cumulative Impacts

- **Impact C-TRA-4: Impacts on Intersections under Cumulative 2040 plus-Project Conditions.** Increases in traffic associated with the Project under cumulative 2040 plus-Project conditions would result in increased peak-hour delays at 13 intersections. Intersection impacts at nine of the intersections would be significant and unavoidable because improvements would require obtaining additional rights-of-way, would violate existing City/town policies, or would be outside the City's jurisdiction.
- **Impact C-TRA-5: Impacts on Roadway Segments under Cumulative 2040 plus-Project Conditions.** Increases in traffic associated with the Project under the cumulative 2040 plus-Project conditions would result in increased daily traffic volumes on area roadway segments.

- **Impact C-TRA-6: Impacts on Routes of Regional Significance under Cumulative 2040 plus-Project Conditions.** Increases in traffic associated with the Project under cumulative 2040 plus-Project conditions would result in significant impacts on several Routes of Regional Significance.

4.2 Significant and Irreversible Environmental Changes

The Greenheart Land Company (Project Sponsor) intends to develop the 11 Assessor's parcels on the Project site (comprised of the properties at the former Derry Lane Site, the former 1300 El Camino Real site, and the 1258 El Camino Real site) into a mixed-use development. Existing development at the Project site includes vacant, previously developed land in the northern portion of the site and commercial buildings in the southern portion. The existing structures in the southern portion of the site would be demolished and developed with approximately 420,000 square feet (sf) of mixed-uses. Due to the increase in usable floor space, it can be reasonably assumed that the post-construction commitment of nonrenewable resources would increase from current levels, although the amount and rate of consumption of these resources would not result in the unnecessary, inefficient, or wasteful use of resources. It is also possible that new technologies or systems would emerge or would become more cost-effective or user-friendly and further reduce the reliance upon nonrenewable natural resources during the lifetime of the Project.

Accidents, such as the release of hazardous materials, may trigger irreversible environmental damage. Potential hazardous materials that could be used at the Project site could include cleaning products used for facility maintenance, liquids with polychlorinated biphenyls, mixed oil, and other organic solids. Exposure of site occupants to hazardous materials could occur in the following manner: improper handling or use of hazardous materials or hazardous wastes during occupancy of the Project site, transportation accident, environmentally unsound disposal methods, and/or emergencies, such as fires and explosions. However, safety requirements and the goals and policies adopted by federal, state, and local governments would reduce the public health and safety risks to reasonably prudent levels so that significant irreversible changes from accidental releases are not anticipated. Mitigation Measure HAZ-1.1 would also ensure that the Project would not create a significant hazard to the public or the environment through the routine transport or disposal of hazardous materials during construction activities. These regulations and relevant mitigation measures are identified in Section 3.4, *Hazards and Hazardous Materials*.

The Project would use nonrenewable resources for both construction and operation. Energy sources include fuels for trucks and construction equipment, and electricity and natural gas for operation of the residential and commercial land uses. The estimated annual fuel and other energy usage for the Project has been quantified using vehicle fuel efficiency values from the California Air Resource Board's (ARB's) EMFAC2014 model, estimated daily vehicle miles traveled (VMT) for Project operations, and default energy intensity values for residential and commercial land use types from the CalEEMod model. The Project would consume approximately 3,480,505 annual kilowatt hours, approximately 87,662 annual therms, and approximately 154,914 gallons of fuel annually during normal operations. The Project would also consume over 235,554 gallons of fuel during construction (Appendix 3.2, *Air Quality Modeling Details*).

The Project would be a consumer of energy. The energy consumed in daily operations is necessary for the ongoing operation of the Project site. Furthermore, due to the various energy-saving measures described above, the City finds no evidence that the Project's energy use would be wasteful, inefficient, or unnecessary.

4.3 Cumulative Impacts

CEQA Guidelines (Section 15355) define cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." The combination of the Project with other foreseeable projects in the vicinity or region affected by the Project defines the cumulative scenario. The list of cumulative projects is included in Chapter 3.0, *Introduction to the Analysis*, and the cumulative impacts and the Project's contribution to the cumulative impacts are addressed in Sections 3.1 through 3.4 of this Infill EIR. These resource sections identify feasible mitigation measures that would reduce the Project's cumulatively considerable contributions to cumulative impacts to less-than-cumulatively-considerable levels. These sections also identify those cumulative impacts that would be significant and unavoidable even with the implementation of feasible mitigation measures.

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Chapter 5
Alternatives

5.1 Introduction

The California Environmental Quality Act (CEQA) (Public Resources Code [PRC], Section 21000 *et seq.*) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 *et seq.*) require that an environmental impact report (EIR) "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (CEQA Guidelines Section 15126.6[a]). If mitigation measures or a feasible project alternative that would meet most of the basic project objectives would substantially lessen the significant environmental effects of a proposed project, then the lead agency should not approve the proposed project unless it determines that specific technological, economic, social, or other considerations make the mitigation measures and the project alternative infeasible (PRC Section 21002, CEQA Guidelines Section 15091[a][3]). The EIR must also identify alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and should briefly explain the reasons underlying the lead agency's determination (CEQA Guidelines Section 15126.6[c]).

One of the alternatives that must be analyzed is the No-Project Alternative. The No-Project Alternative analysis must discuss the existing conditions when the notice of preparation (NOP) is published. The analysis must also address conditions that would be reasonably expected to occur in the foreseeable future if the project were not approved and development continued according to existing plans and supported by available infrastructure and community services (CEQA Guidelines Section 15126.6[e][2]). Therefore, pursuant to the CEQA Guidelines, this section discusses and analyzes a No-Project Alternative.

The Reduced-Intensity Alternatives are introduced here and described together with the 1300 El Camino Real Greenheart Project (Project) and the No-Action Alternative. Significant impacts of the alternatives are compared to the significant environmental impacts of the Project as proposed.

Section 15183.3 of the CEQA Guidelines states that the analysis in an Infill EIR need not address alternative locations, densities, or building intensities. However, the City of Menlo Park (City) has elected to evaluate a range of alternatives as they relate to the allowable base-level development standards in the El Camino Real/Downtown Specific Plan (Specific Plan); alternative densities and building intensities are considered below. This analysis does not, however, consider alternative locations for the Project.

5.2 Description of Alternatives Considered

As discussed in Chapter 2, *Project Description*, the Greenheart Land Company (Project Sponsor) has identified the following Project objectives that are relevant to the physical impacts considered in this document:

- Develop a mixed-use, infill project on El Camino Real that is consistent with the goals and vision of the Specific Plan, which seeks to improve underutilized and vacant lots, focus high-density development in proximity to the train station, and enrich El Camino Real as a vibrant pedestrian- and transit-oriented corridor.

- Redevelop underutilized parcels with an economically viable mixed-use project that includes multi-family residential, office, and community-serving uses.
- Provide a mix of uses that is close to transit and services, including transportation demand management amenities that reduce vehicle trips and promote walking, biking, carpooling, and transit use.
- Use green design practices and methods that promote energy efficiency and resource conservation.
- Create a mixed-use project that conforms to the design principles set forth in the Specific Plan and that respects the surrounding neighborhood through appropriate building height, siting, and massing.
- Provide new and diverse employment opportunities for City residents.
- Generate revenue for the City and other public entities.

As stated above, the alternatives to a proposed project are meant to feasibly attain most of the basic project objectives while avoiding or substantially lessening its significant impacts. Significant and unavoidable Project-specific and cumulative impacts from the Project are listed below.

Project-Level Impacts

- **Impact TRA-1: Impacts on Intersections under Near-Term 2020 plus-Project Conditions.** Increases in traffic associated with the Project under near-term 2020 plus-Project conditions would result in increased peak-hour delays at five intersections. Intersection impacts at the four of the five intersections would remain significant and unavoidable because improvements would require obtaining additional rights-of-way, would violate existing City/town policies, or would be outside the City's jurisdiction.
- **Impact TRA-2: Impacts on Roadway Segments under Near-Term 2020 plus-Project Conditions.** Increases in traffic associated with the Project under near-term 2020 plus-Project conditions would result in increased ADT volumes on area roadway segments.
- **Impact TRA-3: Impacts on Routes of Regional Significance under Near-Term 2020 plus-Project Conditions**. Increases in traffic associated with the Project under near-term 2020 plus-Project conditions would result in significant impacts on several Routes of Regional Significance.

Cumulative Impacts

- **Impact C-TRA-4: Impacts on Intersections under Cumulative 2040 plus-Project Conditions.** Increases in traffic associated with the Project under cumulative 2040 plus-Project conditions would result in increased peak-hour delays at 13 intersections. Intersection impacts at nine of the intersections would be significant and unavoidable because improvements would require obtaining additional rights-of-way, would violate existing City/town policies, or would be outside the City's jurisdiction.
- **Impact C-TRA-5: Impacts on Roadway Segments under Cumulative 2040 plus-Project Conditions.** Increases in traffic associated with the Project under the cumulative 2040 plus-Project conditions would result in increased daily traffic volumes on area roadway segments.

- **Impact C-TRA-6: Impacts on Routes of Regional Significance under Cumulative 2040 plus-Project Conditions.** Increases in traffic associated with the Project under cumulative 2040 plus-Project conditions could result in significant impacts on several Routes of Regional Significance.

No-Project Alternative

Under the No-Project Alternative, the existing parcels would remain as-is. The six buildings and associated parking areas would remain at the Derry Lane Site. Of these six buildings, three are operational (as a dance studio, car wash, and Foster's Freeze), and three are currently vacant.[1] It is assumed that due to the deteriorated nature of the vacant buildings, they are not likely to be retenanted. There are no existing buildings at the 1300 El Camino Real Site, but the building foundations of the demolished buildings and associated parking surfaces remain. It is assumed this site would remain vacant and the building foundations and paved surfaces would not be removed. There is one building on the 1258 El Camino Real Site; however this building was vacated in 2010. It is assumed that due to the deteriorated nature of this vacant building, it is not likely to be retenanted.

Reduced-Intensity Alternatives

As discussed above, Reduced-Intensity Alternatives are not required as part of an Infill EIR. The alternatives considered in this analysis were not designed to reduce significant and unavoidable impacts. Instead, these alternatives illustrate densities consistent with the development standards presented in the Specific Plan EIR, at the base-level limits. As shown in Table 3-3 of the Specific Plan EIR base level, land uses in the El Camino Real Northeast – Residential (ECR NE-R) zoning district cannot exceed a floor-area ratio (FAR) of 1.10 for general office or 32 dwelling units per acre for residential uses. As noted earlier, the Project is proposed at the "Public Benefit Bonus" level, which is a discretionary action. If the developer and the City do not agree on the public-benefit topic, then the proposal may be revised to the base level.

Both Reduced-Intensity Alternatives considered would include an aboveground parking structure, three-story residential building, and two-story office buildings. The alternatives depict a base-level maximum FAR and density, which does not include a Public Benefit Bonus. A Public Benefit Bonus is the additional development permitted beyond the base intensity (and/or height, if applicable) for an extra public benefit, above and beyond the inherent positive attributes of a project. The alternatives have been crafted to achieve the overall goals and represent possible community preferences for building types and sizes. The two Reduced-Intensity Alternatives considered would both reduce the Project's overall square footage by 112,000 square feet (sf) from 420,000 sf to 308,000 sf, but each would redistribute the remaining square footage to maximize either office space or residential space.

Base Level Maximum Office Alternative

This alternative allows for a 1.10 FAR, which meets the base density standards of the Specific Plan for the El Camino Real Northeast zoning district. The development standards stipulate that general office space shall not exceed one-half of the base FAR or Public Benefit Bonus FAR. This alternative does not exceed half of the base FAR. More specifically, this alternative would reduce the proposed office square footage by 34,900 sf from 188,900 sf to 154,000 sf and reduce the residential square footage by 63,100 sf from 202,100 sf to 139,000 sf (from 202 units to 139 units). The community-serving area

[1] Although currently vacant, at the time of the release of the Notice of Preparation, Foster's Freeze was operational.

would be reduced by 14,000 sf from 29,000 sf to 15,000 sf. The general layout, as well as ingress and egress, would be the same as the Project.

Base Level Maximum Residential Alternative

This alternative allows for a 1.10 FAR, which meets the development standards of the Specific Plan, with 32 dwelling units per acre, for the El Camino Real Northeast – Residential zoning district. The Base Level Maximum Residential Alternative would increase residential square footage by only 3,900 sf, from 202,100 sf to 206,000 sf (from 202 units to 206 units), and reduce office square footage by 101,900 sf, from 188,900 sf to 87,000 sf. The community-serving area would be reduced by 14,000 sf, from 29,000 sf to 15,000 sf. The general layout, as well as ingress and egress, would be the same as that of the Project.

A summary of the Reduced-Intensity Alternatives as they relate to the Project is presented in Table 5-1.

Table 5-1. Comparison of Project and Reduced-Intensity Alternatives

Scenario	FAR	Total SF	Office (SF)	Residential (SF)	Dwelling Units	Community-Serving (SF)
Project	1.5	420,000	188,900	202,100	202	29,000
Base Level Maximum Office Alternative	1.1	308,000	154,000	139,000	139	15,000
Base Level Maximum Residential Alternative	1.1	308,000	87,000	206,000	206	15,000

FAR = floor area ratio
SF = square feet

5.3 Attainment of Project Objectives

No-Project Alternative

The No-Project Alternative would not meet the primary objectives of improving underutilized and vacant lots, focusing high-density development in proximity to the train station, and enriching El Camino Real as a vibrant pedestrian- and transit-oriented corridor. Instead, the sites would remain underutilized, and existing vacant buildings would continue to deteriorate. The No-Project Alternative would not demolish buildings or remove building foundations and paved surfaces from previously demolished buildings. The No-Project Alternative would not construct office space, community space, or residential units.

Because the proposed buildings would not be constructed, the No-Project Alternative would not achieve a mix of uses that is close to transit and services, provide new and diverse employment opportunities for City residents, or generate revenue for the City and other public entities. As such, the No-Project Alternative would not meet the Project objectives.

Reduced-Intensity Alternatives

As with the Project, both of the Reduced-Intensity Alternatives would demolish the existing buildings and paved features and construct proposed new structures. However, as noted above, each of the Reduced-Intensity Alternatives would reduce overall square footage by approximately 112,000 sf. These alternatives would create new and diverse employment opportunities, improve underutilized and vacant lots, and enrich El Camino Real as a vibrant pedestrian- and transit-oriented corridor, although to a lesser extent than the Project. Since the Reduced-Intensity Alternatives would be in the same location, the Project would still be in a prominent location proximate to the Caltrain station. In addition, the Reduced-Intensity Alternatives would create increased tax revenues for the City, albeit less than the Project.

5.4 Impact Assessment

No-Project Alternative

Transportation

The No-Project Alternative would retain existing conditions at the Project site and would not generate additional traffic or parking demand. This alternative would result in the same net daily vehicle trips and affected intersections as the baseline because no new uses would be added at the Project site. No transportation-related impacts would result with the No-Project Alternative. (NI)

Air Quality

The No-Project Alternative would not construct new land uses at the Project site and would not generate construction air emissions above the baseline. Since no development would occur under the No-Project Alternative, no sensitive receptors would be exposed to localized toxic air contaminant concentrations during construction. No impacts on air quality would result with the No-Project Alternative. (NI)

Noise

The operational noise at the Project site would be similar to noise under existing conditions because vehicle trips and employment at the site would not increase. No noise-related impacts would result from the No-Project Alternative. (NI)

Hazards and Hazardous Materials

Under the No-Project Alternative, no structures would be demolished, and the soil would not be disturbed; therefore, no impact would result relative to the potential release of hazardous materials. Under the No-Project Alternative, construction workers would not be exposed to potential risks from asbestos, lead paint, contaminated soil or groundwater, and ecological receptors would not be exposed to residual contaminants in soil and/or groundwater. Mitigation measures directed at eliminating the release of hazardous materials into the environment would not be necessary. However, as directed by the Department of Toxic Substances Control (DTSC), the No-Project Alternative would still include implementation of the proposed remedial strategy for remedial investigation activities conducted in response to the 2011 DTSC order, as discussed in Section 3.4, *Hazards and Hazardous Materials*. Removal of contaminated soils, particularly if soils are transported for offsite disposal or reuse, could spread contaminants. This could have an impact on the public or the surrounding environment during transport if

the materials are handled incorrectly. However, the transport and disposal of hazardous materials must comply with applicable Department of Transportation regulations and City of Menlo Park General Plan hazardous materials policies. Furthermore, implementation of Mitigation Measure HAZ-1.1 would ensure that any spills would be contained and controlled. Mitigation Measures HAZ-2.1 and HAZ-2.2 would ensure that characterization activities would be conducted in areas where the likelihood of contaminated media exists and that best management practices (BMPs) would be implemented. Therefore, the No-Project Alternative would result in a less-than-significant impact with mitigation on the public or the environment through the routine transport or disposal of hazardous materials. (LTS/M)

Base Level Maximum Office Alternative

Transportation

The Base Level Maximum Office Alternative would most likely result in the same transportation impacts as the Project. The Project is estimated to generate 3,740 net daily trips including 384 trips per AM Peak Hour and 401 per PM Peak Hour. The Base Level Maximum Office Alternative would generate 580 fewer trips per day, including 79 fewer trips per AM Peak Hour, and 98 fewer trips during the PM Peak Hour (Table 5-2). The trip differential for the Base Level Maximum Office Alternative is not enough to result in changes to intersection, roadway, pedestrian, bicycle, or transit impacts when compared to the Project. With the same impacts as the Project, the same mitigation measures detailed in Section 3.1, *Transportation*, would be required. Similar to the Project, impacts to intersections and roadways would be significant and unavoidable. (SU)

Table 5-2. Trip Generation Summary – Base Level Maximum Office Alternative

	Daily		AM Peak Hour				PM Peak Hour			
Land Use	Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Existing Trips to be removed		-775		-6	-3	-3		-53	-28	-25
Maximum Office Alternative										
Apartment	6.95	966	0.52	72	14	58	0.68	94	61	33
Office	11.84	1,823	1.76	270	238	32	1.63	251	43	208
Shopping Center	131.92	1,979	3.27	49	30	19	11.20	168	81	87
Subtotal		4,768		391	282	109		513	185	328
Trip Reduction [1]		*-495*		*-72*	*-43*	*-29*		*-127*	*-54*	*-73*
Pass-by (retail only) [2]		*-353*	*-338*		*-8*	*-5*	*-3*		*-30*	*-16*
Project Alt. Trips		3,871	3,935		311	234	77		356	115
Net Trip Generation		3,096	3,160		305	231	74		303	87
Project (for comparison)		3,740	3,740		384	283	101		401	126
Net Difference (Project – Project Alternative)		-644	-580		-79	-52	-27		-98	-39

Notes:

Based on methodologies presented in *Trip Generation Handbook, 3rd Edition*, ITE, 2014. Trip Reduction worksheets are enclosed for reference.

A 25% pass-by reduction for retail uses, taken after all of trip reduction rates were applied.

Air Quality

Localized Particulate Matter Emissions During Construction. Diesel-fueled engines, which generate respirable particulate matter with a diameter of 2.5 micrometers or less (PM2.5), would be used during construction of the Base Level Maximum Office Alternative, similar to the Project. Construction of the Base Level Maximum Office Alternative would also result in fugitive (dust) emissions of PM2.5 through site disturbance and truck travel. Multiple sensitive receptors are located within 1,500 feet of the Project site.[2] Since the Base Level Maximum Office Alternative would result in a reduction of building area compared to the Project, these impacts would be less than under the Project. Similar to the Project, construction of the Base Level Maximum Office Alternative would likely result in significant increases in PM2.5 concentrations without mitigation, but implementation of Mitigation Measures AQ-1.1, AQ-1.2, and AQ-1.3 would reduce these impacts to a less-than-significant level. Exposure to PM2.5 concentrations with implementation of the Base Level Maximum Office Alternative would be less than significant with mitigation, similar to the Project. (LTS/M)

Cumulative Impacts. Implementation of the Base Level Maximum Office Alternative in combination with El Camino Real vehicle traffic and Caltrain emissions, similar to the Project, would result in a less-than-significant cumulative impact for the non-cancer hazard index, cancer risk, and PM2.5 concentrations after implementation of mitigation measures. Since the Base Level Maximum Office Alternative would result in a reduction of building area compared to the Project, these impacts would be less than under the Project. Similar to the Project, construction of the Base Level Maximum Office Alternative would likely result in significant increases in cancer risk and PM2.5 concentrations without mitigation, but implementation of Mitigation Measures AQ-1.1, AQ-1.2, and AQ-1.3 would reduce these cumulative impacts to a less-than-significant level. (LTS/M)

Noise

Traffic Noise Impacts. The Base Level Maximum Office Alternative would result in a reduction in the development at the site. As such, the total number of vehicle trips generated under this alternative would be reduced compared to the Project. The Base Level Maximum Office Alternative would generate 3,160 net daily vehicle trips, which is 580 fewer daily trips than would be generated with the Project (which would result in 3,740 net daily trips). There would be no impacts related to traffic noise with implementation of the Project. As the Base Level Maximum Office Alternative would reduce the total amount of development and the associated vehicle trips as compared to the Project, impacts related to traffic noise would also be less than significant. (LTS)

Cumulative Impacts. A project would generally result in a significant cumulative traffic noise impact if cumulative plus project noise levels at existing sensitive receivers were greater than the applicable thresholds (60 A-weighted decibels [dBA] average equivalent sound level [L_{DN}] over a 24-hour period for single-family residential land uses). A project would have a cumulatively considerable contribution to the overall increase in traffic noise levels if it would increase cumulative traffic noise levels by greater than 1 dB under cumulative with-Project conditions.

[2] Although BAAQMD has determined that construction activities occurring at distances of greater than 1,000 feet from a sensitive receptor likely do not pose a significant health risk, receptors out to 1,500 feet were identified to capture the health risks at the nearest schools, daycare facilities, etc.

Modeling results for cumulative plus Project traffic noise levels indicated that cumulative traffic noise would be in excess 60 dBA L_{DN} at a distance of 50 feet for 7 of the 14 analyzed roadway segments in the vicinity of the Project site. The Base Level Maximum Office Alternative would result in 3,160 net daily trips, or 580 trips fewer than the number generated by the Project (3,740 net daily trips); this is an approximately 15-percent reduction in traffic. A 15-percent reduction in traffic, however, would only reduce traffic noise levels by less than 1 decibel (dB), and all segments with cumulative noise impacts under Project conditions exceed thresholds by at least 2 dB; implementation of this alternative would therefore still result in cumulative noise impacts along the seven segments identified in Table 3.3-5 in Section 3.3, *Noise*. The net daily vehicle trips associated with this alternative would contribute to traffic noise levels on surrounding roadway segments as is the case with the Project, however, the contribution would be less under this alternative than with Project implementation. As with the Project, this alternative would not have a cumulatively considerable contribution to a cumulative traffic noise impact; the impact would be less than significant. (LTS)

Hazards and Hazardous Materials

Routine Hazardous Materials Use. As with the Project, the Base Level Maximum Office Alternative would be required to comply with mandatory hazardous materials regulations and stormwater pollution prevention plan (SWPPP) requirements. Operation of the Base Level Maximum Office Alternative would involve the use of household and commercial hazardous materials, such as cleaning agents, and paints. However, these materials would not be used, stored, or transported in large enough quantities to cause a substantial impact, either during construction or operation of the Base Level Maximum Office Alternatives. Furthermore, the use, storage, and transportation of hazardous materials are subject to applicable federal, state, and local regulations, the intent of which is to minimize the risk of upset. During construction activities, the Base Level Maximum Office Alternative would also be subject to Mitigation Measure HAZ-1.1 to minimize hazards through the routine transport and disposal of hazardous materials. Impact would be less than significant with mitigation, as with the Project. (LTS/M)

Hazardous Materials Release. Similar to the Project, the Base Level Maximum Office Alternative would require excavation and ground disturbance. Potential for soil and groundwater contamination exists at both the Derry Lane and 1300 El Camino Real Sites. At the Derry Lane Site, it has been confirmed that there is impacted soil and groundwater contaminated by tetrachloroethylene (PCE), trichloroethylene (TCE), dichloroethylene (DCE), and vinyl chloride from long-term commercial operations of Wo Sing Cleaners. At the 1300 El Camino Real Site, impacted soil may exist due to historic auto detailing and painting operations, from a pad-mounted transformer formerly onsite, and from the presence of undocumented fill found onsite.

Onsite soil disturbance has the potential to result in impacts due to hazardous materials releases in a variety of ways: soil disturbance could generate dust containing residual soil contaminants, which could pose an inhalation hazard to workers if contaminants adhere to the dust; improperly stockpiled soils could introduce contaminants into stormwater; and excavation and removal of contaminated soils, particularly if soils are used elsewhere onsite or transported for offsite disposal or reuse, could spread contaminants. Disturbance of groundwater at locations that may have been previously contaminated by prior uses could further extend contamination into the environment and expose construction workers, the public, or the environment to hazardous conditions. Furthermore, the general soil movement required for utility installations, utility trenches also have the potential to create a horizontal conduit for chemical contaminants contained in soil vapors or shallow groundwater to migrate along permeable soils that would be placed as trench backfill.

All of these activities proposed with the Base Level Maximum Office Alternative, similar to the Project, have the potential to result in a release of hazardous materials that could pose a human or environmental risk. However, implementation of Mitigation Measures HAZ-2.1 through HAZ-2.3 would reduce the potentially significant soil and groundwater contamination impacts at the Base Level Maximum Office Alternative to less than significant. (LTS/M)

Cumulative Impacts. All cumulative impacts of the Base Level Maximum Office Alternative would be less than cumulatively considerable with implementation of the mitigation measures noted above. Development of the Base Level Maximum Office Alternative and other cumulative development could expose people or the environment to residual contaminants in soil and/or groundwater if measures are not implemented to control unintentional or inadvertent releases. Development of the Base Level Maximum Office Alternative and other cumulative development could also expose people to asbestos, lead, polychlorinated biphenyls (PCBs), or other hazardous materials in existing buildings that may be demolished, renovated, or rehabilitated if measures are not implemented to control unintentional or inadvertent releases. However, implementation of the mitigation measures noted above, and compliance with current regulatory standards, would render the cumulative impacts less than significant, similar to the Project. (LTS)

Base Level Maximum Residential Alternative

Transportation

The Base Level Maximum Residential Alternative would likely result in the same transportation impacts as the Project. The Project is estimated to generate 3,740 net daily trips including 384 trips per AM Peak Hour and 401 per PM Peak Hour. The Maximum Residential Project Alternative would generate 644 fewer trips per day, including 136 fewer trips per AM Peak Hour, and 130 fewer trips during the PM Peak Hour (Table 5-3). The trip differential for the Base Level Maximum Residential Alternative is not enough to result in changes to intersection, roadway, pedestrian, bicycle, or transit impacts when compared to the Project. With the same impacts as the Project, the same mitigation measures detailed in Section 3.1, *Transportation*, would be required. Similar to the Project, impacts to intersections and roadways would be significant and unavoidable. (SU)

Table 5-3. Trip Generation Summary – Base Level Maximum Residential Alternative

		Daily		AM Peak Hour				PM Peak Hour			
Land Use	Units	Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Existing Conditions											
Existing Trips to be removed			-775		-6	-3	-3		-53	-28	-25
Maximum Office Alternative											
Apartment	206 du	6.66	1,372	0.51	105	21	84	0.64	131	85	46
Office	87 ksf	13.57	1,181	1.97	171	151	20	2.02	176	30	146
Shopping Center	15 ksf	131.92	1,979	3.27	49	30	19	11.20	168	81	87
Subtotal			4,532		325	202	123		475	196	279
Trip Reduction [1]			*-308*		*-62*	*-33*	*-29*		*-121*	*-56*	*-65*
Pass-by (retail only)[2]			*-353*		*-9*	*-6*	*-3*		*-30*	*-16*	*-14*
Project Trips			3,871		254	163	91		324	124	200
Net Trip Generation			3,096		248	160	88		271	96	175
Project (for comparison)			3,740		384	283	101		401	126	275
Net Difference (Project – Project Alternative)			-644		-136	-123	-13		-130	-30	-100

ksf = thousand square feet
du = dwelling unit
Notes:
Based on methodologies presented in *Trip Generation Handbook, 3rd Edition*, ITE, 2014. Trip Reduction worksheets are enclosed for reference.
A 25% pass-by reduction for retail uses, taken after all of trip reduction rates were applied.

Air Quality

Exposure of Sensitive Receptors to Localized Particulate Matter Emissions during Construction. Diesel-fueled engines, which generate PM2.5, would be used during construction of the Base Level Maximum Residential Alternative, similar to the Project. Construction of the Base Level Maximum Residential Alternative would also result in fugitive (dust) emissions of PM2.5 through site disturbance and truck travel. Multiple sensitive receptors are located within 1,500 feet of the Project site, as noted above for the Base Level Maximum Office Alternative. Similar to the Project, construction of the Base Level Maximum Residential Alternative would likely result in significant increases in PM2.5 concentrations without mitigation, but implementation of Mitigation Measures AQ-1.1, AQ-1.2, and AQ-1.3 would reduce these impacts to a less-than-significant level. Exposure to PM2.5 concentrations with implementation of the Base Level Maximum Residential Alternative would be less than significant with mitigation. (LTS/M)

Cumulative Impacts. Implementation of the Base Level Maximum Residential Alternative in combination with El Camino Real vehicle traffic and Caltrain emissions, similar to the Project, would result in a less-than-significant cumulative impact for the non-cancer hazard index, cancer risk, and PM2.5 concentrations after implementation of mitigation measures. Since the Base Level Maximum Residential Alternative would result in a reduction of building area compared to the Project, these impacts would be less than under the Project. Similar to the Project, construction of the Base Level

Maximum Residential Alternative would likely result in significant increases in cancer risk and PM2.5 concentrations without mitigation, but implementation of Mitigation Measures AQ-1.1, AQ-1.2, and AQ-1.3 would reduce these cumulative impacts to a less-than-significant level. (LTS/M)

Noise

Traffic Noise Impacts. The Base Level Maximum Residential Alternative would result in a reduction in the development at the site. As such, the total number of vehicle trips generated under this alternative would be reduced compared to the Project. The Base Level Maximum Residential Alternative would generate 3,096 net daily vehicle trips, which is 644 fewer daily trips than would be generated with the Project's 3,740 net daily trips. There would be no impacts related to traffic noise with implementation of the Project. As the Residential Office Alternative would reduce the total amount of development and the associated vehicle trips as compared to the Project, impacts related to traffic noise would also be less than significant. (LTS)

Cumulative Impacts. As discussed in Section 3.3, *Noise*, a project would generally result in a significant cumulative traffic noise impact if cumulative plus project noise levels at existing sensitive receivers were greater than the applicable thresholds (60 dBA L_{DN} for single-family residential land uses). A project would have a cumulatively considerable contribution to the overall increase in traffic noise levels if it would increase cumulative traffic noise levels by greater than 1 dB under cumulative plus project conditions.

Modeling results for Cumulative plus Project traffic noise levels indicated that cumulative traffic noise would be in excess 60 dBA L_{DN} at a distance of 50 feet for seven of the 14 analyzed roadway segments in the vicinity of the Project site. The Base Level Maximum Residential Alternative would result in 3,096 net daily trips, or 644 trips fewer than the number generated by the Project (3,740 net daily trips); this is an approximately 17-percent reduction in traffic; however, it would only reduce traffic noise levels by less than 1 dB, and all segments with cumulative noise impacts under Project conditions exceed thresholds by at least 2 dB. Implementation of this alternative would therefore still result in cumulative noise impacts along the seven segments identified Table 3.3-5 in Section 3.3, *Noise*. The net daily vehicle trips associated with this alternative would contribute to traffic noise levels on surrounding roadway segments as is the case with the Project; however, the contribution would be less under this alternative than with Project implementation. As with the Project, this alternative would not have a cumulatively considerable contribution to a cumulative traffic noise impact; the impact would be less than significant. (LTS)

Hazards and Hazardous Materials

Routine Hazardous Materials Use. As with the Project, the Base Level Maximum Residential Alternative would be required to comply with mandatory hazardous materials regulations and SWPPP requirements. Operation of the Base Level Maximum Residential Alternative would involve the use of household and commercial hazardous materials, such as cleaning agents, and paints. However, these materials would not be used, stored, or transported in large enough quantities to cause a substantial impact, either during construction or operation of the Base Level Maximum Residential Alternative. Furthermore, the use, storage, and transportation of hazardous materials are subject to applicable federal, state, and local regulations, the intent of which is to minimize the risk of upset of hazardous materials. During construction activities, the Base Level Maximum Residential Alternative would also be subject to Mitigation Measure HAZ-1.1 minimize hazards through the routine transport and disposal of hazardous materials. Impact would be less than significant with mitigation, as with the Project. (LTS/M)

Hazardous Materials Release. Similar to the Project, the Base Level Maximum Residential Alternative would require excavation and ground disturbance. Potential for soil and groundwater contamination exists at both the Derry Lane and 1300 El Camino Real Sites. At the Derry Lane Site, contamination was confirmed in the form of soil and groundwater impacted with PCE, TCE, DCE, and vinyl chloride from long-term commercial operations of Wo Sing Cleaners. At the 1300 El Camino Real Site, impacted soil may exist due to historic auto detailing and painting practices on the site, from a pad-mounted transformer formerly onsite, and from the presence of undocumented fill found onsite.

Onsite soil disturbance has the potential to result in impacts due to hazardous materials releases in a variety of ways: soil disturbance could generate dust containing residual soil contaminants. These contaminants could pose an inhalation hazard to workers if they adhere to the dust; improperly stockpiled soils could introduce contaminants into stormwater; and excavation and removal of contaminated soils, particularly if soils are used elsewhere onsite or transported for offsite disposal or reuse, could spread contaminants. Disturbance of groundwater at locations that may have been contaminated by previous uses could further extend contamination into the environment and expose construction workers, the public, or the environment to hazardous conditions. Furthermore, the general soil movement required for utility installations, utility trenches also have the potential to create a horizontal conduit for chemical contaminants contained in soil vapors or for the migration of shallow groundwater along permeable soils that would be placed as trench backfill.

All of these activities proposed with the Base Level Maximum Residential Alternative, similar to the Project, have the potential to result in a release of hazardous materials that could pose a human or environmental risk. However, implementation of Mitigation Measures HAZ-2.1 through HAZ-2.3 would render the potentially significant soil and groundwater contamination impacts of the Base Level Maximum Residential Alternative less than significant. (LTS/M)

Cumulative Impacts. All cumulative impacts of the Base Level Maximum Residential Alternative would be less than cumulatively considerable with implementation of the mitigation measures noted above. Development of the Base Level Maximum Residential Alternative and other cumulative development could expose people or the environment to residual contaminants in soil and/or groundwater if measures are not implemented to control unintentional or inadvertent releases. Development of the Base Level Maximum Residential Alternative and other cumulative development could also expose people to asbestos, lead, PCBs, or other hazardous materials in existing buildings that may be demolished, renovated, or rehabilitated if measures are not implemented to control unintentional or inadvertent releases. However, implementation of the mitigation measures noted above and compliance with current regulatory standards would reduce the cumulative impacts to a level that is less than significant, similar to the Project. (LTS)

5.5 Comparison of Impacts

Table 5-4 presents a summary comparison of the potential environmental issues associated with various Project alternatives, including their significance (if any) after mitigation, where indicated.

Table 5-4. Comparison of Impacts among Project Alternatives

Environmental Issue	Project	No-Project Alternative	Maximum Office	Maximum Residential
Transportation				
Impacts on Intersections	SU	NI	SU	SU
Impacts on Roadway Segments	SU	NI	SU	SU
Impacts on Routes of Regional Significance	SU	NI	SU	SU
Impacts on Pedestrian and Bicycle	LTS	NI	LTS	LTS
Impacts on Transit Facilities	LTS	NI	LTS	LTS
Cumulative Impacts	SU	NI	SU	SU
Air Quality				
Exposure of Sensitive Receptors to Localized Particulate Matter Emissions during Construction	LTS/M	NI	LTS/M	LTS/M
Cumulative Impacts	LTS/M	NI	LTS/M	LTS/M
Noise				
Traffic Noise Impacts	LTS	NI	LTS	LTS
Cumulative Impacts	LTS	NI	LTS	LTS
Hazards and Hazardous Materials				
Routine Hazardous Materials Use	LTS/M	LTS/M	LTS/M	LTS/M
Accidental Release of Hazardous Materials	LTS/M	LTS/M	LTS/M	LTS/M
Cumulative Impacts	LTS	LTS	LTS	LTS

NI = No impact LTS = Less than significant LTS/M = Less than significant with mitigation SU = Significant and unavoidable

5.6 Environmentally Superior Alternative

Sections 21002 and 21081 of the CEQA Guidelines require lead agencies to adopt feasible mitigation measures or feasible environmentally superior alternatives in order to substantially lessen or avoid otherwise significant adverse environmental effects, unless specific social or other conditions make such mitigation measures or alternatives infeasible. CEQA also requires that an environmentally superior alternative be identified among the alternatives analyzed. In general, the environmentally superior alternative is the project that avoids or substantially lessens some or all of the significant and unavoidable impacts of the project (CEQA Guidelines Section 15126.6).

On the basis of comparing the extent to which the alternatives reduce or avoid the significant impacts of the Project, the No-Project Alternative would be the environmentally superior alternative. Because no development would occur at the Project site, there would be no construction or operational impacts. However, the CEQA Guidelines state that the No-Project Alternative cannot be selected as the environmentally superior alternative.

As previously discussed, the Reduced-Intensity Alternatives (the Maximum Office and Maximum Residential) would result in reduction of building area of approximately 27 percent compared to the Project. However, as discussed above, the Base Level Maximum Residential Alternative would result in a greater decrease in vehicle trips over the Base Level Maximum Office Alternative. Since impacts related to air quality, noise, and transportation are all closely related to vehicle trips, it is anticipated that the Base Level Maximum Residential Alternative would result in less severe environmental impacts when compared to the Project and the other alternatives. Impacts related to hazardous materials would be similar for both the Maximum Office and Base Level Maximum Residential Alternatives. However, due to the reduction in vehicle trips, the Base Level Maximum Residential Alternative is considered the environmentally superior alternative.

Chapter 6
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